U.S. Army Corps of Engineers

Baltimore District
Norfolk District

Revised Final

Remedial Investigation Report
Former Wastewater Treatment Plant

Wallops Flight Facility
Virginia

Contract Number W91236-08-D-0050
Delivery Order No. 0001

August 2013

Prepared for:

U.S. ARMY CORPS OF ENGINEERS
Baltimore, Maryland
Norfolk, Virginia

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Prepared by:

Weston Solutions, Inc.
Norfolk, Virginia

REVISED FINAL

REMEDIAL INVESTIGATION REPORT

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Norfolk, VA

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WESTON PROJECT NO.: 20187.001.001.0040

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Baltimore District
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Norfolk, VA

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ACRONYMS AND ABBREVIATIONS

µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µg/mg	micrograms per milligram
ug/m^3	micrograms per cubic meter
ADD	average daily dose
AF	adherence factor
AOC	Area of Concern
ARAR	applicable or relevant and appropriate requirement
AT	averaging time
ATc	averaging time for carcinogens
ATnc	averaging time for noncarcinogens
ATSDR	Agency for Toxic Substances and Disease Registry
AUF	area use factor
AWQC	ambient water quality criteria
BAF	bioaccumulation factor
BCF	bioconcentration factor
bgs	below ground surface
BHHRA	baseline human health risk assessment
BTAG	Biological Technical Assessment Group
BW	body weight
CAH	chlorinated aliphatic hydrocarbon
CCME	Canadian Council of Ministers of the Environment
CDI	chronic daily intake
CENAB	U.S. Army Corps of Engineers, Baltimore District
CENAO	U.S. Army Corps of Engineers, Norfolk District
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cm	centimeter
cm^2/day	square centimeters per day
CNAAS	Chincoteague Naval Auxiliary Air Station
CNS	central nervous system
COC	contaminants of concern
COEC	contaminants of ecological concern
COPC	contaminants of potential concern
COPEC	contaminants of potential ecological concern
CSF	cancer slope factor
CSM	conceptual site model
DDD	dichloro-diphenyl-dichloroethylene
DDE	dichloro-diphenyl-dichloroethylene
DDT	dichloro-diphenyl-trichloroethane
DO	dissolved oxygen
DoD	United States Department of Defense
DOE	United States Department of Energy
DPT	direct push technology
Earth Tech	Earth Tech, Inc.
Ebasco	Ebasco Services, Inc.
Eco-SSL	ecological soil screening level
ED	exposure duration

ACRONYMS AND ABBREVIATIONS (Continued)

EF	exposure frequency
EPC	exposure point concentration
EPI	Environmental Priorities Initiative
ERA	ecological risk assessment
ESS	Environmental Sites Survey
ET	exposure time
EV	event frequency
°F	degrees Fahrenheit
FFTA	Former Fire Training Area
FI	fraction ingested
FS	Feasibility Study
ft	feet
ft/day	feet per day
ft/ft	feet per foot
ft^2/min	square feet per minute
FUDS	Formerly Used Defense Site
gpd	gallons per day
gpm	gallons per month
HEAST	Health Effects Assessment Summary Tables
HEC	human equivalent concentration
HHMSSL	Human Health Medium-Specific Screening Level
HI	hazard index
HQ	hazard quotient
HRS	Hazardous Ranking System
HTRW	hazardous, toxic, and radioactive waste
I.D.	inner diameter
IEUBK	Integrated Exposure Uptake Biokinetic
ILCR	incremental lifetime cancer risk
IR_A	air inhalation rate
IRIS	Integrated Risk Information System
IR_S	soil or sediment ingestion rate
ISQG	interim sediment quality guideline
IUR	inhalation unit risk
kg	kilogram
KM	Kaplan-Meier
L	liter
L/gram	liters per gram
LADD	lifetime average daily dose
LEL	lowest effect level
LMS	linearized multistage model
LOAEL	lowest observed adverse effect level
LSI	limited site investigation

ACRONYMS AND ABBREVIATIONS (Continued)

m	meter
m^3/hr	cubic meters per hour
M&E	Metcalf & Eddy, Inc.
MCL	Maximum Contaminant Level
MEK	methyl ethyl ketone
MIBK	methyl isobutyl ketone
mg/cm^2	milligrams per square centimeter
mg/m^3	milligrams per cubic meter
mg/L	milligrams per liter
mg/kg	milligrams per kilogram
mg/kg-day	milligrams per kilogram per day
mL	milliliter
MRL	minimum risk level
Msl	mean sea level
mV	millivolts
MW	monitoring well
NASA	National Aeronautics and Space Administration
ND	non-detect
NGS	National Geographic Society
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NOAEL	no observed adverse effect level
NPL	National Priorities List
NTU	Nephelometric Turbidity Unit
NWI	National Wetland Inventory
ORNL	Oak Ridge National Laboratory
ORP	oxidation-reduction potential
PA	Preliminary Assessment
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PEF	particulate emission factor
PEL	probable effect level
PID	photoionization detector
ppm	parts per million
PPRTV	Provisional Peer Review Toxicity Values
PRG	Preliminary Remediation Goal
PRP	potential responsible party
PVC	polyvinyl chloride
PWS	public water system
RAGS	Risk Assessment Guidance for Superfund
RBC	risk-based concentration
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RfD	reference dose
RI	Remedial Investigation

ACRONYMS AND ABBREVIATIONS (Continued)

RME	reasonable maximum exposure
RRE	relative risk evaluation
RSL	Regional Screening Level
SA	surface area
SAIC	Science Applications International Corporation, Inc.
SCEM	Site Conceptual Exposure Model
SD	sediment
SI	Site Inspection
SLERA	Screening Level Ecological Risk Assessment
SQL	sample quantitation limit
SS	surface soil
SSL	soil screening level
STL	Severn Trent Laboratories, Inc.
SVOC	semivolatile organic compound
SW	surface water
SWMU	Solid Waste Management Unit
TAL	Target Analyte List
TCE	trichloroethylene
TCL	Target Compound List
TCRA	Time Critical Removal Action
THQ	target hazard quotient
TR	target risk
TRV	toxicity reference value
TRW	Technical Review Workgroup
UCL	upper confidence limit
UF	uncertainty factor
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UXO	Unexploded ordnance
VAGWQS	Virginia Groundwater Quality Standard
VAWQS	Virginia Water Quality Standard
VaDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDGIF	Virginia Department of Game and Inland Fisheries
VIP	vapor intrusion pathway
VOC	volatile organic compound
VPDES	Virginia Pollution Discharge Elimination System
WESTON	Weston Solutions, Inc.
WFF	Wallops Flight Facility
WW	wet weight
WWTP	wastewater treatment plant

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

Weston Solutions, Inc. (WESTON®) has prepared this Remedial Investigation (RI) Report for the United States Army Corps of Engineers (USACE), Baltimore District (CENAB) and Norfolk District (CENAO) under Contract W91236-08-D-0050, Delivery Order No. 0001. This RI Report presents the results from site investigations conducted at the former Wastewater Treatment Plant (WWTP) (the Site) located at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center Wallops Flight Facility (WFF), in Accomack County, Virginia. Historically, the Site also has been referred to as Site 1 – Old (or Abandoned) WWTP. WESTON has prepared this report in accordance with the Final Work Plan, finalized in November 2009 (WESTON, 2009).

The RI was completed in cooperation with the USACE, the U.S. Environmental Protection Agency (USEPA) Region III, the Commonwealth of Virginia Department of Environmental Quality (VDEQ), and NASA in accordance with the applicable federal, state, and local guidelines as required under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Investigations conducted at the Site are part of the ongoing Formerly Used Defense Site (FUDS) Program to identify and remediate areas within a FUDS of hazardous, toxic, and radioactive waste (HTRW) and ordnance-related hazards left during previous occupation by the Department of Defense (DoD).

ES.2 SITE DESCRIPTION

WFF is located in Accomack County on the eastern shore of the Commonwealth of Virginia, and comprises three separate areas: Main Base, Wallops Island, and Wallops Mainland. The former WWTP is located northwest of the intersection of Runway 17-35 and the abandoned taxiway that runs parallel to Runway 10-28 in the north-central portion of the Main Base. The area surrounding the WWTP comprises approximately 0.8 acre and includes mounded material identified in previous investigations as possible residual sludge piles located approximately 150 to 200 feet north of the former WWTP structures. In addition, two sludge drying beds thought to contain residual sludge materials associated with former WWTP activities are located in the

eastern portion of the Site. The WWTP consists of and is surrounded by dense vegetative cover, including woodland underbrush and young trees. The WWTP is no longer active and the structures are currently partially degraded and overgrown with vegetation. NASA abandoned the facility upon obtaining custody of the land and has not used the WWTP for any purpose since the transfer of the facility ownership in 1959.

ES.3 SITE HISTORY

The WWTP, which was constructed by the Navy in the early 1940s, consists of three cinder-block structures and a trickling filter (removed in 2006). The cinder-block structures include a control/pump house, process tanks (chlorine reaction tanks, primary and final settling tanks, and sludge digestion tank), and sludge drying beds. With the exception of the control/pump house, the system was controlled by gravity flow. Three electrical transformers were formerly located adjacent to the south side of the control/pump house. A trickling filter, a 24-foot diameter concrete basin 4 feet in depth, was removed in May 2006 as part of a Time Critical Removal Action (TCRA).

Influent to the WWTP flowed by gravity through a 10-inch diameter sewer line entering the valve house and then entering the comminutor (grinding process) building, after which the flow was routed to the primary settling tank. As the primary settling tank filled, solids settled to the bottom, and effluent from the primary process tank flowed by gravity from the top of the tank to the trickling filter. The trickling filter acted as an aerator and biofilter, spraying wastewater over rock, and the water then drained to a wet well in the control/pump house. A pump station in the control/pump house returned the wastewater to the primary and final settling tanks. As a result, wastewater from the trickling filter was re-circulated through the primary settling tank or final settling tank to aid in the removal of the suspended solids. Once the effluent from the process tanks had undergone significant treatment in the trickling filter process, the effluent was treated by chlorine reaction and discharged to an intermittent stream on the north side of the Site.

Sludge from the process tanks was sent to the digester from the lower portion of each process tank before being placed in the sludge drying beds. As necessary, the sludge was removed from the drying beds and was suspected to have been piled in the northern portion of the Site. It is also noted that an overflow line was present at the control/pump house that may have been used on

occasion when the pumping system was not functional. The overflow pipe and its outfall were constructed of terracotta tile, based on site observations and consistent with the age of the former WWTP. The overflow pipe's outfall could not be located during the TCRA. However, during the Site Investigation field activities, the pipe was located approximately 2 feet below grade and completely buried.

In December 2005, in preparation for a Site Investigation of the WWTP, USACE representatives conducted an on-site reconnaissance of the WWTP. During the visit, beads of elemental mercury were discovered several inches below the surface immediately adjacent to the pedestal of a rotary arm trickling filter. During an inspection of the trickling filter, a clogged and uncapped pipe was noted in the location where the seal drain should have been. The drain pipe appeared to be clogged with a rusty sludge material. Just below the surface of the stone filter media, beads of elemental mercury were observed several inches from the pedestal. The detached locked drain valve was also found lying on the ground nearby.

The trickling filter was manufactured by Dorr Inc. during the early 1940s. According to a Dorr-Oliver representative, the filter seal contained 11.5 pounds of mercury. The area above and under the seal drain pipe was isolated with plastic to prevent further spillage of mercury and to prevent migration of released mercury farther down into the filter. In May 2006, WESTON completed a TCRA involving the demolition and removal of the trickling filter structure, including recovery of elemental mercury through vacuuming (approximately 7 to 8 pounds), from the WWTP. Soil samples collected below the trickling filter did not indicate impact from the mercury release (WESTON, 2006).

Data presented in the RI include results of samples collected during a Site Investigation completed between 19 and 23 February 2007, including monitoring well installation and groundwater, soil, surface water, sediment, and sludge sampling.

ES.4 NATURE AND EXTENT OF CONTAMINATION

This subsection presents the results of the RI data and the findings and conclusions of the investigations conducted at the Site.

ES.4.1 Metals

ES.4.1.1 Soils

Most metals were detected in site soils; however, concentrations of seven metals, including aluminum, antimony, arsenic, cobalt, iron, lead, and manganese, exceeded residential direct contact screening levels. Arsenic was also detected at concentrations exceeding the industrial direct contact screening level. Metals concentrations in site soils are widespread across the Site, and all detected concentrations of metals in soil other than antimony and lead are within background concentrations, as presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24) and detailed below.

- Aluminum concentrations in soil ranged from 1,300 to 13,000 milligrams per kilogram (mg/kg) with eight samples exceeding the residential direct contact screening level of 7,700 mg/kg. The background range of aluminum is 1,870 to 13,900 mg/kg in soils.

- Antimony concentrations in soil ranged from 0.54 to 3.2 mg/kg with only one sample slightly exceeding the residential direct contact screening level of 3.1 mg/kg. Background values are not available for antimony; however, the one sample only slightly exceeded the residential screening level.

- Arsenic concentrations in soil ranged from 0.76 to 5.4 mg/kg with 19 samples exceeding the residential direct contact screening level of 0.39 mg/kg and 13 samples exceeding the industrial direct contact screening level of 1.6 mg/kg. The background range of arsenic is 0.78 to 14.2 mg/kg in soils.

- Cobalt concentrations in soil ranged from 0.23 to 3.3 mg/kg with five samples exceeding the residential direct contact screening level of 2.3 mg/kg. The background range of cobalt is 0.35 to 7.3 mg/kg in soils.

- Iron concentrations in soil ranged from 1,400 to 10,000 mg/kg with seven samples exceeding the residential direct contact screening level of 5,500 mg/kg. The background range of iron is 1,740 to 10,900 mg/kg in soils.

- Lead concentrations in soil ranged from 1.2 to 2,450 mg/kg with four samples exceeding the residential direct contact screening level of 400 mg/kg. The background range of lead is 4.9 to 124 mg/kg in soils. All four samples with lead exceedances were located adjacent to the Pump House that has flaking paint. Samples of the flaking paint from the Pump House contain approximately 9 percent lead indicating the exceedences are associated with flaking lead-based paint from the exterior of the Pump House.

- Manganese concentrations in soil ranged from 5.5 to 320 mg/kg with one sample exceeding the residential direct contact screening level of 180 mg/kg. The background range of manganese is 8.4 to 781 mg/kg in soils.

- With the exception of lead (from flaking lead-based paint in the Pump House area), metals in soil at the Site may be attributable to background concentrations in soil at the Site and are not indicative of a release or source area.

ES.4.1.2 Sludge

Numerous metals were detected in the three composite sludge samples collected from sludge drying beds and settling tank at the Site. Eight metals, including antimony, arsenic, cobalt, iron, lead, manganese, mercury, and silver, were detected at concentrations exceeding residential direct contact screening levels. Arsenic and mercury were also detected at concentrations exceeding industrial direct contact screening levels. In general, the maximum metal concentrations were detected in the composite sludge samples collected from the sludge drying beds, SL02 and SL03. The concentration ranges of metals, along with a comparison to background concentrations as presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24), are described as follows:

- Arsenic was detected in the two samples collected from the sludge drying beds at concentrations ranging from 2.6 to 3.2 mg/kg. Results from both samples exceeded the residential direct contact screening level of 0.39 mg/kg and the industrial direct contact screening level of 1.6 mg/kg. The background range of arsenic is 0.78 to 14.2 mg/kg in soils.

- Cobalt was detected in the two samples collected from the sludge drying beds at concentrations ranging from 2.0 to 2.6 mg/kg. Results from one of the samples exceeded the residential direct contact screening level of 2.3 mg/kg. The background range of cobalt is 0.35 to 7.3 mg/kg in soils.

- Iron was detected in all composite sludge samples at concentrations ranging from 12,000 to 15,000 mg/kg. Concentrations of iron exceeded the residential direct contact screening level of 5,500 mg/kg in all composite sludge samples. The background range of iron is 1,740 to 10,900 mg/kg in soils. Iron detected in the composite sludge samples exceeded the background range.

- Lead was detected in all composite sludge samples at concentrations ranging from 130 to 530 mg/kg. Results from one of the samples collected from the sludge drying beds exceeded the residential direct contact screening level of 400 mg/kg. The background range of lead is 4.9 to 124 mg/kg in soils. Lead detected in the composite

sludge samples exceeded the background range with one sample exceeding the residential soil screening level.

- Manganese was detected in all composite sludge samples at concentrations ranging from 160 to 270 mg/kg. Results from two of the samples exceeded the residential direct contact screening level of 180 mg/kg. The background range of manganese is 8.4 to 781 mg/kg in soils.

- Mercury was detected in all composite sludge samples at concentrations ranging from 0.17 to 28 mg/kg. The two composite sludge samples collected from the sludge drying beds contained mercury concentrations exceeding the residential direct contact screening level of 0.67 mg/kg and the industrial direct contact screening level of 2.8 mg/kg. The background range of mercury is 0.025 to 0.25 mg/kg in soils. Mercury concentrations in sludge exceeded the background soil range.

- Silver was detected in the two samples collected from the sludge drying beds at concentrations ranging from 110 to 130 mg/kg. Results from both samples exceeded the residential direct contact screening level of 39 mg/kg. The background range of silver is 0.15 to 0.3 mg/kg in soils. Silver concentrations in sludge exceeded the background soil range.

Concentrations of arsenic, cobalt, and manganese in WWTP sludge may be attributable to background concentrations in soil at the Site. Concentrations of iron, lead, mercury, and silver in sludge exceeded the background range and the respective residential screening levels. The source of mercury is likely a result of residual concentrations from contact with the trickling filter. Sludge contaminants, including iron, lead, mercury, and silver, are confined to areas of the Site where sludge is located.

ES.4.1.3 Sediment

A total of 18 metals were detected in the sediment samples, with all but one of the maximum concentrations detected in SD2. Of these 18 metals, one metal, arsenic, was detected at concentrations exceeding residential direct contact screening levels. No metals were detected in sediment samples at concentrations exceeding ecological-based screening levels. Currently, no human-health based screening levels exist for sediment exposure; therefore, the concentrations were compared to soil screening levels. Arsenic was detected in both sediment samples at concentrations ranging from 1.4 mg/kg to 2.7 mg/kg, exceeding the residential direct contact soil screening level of 0.39 mg/kg. The presence of arsenic in sediment adjacent to the Site is likely a result of transport via stormwater runoff. Arsenic was detected in site soil samples at

concentrations ranging from 0.76 mg/kg to 5.4 mg/kg, which is consistent with the background range (0.78 to 14.2 mg/kg) of arsenic in surface soils as obtained from the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24). Sources of arsenic were not identified at the Site but the presence of arsenic in site soils may be attributable to background conditions. The presence of arsenic in sediment adjacent to the Site may be attributable to the levels of arsenic in site soils as well as the migration of sediment-laden stormwater from elsewhere on the base that discharges through the outfalls to the intermittent tributary.

ES.4.1.4 Surface Water

Numerous metals, including aluminum, barium, calcium, cobalt, iron, magnesium, manganese, potassium, sodium, and vanadium, were detected in the surface water sample. Aluminum, barium, iron, and manganese were detected at concentrations exceeding surface water screening levels. Metals concentrations in surface water may be associated with the migration of sediment-laden stormwater from various areas of WFF discharged through the outfalls to the intermittent stream.

ES.4.1.5 Wastewater

A total of 12 metals were detected in the wastewater sample collected from the settling tank at the Site. Aluminum, barium, iron, lead, and manganese were detected at concentrations exceeding surface water screening levels. The settling tank is not covered and is open to the outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank. Aluminum, barium, iron, lead, and manganese were also detected in the composite sludge sample collected from the settling tank.

ES.4.1.6 Groundwater

Numerous total metals, including aluminum, arsenic, barium, calcium, chromium, cobalt, iron, magnesium, manganese, potassium, sodium, and vanadium, were detected in groundwater at the Site. Concentrations of arsenic and manganese exceeded screening criteria. Arsenic was detected at 0.01 milligrams per liter (mg/L) at MW5 (downgradient of the former WWTP structures) and in the investigative, field duplicate, and blind duplicate samples collected from MW3 (adjacent to former trickling filter) ranging from 0.011 to 0.015 mg/L. The tapwater Regional Screening

Level (RSL) for arsenic is 0.000045 mg/L. The Maximum Contaminant Level (MCL) for arsenic is 0.01 mg/L. The background range of arsenic in groundwater is 0.0036 to 0.0177 mg/L as obtained from the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.6). The arsenic concentrations detected in site monitoring wells are within the background range for WFF.

ES.4.2 Pesticides

Pesticides were detected in soil, sludge, and sediment samples collected during the site investigations. Pesticides were not detected in surface water, wastewater, or groundwater samples.

A total of four pesticides were detected in multiple soil samples, including 4,4'-dichloro-diphenyl-dichloroethylene (DDD); 4,4'-dichloro-2,2-bis(p-chlorophenyl)ethylene (DDE); 4,4'-dichloro-diphenyl-trichloroethane (DDT); and dieldrin. 4,4’-DDD was detected at a range of 0.57 to 12 micrograms per kilogram (µg/kg); 4,4’-DDE was detected at a range of 0.41 to 14 µg/kg; 4,4’-DDT was detected at a range of 0.79 to 43 µg/kg; and dieldrin was detected at a range of 3.9 to 5.7 µg/kg. The detected pesticide concentrations in soil were significantly lower than the residential direct contact screening levels. A total of four pesticides were detected in the composite sludge samples, including 4,4'-DDD; 4,4'-DDE; 4,4'-DDT; and dieldrin. 4,4’-DDD was detected at a range of 110 to 1,200 µg/kg; 4,4’-DDE was detected at a range of 67 to 1,400 µg/kg; 4,4’-DDT was detected at a range of 110 to 1,100 µg/kg; and dieldrin was detected at a range of 5.6 to 9.9 µg/kg. The pesticide concentrations in sludge were significantly higher than the concentrations of pesticides detected in soils collected from the Site. However, no pesticides were detected in composite sludge samples at concentrations exceeding residential direct contact screening levels. Also, concentrations of 4,4’-DDE and 4,4’-DDT are within background concentration ranges presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24). A total of three pesticides (4,4'-DDD; 4,4'-DDE; and 4,4'-DDT) were detected in the sediment samples. 4,4’-DDD was detected at 2.7 µg/kg in one sample; 4,4’-DDE was detected at a range of 1.8 to 2.6 µg/kg; and 4,4’-DDT was detected at a range of 0.77 to 1.6 µg/kg. The concentrations of pesticides in sediment are within the range of concentrations

of pesticides detected in soil. These pesticides were not detected at concentrations exceeding human health or ecological-based screening levels.

ES.4.3 Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) were detected only in soil samples collected during the site investigations. PCBs were not detected in sludge, sediment, surface water, wastewater, or groundwater samples.

Analysis for PCBs revealed Aroclor-1260 at one composite soil sampling location in the former transformer area. Three electrical transformers were formerly located adjacent to the south side of the control/pump house. The detected concentrations of Aroclor-1260 were 190 and 290 µg/kg from the parent and duplicate samples at location SS1. The maximum concentrations exceeded the residential direct contact screening level of 220 µg/kg.

ES.4.4 Semivolatile Organic Compounds

Semivolatile organic compounds (SVOCs) were detected in soil, sludge, wastewater, and groundwater samples collected during the site investigations. SVOCs were not detected in sediment or surface water samples.

SVOCs were detected in 5 of the 26 soil samples collected at the Site with 6 SVOCs detected in the soil samples. SVOCs were detected at soil sampling locations in the 0 to 0.5, 0.5 to 2, and the 19 to 21 feet below ground surface (ft bgs) sampling depths at location MW2, the 0.5 to 2 ft bgs sampling depth at location MW4, the 0 to 0.5 ft bgs sampling depth at location MW6, and the 0 to 2 ft bgs sampling depth at location SS7. Of the six detected SVOCs, two polycyclic aromatic hydrocarbons (PAHs) (benzo(a)pyrene and dibenz(a,h)anthracene) were detected at concentrations exceeding their respective residential direct contact screening levels. Benzo(a)pyrene exceeded the residential direct contact screening level of 15 µg/kg at concentrations of 34 and 30 µg/kg at sampling location MW2 from the 0 to 0.5 ft bgs and 19 to 21 ft bgs sampling depths. The surface and subsurface soil concentrations were comparable at this sampling location. The background range for benzo(a)pyrene at WFF is 46 to 410 µg/kg as obtained from Table 4.24 of the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a). Dibenz(a,h,)anthracene concentrations for four soil samples, including the 0

to 0.5 ft bgs and 19 to 21 ft bgs samples from location MW2, the 0.5 to 2 ft bgs sample from location MW4, and the 0 to 0.5 ft bgs sample from location MW6, exceeded the residential direct contact screening level of 15 µg/kg. Dibenz(a,h)anthracene concentrations in soil ranged from 33 to 50 µg/kg. A background range is not available for dibenz(a,h)anthracene; however, the detected concentrations for the surface soils (depth of 0 to 2 feet bgs) are within the range of the other PAH constituent background concentration ranges presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a). The concentrations of SVOCs within surface soils at the Site may be attributable to background conditions at WFF. It should be noted that there is no available evidence of historical use of PAHs at the base, but petroleum compounds possibly containing the constituents of interest were commonly used for dust control and may be the source of PAHs in surface soils throughout WFF. The PAHs detected in the 19 to 21 ft bgs sample from MW2 may be the result of cross-contamination associated with the transport of contaminants with the drill rig auger from the surface zone to the subsurface soils because there is no identified source for contaminants at this depth at the site. If there was vertical migration of PAHs from the surface at this site, concentrations would have been expected to be significantly lower than the surface yet the PAH concentrations were similar for the surface samples and the subsurface soil from the 19 to 21 ft bgs depth.

Seventeen SVOCs were detected in the composite sludge samples. In general, the maximum SVOC concentrations were detected in the composite sludge sample collected from the primary settling tank (SL01). Of the 17 detected SVOCs, 6 PAHs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene, were detected at concentrations exceeding their respective residential direct contact screening levels. PAH concentrations in sludge at the Site are higher than the concentrations detected in soil at WFF as presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a). The extent of PAH contamination is limited to the sludge within the sludge drying beds and primary settling tank. The samples were all collected from 0 to 2 ft bgs; therefore, the depth of contamination is not known. The suspected depth of PAH contamination at the Site is limited to the depth of the sludge. The presence of PAHs in the walled settling tank and sludge drying beds is thought to be attributed to the treatment of industrial water received via sanitary sewers at the WWTP and not as a result of background conditions.

Three PAH constituents (fluoranthene, phenanthrene, and pyrene) were also detected in the wastewater sample collected from the primary settling tank. Each of the SVOCs was detected at concentrations exceeding screening levels. As previously discussed, PAHs were also detected in the sludge collected from the settling tank. Very little wastewater was observed at the settling tank location. It should be noted that the settling tank is not covered and is open to the outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank.

Five SVOCs, 2,4-dimethylphenol, 3 and 4 methylphenol, bis(2-ethylhexyl)phthalate, diethyl phthalate, and phenol, were detected in at least one groundwater sample. The SVOC constituents detected in soil and sludge at the Site included mainly PAH constituents. SVOCs in groundwater are not attributable to leaching from soil. Phthalate esters are commonly used in laboratories and the source of these detections may be attributable to laboratory contamination. None of the SVOCs were detected at concentrations exceeding their respective screening levels.

ES.4.5 Volatile Organic Compounds

Volatile organic compounds (VOCs) were detected in soil, sludge, sediment, surface water, wastewater, and groundwater samples collected during the site investigations.

Six VOCs, acetone, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), tetrachloroethene (PCE), toluene, and total xylenes, were detected in the soil samples. Analytical results reveal that none of these VOCs exceeded the residential and industrial direct contact screening levels. Acetone and MEK are common laboratory contaminants and were detected in several soil samples at low concentrations that may be attributable to laboratory contamination. PCE was detected at a concentration of 6.7 µg/kg in one of the 26 samples, SS9, collected from the sludge drying bed. PCE was also detected in the composite sludge sample (SL02) collected from the same sludge drying bed. PCE in soil is limited to the soil within the sludge drying bed. However, the concentrations in soil and sludge did not exceed residential direct contact screening levels. Toluene was detected in 2 of the 26 samples analyzed for this parameter at estimated concentrations below the detection limit in the 4 to 6 ft bgs sample collected at the MW3 location and the 0 to 0.5 ft bgs sample collected at the MW1 location. These concentrations were much lower than the residential screening level and are not indicative of a release at the Site. Similarly, total xylenes was detected in one of the 26 samples analyzed for this parameter in the

4 to 6 ft bgs sample collected at the MW3 location at a concentration well below the residential screening level. Toluene and total xylenes were not detected in any of the groundwater samples collected at the Site.

Seven VOCs, 1,1,2,2-tetrachloroethane, 2-hexanone, acetone, MEK, MIBK, PCE, and toluene, were detected in the composite sludge samples. Analytical results reveal that none of the detected VOCs exceeded the residential direct contact screening levels. Acetone and MEK are common laboratory contaminants and were detected in the composite sludge samples at low concentrations that may be attributable to laboratory contamination. PCE was detected in only one of the three composite sludge samples at SL02 at a concentration of 5.1 µg/kg. PCE in soil is limited to the soil and sludge within the sludge drying bed. However, the concentrations in soil and sludge did not exceed residential direct contact screening levels. Toluene was detected in 2 of the composite sludge samples at 6.2 µg/kg at SL02 and 1,200 µg/kg at SL01. The concentration of toluene was much higher in the sludge collected from within the primary settling tank. These concentrations did not exceed the residential direct contact soil screening level of 500,000 µg/kg. The extent of VOCs in the sludge is limited to the sludge located within the primary settling tank and sludge drying beds.

One VOC, chloromethane, was detected in the surface water at an estimated concentration of 0.53 µg/L. A surface water screening level is not available for chloromethane. Choromethane was not detected in any other media at the Site.

Two common laboratory contaminants, acetone and MEK, were detected in the sediment, wastewater, and groundwater samples. Analytical results reveal that neither VOC exceeded screening levels for sediment, wastewater, or groundwater. The presence of acetone and MEK in the samples may be attributable to laboratory contamination.

PCE was also detected at a concentration of 4.4 µg/L in groundwater collected from the upgradient monitoring well MW1. This concentration exceeds the tapwater RSL of 0.11 µg/L but is lower than the MCL of 5 µg/L. PCE has been infrequently detected in several soil and composite sludge samples at the Site within one of the sludge drying beds; however, based on the low concentrations noted (well below screening levels), groundwater should not be impacted by leaching of PCE for the drying beds.

ES.5 HUMAN HEALTH RISK ASSESSMENT

The Baseline Human Health Risk Assessment (BHHRA) was conducted to assess potential health impacts to humans at the Site considering both the current and future uses at the WFF. The objectives of the BHHRA were to estimate potential risk to people contacting site-related contaminants of potential concern (COPCs) under scenarios of current and plausible future land uses, to provide an analysis of risks and help determine the need for remedial action(s) at the Site, and to identify specific media and areas associated with unacceptable risk, as applicable.

ES.5.1 Exposure Scenarios

The following exposure scenarios were identified for assessment for the Site:

- *Current/future adolescent child trespasser* – The current land use for the Site is considered to be limited to the occasional trespasser due to the relative inaccessibility of this area. Current and future adolescent child trespassers (7 to 16 years old) who might walk through the site or wade in the intermittent streams that flow into Little Mosquito Creek were evaluated in the risk assessment. It was assumed that the trespasser would come into contact with site soil, residual sludge materials and wastewater associated with former WWTP activities, and off-site sediment and surface water in the intermittent stream adjacent to the Site. Soil exposure pathways include incidental soil ingestion, dermal contact with soil, and inhalation of outdoor dust. Sludge exposure pathways include incidental ingestion and dermal contact. Wastewater exposure includes dermal contact. Exposure pathways for sediment and surface water from the intermittent stream include incidental ingestion and dermal contact.

- *Future commercial/industrial workers* – Given the potential for future commercial development, a future industrial worker was evaluated. This receptor is assumed to spend the majority of the work day indoors with exposure to COPCs through incidental ingestion of soils that have become entrained in indoor dust, dermal contact with indoor dust, and inhalation of COPCs in indoor air resulting from dust resuspension and vapors. It is also assumed that a future site worker may come into contact with residual sludge materials (incidental ingestion and dermal contact) and dermal contact with wastewater associated with former WWTP activities.

- *Future construction workers* – Given the potential for future construction activities at the Site, a construction worker scenario was evaluated. A construction worker is defined as a worker who is involved with the construction of new buildings at the Site. The construction worker is assumed to be exposed to site soils, residual sludge materials and wastewater associated with former WWTP activities, and groundwater in construction trenches. Exposure pathways for the construction worker include incidental soil and sludge ingestion, dermal contact with soil and sludge, and

inhalation of dust emissions from soils. In addition, it is assumed that the construction worker may come in contact (dermal) with groundwater if it enters the construction trench during construction activities. It is also assumed that the construction worker would come into dermal contact with wastewater associated with former WWTP activities.

- *Hypothetical future child and adult residents* – Future residential development is highly unlikely given the current and likely future land use at the Site and the nature of the site activities and surroundings. However, a hypothetical future residential scenario was evaluated to determine an upper-bound on the level of risks posed by each site. Cancer risks were calculated for the age-adjusted resident and adult resident. Noncancer hazard quotients (HQs) were calculated for the adult resident and child resident. Soil exposure pathways include incidental soil ingestion, dermal contact with soil, inhalation of outdoor dust, and inhalation of indoor vapors. In addition, it is assumed that the aquifer will be developed into a potable water source for the hypothetical residents. Therefore, the groundwater ingestion, inhalation of VOCs while showering/bathing, and dermal contact with groundwater while bathing/showering exposure scenarios were evaluated. The resident might also wade in the intermittent streams that flow into Little Mosquito Creek. It is assumed that the resident would come into contact with off-site sediment and surface water in the intermittent stream adjacent to the Site. Exposure pathways for sediment and surface water from the intermittent stream include incidental ingestion and dermal contact.

ES.5.2 Risk Characterization Results

The results of the risk characterization are presented as follows:

- The risk estimates for the hypothetical future residents exceeded the high end of USEPA's risk management range of 1E-04 to 1E-06 cancer risk with incremental lifetime cancer risks (ILCRs) of 4E-04 for the age-adjusted adult and 3E-04 for the future adult resident.

- The risk estimates for the current/future adolescent child trespasser, future commercial/industrial worker, and future construction worker were all within USEPA's risk management range of 1E-04 to 1E-06 with ILCRs of 9E-07, 8E-06, and 8E-07, respectively.

- The future adult and child resident scenarios had hazard indices (HIs) greater than the noncancer HI management level of 1 with HIs of 3 and 8, respectively. HIs were dominated by groundwater ingestion in the future child and adult residents and soil ingestion for the future child resident.

- The current/future adolescent child trespasser, future commercial/industrial worker, and future construction worker scenarios had HIs that did not exceed the noncancer HI management level of 1 with HIs of 0.02, 0.4, and 1, respectively.

ES.5.3 Summary

In summary, the hypothetical future age-adjusted residential receptor exceeded the high end of USEPA's risk management range of 1E-04 to 1E-06 cancer risk, whereas the risk estimates for the current/future adolescent child trespasser, future commercial/industrial worker, and future construction worker were all within USEPA's risk management range of 1E-04 to 1E-06. The future adult and child resident scenarios had HIs greater than the noncancer HI management level of 1. HIs were dominated by groundwater ingestion in the future child and adult residents and, to a lesser extent, soil ingestion for all other HI exceedances. The future residential scenarios were included in the evaluation and established upper bound site risks and HIs for the Site. However, this future land/water use is not anticipated at the Site and this exposure scenario may overestimate actual future site risk. The Commonwealth of Virginia views all groundwater as a potentially potable resource, regardless of current or projected land use; therefore, the ingestion of groundwater scenario was evaluated in the BHHRA.

Contaminants of concern (COCs) that were determined for the Site and their potential impact on site risk were as follows:

- Arsenic in soil. Arsenic is a COC for soil for the future industrial worker, age-adjusted, and adult resident based on cancer risk estimates in excess of 1E-06. However, the site ranges and averages for arsenic were within the background range. Therefore, it appears arsenic risk is a function of natural levels in the soil.

- Arsenic in groundwater. Arsenic is a COC for groundwater for the age-adjusted, child, and adult resident scenarios. Arsenic risks slightly exceeded 1E-04 for the age-adjusted and adult residents. The arsenic HQ for the child resident was 3. All arsenic levels were within the background groundwater range. Arsenic was detected at only two of the seven wells, with concentrations ranging from 10 µg/L at MW5 (downgradient of the former WWTP structures) to 15 µg/L in the blind duplicate sample, MW20, at MW3 (former trickling filter location). Background arsenic concentrations range from 3.6 µg/L to 17.7 µg/L. Therefore, it appears arsenic risk is a function of natural levels in the groundwater.

- Benzo(a)pyrene in sludge. Benzo(a)pyrene is a COC for soil for the future industrial worker based on a cancer risk estimate in excess of 1E-06. Risk through incidental sludge ingestion and dermal contact with sludge were both at 1E-06. Given the conservatism of the assumptions for sludge exposure, the risks are not likely to be of concern and are within the management range of 1E-06 to 1E-04.

- PCE in groundwater. PCE is a COC for groundwater for the age-adjusted and adult resident scenarios. PCE posed risks in excess of 1E-05 through tap water ingestion and dermal contact while showering/bathing. These risks may be overestimates of true site risk because residential development and potable water use is not anticipated at the Site. Risks for PCE were within the management range of 1E-06 to 1E-04 that USEPA uses to manage site risks. It should be noted that PCE concentrations detected in groundwater were upgradient of the former WWTP structures and were below the USEPA MCL of 5 µg/L for drinking water.

- Cobalt in groundwater. Cobalt is a COC for groundwater for the child resident scenario. Cobalt posed an HQ of 2 in the child resident scenario. Cobalt was detected in three of the seven wells, with concentrations ranging from 3.9 µg/L at MW4 to 7.1 µg/L at MW6. However, cobalt is within the background range of 0.61 to 18.6 µg/L. Therefore, the slightly elevated HQ for exposure to cobalt containing groundwater is reflective of background exposure.

Based on the following uncertainties and conclusions, there is minimal human health risk identified for the Site related to site contaminants due to potential source areas:

- Although arsenic concentrations resulted in unacceptable risk for several scenarios, arsenic concentrations in soil and groundwater are consistent with background.

- The risk associated with benzo(a)pyrene in sludges was at the lower end of the risk management goal.

- Although there is apparently risk from groundwater consumption and contact because of PCE concentrations at one well, the impacted well is located upgradient of the source area at the Site, indicating the presence of PCE is likely related to an upgradient site. Additionally, the one detected PCE concentration is less than the USEPA MCL for drinking water.

- Although there is noncancer risk associated with cobalt in groundwater, similar to arsenic, the detected concentrations are consistent with background.

ES.6 SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT

The Screening Level Ecological Risk Assessment (SLERA) was performed to evaluate the potential ecological effects from exposure to the contaminants at the Site. This multi-pathway analysis was based on reasonable, protective assumptions about the potential for ecological receptors to be exposed and/or adversely affected by exposure to contaminants of potential ecological concern (COPECs). To establish the list of COPECs, the USEPA Region III Biological Technical Assessment Group (BTAG) Screening Benchmarks and other available

sources were used to screen soil, sludge, sediment, groundwater, and surface water for ecological risks. Food chain modeling was conducted for COPECs meeting the following criteria:

1. Constituents whose maximum concentration exceeded the ecological benchmark.
2. Constituents for which ecological benchmarks were not available.
3. Bioaccumulative compounds.

To determine whether fish potentially entering the upper portion of the unnamed tributary adjacent to the Site could be impacted by contaminated surface water or sediment, potential concentrations of COPECs in fish tissue were modeled for comparison with literature-based data on toxicological effects. The projected fish tissue concentration was modeled based on derivation of bioaccumulation factors (BAFs) using data previously collected on fish and sediment in Little Mosquito Creek during the ecological risk assessment of Sites 14 and 15 (WESTON, 2007c).

Specific results of the SLERA evaluation are summarized in the following subsections.

ES.6.1 Terrestrial Ecosystem

1. Maximum concentrations of metals in soil (aluminum, antimony, cadmium, iron, lead, manganese, mercury, vanadium, and zinc) as well as 4,4,-DDT, dieldrin, and Aroclor-1260 exceeded soil ecological benchmarks at the Site. Of these, antimony, lead, zinc, and dieldrin exceeded WFF background soil concentrations; however, lead concentrations are related to flaking lead-based paint on the exterior of the Pump House. All chemicals detected within background range were retained along with chemicals detected above background ranges, chemicals for which no benchmarks were available (cyanide, bis[2-ethylhexyl)phthalate, acetone, MEK, and MIBK), and bioaccumulative chemicals (mercury and DDT compounds) for analysis of potential food chain impacts using modeling. PCBs were not analyzed as part of the background evaluation, thus Aroclor-1260 was also retained for further assessment.

2. Food chain HQ modeling of COPECs indicated that the American robin and short-tailed shrew would be at risk from ingestion of soil invertebrates. Modeling using the NOAEL as a toxicological reference indicated risks from robins ingesting soil invertebrates contaminated with DDD, DDE, DDT, Aroclor-1260, aluminum, lead, mercury, vanadium, and zinc. Modeling using the LOAEL as a toxicological reference indicated risks from robins ingesting soil invertebrates contaminated with DDT, aluminum, lead, mercury, and zinc. Modeling using the NOAEL indicated risks to shrews from Aroclor-1260, antimony, lead and vanadium. Modeling using the LOAEL indicated risks to shrews from lead and vanadium. Concentrations of DDT, aluminum, mercury, and vanadium in soils at the WWTP are within range of the concentrations detected in the background investigation (TetraTech, 2004a).

Background ranges are not available for DDD, DDE, Aroclor-1260 and antimony. Concentrations of lead and zinc in site soil exceeded the background range but lead in soils is associated with flaking lead-based paint from the exterior of the Pump House.

3. The detected concentrations of several chemicals (i.e., Aroclor-1260, lead, and zinc) were elevated at one sample location, SS1. After excluding data from location SS1, the 95% UCLs were re-calculated for chemicals with an HQ greater than one for either the robin or short-tailed shrew—DDT compounds, aluminum, antimony, lead, mercury, vanadium, and zinc. Thus, removing soil contamination at location SS1 would reduce HQ for shrews to <1 using the LOAEL for all contaminants except aluminum and vanadium, which fall within background levels. Removing soil contamination at SS1 would reduce HQ from robins to <1 using the LOAEL for all contaminants except aluminum, lead, mercury, and zinc. Aluminum and mercury concentrations fall within background. Remaining lead concentrations would result in an HQ of 2.1 reduced from an HQ of 99. Remaining zinc concentrations would result in an HQ of 1.5 to robins reduced from 3.9. Given the low degree of risk over a limited geographic area, population impacts to these species are unlikely.

4. Remaining receptors (red fox, red-tailed hawk) modeled did not show evidence of potential ecological risks from soil.

5. Three composite sludge samples collected from an area contained within the former concrete infrastructure, but open to the air, exhibited maximum concentrations of the metals aluminum, antimony, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, vanadium and zinc; and dieldrin; DDT compounds; PAHs; and toluene that exceed ecological benchmarks. Concentrations of several metals (e.g., lead at 530 mg/kg, mercury at 28 mg/kg, silver at 130 mg/kg and zinc at 680 mg/kg) exceeded background concentrations. PAH concentrations were also detected in excess of background concentrations. No further ecological evaluation was conducted since the area is small and contained, but if the sludge beds were used as primary habitat for ecological receptors or if a likelihood of release could occur in the future which could result in ecological risk, potential remedial alternatives for the beds should be evaluated as part of the FFS.

ES.6.1 Aquatic Ecosystem

1. Concentrations of aluminum, barium, iron, and manganese in the one surface water sample collected from within the unnamed tributary of Little Mosquito Creek exceeded their respective Region III BTAG freshwater ecological benchmarks and thus represent a potential contamination source to Little Mosquito Creek. However, prior surface water data collected as part of the Sites 14 and 15 RI did not indicate exceedances of these metals in Little Mosquito Creek; thus, there is little likelihood of impact within the estuarine ecosystem of the creek.

2. Groundwater concentrations of metals (aluminum, barium, iron, and manganese) collected from the three wells closest to the unnamed tributary (MW4, MW6, and MW7) exceeded BTAG Region III freshwater surface water screening benchmarks.

However, groundwater concentrations fell within the range of background groundwater concentrations detected in the background investigation (TetraTech, 2004a). As a result, it is unlikely that any surface water impacts may be attributable to groundwater from former WWTP activities.

3. No analytes were detected in sediment within the unnamed tributary to Little Mosquito Creek at concentrations that exceeded ecological screening benchmarks.

4. Modeling undertaken to evaluate whether fish potentially entering the upper portion of the unnamed tributary to Little Mosquito Creek could be at risk indicated that modeled tissue concentrations would not exceed toxicological effects levels reported in Jarvinen and Ankley (1999). Food chain HQ modeling indicated that no HQs greater than 1.0 were noted for any receptors evaluated.

ES.7 RECOMMENDATIONS

The recommendations for the Site are based on the nature and extent of contamination, fate and transport characteristics, and the results of the BHHRA and SLERA. A focused feasibility study (FFS) is recommended for the Site, which would include the development and analysis of remedial alternatives to address a potential release of the contained sludge. A brief summary of the results that are the basis for the FFS recommendation is provided in the following paragraphs.

Food chain modeling in the SLERA indicated that the American robin and/or the short-tailed shrew would be at risk from ingestion of soil invertebrates contaminated with DDT compounds, Aroclor-1260, aluminum, antimony, lead, mercury, vanadium, and zinc at the Site. Elevated HQs for several chemicals (i.e., Aroclor-1260, lead, and zinc) may be attributed to chemical concentrations at one sample location, SS1. Elevated chemical concentrations at location SS1 may be considered data outliers. Composite sample location SS1 is adjacent to the former transformer area where three electrical transformers were located adjacent to the south side of the control/pump house. The 95% UCL values were biased high for Aroclor-1260, lead, and zinc due to the elevated concentrations present at sample location SS1. When the models were re-calculated excluding that one location, HQs for lead and zinc were significantly decreased. It should be noted that Aroclor-1260 was not detected at any other sampling locations at the Site and the lead is associated with lead-based paint flaking from the exterior of the Pump House.

Three composite sludge samples collected in an area within the former concrete infrastructure but open to the air exhibited maximum concentrations of the metals aluminum, antimony, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, vanadium, and zinc, and dieldrin, DDT compounds, PAHs, and toluene that exceed ecological benchmarks. Concentrations of several metals (e.g., lead at 530 mg/kg, mercury at 28 mg/kg, silver at 130 mg/kg, and zinc at 680 mg/kg) exceeded background concentrations. PAH concentrations were also detected in excess of background concentrations. No further ecological evaluation was conducted since the area is small and contained, but if the sludge beds were used as primary habitat for ecological receptors or if a likelihood of release could occur in the future which could result in ecological risk, potential remedial alternatives for the beds should be evaluated as part of the FFS.

1. INTRODUCTION

Weston Solutions, Inc. (WESTON®) has prepared this Remedial Investigation (RI) Report for the United States Army Corps of Engineers (USACE), Baltimore District (CENAB) and Norfolk District (CENAO) under Contract W91236-08-D-0050, Delivery Order No. 0001. This RI Report presents the results from site investigations conducted at the former Wastewater Treatment Plant (WWTP) (the Site), located at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center Wallops Flight Facility (WFF), in Accomack County, Virginia. Historically, the Site also been referred to as Site 1 – Old (or Abandoned) WWTP. WESTON has prepared this report in accordance with the Final Work Plan, finalized in November 2009 (WESTON, 2009).

Between 19 and 23 February 2007, WESTON conducted the RI field investigation for CENAO under Contract No. W91236-05-D-0036, Delivery Order No. 0008. This RI Report also includes a summary of previous sampling events conducted at the Site by various parties. The RI was completed in cooperation with the USACE, the U.S. Environmental Protection Agency (USEPA) Region III, the Commonwealth of Virginia Department of Environmental Quality (VDEQ), and NASA in accordance with the applicable federal, state, and local guidelines as required under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Investigations conducted at the Site are part of the ongoing Formerly Used Defense Site (FUDS) Program to identify and remediate areas within a FUDS of hazardous, toxic, and radioactive waste (HTRW) and ordnance-related hazards left during previous occupation by the Department of Defense (DoD).

This RI Report was prepared in accordance with the USEPA *Guidance for Conducting Remedial Investigations and Feasibility Studies under the CERCLA, Interim Final* (Guidance Document) (USEPA, 1988).

1.1 REMEDIAL INVESTIGATION OBJECTIVES AND SCOPE

The purpose of this RI Report is to present and evaluate data gathered during the RI field investigation. The objective of the RI is to evaluate the source areas and the extent of soil,

sediment, groundwater, and surface water contamination, and to assess potential impacts to human health and the environment. The specific objectives of the RI are:

- **Extent of Contamination**: To determine the areal and vertical extent of contamination, particularly at potential exposure points.
- **Contaminant Fate and Transport**: To determine the rate of migration and the fate of contaminants through various migration pathways.
- **Ecological Assessment**: To characterize and estimate the potential for adverse ecological effects associated with site contaminants.
- **Baseline Risk Assessment**: To evaluate the potential human health and environmental risks associated with the site under a no action alternative (i.e., in the absence of remedial action).

1.2 REPORT ORGANIZATION

This report is divided into the following sections:

- **Section 1—Introduction**: A brief overview of the objective and scope of the RI.
- **Section 2—Facility Background and History**: The facility description, history, the surrounding land use, demographics, climate, regional soils, surface water features, area drainage and topography, regional geology and hydrogeology, and groundwater use.
- **Section 3—Former Wastewater Treatment Plant (WWTP) Background and History**: The site description, history, a summary of results from previous investigations, conceptual site model (CSM), and descriptions of the site geology, hydrogeology, and hydrology.
- **Section 4—Environmental Investigation Procedures**: Procedures used in the RI field investigation.
- **Section 5—Nature and Extent of Contamination**: The nature and extent of contamination by each environmental medium.
- **Section 6—Contaminant Fate and Transport**: The contaminant migration pathways, environmental fate, and rate of migration.
- **Section 7—Baseline Human Health Risk Assessment**: An evaluation of the potential risks to human health and the environment in the absence of remedial actions.
- **Section 8—Ecological Risk Assessment**: An evaluation of potential risks to the ecological community from site-related contaminants.
- **Section 9—Summary and Conclusions**: The conclusions of the RI and recommendations for additional work.
- **Section 10—References**: Lists all reference sources used in the RI report.

The tables and figures are referenced by section numbers and are presented after Section 10. The appendices follow the tables and figures.

2. FACILITY BACKGROUND AND HISTORY

2.1 FACILITY DESCRIPTION

2.1.1 Facility Location

WFF is located in Accomack County on the eastern shore of the Commonwealth of Virginia, and comprises three separate areas: Main Base, Wallops Island, and Wallops Mainland. A WFF vicinity map is provided in **Figure 2-1.** The study area (Main Base) is situated on the Atlantic Coast of the Delmarva Peninsula, approximately 5 miles south of the Maryland/Virginia state boundary, west of Chincoteague Island. Wallops Island and Wallops Mainland are located approximately 7.5 miles south-southeast of the Main Base. The Main Base comprises approximately 2,230 acres, and is bordered on the east by extensive marshland, swales, and tidal creeks, including Cedar Creek and Simoneaston Bay, which drain into Chincoteague Bay and Chincoteague Inlet. The Main Base is bordered to the north and west by Little Mosquito Creek. State Routes 175 and 798 form the southern and southeastern borders of the Main Base. A study area location map depicting the location of WWTP within the Main Base is presented in **Figure 2-2.**

2.1.2 Facility History

The Department of the Navy acquired the WFF area in 1942 through condemnation in order to establish the Chincoteague Naval Auxiliary Air Station (CNAAS) as a training facility for World War II naval aviators. Prior to being developed for the CNAAS, this area principally consisted of farmland and marshes. Aerial photographs indicate that by 1943, various buildings and three runways were complete. Over the years, the mission of the facility changed numerous times. The three runways were modified and extended as needed with the changing mission. This resulted in the construction, expansion, and occasional abandonment of numerous associated structures and roadways. On 26 January 1946, the Naval Aviation Ordnance Test Station was established. In 1958, the National Aeronautics and Space Act established NASA. Although the Navy decided to shut down the CNAAS, the facility continued to operate until 1959, when it was officially closed. NASA took custody of the facility on 30 June 1959, along with the Wallops Mainland area. NASA leased the property from May 1959 until the finalization of the transfer from the

Navy in June 1961. From 1959 to 1974, the area consisting of the Main Base, Wallops Island, and Wallops Mainland was known as Wallops Station. During this period, activities in the study area were conducted in support of the Civilian Space Program. In 1975, the facility name was changed to Wallops Flight Center. Activities were expanded to include studies of ocean processes. Noise reduction studies of aircraft on runways were conducted on the Main Base at the Wallops Research Airport. In July 1975, NASA excessed approximately 397 acres of land along the eastern extent of the Main Base to the U.S. Fish and Wildlife Service (USFWS) to establish the Wallops Island National Wildlife Refuge. In October 1981, Wallops Flight Center was consolidated with the Goddard Space Flight Center in Maryland, and the name was officially changed to WFF. Since then, WFF has become NASA's primary facility for suborbital programs (NASA, Undated; Occu-Health, 1999; Science Applications International Corporation [SAIC], 2003).

2.2 FACILITY ENVIRONMENTAL INVESTIGATION HISTORY

Formal environmental investigations on a facility-wide basis began at WFF around 1985 and are summarized in the following subsections.

2.2.1 Fred C. Hart Associates, Inc. - Environmental Audit (March 1986)

In March 1985, Fred C. Hart Associates, Inc. initiated an environmental audit of WFF for NASA. The purpose of the audit was to determine the status of compliance with federal, state, local, and NASA environmental regulations pertaining to a variety of areas, including, but not limited to, hazardous waste, solid waste, air quality, wastewater discharges, drinking water supply, and CERCLA (Fred C. Hart, 1986). The audit findings identified major and minor regulatory violations, pending regulations that may affect WFF, and potential environmental liabilities and concerns at WFF.

2.2.2 Ebasco Services, Inc. – Preliminary Assessment (April 1988) and Site Inspection (January 1990)

In February 1988, WFF was placed on USEPA's Federal Facility Hazardous Waste Compliance Docket. As a result of being placed on the docket, NASA was required under CERCLA to submit to USEPA information necessary to assess whether WFF should be placed on the

National Priorities List (NPL). Ebasco Services, Inc. (Ebasco), on behalf of NASA, completed a Preliminary Assessment (PA) Report in 1988 and a Site Inspection (SI) Report in 1990 in compliance with the CERCLA requirements. The PA Report identified six areas at WFF where the release of hazardous materials may have occurred. Of the six areas, four were investigated further, including sample collection and analysis, as part of the 1990 SI Report (Ebasco, 1988; Ebasco, 1990a).

2.2.3 Ebasco Services, Inc. – Environmental Sites Survey (November 1990)

In November 1990, Ebasco, on behalf of NASA, completed an Environmental Sites Survey (ESS) of WFF. The ESS resulted in the identification of 14 areas/sites located throughout WFF considered potential sites. Nine of these sites were located at the Main Base, and the other five were located on Wallops Island (Ebasco, 1990b; Metcalf & Eddy, Inc. [M&E], 1996).

2.2.4 Metcalf & Eddy, Inc. – Revision of Site Investigation (August 1992)

In August 1992, in response to requests for additional information from USEPA under CERCLA, M&E completed a Revision of Site Investigation Report. The Revision of Site Investigation Report was conducted for NASA and provided additional information related to the six areas of concern identified in the 1988 PA Report, four of which were later further investigated as part of the 1990 SI Report. Limited field investigations and sampling efforts were completed in developing the 1992 Revision of Site Investigation Report (M&E, 1992).

2.2.5 Versar, Inc. – Draft RCRA Facility Assessment (November 1992)

In November 1992, Versar, Inc. (Versar), in partnership with CDM (formerly Camp Dresser & McKee) Federal Programs Corporation, completed a Draft Resource Conservation and Recovery Act (RCRA) Facility Assessment/Environmental Priorities Initiative (RFA/EPI) for USEPA Region 3. The RFA/EPI identified 4 Solid Waste Management Units (SWMU) and 11 Areas of Concern (AOCs) at WFF Main Base (Versar, 1992).

2.2.6 Metcalf & Eddy, Inc. – Site Inspection for Miscellaneous Sites (March 1993 – March 1996)

In 1993, M&E initiated an SI project on behalf of NASA that included investigation of the 14 separate sites identified in the 1990 Ebasco ESS as being potentially affected by past activities. In 1993, one of the 14 sites was split into two separate sites, resulting in a total of 15 sites. Due to the magnitude of the project, the SI was conducted in phases over several years. The SI project detailed the investigation activities and findings for each site. In general, the investigation activities included the performance of background document reviews; a magnetometer study and a soil gas survey; soil, groundwater, surface water, and sediment sampling; and the preparation of preliminary Hazard Ranking System (HRS) scores (M&E, 1996; TetraTech NUS, 2004b).

As a result of the SI, individual sites were prioritized for additional studies and evaluation. Since 1993, sites have been investigated on individual tracks based on the priority and potential hazard identified. Actions conducted at these sites include supplemental investigations, sampling programs, removal actions, product recovery, RIs, feasibility studies (FSs), remediation, and closeout. In addition to the formal facility-wide environmental assessment and site inspection process, NASA has conducted other environmental assessments and cleanup programs at areas on both the Main Base and Wallops Island. VDEQ and USEPA have provided monitoring and regulatory support throughout this process (TetraTech NUS, 2004b).

The WWTP was originally identified as a site of concern in the 1990 Ebasco ESS. Section 3.0 of this RI Report provides a more detailed history of the WWTP, summarizes the analytical findings from previous investigations, and reviews the planned RI activities.

2.3 FACILITY ENVIRONMENTAL SETTING

2.3.1 Facility Topography and Drainage

WFF is located on the eastern shore of the Delmarva Peninsula and is relatively flat with no major topographic features. Numerous inlets, marshes, bays, creeks, and tidal estuaries exist throughout the WFF area.

The Main Base is relatively flat with a reported highest point of elevation of about 40 feet above mean sea level (msl). The area is bordered to the east by extensive marshland and creeks that

drain to the Chincoteague Bay and inlet. Little Mosquito Creek, which eventually also flows east into the inlet and to the Atlantic Ocean, borders the Main Base to the north and west. The runway complex covers a large portion of the Main Base and forms a flat plateau-like feature that covers the majority of the highest elevations at the Main Base. Drainage from and across the Main Base is through natural and man-made drainage structures. Drainage within the industrialized portions of the Main Base is controlled and diverted by stormwater collection and conveyance systems. In addition, portions of the base have been isolated from surface water drainage areas by the construction of berms and higher elevation structures (Occu-Health, 1999).

The natural drainage patterns for the southwest, west, and northern portions of the Main Base are towards Little Mosquito Creek and its tributaries. The eastern, southeastern, and southern portions of the Main Base drain towards a series of marshlands, creeks, and bays that lead to Chincoteague Bay and the Atlantic Ocean. A site location map illustrating topography and area features of the Main Base is provided in **Figure 2-3.**

2.3.2 Facility Soils

Soils at WFF are Atlantic Coastal Plain soils that are typically nearly level, very deep, and well drained. Soils within the Main Base area are predominately Bojac fine sandy loam. In general, the upland, terrace, and level portions of the Main Base are also comprised of Bojac fine sandy loam. This soil type is reported to be a low organic content, acidic, well-drained soil with moderately rapid permeability. The more steeply sloped areas found around the perimeter of the Main Base and the slopes leading from the level areas to the marshlands are predominantly classified as Molena loamy sand. These soils have properties similar to the Bojac series but reportedly have a higher permeability, a higher percentage of coarser sands, and slightly more acidic content. Other soil types that appear to be present include silty bands and mucky sandy loam (Chincoteague and Polawana series) which are present within the marshland areas around the extreme perimeter of the Main Base (United States Department of Agriculture [USDA], 1994).

2.3.3 Area General Hydrogeology

WFF is located in the Atlantic Coastal Plain Physiographic Province and is underlain by a thick sequence of approximately 7,000 feet of unconsolidated sediments that overlie igneous and metamorphic crystalline bedrock. The sediments range in age from recent to Cretaceous and generally consist of unconsolidated alternating series of sand, silt, clay, and gravel. The regional dip of the individual geologic units is southeast (Occu-Health, 1999; TetraTech NUS, 2004b).

The water-bearing formations within the WFF area consist of sedimentary units ranging in age from Cretaceous to Quaternary. The two uppermost stratigraphic units, the Yorktown Formation and the overlying Columbia Group, are the most important water supply formations for agricultural, domestic, public, and industrial uses in the area. The Yorktown Formation is the uppermost unit in the Chesapeake Group. The formation consists of fine-to-coarse, greenish gray, glauconitic quartz sand, which is clayey, silty, and in part, shelly. The formation occurs at depths of 60 to 140 feet below ground surface (ft bgs) in Accomack County. The Columbia Group sediments represent the Holocene and Pleistocene epochs. Lithology of the Columbia Group consist of sand, sandy clay, and minor amounts of gravel deposited during the sea level fluctuations in the Pleistocene epoch (SAIC, 2003).

The Virginia State Water Control Board identified four major aquifers on the eastern shore of Virginia: the Holocene-Pleistocene aquifer (Columbia Group) and the three separate units of Miocene aquifers, including the lower part of the Yorktown-Eastover aquifer (the part in the Eastover Formation that corresponds in age to the late uppermost Miocene epoch), the St. Marys-Choptank aquifer (Choptank Formation), and the Chickohominy-Piney Point aquifer (Old Church Formation). The water table aquifer, known as the Columbia aquifer, is unconfined and typically overlain by wind-deposited beach sands, silts, and gravel. The aquifer occurs between depths of 5 and 60 ft bgs. The water table ranges from depths of 0 to 30 ft bgs (Occu-Health, 1999; SAIC, 2003; TetraTech NUS, 2004b).

The top of the shallowest confined Miocene aquifer is the Pliocene-aged portion of the Yorktown-Eastover aquifer in the Yorktown Formation. This zone continues down into upper Miocene-aged sediments of the Eastover Formations found at depths of approximately 100 ft

bgs. It is separated from the overlying Columbia aquifer by a 20- to 30-foot confining layer (aquitard) of clay and silt (Occu-Health, 1999).

In general, the water table (Columbia) aquifer on the Delmarva Peninsula is recharged by surface waters or infiltration of precipitation. The confined aquifers are recharged by the same process. The annual average rainfall for WFF is 36.8 inches, with an estimated annual net precipitation of 14 inches. Aquifer tests conducted on shallow wells at the Main Base (Versar, 2001) indicated transmissivity values ranging from a low of 0.000919 square feet per minute (ft^2/min) or 10 gallons per day per foot (gpd/ft) to a high of 0.16 ft^2/min or 1,764 gpd/ft for the unconfined aquifer. Aquifer tests estimated hydraulic conductivity values ranging from approximately 80 to 200 feet per day (ft/day) and specific yield and storativity values from 0.01 to 0.13. These values are typical of unconfined aquifers with mainly sand units, and demonstrate the ease of recharge from surface water and/or precipitation. The tests also indicated there was not significant vertical leakage through the aquitard below the unconfined aquifer. The confined aquifers are believed to be recharged laterally from areas with greater vertical leakages. Aquifer tests performed on the upper and middle Miocene aquifers estimated a transmissivity range of 8,500 to 14,500 gpd/ft, a storativity of approximately 0.003, and a vertical leakage rate of 0.0352 ft/day for the upper aquifer. The middle Miocene aquifer indicated a transmissivity of 4,000 gpd/ft and a storativity range of 0.002 to 0.0002 (Occu-Health, 1999).

On the Main Base, groundwater flow direction in the shallow Columbia aquifer is generally east and north toward nearby creeks and towards the marsh area that separates Chincoteague Island from the mainland.

Based on groundwater investigations conducted to date at the Main Base, groundwater within the Columbia aquifer occurs under unconfined conditions between depths of about 5 to 60 ft bgs. Groundwater flow directions within the Columbia Group throughout the base are variable, but are consistent with the flow directions that are typical or expected for a water table or unconfined aquifer. Thus, the topography of the water table is a generally subdued reflection of the surface topography. WFF is essentially a peninsula that is surrounded on three sides by surface water bodies that reside at an elevation of sea level and function as discharge points for groundwater, and groundwater generally flows from the base towards these surface water bodies.

2.3.4 Area Water Supplies

Groundwater is the only source for drinking, agricultural, and process water within the WFF area. This is generally true for a large portion of the eastern shore of Virginia. Because of the reliance on groundwater and the coastal proximity of the area, the Commonwealth of Virginia has declared the eastern shore of Virginia a Critical Groundwater Area. The withdrawal of groundwater from the area, including Accomack County, is controlled through the issuance of withdrawal permits under the Virginia Groundwater Management Act. The State Water Control Board, in consultation with local planning commissions and the Department of Health, administers the permitting program and allocates groundwater withdrawal volumes as part of the permitting process. Groundwater withdrawal permits are required for withdrawals that equal or exceed 10,000 gallons per day (gpd) or 300,000 gallons per month (gpm). Withdrawals below the regulated amount, such as a typical single-family home withdrawal, are not permitted (TetraTech NUS, 2004b).

WFF operates and maintains its own permitted water supply system that includes five wells (WW01-WW05) actively used to withdraw water from the Yorktown Formation. The closest of these wells to the WWTP site (WW04) is approximately 0.5 miles to the south. The locations of the WFF Main Base potable supply wells are illustrated in **Figure 2-4**. In addition, the Town of Chincoteague operates eight public water supply (PWS) wells located along the eastern boundary of the Main Base property. The closest PWS well to the WWTP site is located approximately 0.75 mile to the west (see well TOC_4, **Figure 2-4**). Three of the Town of Chincoteague wells are shallow wells drilled into the Columbia aquifer. These three Town of Chincoteague Columbia aquifer wells are periodically sampled in accordance with monitoring program requirements. The remaining five Town of Chincoteague wells are deeper wells installed in the Yorktown aquifer (TetraTech NUS, 2004b). These five wells are sampled and monitored on a regular basis under the drinking water program.

2.3.5 Demographics/Land Use

WFF is located in a rural area where year-round population densities are relatively low for neighboring areas. Chincoteague Island, which lies approximately 5 miles from the Main Base, is the largest, most densely populated area near WFF, and has a resident population of

approximately 3,600 people in the Town of Chincoteague. Area populations are seasonal and fluctuate, and can reach up to 15,000 in the summer months. In the summer months, the population expands due to tourists visiting the nature reserves and beaches of Assateague Island and special events such as the carnival and the pony roundup, sponsored by the Chincoteague Volunteer Fire Department each July. As a result, businesses in the Chincoteague area are generally targeted to the seasonal tourist industry, with the exception of fishing.

The Main Base contains offices, tracking facilities, a range control center, a rocket and fuel storage depot, shops, housing, and the airfield. The nearest off-site private home is located approximately 1,000 feet west of the Main Gate. Farms and residences are located north across Little Mosquito Creek. An Accomack County landfill (closed) is located to the south of State Route 798, approximately 1,000 feet west of the Main Gate. The nearest commercial business (a small store) is located southwest of the Main Base, at the intersection of State Routes 175 and 679.

2.3.6 Climate

The climate at WFF is humid with hot summers, and without a distinct dry season. From October through March, the weather at the facility is dominated by continental air masses with relatively low moisture content. From April through September, the air is more maritime with high moisture content at low levels due to circulation of the Bermuda High cell that reaches its peak during late summer.

The average annual precipitation is 36.8 inches. The average mean temperature is 56 degrees Fahrenheit (ºF), with a mean maximum of 64 ºF and mean minimum of 48 ºF. The prevailing wind direction is southerly during the summer and northwesterly during the winter. The average wind speed is 10 knots.

The cloud cover varies from month to month, being at a minimum in August and at a maximum in January. From June through November, WFF and surrounding areas are subject to severe thunderstorms, high tides, heavy rains, and phenomena generally associated with the hurricane season. From December through March, the area is subject to cold fronts and occasional associated snowstorms, and sleet.

2.3.7 Ecology

The National Wetlands Inventory (NWI) map overlay for the Chincoteague, Virginia/Maryland United States Geological Survey (USGS) topographic quadrangle is based on photo-interpretation of high altitude, black and white, vertical aerial photography. The NWI map and the Accomack County Wetland Maps for the area of WFF indicate that both tidal and non-tidal wetlands occur at the site. The three predominant types of wetlands at WFF are marine, estuarine, and palustrine. The NWI map indicates many large areas of estuarine wetlands adjacent to the Main Base, with several smaller parcels of palustrine forested wetlands. Some of the threatened and endangered species that may utilize the site include the bald eagle, gull-billed tern, and upland sandpiper.

3. FORMER WASTEWATER TREATMENT PLANT (WWTP) BACKGROUND AND HISTORY

3.1 WWTP DESCRIPTION

3.1.1 Facility Location

The former WWTP is located northwest of the intersection of Runway 17-35 and the abandoned taxiway that parallels Runway 10-28 in the north-central portion of the Main Base (see **Figures 2-2 and 2-3)**. The area surrounding the WWTP comprises approximately 0.8 acre, and includes mounded material identified in previous investigations as possible residual sludge piles located approximately 150 to 200 feet north of the WWTP structures. In addition, two sludge drying beds thought to contain residual sludge materials associated with former WWTP activities are located in the eastern portion of the WWTP. A site layout map and a detailed components map illustrating the WWTP components are provided in **Figures 3-1 and 3-2**.

The WWTP consists of, and is surrounded by, dense vegetative cover including woodland underbrush and young trees. Prior to initiation of Time Critical Removal Action (TCRA) activities in 2006 (discussed below), NASA personnel cleared trees and underbrush to gain vehicle/heavy equipment access to the Site and established a temporary gravel access road in the western portion of the WWTP area. The WWTP is no longer active and the structures are currently partially degraded and overgrown with vegetation. NASA abandoned the facility upon obtaining custody of the land and has not used the WWTP for any purpose since the transfer of the facility ownership in 1959.

A preliminary potential responsible party (PRP) analysis performed by NASA in 2001 concluded that the DoD and USACE should assume responsibility for the WWTP and the surrounding area under the FUDS program (SAIC, 2003). USACE has subsequently assumed responsibility for the environmental investigations at the WWTP.

3.1.2 Facility Operational History

The WWTP, which was constructed by the Navy in the early 1940s, consists of three cinder-block structures and a trickling filter (removed in 2006). The cinder-block structures include a control/pump house, process tanks (chlorine reaction tanks, primary and final settling tanks, and

sludge digestion tank), and sludge drying beds. WWTP operations are inferred from the layout of the system because historic documentation of WWTP processes is not available. With the exception of the control/pump house, the system was controlled by gravity flow. Three electrical transformers were formerly located adjacent to the south side of the control/pump house. A trickling filter, a 24-foot diameter concrete basin 4 feet in depth, was removed in May 2006 as part of the TCRA (discussed in greater detail in Section 3.2.7).

Influent to the WWTP flowed by gravity through a 10-inch diameter sewer line entering the valve house and then entering the comminutor (grinding process) building, after which the flow was routed to the primary settling tank. As the primary settling tank filled, solids settled to the bottom, and effluent from the primary process tank flowed by gravity from the top of the tank to the trickling filter. The trickling filter acted as an aerator and biofilter, spraying wastewater over rock, and the water then drained to a wet well in the control/pump house. A pump station in the control/pump house returned the wastewater to the primary and final settling tanks. As a result, wastewater from the trickling filter was re-circulated through the primary settling tank or final settling tank to aid in the removal of the suspended solids. Once the effluent from the process tanks had undergone significant treatment in the trickling filter process, the effluent was treated by chlorine reaction and discharged to an intermittent stream on the north side of the Site.

Sludge from the process tanks was sent to the digester from the lower portion of each process tank, before being placed in the sludge drying beds. As necessary, the sludge was removed from the drying beds, and was suspected to have been piled in the northern portion of the Site. It is also noted that an overflow line was present at the control/pump house that may have been utilized on occasion, when the pumping system was not functional. The overflow pipe and its outfall were constructed of terracotta tile, based on site observations and consistent with the age of the WWTP. The overflow pipe's outfall could not be located during the TCRA. However, during the Site Investigation field activities, the pipe was located approximately 2 feet below grade and completely buried. The location of the suspected effluent outfall is shown on **Figure 3-1.**

3.2 WWTP ENVIRONMENTAL INVESTIGATION HISTORY

3.2.1 Ebasco Services, Inc. – Environmental Sites Survey, Wallops Flight Facility (November 1990)

In November 1990, on behalf of NASA, Ebasco prepared an ESS Report that provided an overview of sites at WFF known to have impacted the environment, the investigation status of the sites, and identification of additional sites for future investigation. The WWTP was identified as 1 of 14 sites that had not been investigated prior to completion of the report and indicated that no information currently was available for the site. As a result, the ESS concluded that additional investigation at the WWTP was warranted (M&E, 1996).

3.2.2 Metcalf & Eddy, Inc. – Site Inspection for Miscellaneous Sites at Wallops Flight Facility, Preliminary Report #1 (June 1993)

In July 1993, as part of the multi-phase SI investigation of 15 separate sites at WFF, M&E prepared a preliminary report for NASA that presented the findings of an unexploded ordnance (UXO)/magnetometer survey (Phase I of the SI) conducted at 9 of the 15 sites, including the WWTP (M&E, 1996). The field investigation for the UXO/magnetometer survey was completed between 1 and 11 March 1993. The preliminary report summarizes structures observed at the WWTP and references a NASA memorandum regarding the potential past use of the WWTP area as an ordnance disposal site. During the UXO/magnetometer survey, three areas (A, B, and C) were investigated to determine the presence of buried tanks, process piping, and UXO. The results of the UXO/magnetometer survey are summarized below:

- Area A - Immediate area surrounding the WW'I'P structures (10 possible subsurface contacts located).
- Area B - Possible sludge disposal area (30 subsurface contacts located).
- Area C – Possible ordnance disposal area in a drainage swale (50 subsurface contacts located).

The subsurface objects were not identified during the investigation, and all subsurface contacts were characterized as less than 2 feet in diameter. Based on the results of the UXO/magnetometer survey, the recommendation was made to record Area C as a possible ordnance disposal area on the Facilities Master Plan. M&E also concluded that additional

subsurface investigations (a UXO survey) should be conducted prior to any intrusive activity at this site.

3.2.3 Metcalf & Eddy, Inc. – Site Inspection for Miscellaneous Sites at Wallops Flight Facility, Preliminary Report #2 (June 1993)

In conjunction with the UXO/magnetometer survey, M&E submitted to NASA a preliminary report presenting the findings of a soil gas survey (Phase II of the SI) conducted at 11 of the 15 sites, including the WWTP (M&E, 1996). The report states that six soil gas samples (WFF1-SG1 through WFF1-SG6) were collected during the March 1993 soil gas survey in the vicinity of the WWTP. Soil gas sampling was not performed in areas of suspected UXO due to the potential safety hazard.

Field investigation screening procedures using a photoionization detector (PID) indicated that volatile organic compound (VOC) concentrations of 7 and 200 parts per million (ppm) were present in the subsurface soil at soil gas sample locations WFF1-SG1 and WFF1-SG6, respectively. The soil gas survey report recommended collection of subsurface soil samples at three locations: soil gas sample location WFF1-SG2, the sludge piles located north of WFF1-SG2, and soil gas sample location WFF1-SG6. The report indicated that additional evaluation of the WWTP would be conducted by USACE.

3.2.4 Metcalf & Eddy, Inc. – Site Inspection Report for Miscellaneous Sites at Wallops Flight Facility (March 1996)

Between June 1993 and September 1995, as part of the multi-phase SI investigation of 15 separate sites at WFF, M&E conducted Phases III through V of the SI. The WWTP was included in the SI evaluation based on a 1988 NASA memorandum to USACE that indicated that a drainage swale located near the WWTP potentially had been used as an ordnance disposal site. The SI Report reiterates the findings of the 1993 preliminary reports that no evidence of ordnance was noted during the initial phases of the investigation. However, NASA discontinued field investigation of the WWTP in 1993 after completion of the UXO/magnetometer and soil gas surveys because the Site was associated with former Navy activities (prior to 1959) and, therefore, falls under the jurisdiction of USACE FUDS Program (SAIC, 2003).

3.2.5 Earth Tech, Inc. – Letter Report (January 2000)

In January 2000, Earth Tech, Inc. (Earth Tech) submitted a letter report to NASA for work conducted at WFF. The report identified potential environmental impacts at the subject FUDS site and evaluated the need for future environmental studies. Work performed at this site as part of this effort included a site visit, personnel interviews, direct push technology (DPT) soil sample collection (one boring), and laboratory analysis. A relative risk evaluation (RRE) was performed using existing data and found the relative risk to be high. In May 1999, Earth Tech submitted a status summary report to USACE for the sampling activities performed at sites located on the Main Base, including the WWTP. One groundwater sample was collected at the WWTP (location W-05), and results of the sampling indicated that aluminum, iron, and manganese exceeded their respective secondary USEPA maximum contaminant levels (MCLs) (SAIC, 2003).

3.2.6 SAIC, Inc. – Limited Site Investigation (LSI) Report (May 2003)

In May 2003, on behalf of the USACE, SAIC completed a Limited Site Investigation (LSI) of several FUDS program sites located at WFF, including the WWTP. Soil samples were collected from three soil borings advanced in the suspected residual sludge mounds and in the sludge drying beds. The LSI included a screening-level evaluation, in which soil data collected from the WWTP were subject to a human health toxicity screen. The toxicity screen was used to evaluate human health effects by comparing site-specific soil data to screening criteria, which included USEPA Region III risk-based concentrations (RBCs) for residential and industrial soils, and USEPA Region III RBCs for protection of groundwater.

Data collected during the LSI indicate that three metals (arsenic, iron, and silver) are present in the surface and shallow subsurface soil at concentrations that exceed the human health and/or migration to groundwater screening criteria. Of the detected metals, arsenic was detected most frequently above screening criteria. SAIC reported that the maximum concentrations of arsenic detected in the soil samples collected at the WWTP were well below the background concentrations of arsenic detected in the Commonwealth of Virginia. The concentrations of arsenic detected at the WWTP were not greater than concentrations arsenic detected in the surface and subsurface soil at other locations at the WFF (i.e., there is no evidence of a surface

release [spill or leak] and there is no persistent source of arsenic at the WWTP). SAIC reported that data suggested that arsenic concentrations detected is the result of natural conditions or minor releases of arsenic at the sludge drying beds (SAIC, 2003).

SAIC reported that iron and silver were detected at concentrations that exceed screening criteria in soil samples collected from the sludge drying beds only, suggesting that former wastewater treatment activities have released metals to the sludge drying beds, as would be expected. Furthermore, although mercury was not detected at concentrations exceeding screening criteria, SAIC reported that the distribution of mercury detected in the soil samples indicates that the trickling filter process may be the source of the mercury (SAIC, 2003).

Organic compounds detected at concentrations above screening criteria at the WWTP consisted of five semivolatile organic compounds (SVOCs) (four polycyclic aromatic hydrocarbons [PAH] and one non-PAH SVOC). No VOCs were detected at concentrations greater than screening criteria. Data indicate that the concentrations of the four PAHs detected above screening criteria were limited to the sludge drying beds and that the maximum concentrations of these compounds were detected in the surface soil of the sludge beds and were attenuating with depth. SAIC reported that this information indicates that the WWTP process was the source of the PAHs and that the elevated concentrations of PAHs should be limited to locations containing residual sludge (SAIC, 2003).

SAIC concluded that the distribution of the concentrations of the organic compounds detected during the LSI seems to indicate that the wastewater is the source of organic compounds at the WWTP and concentrations greater than the screening criteria are limited to the areas containing the former sludge (i.e., residual sludge piles and sludge drying beds) (SAIC, 2003). Based on the LSI findings, SAIC recommended the following:

- Collection of additional soil samples adjacent to or beneath the sludge drying beds to confirm that concentrations exceeding screening criteria do not exist in the subsurface.
- Collection of groundwater samples based upon the potential for contaminants detected in the soil to migrate to the groundwater.

3.2.7 Weston Solutions, Inc. – After Action Report for Time-Critical Removal Action (November 2006)

In December 2005, in preparation for a Site Investigation of the WWTP, USACE representatives conducted an on-site reconnaissance of the WWTP. During the visit, beads of elemental mercury were discovered several inches below the surface immediately adjacent to the pedestal of a rotary arm trickling filter. During an inspection of the trickling filter, a clogged and uncapped pipe was noted in the location where the seal drain should have been. The drain pipe appeared to be clogged with a rusty sludge material. Just below the surface of the stone filter media, beads of elemental mercury were observed several inches from the pedestal. The detached locked drain valve was also found lying on the ground nearby.

The trickling filter was manufactured by Dorr Inc. during the early 1940s. According to a Dorr-Oliver representative, the filter seal contained 11.5 pounds of mercury. The area above and under the seal drain pipe was isolated with plastic to prevent further spillage of mercury and to prevent migration of released mercury farther down into the filter. In May 2006, WESTON completed a TCRA involving the demolition and removal of the trickling filter structure, including recovery of elemental mercury through vacuuming (approximately 7 to 8 pounds), from the WWTP. Soil samples collected below the trickling filter did not indicate an impact from the mercury release (WESTON, 2006).

3.2.8 Weston Solutions, Inc. – Site Investigation Report for WWTP (September 2007)

In September 2007, WESTON completed the Site Investigation of the WWTP. Site Investigation field activities were completed between 19 and 23 February 2007 and included monitor well installation and groundwater, soil, surface water, sediment, and sludge sampling. The Site Investigation also included a human health screening level risk assessment and an ecological screening (WESTON, 2007b).

The 2007 Site Investigation Report concluded that the preliminary screening suggests that soil, sediment, and surface water do not pose a potential risk, whereas sludge and groundwater may pose a potential risk to human health and/or ecological receptors. Recommendations for additional investigations for the WWTP were as follows:

- Confirmation sampling of groundwater for arsenic.
- Confirmation sampling of sludge and wastewater from the clarifying tanks and assessment for potential disposal. Sludge and wastewater should be characterized to determine proper disposal in accordance with applicable or relevant and appropriate requirements (ARARs).
- Confirmation sampling of sludge from the sludge drying beds and assessment for potential disposal. The sludge should be characterized to determine proper disposal in accordance with ARARs.
- Assessment for proper closure of components of the former WWTP in accordance with ARARs (WESTON, 2007b).

3.3 WWTP ENVIRONMENTAL SETTING

3.3.1 Topography and Surface Water

The WWTP is situated at the base of a moderate hill that consists of approximately 30 feet of topographic relief. The area surrounding the WWTP comprises approximately 0.8 acres, and includes mounded material identified in previous investigations as possible residual sludge piles located approximately 150 to 200 feet north of the WWTP structures. Elevation at the site ranges from approximately 16 to 20 feet above msl. Topography of the WWTP slopes generally to the northwest.

No perennially flowing surface water bodies are located on or adjacent to the WWTP site. Stormwater runoff from the site flows overland in a northwesterly direction and discharges into one of two intermittent streams/stormwater drainage ditches located in the northern portion of the site. The intermittent streams originate at the discharge points of two permitted outfalls for the WFF stormwater collection network: Virginia Pollution Discharge Elimination System (VPDES) Permit No. VA0024457 Outfall 013 and Outfall 005 (**Figure 3-1**). These outfalls drain airfield runways and taxiways and grassy areas (EG&G, 2005). The intermittent streams converge in the northern area of the WWTP site, after which surface water is conveyed in a northerly direction for approximately 0.4 miles before discharging into Little Mosquito Creek. This unnamed tributary to Little Mosquito Creek also receives runoff from other nearby sites. It should be noted that from the confluence of the intermittent streams in the northern area of the WWTP site, the stream exhibits more perennial flowing characteristics with increased distance

from the WWTP site. **Figure 3-3** presents the topography and drainage pathways within the area surrounding the WWTP.

3.3.2 WWTP Soils

Soil in the vicinity of the WWTP has been classified as Molena loamy sand, with slope gradients ranging from 6% to 35%. The Molena series consists of very deep, somewhat excessively drained soils on stream terraces of the Piedmont and Upper Coastal Plain. This soil typically exhibits slow-to-medium runoff and rapid permeability (USDA, 1994 and 2009). Because the WWTP is adjacent to abandoned and active runways and considering the past development of the site, it is likely that the soils at the WWTP have been disturbed and reworked.

3.3.3 Geology as Determined by Previous Investigations

Geology at the WWTP site had not been established based on data collected before the 2007 Site Investigation. Soil borings completed during the 2007 Site Investigation are discussed in detail in Section 4.1 of this report.

3.3.4 Groundwater as Determined by Previous Investigations

Groundwater flow direction at the WWTP site had not been established based on data collected before the 2007 Site Investigation. In addition, no monitor wells were installed at the site prior to the Site Investigation, though shallow groundwater flow was expected to be north-northwest based on local topography and the locations of the intermittent streams and Little Mosquito Creek. Groundwater levels measured as part of the Site Investigation are discussed in detail in Section 4.4 of this report.

4. ENVIRONMENTAL INVESTIGATION PROCEDURES

This section describes the procedures used during the WESTON 2007 Site Investigation field activities, which included installation of monitor wells and sampling of groundwater, soil, sludge, sediment, surface water, and wastewater and additional soil and paint chip investigations conducted in 2012 to further define the nature and extent of lead contamination around the transformer pad and Pump House structure. Sampling activities were conducted in accordance with the Work Plan (WESTON, 2007a). Sample locations for the 2007 sampling event are shown in **Figure 4-1,** and field notes recorded during the investigation are presented in **Appendix A**. Sample locations for the 2012-sampling event are presented in **Figure 4-2**.

4.1 SOIL INVESTIGATION AND SAMPLING

The 2007 soil sampling investigation included advancement of seven soil borings at monitor well installation locations (MW1 through MW7), and collection of eight additional soil samples while nine additional surface soil samples were collected in 2012 around the transformer pad and Pump House structure.

4.1.1 Soil Boring Samples

Soil boring samples were collected during monitor well installation to evaluate surface and subsurface soils in monitor well areas and to assess potential leaching of contaminants from soil.

4.1.1.1 Soil Boring Sampling Methodology

During monitor well installation, split-spoon samples were collected at 2-foot intervals until first saturation. During drilling activities, a PID was used to screen soils. Information collected during the logging of these soils is included in boring logs in **Appendix B**.

For the 2007 event, soil samples were collected from 0.0 to 0.5 ft bgs; 0.5 to 2.0 ft bgs, and immediately above the water table, with the exceptions of the borings advanced at MW3 and MW7. Soils to 4 feet were not collected at the MW3 trickling filter location because original soils were previously removed and clean fill material emplaced. At the MW7 location, the water table was too shallow for collection of an additional deep subsurface sample. For the 2012

surface soil samples, samples were collected from 0.0 to 0.5 ft bgs using disposable scoops and bowls.

Table 4-1 presents a summary of the soil boring samples, including the analyses performed for each sampling location and depth. An EnCore® sampler was used to collect the soil sample for Target Compound List (TCL) VOC analysis. After this sample was collected, the rest of the sample was homogenized (mixed) and then introduced into the individual sample containers for TCL SVOC, TCL pesticides/polychlorinated biphenyls (PCB), Target Analyte List (TAL) metals, and cyanide analyses. Laboratory-prepared glass containers with Teflon®-lined caps provided under custody seal from the laboratory were used to collect and store each individual sample. Following collection of a sample, each jar was sealed in a plastic bag and stored on ice for shipment under chain-of-custody (see **Appendix A**) procedures to Severn Trent Laboratories (STL) in Savannah, Georgia.

4.1.2 Geology

A review of site-specific monitor well boring logs records indicates that the lithology encountered is consistent with that of the Columbia Group as discussed in Section 2.3.3. The Columbia Group generally consists of light brown to tan silty sand and sand, with traces of clay and minor amounts of gravel. The depths of the on-site monitor wells from the top of casing range between approximately 12 and 26 ft bgs. No monitor wells at the WWTP have been installed in the Yorktown Formation. Copies of the monitor well boring logs are included in **Appendix B**.

4.1.3 Soil Samples

2007 Sampling Event

Soil samples were collected from the former transformer location (SS1), each of four possible sludge piles (SS2 through SS5), at the discharge point of the outflow pipe (SS8), and from below a rocky/gravely layer observed at the base of each of two sludge drying beds (SS9 and SS10). Soil samples SS6 and SS7 are duplicate samples for SS1 and SS5, respectively.

2012 Sampling Event

Nine soil samples (WWTP-01 through WWTP-09) were collected around the transformer pad and Pump House structure to assess the additional nature and extent of lead contamination associated with the lead detected at location SS1 collected during the 2007 sampling event.

4.1.3.1 Soil Sampling Methodology

Soil was composited from 0 to 2 feet at five locations within each possible sludge pile and below the rocky/gravely layer observed at the base of the sludge drying beds, and from four locations around the former transformer location. The suspected sludge piles were hand augered to visually inspect for signs of sludge material similar to the material observed in the sludge drying beds, but no similar material was found.

Table 4-1 presents a summary of the soil samples, including the analyses performed for each sampling location and depth. An EnCore® sampler was used to collect the initial soil sample collected from each of these locations for TCL VOCs analysis. After this sample was collected, the rest of the sample was homogenized (mixed) and then introduced into the individual sample containers for TCL SVOCs, TCL pesticides/PCBs, TAL metals and cyanide analyses. Laboratory-prepared glass containers with Teflon®-lined caps provided under custody seal from the laboratory were used to collect and store each individual sample. Following collection of a sample, each jar was sealed in a plastic bag and stored on ice for shipment under chain-of-custody (see **Appendix A**) procedures to STL.

4.2 SEDIMENT INVESTIGATION AND SAMPLING

The sediment sampling investigation included collection of two sediment samples from the intermittent stream.

4.2.1 Sediment Samples

Two sediment samples were collected from the intermittent stream in the northern portion of the site. One sediment sample was collected from the closest point beneath the effluent outfall (SD2), and a second sediment sample was collected at the confluence of the intermittent streams downstream of the outfall (SD1). The effluent outfall pipe was verified by digging to expose the piping.

4.2.1.1 Sediment Sampling Methodology

Sediment samples were collected at 0 to 3 inches bgs at two locations in the intermittent stream. Each sediment sample was collected using dedicated stainless-steel scoops and bowls decontaminated prior to use.

Table 4-1 presents a summary of the sediment samples, including the analyses performed for each sampling location and depth. An EnCore® sampler was used to collect the TCL VOCs portion of the sediment samples. After this sample was collected, the rest of the sample was homogenized (mixed) and then introduced into the individual sample containers for TCL SVOCs, TCL pesticides/PCBs, TAL metals, and cyanide analyses. Laboratory prepared glass containers with Teflon®-lined caps provided under custody seal from the laboratory were used to collect and store each individual sample. Following collection of a sample, each jar was sealed in a plastic bag and stored on ice for shipment under chain-of-custody procedures (see **Appendix A**) to STL.

4.3 SURFACE WATER INVESTIGATION AND SAMPLING

The surface water sampling investigation included collection of one surface water sample from the intermittent stream.

4.3.1 Surface Water Samples

One surface water sample (SW1), co-located with the sediment sample collected at SD1, was collected from the confluence of the intermittent streams downstream of the outfall. The effluent outfall pipe was verified by digging to expose the piping.

4.3.1.1 Surface Water Sampling Methodology

Table 4-1 presents a summary of the surface water samples, including the analyses performed for each sampling location and depth. The surface water sample was collected prior to the co-located sediment sample to avoid cross-contamination and/or impacts from disturbance of the sediments. Samples were collected directly from the water body into the individual sample containers for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, TAL metals, and cyanide analyses. Laboratory prepared bottles with Teflon®-lined caps provided under custody seal from the laboratory were used to collect and store each individual sample. Following collection of a

sample, each bottle was sealed in a plastic bag and stored on ice for shipment under chain-of-custody procedures (see **Appendix A**) to STL.

4.4 GROUNDWATER INVESTIGATION AND SAMPLING

The groundwater investigation included installation of seven monitor wells and groundwater sampling. The purpose of the groundwater investigation was to establish groundwater flow direction beneath the site and to assess groundwater quality on and around the site.

4.4.1 Drilling and Monitor Well Installation

Seven shallow monitor wells (MW1 through MW7) were installed at the WWTP from 19 through 21 February 2007 (see **Figure 4-1** for well locations). Well locations were selected to provide groundwater data from upgradient, downgradient, and on-site locations.

Wells were installed using 4.25-inch inner diameter (I.D.) hollow stem augers. Monitor wells were installed to depths between 12 and 26 ft bgs from the top of casing using 10 feet of 2-inch diameter, 0.010-inch slotted polyvinyl chloride (PVC) screen and the appropriate amount of PVC riser pipe. Where possible, the bottom of the screen was placed approximately 7 feet into the saturation zone. Where this was not possible because the depth to water was less than 4 ft bgs, the screen was placed as high as possible without compromising the filter pack and bentonite seal placed above the filter pack. A filter pack was gravity fed from 6 inches below the bottom of the well screen to between 0.5 and 2 feet above the top of well screen. A bentonite seal, consisting of 30% solid bentonite material in the form of bentonite pellets, was then gravity fed or conveyed by tremie pipe to between 0.5 and 2 feet above the top of the filter pack. The remainder of the annular space to top of ground surface was filled with a cement/bentonite grout. Each well was completed with a lockable cap, and a 2.5-foot, aboveground monument set within a 3-foot square and 6-inch deep concrete pad. The concrete pads were sloped to allow runoff. The pads extended 2 inches down into the borehole and were bonded to the grout. See **Table 4-2** for a summary of well construction details. Well construction diagrams are included in **Appendix B**.

4.4.1.1 Monitor Well Development

The seven monitor wells were developed on 21 and 22 February 2007, no sooner than 24 hours from the time the grout seal was emplaced to allow sufficient time for the well materials to cure. The primary objective of development was to remove residual materials in the well remaining after construction. The wells were developed until the column of water in the well was free of visible sediment, and/or the pH, temperature, turbidity, and specific conductivity had stabilized. Stabilization is defined to be achieved when three consecutive measurements have been taken and vary by less than +/- 0.1 standard pH units (for pH), +/- 10% micromhos (for conductivity), +/- 0.5 degrees Celsius (for temperature), and less than 10 Nephelometric Turbidity Units (NTUs) (if achievable).

The development procedures for each well included use of a 1.7-inch hand pump and a battery-operated, submersible pump. Initially, the hand pump was used to remove coarser material, followed by the electric submersible pump to over-evacuate each well to remove finer material. Development water was contained in properly labeled 55-gallon drums for proper disposal. The equipment was decontaminated prior to use at each well to prevent cross-contamination. Decontamination procedures are discussed in the following subsection. Well development forms are presented in **Appendix A**.

4.4.2 Monitor Well Sampling

Groundwater samples were collected from the seven groundwater monitor wells installed at the Site to assess groundwater quality.

4.4.2.1 Monitor Well Sampling Methodology

Purging was conducted using low-stress (or low-flow) protocols whereby drawdown is minimized. Each well was purged using the low-flow submersible bladder pump connected to Teflon®-lined tubing. Water level and field parameter measurements (pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential [ORP]) were recorded on well sampling forms, which are included in **Appendix A**. The pump-tubing assembly was slowly lowered to the approximate midpoint location of the well's screen. The well casing volume of each well was calculated using depth-to-water, well diameter, and the total depth of the well. At least one well volume was removed, and purging continued until stabilization was demonstrated

through obtaining three consecutive measurements of pH +/- 0.1 standard pH units, conductivity +/- 3% micromhos, turbidity +/- 10% NTUs (for turbidity values > 10 NTUs), DO +/- 0.3 milligram per liter (mg/L), ORP +/- 10 millivolts (mV), and temperature +/- 10%. Purge water was contained in 55-gallon drums at the site pending proper disposal.

Table 4-1 presents a summary of the groundwater samples, including the analyses performed for each sampling location and depth. Samples were collected into the individual sample containers for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, TAL metals, and cyanide analyses. Laboratory prepared bottles with Teflon®-lined caps provided under custody seal from the laboratory were used to collect and store each individual sample. Following collection of a sample, each bottle was sealed in a plastic bag and stored on ice for shipment under chain-of-custody procedures (see **Appendix A**) to STL.

4.4.3 Monitor Well Elevation Survey

On 23 February 2007, Baldwin & Gregg, Ltd. (Virginia registered land surveyors) surveyed the locations of MW1 through MW7. Top of casings and ground surface elevations were surveyed relative to the National Geodetic Vertical Datum of 1929 (NGVD 29).

Table 4-3 summarizes the groundwater levels as measured on 23 February 2007. The monitor well groundwater elevations and potentiometric surface map for the WWTP are shown in **Figure 4-3**. The contours indicate flow in a northwesterly direction toward the intermittent stream from the former WWTP operations located on the western side of the WWTP. West of the facility, groundwater flow direction is northeast and toward the intermittent stream. The interpretations of groundwater flow conditions indicated that the general direction of flow for the shallow groundwater zone was consistent with and generally followed the surface topography, which is common for shallow, unconfined aquifers. The hydraulic gradient is 0.0047 feet per foot (ft/ft) based on wells MW6 and MW7 (WESTON, 2007b).

4.5 SLUDGE AND WASTEWATER INVESTIGATION AND SAMPLING

The sludge and wastewater sampling investigation included collection of samples to evaluate the WWTP process areas for residual materials. Sample locations are shown on **Figure 4-1**.

4.5.1 Sludge and Wastewater Sampling

Three composite sludge samples (SL01, SL02, and SL03) and one wastewater sample (WW01) were collected at the WWTP. Sludge sample SL01 and wastewater sample WW01 were collected from the primary settling tank. Very little sludge and very little wastewater was observed to be present at the settling tank location. It should be noted that the settling tank is not covered and is open to the outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank. Five-point composite samples were collected from each of the two sludge drying beds (SL02 and SL03). The sludge drying beds were observed to contain approximately 6 inches of sludge underlain by approximately 1.5 feet of gravel and rock that, in turn, overlie what appears to be native soil. No sludge was observed in the pump house wet well location, so no sample was collected from this location.

4.5.1.1 Sludge and Wastewater Sampling Methodology

Stainless-steel augers or scoops were used to collect sludge and wastewater directly from the primary settling tank. Samples from the sludge drying beds were composited from five points within each bed.

Table 4-1 presents a summary of the sludge and wastewater samples, including the analyses performed for each sampling location and depth. An EnCore® sampler was used to collect the TCL VOCs portion of the composite sludge samples. After this sample was collected, the rest of the sample was homogenized (mixed) and then introduced into the individual sample containers for TCL SVOCs, TCL pesticides/PCBs, TAL metals, and cyanide analyses. Laboratory-prepared glass containers with Teflon®-lined caps provided under custody seal from the laboratory were used to collect and store each individual sample. Following collection of a sample, each jar was sealed in a plastic bag and stored on ice for shipment under chain-of-custody procedures (see **Appendix A**) to STL.

4.6 PAINT CHIP INVESTIGATION AND SAMPLING

The 2012 paint chip sampling investigation included collection of paint chip samples to evaluate the flaking paint located on the outside of the Pump House and determine whether the previous lead detections in soils around the transformer pad were attributed to lead-based paint flaking off or the Pump House. Sample locations are shown on **Figure 4-2**.

4.6.1 Paint Chip Sampling

Two paint chip samples were collected from the outside of the WWTP Pump House structure. Paint chip sample WWTP0PC01 was collected from the white paint that is present on the bulk of the outside of the structure while sample WWTP-PC02 was collected from the black trim paint.

4.6.1.1 Paint Chip Sampling Methodology

Disposable scoops were used to collect (through scraping motion) paint chips directly from the painted area of the Pump House into the sample containers. **Table 4-1** presents a summary of the paint chip samples, including the analyses performed for each sample. Laboratory-prepared glass containers with Teflon®-lined caps were used to collect and store each individual sample with samples hand carried to EnviroCompliance Laboratories for total lead analysis.

5. NATURE AND EXTENT OF CONTAMINATION

One objective of the RI is to evaluate the nature and extent of contamination to inform the decision-making process regarding risks presented by site contaminants and the appropriate remedial action to mitigate these risks. The analytical data results from samples collected during the field investigation are compared to screening levels to delineate the extent of contamination in on- and off-site environmental media (i.e., soil, sediment, groundwater, and surface water). The following subsections discuss the screening levels chosen, potential contamination sources, and the nature and extent of contamination in on- and off-site environmental media.

5.1 SCREENING LEVELS

Screening levels for soil, sediment, groundwater, and surface water were determined for each analytical parameter by choosing from a number of human health, ecological, or ambient/background-based values. The sources of screening levels used are discussed in more detail below. For the evaluation of environmental conditions at the Site, analytical results were compared to screening levels. These comparisons were used to characterize site-related contamination in support of sufficiently defining the extent of contamination. With this approach, emphasis was placed on constituents detected at concentrations above the screening levels and/or ambient/background levels. These screening levels were used for purposes of delineation and nature and extent discussion, or to eliminate contaminants from evaluation in the risk assessments.

5.1.1 Soil and Sludge Screening Levels

Table 5-1 presents the soil and sludge screening levels. The soil and sludge screening levels are risk-based screening values and were drawn from the following sources:

- USEPA regional screening levels (RSL) Table for Residential and Industrial Soil and Air, which are risk-based concentrations for residential and industrial/commercial receptor populations. The non-carcinogenic RSLs were adjusted by a factor of 0.1 to account for additive effects (USEPA, 2009a).

5.1.2 Sediment Screening Levels

Table 5-2 presents the sediment screening levels. The sediment screening levels are risk-based screening values and were drawn from the following sources:

- USEPA RSLs for Residential Soil, which are risk-based concentrations for residential receptor populations. The non-carcinogenic RSLs were adjusted by a factor of 0.1 to account for additive effects (USEPA, 2009a).
- USEPA Region III Biological Technical Assistance Group (BTAG) Sediment Screening Benchmarks (USEPA, 2006a).

5.1.3 Surface Water and Wastewater Screening Levels

Table 5-3 presents the surface water and wastewater screening levels. The surface water and wastewater screening levels are risk-based screening values and were drawn from the following sources:

- USEPA Region III BTAG Freshwater Screening Benchmarks (USEPA, 2006b).
- VDEQ Water Quality for Freshwater Acute and Chronic Aquatic Life Standards (VDEQ, 2008).

5.1.4 Groundwater Screening Levels

Table 5-4 presents the groundwater screening levels. The groundwater screening levels are risk-based screening values and were drawn from the following sources:

- USEPA RSLs for Tap Waters (USEPA, 2009a).
- VDEQ Groundwater Quality Standards (VDEQ, 2004).

5.2 EXTENT OF CONTAMINATION IN SOIL

As presented in Section 4.0, a total of 18 soil boring samples and 8 soil samples were collected during the February 2007 Site Investigation to characterize the nature and extent of contamination on-site. An additional nine surface soil samples were collected in 2012 to further assess potential lead contamination in soils near sampling point SS1 near the Pump House. Soil samples were collected in 2007 from locations presented in **Figure 4-1** and analyzed for the following parameters: TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and cyanide. The 2012 soil samples focused on the transformer pad/Pump House area where the level

of lead previously detected exceeded the residential direct contact screening level (400 mg/kg). The samples were only analyzed for lead and their locations are presented in **Figure 4-2**. Analytical results from soil samples were compared to residential and industrial direct contact screening levels presented in **Table 5-1** to determine the nature and extent of chemical contamination in soil. **Table 5-5** presents a summary of detected constituents in soil and lists the number of detections, total samples analyzed, minimum and maximum detected concentrations, the location and depth of the maximum concentration, the minimum and maximum detection limit, and the number of exceedances of the respective chemical screening levels. Data results and validation reports are presented in **Appendix C**. The nature and extent of soil contamination, based on a comparison of the analytical data to their respective screening levels, is discussed in the following subsections.

5.2.1 Inorganics

A total of 21 metals and cyanide were detected in the soil samples. Of these, 7 metals, including aluminum, antimony, arsenic, cobalt, iron, lead, and manganese, were detected at concentrations exceeding residential direct contact screening levels. Arsenic was also detected at concentrations exceeding the industrial direct contact screening level. The individual chemical results of the seven metals exceeding screening levels are discussed below. **Figure 5-1** presents metals concentrations exceeding screening levels. Certain metals detected at the Site may be naturally occurring. Although background concentrations were not selected as screening levels, the discussion includes a comparison of the site data range to the background data range. The values used during this comparison were obtained from Table 4.24 - Molena Soils Data from the *Final Background Soil and Groundwater Investigation Report* (TetraTech, 2004a).

- Aluminum was detected in all soil samples at concentrations ranging from 1,300 milligrams per kilogram (mg/kg) in the 2- to 4-foot sample collected at the MW6 location to 13,000 mg/kg in the 0- to 0.5-foot sample collected at the MW2 location and in the field duplicate sample collected at the SS5 location. Aluminum was detected in eight soil samples at concentrations exceeding the residential direct contact screening level of 7,700 mg/kg; no results exceeded the industrial direct contact screening level. The background range for aluminum is 1,870 to 13,900 mg/kg. The site aluminum concentrations are within the range of background.

- Antimony was detected in four soil samples at concentrations ranging from an estimated (J qualified) 0.54 mg/kg in sample SS10 to 3.2 mg/kg in the blind duplicate

sample (SS6) collected at the SS1 location. Results from this sample exceeded the residential direct contact screening level of 3.1 mg/kg; no results exceeded the industrial direct contact screening level.

- Arsenic was detected in 22 soil samples at concentrations ranging from an estimated 0.76 mg/kg in the 2- to 4-foot sample collected at the MW5 location to 5.4 mg/kg in the 0 to 0.5-foot sample collected at the MW7 location. Arsenic was detected in 19 samples at concentrations exceeding the residential direct contact screening level of 0.39 mg/kg. Arsenic concentration in 13 samples exceeded the industrial direct contact screening level of 1.6 mg/kg. The background range for arsenic is 0.78 to 14.2 mg/kg. The site arsenic concentrations are within the range of background.

- Cobalt was detected in all soil samples at concentrations ranging from an estimated 0.23 mg/kg in the 2- to 4-foot sample collected at the MW6 location to 3.3 mg/kg in the 0- to 0.5-foot sample collected at the MW7 location and in the field duplicate sample collected at the SS5 location. Cobalt was detected in five soil samples at concentrations exceeding the residential direct contact screening level of 2.3 mg/kg; no results exceeded the industrial direct contact screening level. The background range for cobalt is 0.35 to 7.3 mg/kg. The site cobalt concentrations are within the range of background.

- Iron was detected in 24 soil samples at concentrations ranging from 1400 mg/kg in the 19- to 21-foot sample collected at the MW2 location to 10,000 mg/kg in the field duplicate sample collected at the SS5 location. Iron was detected in seven soil samples at concentrations exceeding the residential direct contact screening level of 5,500 mg/kg; no results exceeded the industrial direct contact screening level. The background range for iron is 1,740 to 10,900 mg/kg. The site iron concentrations are within the range of background.

- Based on the 2007 sampling event, lead was detected in 23 soil samples at concentrations ranging from 1.2 mg/kg in the 18- to 20-foot sample collected at the MW1 location to 460 mg/kg in the field duplicate sample collected at the SS1 location. Lead was detected in this sample at a concentration exceeding the residential direct contact screening level of 400 mg/kg; no results exceeded the industrial direct contact screening level. The background range for lead is 4.9 to 124 mg/kg. The lead concentration at location SS1 is higher than the background range. All other site soil lead concentrations are within the range of background. Nine additional surface soil samples were collected in 2012 in the area around SS1 and the Pump House to further assess the extent of lead contamination. Results indicated lead concentrations in this area ranged from 13.5 to 2,450 mg/kg with the highest concentrations present in the samples collected adjacent to the Pump House. Based on the locations of the highest lead contamination, two paint chip samples were collected from the outside of the Pump House to assess whether the flaking paint was the source of the lead in surface soils. Lead results for the white paint indicated it contains approximately 9% (91,591 mg/kg) lead while the black trim paint had a lower lead content at approximately 0.4 percent (4,240 mg/kg). The lead content of the white paint indicates that the flaking paint found on the exterior of the Pump House was the probable source of the lead

detected in soils in this area. This area was the only area on the site where lead concentrations exceeded the residential screening level of 400 mg/kg.

- Manganese was detected in all soil samples at concentrations ranging from an estimated 5.5 mg/kg in the 2- to 4-foot sample collected at the MW6 location to 320 mg/kg in the 0- to 0.5-foot sample collected at the MW1 location. Manganese was detected in this sample at a concentration exceeding the residential direct contact screening level of 180 mg/kg; no results exceeded the industrial direct contact screening level. The background range for manganese is 8.4 to 781 mg/kg. The site manganese concentrations are within the range of background.

5.2.2 Pesticides

A total of four pesticides were detected in multiple soil samples, including 4,4'-DDD; 4,4'-DDE; 4,4'-DDT; and dieldrin. 4,4'-DDD was detected as a range of 0.57 to 12 µg/kg; 4,4'-DDE was detected at a range of 0.41 to 14 µg/kg; 4,4'-DDT was detected at a range of 0.79 to 43 µg/kg; and dieldrin was detected at a range of 3.9 to 5.7 µg/kg. No pesticides were detected in soil samples at concentrations exceeding residential direct contact screening levels.

5.2.3 Polychlorinated Biphenyls

Analysis for PCBs revealed detection of Aroclor-1260 at one soil sampling location: SS1, the former transformer area. Aroclor-1260 was detected in parent sample SS1 and in its field and blind duplicate samples SS1-D and SS6, respectively, at concentrations ranging from 190 µg/kg to 290 µg/kg. Detected concentrations exceeded the Aroclor-1260 residential direct contact screening level of 220 µg/kg at soil sampling location SS1; no results exceeded the industrial direct contact screening levels. The Aroclor-1260 concentration exceeding the residential screening level is presented in **Figure 5-2**.

5.2.4 Semivolatile Organic Compounds

Six SVOCs were detected in the soil samples—benzo(a)pyrene, benzo(g,h,i)perylene, bis(2-ethylhexyl)phthalate, dibenz(a,h)anthracene, di-n-butyl phthalate, and indeno(1,2,3-cd)pyrene. Of the six detected SVOCs, two PAHs (benzo(a)pyrene and dibenz(a,h)anthracene) were detected in at least one soil sample at concentrations exceeding their respective residential direct contact screening levels. No SVOCs were detected at concentrations exceeding the industrial

direct contact screening levels. **Figure 5-2** presents SVOC concentrations exceeding screening levels. Specific SVOC results exceeding screening levels are discussed below.

- Benzo(a)pyrene was detected in two soil samples collected from the MW2 location at concentrations exceeding the residential direct contact screening level of 15 µg/kg. Benzo(a)pyrene concentrations ranged from an estimated 30 µg/kg in the 19 to 21 foot sample to an estimated 34 µg/kg in the 0- to 0.5-foot sample. The background range for benzo(a)pyrene is 46 to 410 µg/kg. The site benzo(a)pyrene concentrations are less than the background range.

- Dibenz(a,h)anthracene was detected in four soil boring samples at concentration exceeding the residential direct contact screening level of 15 µg/kg. Dibenz(a,h)anthracene concentrations ranged from an estimated 33 µg/kg in the 0- to 5-foot sample collected at the MW6 location to an estimated 50 µg/kg in the 0- to 0.5-foot sample at the MW2 location.

It should be noted that there is no available evidence indicating the historical use of PAHs at the base. At other military installations petroleum compounds possibly containing the constituents of interest were commonly used for dust control and may be the source of PAHs in surface soils throughout WFF. The PAHs detected in the 19 to 21 ft bgs sample from MW2 are probably the result of cross-contamination associated with the transport of contaminants with the drill rig auger from the surface zone to the subsurface soils because there is no identified source for this contaminant at this depth at the site. If there was vertical migration of PAHs from the surface at this site, concentrations would have been expected to be significantly lower than those detected at the surface but the PAH concentrations from the 19 to 21 ft bgs depth were similar to the levels detected in the surface samples The presence of PAHs in the walled settling tank and sludge drying beds is thought to be attributed to the treatment of industrial water received via sanitary sewers at the WWTP and not as a result of background conditions.

5.2.5 Volatile Organic Compounds

Six VOCs were detected in the soil samples—acetone, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), tetrachloroethene (also referred to as perchloroethylene [PCE]), toluene, and total xylenes. Acetone and MEK are common laboratory contaminants. Analytical results reveal that none of these VOCs exceeded the residential and industrial direct contact screening levels. Specific VOC results are as follows:

- Acetone was detected in 23 of the 26 samples analyzed for this parameter with a maximum concentration detected at 370 µg/kg in the 0- to 0.5-foot sample collected at the MW1 location. The residential direct contact screening level for acetone is 6,100,000 µg/kg.

- MEK was detected in 15 of the 26 samples analyzed for this parameter with a maximum concentration detected at 46 µg/kg in the 4- to 6-foot sample collected at the MW3 location. The residential direct contact screening level for MEK is 2,800,000 µg/kg.

- MIBK was detected in 9 of the 26 samples analyzed for this parameter with a maximum concentration detected at 340 µg/kg in the 0- to 0.5-foot sample collected at the MW2 location. The residential direct contact screening level for MIBK is 530,000 µg/kg.

- PCE was detected in one of the 26 samples analyzed for this parameter with a concentration of 6.7 µg/kg in the sample collected at SS9, collected from a depth of 0 to 2 ft bgs. The residential direct contact screening level for PCE is 570 µg/kg.

- Toluene was detected in 2 of the 26 samples analyzed for this parameter with a maximum concentration detected at 2.9 µg/kg in the 4- to 6-foot sample collected at the MW3 location. The residential direct contact screening level for toluene is 500,000 µg/kg.

- Total xylenes were detected in one of the 26 samples analyzed for this parameter with a concentration of 12 µg/kg in the 4- to 6-foot sample collected at the MW3 location. The residential direct contact screening level for total xylenes is 60,000 µg/kg.

5.3 EXTENT OF CONTAMINATION IN SEDIMENT

Two sediment samples (SD1 and SD2) were collected from intermittent streams in the northern portion of the Site during the February 2007 Site Investigation. Sediment samples were collected from locations presented in **Figure 4-1** and analyzed for the following parameters: TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and cyanide. Analytical results from sediment samples were compared to residential direct contact and BTAG freshwater sediment ecological screening levels presented in **Table 5-2** to determine the nature and extent of chemical contamination in sediment. **Table 5-6** presents a summary of detected constituents in sediment and lists the number of detections, total samples analyzed, minimum and maximum detected concentrations, the location and depth of the maximum concentration, the minimum and maximum detection limit, and the number of exceedances of the respective chemical screening levels. Data results and validation reports are presented in **Appendix C**. The nature and extent of

sediment contamination, based on a comparison of the analytical data to their respective screening levels, is discussed in the following subsections.

5.3.1 Inorganics

A total of 18 metals were detected in the sediment samples, with all but one of the maximum concentrations detected in SD2. Of these 18 metals, one metal, arsenic, was detected at concentrations exceeding residential direct contact screening levels. No metals were detected in sediment samples at concentrations exceeding ecological-based screening levels. Arsenic was detected in both sediment samples at concentrations ranging from 1.4 mg/kg to 2.7 mg/kg. Arsenic was detected in both samples at concentrations exceeding the residential direct contact screening level of 0.39 mg/kg. **Figure 5-1** presents arsenic concentrations in sediment.

5.3.2 Pesticides

A total of three pesticides (4,4'-DDD; 4,4'-DDE; and 4,4'-DDT) were detected in the sediment samples. 4,4'-DDD was detected at 2.7 µg/kg in one sample; 4,4'-DDE was detected at a range of 1.8 to 2.6 µg/kg; and 4,4'-DDT was detected at a range of 0.77 to 1.6 µg/kg. These pesticides were not detected at concentrations exceeding human health or ecological-based screening levels.

5.3.3 Polychlorinated Biphenyls

No PCBs were detected in the sediment samples.

5.3.4 Semivolatile Organic Compounds

No SVOCs were detected in the sediment samples.

5.3.5 Volatile Organic Compounds

Two VOCs were detected in the sediment samples—acetone and MEK. Acetone and MEK are common laboratory contaminants. Analytical results reveal that none of these VOCs exceeded screening levels. Specific VOC results are as follows:

- Acetone was detected in both sediment samples with concentrations ranging from an estimated 45 µg/kg to 270 µg/kg. The residential direct contact screening level for acetone is 6,100,000 µg/kg.
- MEK was detected in one of the sediment samples at 18 µg/kg. The residential direct contact screening level for MEK is 2,800,000 µg/kg.

5.4 EXTENT OF CONTAMINATION IN SURFACE WATER

One surface water was collected at the Site during the February 2007 Site Investigation. The surface water sample (SW1), co-located with sediment sample SD1, was collected from the confluence of the intermittent streams downstream of the suspected WWTP effluent outfall. The surface water sample location is presented in **Figure 4-1** and was analyzed for the following parameters: TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and cyanide. Analytical results from the surface water sample were compared to freshwater screening levels presented in **Table 5-3** to determine the nature and extent of chemical contamination in surface water. **Table 5-7** presents a summary of detected constituents in surface water and lists the number of detections, total samples analyzed, detected concentrations, the location of the maximum concentration, the detection limit, and the number of exceedances of the respective chemical screening levels. Data results and validation reports are presented in **Appendix C**. The nature and extent of surface water contamination, based on a comparison of the analytical data to their respective screening levels, is discussed in the following subsections.

5.4.1 Inorganics

A total of 10 metals were detected in the surface water sample. Of the 10 detected metals, only aluminum, barium, iron, and manganese were detected at concentrations exceeding screening levels. **Figure 5-3** presents metals concentrations exceeding screening levels. The individual chemical results of the metals exceeding screening levels are discussed as follows:

- Aluminum was detected in surface water at a concentration of 2.5 mg/L, exceeding the screening level of 0.087 mg/L.
- Barium was detected in surface water at a concentration of 0.031 mg/L, exceeding the screening level of 0.004 mg/L.
- Iron was detected in surface water at a concentration of 7.2 mg/L, exceeding the screening level of 0.3 mg/L.

- Manganese was detected in surface water at a concentration of 0.46 mg/L, exceeding the screening level of 0.12 mg/L.

5.4.2 Pesticides

No pesticides were detected in surface water.

5.4.3 Polychlorinated Biphenyls

No PCBs were detected in surface water.

5.4.4 Semivolatile Organic Compounds

No SVOCs were detected in the surface water.

5.4.5 Volatile Organic Compounds

One VOC, chloromethane, was detected in the surface water at an estimated concentration of 0.53 µg/L. A surface water screening level is not available for chloromethane.

5.5 EXTENT OF CONTAMINATION IN GROUNDWATER

Groundwater samples were collected from seven monitoring wells at the Site during the February 2007 Site Investigation. The groundwater sampling locations are presented in **Figure 4-1** and analyzed for the following parameters: TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and cyanide. Analytical results from groundwater samples were compared to screening levels presented in **Table 5-4** to determine the nature and extent of chemical contamination in groundwater. **Table 5-8** presents a summary of detected constituents in groundwater and lists the number of detections, total samples analyzed, minimum and maximum detected concentrations, the location and screen depth of the maximum concentration, the minimum and maximum detection limit, and the number of exceedances of the respective chemical screening levels. Data results and validation reports are presented in **Appendix C**. The nature and extent of groundwater contamination, based on a comparison of the analytical data to their respective screening levels, is discussed in the following subsections. Although background concentrations were not selected as screening levels, the discussion includes a comparison of the site data range to the background data range. The values used during this comparison were

obtained from Table 4.6 – Unfiltered Groundwater from the *Final Background Soil and Groundwater Investigation Report* (TetraTech, 2004a).

5.5.1 Inorganics

A total of 12 metals were detected in the groundwater samples, including aluminum, arsenic, barium, calcium, chromium, cobalt, iron, magnesium, manganese, potassium, sodium, and vanadium. Of these, two metals (arsenic and manganese) exceeded their respective screening levels in at least one groundwater sample. Calcium, magnesium, potassium, and sodium are considered essential nutrients and screening values are not available for these constituents. **Figure 5-3** presents groundwater concentrations exceeding screening levels. The results of the metals analyses are discussed below:

- Aluminum was detected in each monitoring well with the maximum concentration of 2.2 mg/L detected at MW6. Aluminum concentrations did not exceed the screening level of 37 mg/L.

- Arsenic was detected at two of the seven wells with concentrations ranging from 0.01 mg/L at MW5 (downgradient of the former WWTP structures) to 0.015 mg/L in the blind duplicate sample, MW20, at MW3 (former trickling filter location). With a screening level of 0.000045 mg/L, the concentrations of arsenic exceeded this level at both locations. The background range for arsenic in groundwater is 0.0036 to 0.0177 mg/L. The site arsenic concentrations in groundwater are within range of background.

- Barium was detected in each monitoring well with the maximum concentration of 0.057 mg/L detected at MW6. Barium concentrations did not exceed the screening level of 1 mg/L.

- Chromium was detected in one of the seven monitoring wells at a concentration of 0.017 mg/L at MW2 (upgradient). This chromium concentration did not exceed the screening level of 0.05 mg/L.

- Cobalt was detected in three of the seven wells with concentrations ranging from 0.0039 mg/L at MW4 to 0.0071 mg/L at MW6. Cobalt concentrations did not exceed the screening level of 0.011 mg/L.

- Iron was detected in each monitoring well with the maximum concentration of 11 mg/L detected in the blind duplicate sample, MW20, at MW3 (former trickling filter location). Iron concentrations did not exceed the screening level of 26 mg/L.

- Manganese was detected in each monitoring well with the maximum concentration of 1.5 mg/L detected at MW6. This one location exceeded the screening level of 0.88

mg/L. The background range for manganese in groundwater is 0.0045 to 3.11 mg/L. The site manganese concentrations in groundwater are within range of background.

- Vanadium was detected in two of the seven wells, with concentrations ranging from an estimated 0.0016 mg/L at MW7 to 0.0019 mg/L at MW6. Vanadium concentrations did not exceed the screening level of 0.26 mg/L.

5.5.2 Pesticides

No pesticides were detected in groundwater.

5.5.3 Polychlorinated Biphenyls

No PCBs were detected in groundwater.

5.5.4 Semivolatile Organic Compounds

Five SVOCs were detected in at least one groundwater sample—2,4-dimethylphenol, 3&4 methylphenol, bis(2-ethylhexyl)phthalate, diethyl phthalate, and phenol. Phthalate esters are commonly used in laboratories. No SVOCs were detected at concentrations exceeding their respective screening levels. Specific SVOC results are as follows:

- 2,4-dimethylphenol was detected in one of the seven well locations. The chemical was detected in the blind duplicate sample, MW20, at location MW3 at 100 µg/L, which did not exceed the screening level of 730 µg/L.

- 3&4 methylphenol was detected in one of the seven well locations. The chemical was detected in the blind duplicate sample, MW20, at location MW3 at 11 µg/L, which did not exceed the screening level of 180 µg/L.

- Bis(2-ethylhexyl)phthalate was detected in two of the seven well locations. The chemical was detected at concentrations ranging from an estimated 1.1 µg/L at location MW6 to an estimated 1.5 µg/L at location MW1. The SVOC did not exceed the screening level of 4.8 µg/L.

- Diethyl phthalate were detected in one of the seven well locations. The chemical was detected at location MW7 at an estimated 0.73 µg/L, which did not exceed the screening level of 29,000 µg/L.

- Phenol was detected in one of the seven well locations. The chemical was detected at location MW3 at 7.8 and 12 µg/L in the parent and blind duplicate samples, which did not exceed the screening level of 11,000 µg/L.

5.5.5 Volatile Organic Compounds

Three VOCs were detected in at least one groundwater sample—acetone, MEK, and PCE. Acetone and MEK are commonly used in laboratories. PCE was the only chemical detected at concentrations exceeding the screening level. **Figure 5-3** presents groundwater concentrations exceeding screening levels. Specific VOC results are as follows:

- Acetone was detected in one of the seven well locations. The chemical was detected at location MW3 at 47 and 52 µg/L in the parent and duplicate samples, which did not exceed the screening level of 22,000 µg/L.
- MEK was detected in one of the seven well locations. The chemical was detected at location MW3 at 15 and 17 µg/L in the parent and duplicate samples, which did not exceed the screening level of 7,100 µg/L.
- PCE was detected in one of the seven well locations, MW1 (upgradient well). The chemical was detected at 4.4 µg/L, exceeding the screening level of 0.11 µg/L.

5.6 EXTENT OF CONTAMINATION IN SLUDGE

Three composite sludge samples (SL01, SL02, and SL03) were collected at the Site during the February 2007 Site Investigation. Very little sludge and very little wastewater was observed at the settling tank location. It should be noted that the settling tank is not covered and is open to the outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank. One sludge sample (SL01) was collected from the primary settling tank. Five-point composite samples were collected from each of the two sludge drying beds (SL02 and SL03). Very little sludge and very little wastewater was observed at the settling tank location. Composite sludge samples were collected from locations presented in **Figure 4-1** and analyzed for the following parameters: TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and cyanide. Analytical results from composite sludge samples were compared to residential and industrial direct contact screening levels presented in **Table 5-1** to determine the nature and extent of chemical contamination in sludge. **Table 5-9** presents a summary of detected constituents in sludge and lists the number of detections, total samples analyzed, minimum and maximum detected concentrations, the location and depth of the maximum concentration, the minimum and maximum detection limit, and the number of exceedances of the respective chemical screening levels. **Figure 5-1** presents metals concentrations exceeding screening levels. Data results and validation reports are presented in **Appendix C**. The nature

and extent of sludge contamination, based on a comparison of the analytical data to their respective screening levels, is discussed in the following subsections.

5.6.1 Inorganics

A total of 21 metals and cyanide were detected in the composite sludge samples. Of these, eight metals, including antimony, arsenic, cobalt, iron, lead, manganese, mercury, and silver, were detected at concentrations exceeding residential direct contact screening levels. Arsenic and mercury were also detected at concentrations exceeding industrial direct contact screening levels. In general, the maximum metal concentrations were detected in the composite sludge samples collected from the sludge drying beds (SL02 and SL03). The individual chemical results of the eight metals exceeding screening levels are discussed below:

- Antimony was detected in the two samples collected from the sludge drying beds at concentrations ranging from 12 mg/kg in sample SL03 to 20 mg/kg in sample SL02. Results from both samples exceeded the residential direct contact screening level of 3.1 mg/kg; no results exceeded the industrial direct contact screening levels. There are no background concentrations at WFF for antimony.

- Arsenic was detected in the two samples collected from the sludge drying beds at concentrations ranging from 2.6 mg/kg in sample SL02 to 3.2 mg/kg in sample SL03. Results from both samples exceeded the residential direct contact screening level of 0.39 mg/kg and the industrial direct contact screening level of 1.6 mg/kg. The sludge arsenic concentrations are within the soil background range for arsenic of 0.78 to 14.2 mg/kg.

- Cobalt was detected in the two samples collected from the sludge drying beds at concentrations ranging from 2.0 mg/kg in sample SL02 to 2.6 mg/kg in sample SL03. Results from one of the samples exceeded the residential direct contact screening level of 2.3 mg/kg; no results exceeded the industrial direct contact screening levels. The sludge cobalt concentrations are within the soil background range for cobalt of 0.35 to 7.3 mg/kg.

- Iron was detected in all composite sludge samples at concentrations ranging from 12,000 mg/kg in sample SL03 to 15,000 mg/kg in sample SL01. Concentrations of iron exceeded the residential direct contact screening level of 5,500 mg/kg in all composite sludge samples; no results exceeded the industrial direct contact screening levels. Iron concentrations in sludge exceeded the soil background range of 1,740 to 10,900 mg/kg.

- Lead was detected in all composite sludge samples at concentrations ranging from 130 mg/kg in sample SL01 to 530 mg/kg in sample SL02. Results from one of the

samples collected from the sludge drying beds exceeded the residential direct contact screening level of 400 mg/kg; no results exceeded the industrial direct contact screening levels. Lead in sludge exceeded the soil background range of 4.9 to 124 mg/kg.

- Manganese was detected in all composite sludge samples at concentrations ranging from 160 mg/kg in sample SL02 to 270 mg/kg in sample SL01. Results from two of the samples exceeded the residential direct contact screening level of 180 mg/kg; no results exceeded the industrial direct contact screening levels. The sludge manganese concentrations are within the soil background range for manganese of 8.4 to 781 mg/kg.

- Mercury was detected in all composite sludge samples at concentrations ranging from 0.17 mg/kg in sample SL01 to 28 mg/kg in sample SL03. The two composite sludge samples collected from the sludge drying beds contained mercury concentrations exceeding the residential direct contact screening level of 0.67 mg/kg and the industrial direct contact screening level of 2.8 mg/kg. Mercury in sludge exceeded the soil background range of 0.025 to 0.25 mg/kg.

- Silver was detected in the two composite sludge samples collected from the sludge drying beds at concentrations ranging from 110 mg/kg in sample SL03 to 130 mg/kg in sample SL02. Results from both samples exceeded the residential direct contact screening level of 39 mg/kg; no results exceeded the industrial direct contact screening levels. Silver in sludge exceeded the soil background range of 0.15 to 0.3 mg/kg.

5.6.2 Pesticides

A total of four pesticides (4,4'-DDD; 4,4'-DDE; 4,4'-DDT; and dieldrin) were detected in the composite sludge samples. Three of the pesticides (4,4'-DDD; 4,4'-DDE; and 4,4'-DDT) were detected in all the composite sludge samples, the maximum concentrations of which were detected in the two sludge drying bed samples. Dieldrin was detected in the two sludge drying bed samples only. 4,4'-DDD was detected at a range of 110 to 1,200 µg /kg; 4,4'-DDE was detected at a range of 67 to 1,400 µg/kg; 4,4'-DDT was detected at a range of 110 to 1,100 µg/kg; and dieldrin was detected at a range of 5.6 to 9.9 µg/kg. No pesticides were detected in the composite sludge samples at concentrations exceeding residential direct contact screening levels.

5.6.3 Polychlorinated Biphenyls

No PCBs were detected in the composite sludge samples.

5.6.4 Semivolatile Organic Compounds

Seventeen SVOCs were detected in the composite sludge samples. Of the 17 detected SVOCs, 6 PAHs—benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene—exceeded residential direct contact screening levels in at least one sample. Results for benzo(a)pyrene and benzo(b)fluoranthene also exceeded industrial direct contact screening levels in at least one sample. In general, the maximum SVOC concentrations were detected in the sludge sample collected from the primary settling tank (SL01). **Figure 5-2** presents SVOC concentrations exceeding screening levels. Specific SVOC results exceeding screening levels are discussed below:

- Benzo(a)anthracene was detected in all composite sludge samples at concentrations exceeding the residential direct contact screening level of 150 µg/kg. Benzo(a)anthracene concentrations ranged from an estimated 290 µg/kg in sample SL03 to an estimated 2,100 µg/kg in sample SL01, which equals the industrial direct contact screening level.

- Benzo(a)pyrene was detected in all composite sludge samples at concentrations exceeding the residential direct contact screening level of 15 µg/kg. Concentrations ranged from an estimated 290 µg/kg in sample SL03 to an estimated 910 µg/kg in sample SL01. The industrial direct contact screening level of 210 µg/kg was exceeded for all composite sludge samples.

- Benzo(b)fluoranthene was detected in all composite sludge samples at concentrations exceeding the residential direct contact screening level of 150 µg/kg. Concentrations ranged from 550 µg/kg in sample SL03 to 4,800 µg/kg in sample SL01. The industrial direct contact screening level of 2,100 µg/kg was exceeded in sludge sample SL01.

- Benzo(k)fluoranthene was detected in all composite sludge samples at concentrations ranging from an estimated 290 µg/kg in sample SL03 to an estimated 2,400 µg/kg in sample SL01. Results from sample SL01 exceeded the residential direct contact screening level of 1,500 µg/kg but did not exceed the industrial direct contact screening level of 21,000 µg/kg.

- Dibenz(a,h)anthracene was detected in one composite sludge sample at an estimated concentration of 76 µg/kg, exceeding the residential direct contact screening level of 15 µg/kg but not exceeding the industrial direct contact screening level of 210 µg/kg .

- Indeno(1,2,3-cd)pyrene was detected in all composite sludge samples at concentrations exceeding the residential direct contact screening level of 150 µg/kg but not exceeding the industrial direct contact screening level of 2,100 µg/kg.

Concentrations ranged from an estimated 230 µg/kg in sample SL03 to an estimated 1,400 µg/kg in sample SL01.

5.6.5 Volatile Organic Compounds

Seven VOCs were detected in the composite sludge samples—1,1,2,2-tetrachloroethane, 2-hexanone, acetone, MEK, MIBK, PCE, and toluene. Acetone and MEK are common laboratory contaminants. Analytical results reveal that none of these VOCs exceeded the residential and industrial direct contact screening levels. In general, the maximum VOC concentrations were detected in the sludge sample collected from the primary settling tank (SL01). Specific VOC results are as follows:

- 1,1,2,2-tetrachloroethane was detected in one composite sludge sample at an estimated concentration of 29 µg/kg. The residential direct contact screening level for acetone is 590 µg/kg.
- 2-hexanone was detected in one composite sludge sample at an estimated concentration of 130 µg/kg. A residential direct contact screening level is not available for 2-hexanone.
- Acetone was detected in all composite sludge samples with concentrations ranging from an estimated 55 µg/kg in SL03 to an estimated 740 µg/kg in SL02. The residential direct contact screening level for acetone is 6,100,000 µg/kg.
- MEK was detected in two composite sludge samples with concentrations ranging from 77 µg/kg in SL02 to an estimated 210 µg/kg in SL01. The residential direct contact screening level for MEK is 2,800,000 µg/kg.
- MIBK was detected in one composite sludge sample at an estimated concentration of 91 µg/kg. The residential direct contact screening level for MIBK is 530,000 µg/kg.
- PCE was detected in one composite sludge sample at an estimated concentration of 5.1 µg/kg. The residential direct contact screening level for PCE is 570 µg/kg.
- Toluene was detected in two composite sludge samples with concentrations ranging from an estimated 6.2 µg/kg in sample SL02 to an estimated 1,200 µg/kg in sample SL01. The residential direct contact screening level for toluene is 500,000 µg/kg.

5.7 EXTENT OF CONTAMINATION IN WASTEWATER

One wastewater sample (WW01) was collected at the Site from the primary settling tank during the February 2007 Site Investigation. Very little sludge and very little wastewater was observed at the settling tank location. It should be noted that the settling tank is not covered and is open to

the outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank. The wastewater sampling location is presented in **Figure 4-1** and analyzed for the following parameters: TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and cyanide. Analytical results from the wastewater sample were compared to screening levels presented in **Table 5-3** to determine the nature and extent of chemical contamination in wastewater. **Table 5-10** presents a summary of detected constituents in wastewater and lists the number of detections, total samples analyzed, minimum and maximum detected concentrations, the location and depth of the maximum concentration, the minimum and maximum detection limit, and the number of exceedances of the respective chemical screening levels. Data results and validation reports are presented in **Appendix C**. The nature and extent of wastewater contamination, based on a comparison of the analytical data to their respective screening levels, is discussed in the following subsections.

5.7.1 Inorganics

A total of 12 metals were detected in the wastewater sample. Of the 12 detected metals, only aluminum, barium, iron, lead, and manganese were detected at concentrations exceeding screening levels. **Figure 5-3** presents wastewater concentrations exceeding screening levels. The individual chemical results of the metals exceeding screening levels are discussed below:

- Aluminum was detected in wastewater at a concentration of 0.24 mg/L, exceeding the screening level of 0.087 mg/L.
- Barium was detected in wastewater at a concentration of 0.1 mg/L, exceeding the screening level of 0.004 mg/L.
- Iron was detected in wastewater at a concentration of 15 mg/L, exceeding the screening level of 0.3 mg/L.
- Lead was detected in wastewater at a concentration of 0.029 mg/L, exceeding the screening level of 0.0025 mg/L.
- Manganese was detected in wastewater at a concentration of 0.17 mg/L, exceeding the screening level of 0.12 mg/L.

5.7.2 Pesticides

No pesticides were detected in wastewater.

5.7.3 Polychlorinated Biphenyls

No PCBs were detected in wastewater.

5.7.4 Semivolatile Organic Compounds

Three SVOCs were detected in the wastewater sample—fluoranthene, phenanthrene, and pyrene. **Figure 5-3** presents wastewater concentrations exceeding screening levels. Each of the SVOCs was detected at concentrations exceeding screening levels with specific results as follows:

- Fluoranthene was detected in wastewater at an estimated concentration of 1.5 µg/L, exceeding the screening level of 0.04 µg/L.
- Phenanthrene was detected in wastewater at an estimated concentration of 0.91 µg/L, exceeding the screening level of 0.4 µg/L.
- Pyrene was detected in wastewater at an estimated concentration of 1.2 µg/L, exceeding the screening level of 0.025 µg/L.

5.7.5 Volatile Organic Compounds

Two VOCs (acetone and MEK) were detected in the wastewater sample. Acetone and MEK are common laboratory contaminants. Analytical results reveal that none of these VOCs exceeded screening level. Specific VOC results are as follows:

- Acetone was detected in wastewater at an estimated concentration of 8.9 µg/L. The screening level for acetone is 1,500 µg/L.
- MEK was detected in wastewater at an estimated concentration of 3.8 µg/L. The screening level for MEK is 14,000 µg/L.

6. CONTAMINANT FATE AND TRANSPORT

This section discusses the physical and chemical processes that affect contaminant migration in soils/sediment, surface water, and groundwater for the sources and contaminants described in Section 5. There have been limited detections of contaminants in each of these matrices at the former WWTP during site investigations.

6.1 CONTAMINANT PRESENCE

Sampling at the former WWTP was designed to evaluate the impact of WWTP processes and the mounded material identified in previous investigations as possible residual sludge piles. Potential sources of contamination include the two sludge drying beds thought to contain residual sludge materials associated with former WWTP activities, residual sludge piles, and the trickling filter. Some contaminants at the Site are likely the result of the historical use of pesticides (e.g., DDT) and flaking lead-based paint at the Pump House. The use of DDT as a pesticide was widespread for nearly 40 years until it was banned in 1972. Because of the low chemical reactivity, resistance to oxidation, and resistance to other degenerative processes, residues of these compounds have been shown to be persistent in the environment. Further, these compounds generally are not soluble in water but can accumulate in the tissues of organisms that live in the water. PAHs may be derived from a number of sources that have entered the Site through the wastewater treatment system, including fuel residue and the organic combustion of organic materials. PAHs, like DDT, have a strong tendency to bind to sediment particles rather than dissolve in water; therefore, when PAH residues enter a body of water (e.g., wastewater), they tend to accumulate in sediments (Lindsey et al., 1998) or in this case, the sludges.

6.1.1 Soil and Sludge

Limited contamination in surface and subsurface soils has been confirmed by this and historical investigations at the former WWTP. The contaminants that are present in site soils include pesticides (4,4'-DDD; 4,4'-DDE; 4,4'-DDT; and dieldrin), PCBs (Aroclor-1260), SVOCs (benzo(a)pyrene, benzo(g,h,i)perylene, bis(2-ethylhexyl)phthalate, dibenz(a,h)anthracene, di-n-butyl phthalate, and indeno(1,2,3-cd)pyrene), VOCs (acetone, MEK, MIBK, PCE, toluene, and total xylenes), and metals. Contaminants of potential concern (COPCs) (constituents detected at

concentrations exceeding the screening levels) for soils include metals (aluminum, antimony, arsenic, cobalt, iron, lead, and manganese), PCB Aroclor-1260, and PAHs (benzo(a)pyrene and dibenz(a,h)anthracene).

Residual sludge is present in the settling tank and the sludge drying beds. The contaminants that are present in site sludge include pesticides (4,4'-DDD; 4,4'-DDE; 4,4'-DDT; and dieldrin), SVOCs, VOCs, and metals. COPCs for sludge include metals (antimony, arsenic, cobalt, iron, lead, manganese, mercury, and silver) and PAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene).

These contaminants are subjected to physical, biological, and chemical reactions that directly influence their persistence and potential migration.

6.1.2 Wastewater

The contaminants present in wastewater within the former settling tank include PAHs (fluoranthene, phenanthrene, and pyrene), VOCs (acetone and MEK), and metals (aluminum, barium, calcium, copper, iron, lead, magnesium, manganese, potassium, sodium, vanadium, and zinc). COPCs for wastewater include metals (aluminum, barium, iron, lead, and manganese) and PAHs (fluoranthene, phenanthrene, and pyrene) and are subjected to physical, biological, and chemical reactions that directly influence their further persistence and potential migration.

6.1.3 Groundwater

The impact to groundwater from WWTP operations occurs by leaching through soil and sludge to underlying groundwater. Limited contamination in groundwater has been observed in samples collected from monitoring wells at the Site. The contaminants present in groundwater underlying the WWTP include SVOCs (2,4-dimethylphenol, 3 and 4 methylphenol, bis(2-ethylhexyl)phthalate, diethyl phthalate, and phenol), VOCs (acetone, MEK, and PCE), and metals (aluminum, arsenic, barium, calcium, chromium, cobalt, iron, magnesium, manganese, potassium, sodium, and vanadium).

COPCs for groundwater include metals (arsenic and manganese) and PCE. Although the VOC PCE has been detected at low levels in groundwater at MW1 (which is upgradient from former WWTP structures), its presence is potentially attributable to migration from upgradient sources. Metals detected in groundwater at concentrations exceeding screening criteria (arsenic and manganese) may in part be the result of migration from adjacent upgradient sources, as well as the result of leaching of metals from material within the sludge and surrounding soils. Contaminants in groundwater are then subjected to physical, biological, and chemical reactions that directly influence their further persistence and potential migration.

6.1.4 Sediment and Surface Water

Contaminants from soil, sludge, and groundwater at the former WWTP may impact sediment and surface water when stormwater carries particles along its path and when groundwater discharges to the unnamed tributary to Little Mosquito Creek. The sediments and surface water are also impacted by runoff or discharge from other contaminated sites within the same discharge area. The contaminants that are present in the surface water adjacent to the Site include metals (aluminum, barium, calcium, cobalt, iron, magnesium, manganese, potassium, sodium, and vanadium) and the VOC chloromethane. COPCs for surface water include the metals aluminum, barium, iron, and manganese.

Site sediments are characterized by sediments in the intermittent stream directly downstream of the Site. The contaminants present in the sediment adjacent to the Site include pesticides (4,4'-DDD; 4,4'-DDE; and 4,4'-DDT), VOCs (acetone and MEK), and metals. Arsenic was the only chemical detected in sediment at a concentration in excess of screening levels.

6.2 CONTAMINANT PROPERTIES/PERSISTENCE

This subsection presents a discussion of the mobility or persistence of detected contaminants at the former WWTP. The properties of contaminants that determine their movements and potential threat to water quality include water solubility, tendency to adhere to soil materials, persistency, and toxicity.

6.2.1 Transport and Attenuation Processes

Various transport and attenuation processes control the migration and persistence of contaminants. Processes that tend to disperse constituents include the following:

- Surface water and groundwater movement (which includes the movement of dissolved and suspended contaminants).
- Facilitated transport.
- Leaching by dissolution or desorption.
- Surface erosion.

The solubility of a compound determines the concentration of contaminants dissolved in water and whether the compound will react with other chemicals present. Knowledge of the solubility of a chemical provides considerable insight into the fate and transport of that chemical. In general, highly soluble compounds are less likely to partition into soil or sediment, or to volatilize from water, and are more likely to biodegrade.

Contaminants can be transported in the dissolved phase in one of two ways: advection or dispersion. Advection involves transport of the contaminant with the flowing groundwater and migrating with the mean velocity of the solvent (groundwater plus dissolved contaminant). Hydrodynamic dispersion has two components: molecular diffusion and mechanical dispersion. At low groundwater velocities, diffusion is predominant; at high velocities, dispersion is predominant. Molecular diffusion is the process by which ionic or molecular constituents move under the influence of concentration gradients. Mechanical dispersion is a function of dispersivity, and is dependent on vertical and horizontal permeability variations and the degree of heterogeneity and anisotropy; consequently, it is dependent on the nature of the medium (Walton, 1988).

Particle transport involves the movement of small, solid-phase particles (such as inorganic and organic colloids), macromolecules, or emulsions to which contaminants have adhered by sorption, ion exchange, or other means. Hydrophobic organic contaminants, particularly high molecular weight organic compounds such as PAHs, DDT, and heavy metals, have a high affinity for mobile subsurface particles, and this attraction alters their mobility (Huling, 1989).

Cosolvation is the process by which the solubility and mobility of one contaminant is increased by the presence of another (Keely, 1989). High concentrations of some organic compounds or solvents increase the potential for facilitating transport of usually immobile hydrophobic organic contaminants by partitioning into a more mobile solvent. The presence of mobile immiscible-phase solvents and petroleum fluids can facilitate the transport of hydrophobic organic contaminants in both saturated and unsaturated soils (Huling, 1989).

Naturally occurring organic compounds (e.g., humic and fulvic acids) can undergo complexation reactions with metals and pesticides. Complexation reactions can increase the solubility of metals (including iron, aluminum, copper, nickel, and lead) and pesticides (e.g., DDT). In a cosolvent system, as the fraction of a water-miscible cosolvent increases, the solubilities of the hydrophobic organic contaminants increase; however, the cosolvent concentration normally needs to be high to ensure a substantial increase in solute velocity. Cosolvation, therefore, is important primarily near sources of groundwater contamination.

Chemical phase shifts involve changes in pH and/or the redox potential of the groundwater. These shifts can increase contaminant solubilities and mobilities by ionizing neutral organics, solubilizing precipitated metals, forming complexes, or limiting biological activity (Keely, 1989). These processes are particularly important in determining the mobility of heavy metals.

Processes that tend to attenuate the dispersion of contaminants include retardation resulting from sorption, volatilization, degradation, and precipitation. The sorption properties of individual solutes are dependent on soil and groundwater characteristics. In general, the relative amount of sorption by soil or sediment materials that do not contain organic matter is as follows: clay > silt > sand > gravel (Walton, 1988).

The tendency of organic chemicals to be sorbed is also dependent on the organic content of the soil and the degree of hydrophobicity of the solute. The rate of travel for each chemical depends on the degree of sorption. If an organic chemical is extensively adsorbed by particles, it will be rendered relatively immobile. The rates and degree of volatilization, photolysis, hydrolysis, and biodegradation are directly dependent on the extent of adsorption (Montgomery, 1991). The vadose zone typically contains greater amounts of organic material and metal oxides (which may

also act as sorbents) than the saturated zone, which may make the rate of movement in the vadose zone substantially less than that in the saturated zone.

The soil partition or sorption coefficient (K_{oc}) is defined as the ratio of adsorbed chemical per unit weight of organic carbon to the aqueous solute concentration. The coefficient indicates the propensity of a compound to adsorb to organic carbon (degree of retardation) and, therefore, provides a means for estimation of the relative mobility of solutes (Montgomery, 1991). The mobility of a contaminant is a function of the relative rate of transport of the contaminant versus the rate of groundwater flow. Contaminants that have low mobilities (i.e., high retardation or sorption) move slowly compared to the velocity of the groundwater.

Volatilization is the transport of a compound from the liquid to the vapor phase and, ultimately, into the atmosphere. Volatilization rates are affected by soil properties, vapor pressure, temperature, and sorption. In recharge areas composed of sandy or gravelly soil, shallow groundwater contains moderate amounts of dissolved oxygen, and volatilization may be an important process, especially for compounds with moderate to high volatility (Montgomery, 1991). The effectiveness of volatilization normally decreases with depth.

Chemicals released to the environment are susceptible to several degradation pathways, including chemical degradation (e.g., hydrolysis, oxidation, reduction, and dehydrohalogenation); photolysis or photochemical degradation; and biodegradation. Compounds formed by these processes may be more or less toxic and/or more or less mobile than the parent compound.

Hydrolysis is the reaction of a chemical with water, typically involving the introduction of a hydroxyl group and the loss of a halide or other element (e.g., the formation of ethanol from chloroethane). Reaction half-lives range from several seconds to thousands of years. For halogenated compounds, hydrolysis proceeds most rapidly for the monohalogenated forms (Fetter, 1989).

Oxidation typically involves the loss of electrons during a chemical reaction and includes the replacement of hydrogen by hydroxide forming an alcohol (Fetter, 1998). In general, substituted

aromatic compounds such as toluene and phenol can be oxidized. Oxidation rates for aromatic compounds are typically an order of magnitude faster than for chlorinated aliphatic compounds.

Biodegradation may be defined as the breakdown of organic compounds by microorganisms through metabolic processes. Biodegradation is an important mechanism in transforming short-chain halogenated compounds in an anaerobic environment, and in breaking one- and two-ring compounds under aerobic conditions (Olsen and Davis, 1990). Biodegradation includes many of the aforementioned chemical degradation reactions, but generally allows them to occur at much faster rates (Olsen and Davis, 1990). Variables affecting the rate of biodegradation are as follows:

- Number of microorganisms (most are within 14 cm of the ground surface).
- Chemical properties, concentrations, and distribution.
- Temperature.
- pH.
- Moisture and oxygen content.
- Salinity.

The rate of biodegradation tends to be higher for low molecular weight compounds. Pollutant concentrations generally must be in the range of at least 10 to 100 µg/L to sustain a microbe population. Pollutants at high concentrations may be only partially biodegraded if oxygen is depleted (because of metabolism) during aerobic biodegradation (Newsom, 1985).

Migration of contaminants through soil may be retarded to some extent by sorption. The mobility of aromatic hydrocarbons and solvents such as PCE is generally high, primarily because sorption of these compounds is weak. Migration is faster through previously affected soil because large releases may exceed the sorptive capacity of the soil, causing the hydrocarbon mixture to move as a bulk fluid. Sorption is directly related to the size and complexity of the compound and is inversely related to solubility. Because of high solubilities and limited sorption, lower molecular weight aromatic hydrocarbons (e.g., benzene) and less halogenated aliphatic hydrocarbons (e.g., vinyl chloride) are the most likely classes of those compounds present in high enough concentrations in soil to affect groundwater. Compounds with low solubilities, low volatilities, and high sorption (e.g., PCBs, pesticides, and most PAHs) are likely to be less mobile and present principally near the source areas (Oak Ridge National Laboratory [ORNL], 1989).

6.2.2 Chemical Properties

The fate and transport of contaminants may be viewed with regard to various chemical groups. Detected contaminants may be divided into various groups with similar chemical structures that generally exhibit similar chemical behavior. **Table 6-1** presents some of the physical and chemical properties of the COPCs.

6.2.2.1 VOCs

PCE is the only VOC COPC identified at the Site and is classified as a chlorinated aliphatic hydrocarbon (CAH). CAHs are characterized by straight-chain structures; a variable number of single, double, and triple bonds; and the presence of chlorine. CAHs have many applications, such as solvents, degreasers, dry cleaning agents, gasoline additives, refrigerants, and organic synthesis agents (Moore and Ramamoorthy, 1984). CAHs tend to have high solubilities, high volatilities, low to moderate partition coefficients, high mobilities, and densities greater than water. As a result, they are relatively easily volatilized into the atmosphere (if conditions are suitable) or leached from soil into groundwater. Once in the subsurface, the CAHs typically undergo progressive dehalogenation; however, the time required for each step may vary widely and degradation may or may not occur, depending on conditions (normally anaerobic). The relative rate of dechlorination of CAHs decreases as chlorines are sequentially removed. Carbon dioxide is the general end product of organic degradation (oxidation).

6.2.2.2 SVOCs

SVOCs present at the Site may be classified as PAHs (e.g., benzo(a)anthracene, and phenanthrene). The PAHs are composed of fused benzene rings. Physical and chemical properties vary regularly with molecular weight. PAHs are frequently found in fuels (e.g., JP-4 and fuel oil), tar, and asphalt, and are used in manufacturing pesticides, preservatives, and antiseptics (Moore and Ramamoorthy, 1984). In general, PAHs tend to have very low solubilities, high partition coefficients, and very low mobilities. Aqueous solubility and volatility decrease with increasing molecular weight. The least complex and most mobile of these compounds is naphthalene. PAHs are generally confined to the soil or sediment, with the exception of some of the compounds with higher solubilities; those at high soil concentrations; or those that are degradation products of other, possibly more mobile, compounds. Lower

molecular weight PAHs biodegrade to carbon dioxide and water, but higher molecular weight PAHs may form phenolic and acidic metabolites (Moore and Ramamoorthy, 1984).

6.2.2.3 PCBs

PCBs were detected only in soil in one sample collected from the former transformer area. PCBs were not detected in any other media investigated at the Site. Aroclor-1260 was detected in parent sample SS1 and in its field and blind duplicate samples SS1-D and SS6, respectively. PCBs are a class of organic compounds with 1 to 10 chlorine atoms attached to biphenyl, which is a molecule composed of two benzene rings. PCBs were widely used for many applications, especially as dielectric fluids in transformers and capacitors and coolants. PCB production was banned by the United States Congress in 1976 and by the Stockholm Convention on Persistent Organic Pollutants in 2001. PCBs are toxic and are persistent organic pollutants. PCBs have low water solubilities and low vapor pressures at room temperature, but they have high solubilities in most organic solvents, oils, and fats. PCBs are very stable compounds and do not degrade readily. Their destruction by chemical, thermal, and biochemical processes is extremely difficult. The source of PCBs in the soil at sample location SS1 is the former transformer and is the only area on the WWTP site where PCBs were detected.

6.2.2.4 Metals

The fate and transport of metals in the surface and subsurface environments are variable. Depending on conditions, some metals are precipitated, some are adsorbed to colloids and other surfaces or held by ion exchange, and some are transported by surface water and groundwater as free ions or as metal/ligand complexes. The mobilities of metals are principally controlled by pH, Eh, and the presence of metal hydroxides, clay minerals, or organic compounds. Heavy and trace metals have very high potentials for retardation. The mobilities of many trace metals (e.g., arsenic, copper, lead, nickel, and zinc) are limited by their tendency to be adsorbed and/or coprecipitated by manganese and iron oxides and/or insoluble organic material.

Surface water and groundwater are solvents that are in contact with various earth materials and, therefore, contain dissolved cations and anions as well as some nonionic inorganic material. Naturally occurring groundwater can contain dissolved solids that range in concentration from less than 100 mg/L to more than 500,000 mg/L (Hem, 1985). Major cations (e.g., sodium and

magnesium) have moderate mobilities. Major anions (e.g., chloride) generally have high mobilities, primarily because of their negative charge, solubility, and lack of adsorption.

Unlike most organic compounds, metals are naturally occurring and cannot break down and, therefore, are always present. However, certain processes can essentially immobilize metals, especially those metals that have varying oxidation states (e.g., iron, chromium, and arsenic). Trace metals are mobile if soluble ions exist, the soil has a low cation exchange capacity, or if the metals are chelated or attached to a mobile colloid. Conditions that promote the maximum mobility of trace metals would include the presence of an acidic, clean, sandy soil with a low organic and clay content (Fetter, 1998).

A possible source of some metals (specifically arsenic, and mercury) may be pesticide and/or fertilizer application; other metals such as lead are found in paint. Arsenic is widely distributed and was abundant in pre-World War II inorganic pesticides, wood preservatives, and alloys. Arsenic can exist in two valence states (+3 and +5) dissolved in water. Dissolved arsenic species can be absorbed by ferric hydroxides that are stable over a wide Eh-pH range. However, under reducing conditions, arsenic mobility is increased (+5 valance arsenic is more strongly absorbed than +3). Arsenic is most mobile under mildly reducing conditions lacking hydrogen sulfide, and methane-generating bacteria can convert arsenic to mobile organic forms. The presence of metal cations (specifically barium), iron, aluminum, and possibly manganese oxides, and sulfides can result in the coprecipitation of arsenates and arsenites. However, the complexation of arsenic by dissolved organic matter prevents sorption and coprecipitation (Bodek et al., 1988).

Lead released or disposed of in soil is generally bound in the upper 5 cm, especially in soil with at least 5% organic matter or a pH of 5 or above. Leaching is not important under normal conditions. Lead is absorbed by organic matter, clay minerals, and hydrous iron and manganese (increasing with increasing pH) and precipitated by forming low-solubility compounds with major anions (e.g., sulfate). As previously noted, lead mobility is restricted by adsorption, but may be increased by the formation of soluble organic and anion complexes (Rose et al., 1979). Biomethylation can lead to remobilization and volatilization.

A TCRA was completed in 2006 to remove the trickling filter feature that was a source of mercury at the Site. Mercury is highly volatile; strongly binds to hydrous iron and manganese

oxides, clays, and organics; and coprecipitates with sulfide. Once this process has occurred, desorption is negligible (Bodek et al., 1988). Common ligands (e.g., chloride) decrease the amount of sorption. Most of the inorganic mercury compounds have low solubility and mobility, but methane-generating bacteria can convert metallic mercury to organic mobile forms, such as methyl mercury salt and dimethyl mercury (Fetter, 1998). Most of these reactions take place in sediments. Mercury is very soluble in oxidized aquatic systems.

6.3 CONTAMINANT MIGRATION

This subsection presents the contaminant fate and transport pathways for the potential affected media areas. The various contaminant pathways for each potential source area are discussed based upon the properties of the contaminants and the impacts to the site media as indicated from the RI results.

6.3.1 Soils, Sludge, and Sediments

The migration of contaminants in soil and sludge is influenced by a given constituent's adsorption potential or the physical/chemical process by which the contaminant is bound up by soil, solubility in water, and vapor pressure or potential to volatilize. The detection of COPCs in soils and sludge at the Site is a result of impact to the soil from former WWTP processes, and the resulting physical-chemical interactions of the constituents in a given matrix.

A contaminant is bound to the soil so that it is either immobilized or released very slowly by adsorption, a major physical-chemical process affecting contaminant migration in soil. Adsorption to soil can prevent contaminant breakdown or migration by the processes of phototransformation, hydrolysis, volatilization, mobility by water solubility, and microbial biodegradation. These processes depend on the binding strength of the soil, which is a function of the organic carbon present in the soil and the hydrophobicity of the chemical.

Soil adsorption, numerically expressed as the adsorption coefficient (K_{oc}), reflects the extent that an organic chemical partitions between a solid phase and a liquid phase. The K_{oc} value is utilized to predict the likelihood that a chemical will adsorb to soil organic carbon. Soils must contain organic carbon/organic matter to produce a K_{oc}. Chemicals with a high K_{oc} will adsorb to organic carbon; whereas, a low K_{oc} (values typically less than 1 liter per gram [L/g]) indicates

that the chemical will not adsorb to soil organic carbon. The soil COPCs listed in **Table 6-1** all have K_{oc} values greater than 100 L/g.

Solubility in water is another indicator of contaminant mobility. Solubility, measured in milligrams per liter (mg/L), may be used to predict the likelihood that a chemical will be adsorbed to soils, or will migrate by dissolution in surface runoff or through leaching (the movement of a chemical downward through soil through percolation of water). Solubility is defined as the mass of a solute that will dissolve in a unit volume of solution under specified conditions. The solubility defines the maximum possible concentration that commonly occurs in groundwater for any given contaminant. The presence of COPCs in the unsaturated soils may serve as a renewable source of groundwater contamination if the contaminants are highly water-soluble. As the water table fluctuates over time, the saturated portion of the flow system repeatedly comes in contact with contaminated soil. Each rise of the water table serves to recharge the contaminants in the groundwater. A chemical with low solubility (less than 10 mg/L) is less likely to be mobile, or subject to breakdown through biodegradation, and more likely to adsorb to the soil matrix. All of the soil, sludge, and sediment COPCs listed in **Table 6-1** have water solubilities less than 10 mg/L.

Volatilization refers to mass transfer from liquid and soil to the gaseous phase. The volatilization of a chemical in soil is dependent upon the vapor pressure and water solubility of the chemical, the concentrations introduced to the soil, the amount of moisture present in the soil, movement of air through the soil, sorptive and diffusive characteristics, soil temperature, clay content, organic-carbon content, porosity, and density. VOCs that have volatilized into the soil gas phase can move into various phases or become part of another phase without changing form (i.e., migrate and condense, sorb onto soil particles, dissolve in groundwater, degrade, or escape to the atmosphere. All of the soil, sludge, and sediment COPCs have low volatility.

The constituents that were detected at levels greater than the screening levels in soils, sludge, and sediment at and adjacent to the former WWTP have high adsorption coefficients, low water solubilities, and low vapor pressures, indicating they are relatively immobile, somewhat persistent, and have low volatility.

6.3.2 Surface Water

Migration of contaminants in surface water, facilitated primarily by surface runoff, is affected by the chemical's solubility, ad- or absorption to soil, site topography, and amount of rainfall. Surface runoff causes a given chemical to move from a contaminated area to a non-contaminated area.

Water-soluble chemicals may dissolve in surface water and move with the water as it runs off a contaminated area. Surface water runoff may further erode soils, carrying chemicals that are adsorbed or absorbed by the soils and depositing them at downgradient locations. If topography is sloped, as at the Site, the movement of soil and associated absorbed and/or adsorbed chemicals is increased. Similarly, abundant rainfall will result in increased runoff and increased transport of chemicals in the path of the surface runoff.

COPCs for surface water include the metals aluminum, barium, iron, and manganese. Several metals were detected in sediments downstream of the Site with only arsenic identified as a COPC. Aluminum, barium, iron, and manganese were detected in the two sediment samples downgradient from the former WWTP and also in all soil samples collected from site soils.

6.3.3 Groundwater

Groundwater COPCs include arsenic, manganese, and PCE. The source of the PCE is currently unknown and was only detected in the upgradient well (MW1) at the site. Although PCE has been detected in site sludges and soils above SSLs, it has not been detected in monitoring wells located downgradient of these PCE detects. It should be noted PCE was only detected in 1 of 3 composite sludge samples and 1 of 26 soil samples at the Site. Once a chemical enters the groundwater regime, several transport mechanisms are present that may aid in the spreading of the contamination. These mechanisms include diffusion, advection, mechanical dispersion, and hydrodynamic dispersion. Diffusion is the process by which a contaminant in water will move from an area of greater concentration toward an area where it is less concentrated. Diffusion will occur as long as a concentration gradient exists, even if the fluid is not moving, and as a result, a contaminant may spread away from the place where it is introduced into a porous medium. Diffusion may also occur when the concentration of a contaminant is higher in one area than in

an adjacent area, dependent on the adjacent area porosity. The medium to fine grained quartz sand through which shallow groundwater flows underlying the Site allows an accelerated groundwater flow, which minimizes the effects of mechanical dispersion and diffusion as primary mechanisms for contaminant movement. Advection is the movement of dissolved solute with flowing groundwater. The amount of contaminant being transported is a function of its concentration in the groundwater and the quantity of groundwater flowing, and advection will transport contaminants at different rates in each stratum. The effect of advection for contaminant transport would generally be expected to be higher in sandy soils than diffusion and dispersion.

Groundwater flow through different porous media occurs at variable rates due to the arrangement of particles in the subsurface. As contaminated groundwater travels through the stratum, the fluid does not all travel at the same velocity, and as a result, mixing occurs along the flow path. This mixing is termed mechanical dispersion, and it results in a dilution of the contaminant at the advancing edge of flow. Mechanical dispersion occurs longitudinally, or along the direction of the flow path, and transversely, or laterally. Mechanical dispersion and diffusion combine in groundwater flow to create hydrodynamic dispersion. This process begins when a contaminant enters the aquifer. The adsorption of a solute onto an aquifer material (e.g., clay) results in a reduction of concentration in the aqueous phase and a retardation of the velocity of contaminant migration. Similar to diffusion and dispersion, the predominantly sandy medium through which shallow groundwater flows in the area of the Site minimizes the impact of adsorption on contaminant movement.

The degree of retardation experienced by a particular organic contaminant will depend on the fraction of organic carbon (f_{oc}) of the aquifer materials. The higher the f_{oc}, the more sites are available for adsorption.

The primary mechanisms for natural attenuation of metals are adsorption and dilution. The formation of adsorbed species and insoluble solids is dependent primarily on the ambient biogeochemical conditions of the groundwater. The physicochemical variability in groundwater pH, ORP, and salinity may affect metal mobility in the soil/sediment-groundwater system. Generally as the pH of groundwater increases, the dissolved concentrations of metals will decrease as sorption is promoted. Groundwater samples collected from the Site in 2007 indicate

groundwater at these locations has a relatively average pH (6.1 to 7.5). Data for pH are presented on well purge forms provided in **Appendix A**. The lowest pH values were observed at MW1 (5.86) and MW5 (5.7). The highest arsenic concentration was observed at MW3 (pH of 7.24). Thus, pH does not appear to be a significant indicator for metals in groundwater.

Reducing conditions can also result in high dissolved concentrations of some metals. Reducing conditions are present across the Site as evidenced by negative ORP measurements during groundwater sampling (see **Appendix A**). Changing groundwater conditions are not indicative across the Site.

Due to low solubilities and high adsorption coefficients of the majority of COPCs, and the average pH and low ORP of groundwater at the Site, groundwater has not been significantly impacted by previous site activities. The chemicals that have been reported in groundwater have been detected at low levels at a limited number of locations.

7. BASELINE HUMAN HEALTH RISK ASSESSMENT

7.1 INTRODUCTION

A baseline human health risk assessment (BHHRA) was conducted to assess potential health impacts to humans considering both the current and future uses at the WFF. The BHHRA was conducted in accordance with guidance provided in USACE's Risk Assessment Handbook, Volume I: Human Health Evaluation (1999) and the USEPA RAGS, as well as other appropriate USEPA and VDEQ guidelines for risk assessment. The objectives of the BHHRA were to estimate potential risk to people contacting site-related COPCs under scenarios of current and plausible future land uses, to provide an analysis of risks and help determine the need for remedial action(s) at the Site, and to identify specific media and areas associated with unacceptable risk, as applicable. The exposure pathways analysis for the Site is summarized in **Appendix D1,** Table D-1. It presents the sources of contaminant exposure, the potential exposure media, the susceptible populations, and the exposure routes of concern.

The BHHRA serves multiple roles in the decision-making process, including:

- Estimation of the potential risks to exposed individuals if no actions are taken (i.e., baseline conditions).
- Assistance in determining the need for remedial action at the Site.
- Provision of a basis for determining cleanup goals.

There are five major components of the HHRA process:

- Hazard Identification (Section 7.2) – Includes an evaluation of the available data and the data used in the BHHRA. Describes the data usability, data validation, and the guidelines for data reduction for risk assessment purposes; outlines the data evaluation approach, and identifies the COPCs.
- Exposure Assessment (Section 7.3) – Describes the exposure setting including the local land and water uses. Presents a CSM that outlines source(s) of contamination, the affected media, and the current and future exposure scenarios along with their associated exposure pathways. Methods for estimating the COPC exposure point concentrations (EPCs) are also presented.

- Toxicity Assessment (Section 7.4) – Presents the toxicity factors that are used to estimate cancer risks and noncancer health effects for the COPCs identified in the Hazard Identification.

- Risk Characterization (Section 7.5) – Presents the approach to evaluating the potential cancer risks and noncancer health effects. Integrates the toxicity assessment and the exposure assessment to characterize both potential cancer risks and noncancer health effects.

- Uncertainty Analysis (Section 7.6) – Identifies the important uncertainties in the risk assessment process and describes the potential impact of alternative approaches on the overall estimate of risk.

The Risk Summary and Conclusions (Section 7.7) presents a discussion of the results of the risk assessment including the perspective developed through the Uncertainty Analysis.

7.2 HAZARD IDENTIFICATION

The hazard identification involved the review of available site data, the evaluation of data usability and data validation, establishment of guidelines for data reduction, the evaluation of data for use in the risk assessment, and selection of COPCs. The following guidelines for data reduction were used to produce the data summaries for each medium of concern for the BHHRA:

- If a chemical was reported in both a field sample and a method or field blank, it was considered to be a positive identification if the chemical was present in the field sample at a concentration greater than 10 times (for common laboratory contaminants), or 5 times (for all other substances) the maximum concentration reported in the blank for that data set. Common laboratory contaminants include acetone, methylene chloride, methyl ethyl ketone (2-butanone), and phthalate esters.

- If a chemical was not positively identified in any sample for a given medium because it was reported as a non-detect (indicated by a "U" qualifier) or because it was rejected by the data validator (indicated by an "R" qualifier), it was not addressed for that medium. No data containing an "R" flag were used in the BHHRA.

- Data with "J" qualifiers were assumed to be positive identifications. "J" values are estimated chemical concentrations reported below the minimum confident quantitation limit or the sample quantitation limit (SQL). All data with "J" qualifiers were assumed to be positive identifications for that medium and the corresponding reported concentrations were used.

- Duplicate samples from the same sampling location were considered as one data point. For duplicates where both sample values were detected or not detected, the values were averaged unless the relative difference between the two samples was equal to or greater than 50%. If the latter criterion was met, the maximum value of the

duplicate set was used as the sample concentration. If a duplicate consisted of non-detected and detected values, the detected value was used as the sample concentration in subsequent calculations.

- For all sample locations where soils were sampled at multiple depths for a single location, the results from the various depths were treated as individual data points in summarizing the data.

7.2.1 COPC Selection Process

COPCs were identified by comparing the maximum detected chemical concentration for each chemical by medium to risk-based concentrations (RBCs). Soil screening levels (SSLs) were not utilized in the COPC selection process because the approved 2009 Weston Work Plan did not indicate that contaminant levels in site soil/sludge data would be screened against the risk-based and MCL-based SSLs for groundwater. This was confirmed by review of Section 3.1 – Human Health Conceptual Site Model and Table 3.1a RAGS Part D Table 1 Selection of Exposure Pathways, WWTP Site of the Work Plan. The regulatory agencies are in general agreement with this USACE position concerning the non-use of soil-to-groundwater SSLs at the WWTP site provided that the following three criteria are met. The criteria as well as the rationale for compliance with them are presented as follows:

1.) There is sufficient (more than one data point per sample location) groundwater data that indicates no releases from the site as evidenced by a stable/decreasing trend line for any COPCs.

Although only one groundwater dataset from 2007 was generated for the WWTP site, no COPCs were identified; therefore, a second groundwater monitoring event was neither conducted nor warranted. Only three compounds (arsenic, manganese, and PCE) were detected above EPA RSLs for tap water during the 2007 sampling event but they were not identified as COPCs because their concentrations were either within the WFF background concentration range (arsenic and manganese) or was only detected in an upgradient well (PCE). Arsenic was only detected above its RSL in two wells (MW3 and MW5) at concentrations of 0.010 mg/L and 0.015 mg/L, respectively which were within the WFF background range of 0.0036 to 0.0177 mg/L. Manganese was only detected above its RSL in one well (MW6) of seven site wells at a concentration of 1.5 mg/L which was within the WFF background range of 0.0045 to 3.11 mg/L. Although PCE was detected in one well (MW1) at the site at a concentration of 4.4 ug/L which is above the RSL but below its MCL, its location is upgradient of the structures and potential source areas and its presence is not related to the WWTP site.

The 2007 dataset adequately addresses whether a release has occurred because no COPCs were identified for that sampling event; therefore, not warranting any subsequent groundwater monitoring at the WWTP site.

2.) Soil contamination/soil releases occurred in the distant past (30 years).

WWTP operations took place from the early 1940s to approximately 1959 when NASA acquired the WFF from the Department of the Navy. Any soil releases occurred over 50 years ago.

3.) No identified soil COPCs have been detected in groundwater above screening levels or background.

Although various metals (aluminum, antimony, arsenic, cobalt, iron, lead, manganese, mercury, and silver), Aroclor-1260, and several PAHs exceeded screening criteria and were identified as soil COPCs, only arsenic and manganese concentrations exceeded screening criteria in groundwater but they were within the range established for WFF background.

The COPC selection process included the following inputs:

- Chemicals were included in the COPC selection process if they were positively detected in at least one sample in a given medium, including (a) chemicals with no qualifiers attached (excluding samples with unusually high detection limits) and (b) chemicals with qualifiers attached that indicate known identities but unknown or estimated concentrations (e.g., J-qualified data).

- A chemical was excluded as a COPC for a medium if it was not detected in any samples from that medium.

- Compounds not normally considered as being toxic to humans were excluded. Calcium, magnesium, potassium, and sodium are considered to be essential nutrients and are toxic only at very high doses. These chemicals were not retained as COPCs.

- Chemicals were identified as COPCs if detected in media at concentrations in excess of risk-based concentrations (RBCs) that are associated with a cancer risk of 1E-06 (one-in-one-million) and a systemic hazard quotient (HQ) of 1. The USEPA has now incorporated all USEPA Region IX, III and VI human health screening values into the national screening database: http://USEPA-prgs.ornl.gov/chemicals/index.shtml. These RSLs were used for chemical comparison.

- Soil COPCs were identified by comparing the maximum detected concentration of each chemical with the residential RSL. For COPC screening purposes, noncarcinogenic RSLs were adjusted to correspond to a target hazard quotient (THQ) of 0.1 rather than 1. This was done to ensure that chemicals with additive effects are not prematurely eliminated during screening. Where RSLs are available for carcinogenic and noncarcinogenic endpoints and both ingestion and inhalation exposure routes, the lower (i.e., most stringent) value was used for the screening

comparison. Chromium was screened against the total chromium RSL (1:6 ratio Cr VI : Cr III).

- In order to identify groundwater COPCs, the maximum detected concentrations were compared to the tap water RSLs (Target Risk [TR] – 1.0E-06; THQ – 0.1).

- Currently, there are no RSLs for sediment exposure. Therefore, in order to select sediment COPCs, the maximum detected concentrations in sediment were compared to the residential soil RSLs multiplied by a factor of 10 for carcinogens (TR – 1.0E-05). For noncarcinogens, however, the THQ has been left un-adjusted to 1.0 to account for additive toxicity.

- Similarly, there are no RSLs for surface water exposure. Therefore, in order to select surface water COPCs, the maximum detected concentrations in surface water were compared to the minimum value from the VDEQ Surface Water Quality Standard (Human Health, Public Water Supply) or the tap water RSLs multiplied by a factor of 10 (TR – 1.0E-05; THQ – 1.0).

- If a risk-based screening level cannot be obtained or calculated for a chemical, that chemical was carried forward and discussed qualitatively in the uncertainty analysis. However, when a chemical does not have a screening value available, an attempt was made to identify and use a suitable surrogate in the COPC selection process.

- USEPA has not assigned verified or provisional toxicity values (i.e., cancer slope factors [CSFs] and reference doses [RfDs]) to lead because the toxicity data available to date are inadequate for evaluation by current methodology. Therefore, lead risk is not evaluated using the conventional risk assessment approach. USEPA's Integrated Exposure Uptake Biokinetic model (IEUBK) (USEPA, 2004a) was used to characterize lead risk to children aged 1 to 6 years. The Adult Lead Model (USEPA, 2003c) was used to characterize lead risk to unborn infants based on environmental exposure of the mother to lead-contaminated media.

For site soil, summaries for two data groupings are presented, one for the subsurface soil (0.5 to 10 ft bgs) and one for surface soil (0 to 0.5 ft bgs). Data summaries are also presented for the groundwater, sludge, wastewater, sediment, and surface water collected from the Site.

Appendix D1, Tables D-2 and D-3 present the soil data summaries for the subsurface soil and surface soil, respectively. **Appendix D1,** Tables D-4 and D-5 present the sludge and sediment data summaries, respectively. **Appendix D1,** Tables D-6 through D-8 present the groundwater, surface water, and wastewater data summaries, respectively.

7.2.2 COPC Results

7.2.2.1 Soil COPCs

Appendix D1, Tables D-2 and D-3 present the COPC selection process and results for the subsurface soil and surface soil, respectively. Surface soil samples were taken at 0 to 0.5 and at 0 to 2 ft intervals. In the instances where samples were taken at 0 to 0.5 ft bgs, additional samples were taken at 0.5 to 2 ft bgs in the sample location. As a result those 0.5 to 2 ft bgs were included in the subsurface sample group. The following analytes were identified as COPCs in subsurface soils (0.5 to 10 ft bgs):

Dibenz(a,h)anthracene	Arsenic
Aluminum	Iron

The following analytes were identified as COPCs in the surface soil (0 to 2 ft bgs):

Aroclor 1260	Arsenic
Benzo(a)pyrene	Cobalt
Dibenz(a,h)anthracene	Iron
Aluminum	Lead
Antimony	Manganese

As noted in the Site Assessment Memo for WFF PA II, “the potential for soil or groundwater contamination due solely to lead-based paint or asbestos-containing material (ACM) deposition from building maintenance or demolition activities will not be considered further"; therefore, the additional lead detections noted in 2012 were not included in this HHRA because their presence in soils is related to lead-based paint chips flaking off the Pump House building.

7.2.2.2 Sludge COPCs

Appendix D1, Table D-4 presents the COPC selection process and results for sludge. The following analytes were identified as COPCs in sludge:

Benz(a)anthracene	Arsenic
Benzo(a)pyrene	Chromium
Benzo(b)fluoranthene	Cobalt
Benzo(k)fluoranthene	Iron

Carbazole	Lead
Dibenz(a,h)anthracene	Manganese
2-Hexanone	Mercury
Indeno(1,2,3-cd)pyrene	Silver
Antimony	

7.2.2.3 Sediment COPCs

Appendix D1, Table D-5 presents the COPC selection process and results for sediment. As presented, the maximum detected concentrations for all analytes were less than the RSLs. Therefore, no COPCs in sediment were identified. This medium was eliminated from further evaluation in the BHHRA.

7.2.2.4 Groundwater COPCs

Appendix D1, Table D-6 presents the COPC selection process and results for groundwater. The following analytes were identified as COPCs in groundwater:

2,4-Dimethylphenol	Cobalt
Tetrachloroethene	Iron
Arsenic	Manganese
Chromium	

7.2.2.5 Surface Water COPCs

Appendix D1, Table D-7 presents the COPC selection process and results for the surface water collected from the Site. As presented, iron and manganese were the only analytes identified as a COPC.

7.2.2.6 Wastewater COPCs

Appendix D1, Table D-8 presents the COPC selection process and results for the wastewater collected from the Site. As presented, iron, lead, and manganese were the only analytes identified as COPCs.

7.2.2.7 Indoor Air COPCs

Due to complexity, USEPA recommends that a comprehensive assessment of the vapor intrusion pathway (VIP) be conducted using all available lines of evidence before drawing conclusions about the risks posed by this pathway. Soil gas and indoor air samples were not collected at the Site. No enclosed structures of use are present at the Site as it is abandoned and is currently used as open space. Thus the Site was not considered to be of potential concern for indoor air. The

vapor intrusion screening for the Site was completed through Tier 1 and Tier 2. Note that the USEPA guidance is intended to be applied to existing groundwater plumes.

The Tier 1 Primary Screening step is used to determine sites typically needing further consideration or to screen out sites at which the VIP does not ordinarily need further consideration. The Tier 1 screening results for the Site indicated that the Tier 2, secondary screening should be conducted (since it could not be shown in the Tier 1 screening that the pathway is incomplete.). The Tier 2 evaluation identifies whether or not subsurface vapor intrusion is likely to contribute significantly to unacceptable indoor air quality. For the Site, only groundwater concentrations were used in the Tier 2 evaluation since soil gas data are not available.

Analytical results from the seven groundwater samples were included in the VIP evaluation. All groundwater samples were analyzed for VOCs and SVOCs. **Appendix D1**, Table D-6 presents the summary of groundwater samples compared with the tap water RSLs.

In accordance with the USEPA Region III Vapor Intrusion Framework guidance document (USEPA, 2009e), USEPA no longer recommends using the 2002 USEPA Vapor Intrusion Screening values (USEPA, 2002a) or any other values derived from the Johnson & Ettinger Model. As a result, use of groundwater data is the recommended approach to support multiple lines of evidence in a VIP evaluation.

Additionally, only three chemicals (acetone, MEK, and PCE) were detected in groundwater and thus carried forward to the Tier 2 screen. Each of the three chemicals was detected only in one of the seven groundwater samples. Of these three chemicals, acetone and MEK were detected at concentrations less than their respective tap water RSLs. The detected PCE concentration (4.4 µg/L) exceeded the tap water RSL but is less than the federal MCL of 5 µg/L. In conclusion, the groundwater to indoor air pathway is not expected to pose an unacceptable risk to human health.

7.2.3 Comparison to Background Concentrations

Certain metals detected at the Site may be naturally occurring. Although a comparison to background concentrations is not a criterion for selecting COPCs, a comparison was conducted for informational purposes for metals only. As previously described, the values used during this

comparison were obtained from the *Final Background Soil and Groundwater Investigation Report* (TetraTech, 2004a). Numerical comparisons were performed and included a comparison of the Site and background maximum detected concentrations and arithmetic means. The results of these comparisons and the impact of background levels on site risks are described and presented in the Risk Characterization and Uncertainty Analysis sections (USEPA, 2002b).

7.3 EXPOSURE ASSESSMENT

The objective of the exposure assessment is to estimate the nature, extent, and magnitude of potential exposure of human receptors to COPCs considering the current and reasonably anticipated future uses of the Site. The exposure assessment includes an evaluation of the likelihood of such exposures occurring and provides the basis for development of acceptable exposure concentrations. The reasonable maximum exposure (RME) scenario is evaluated for each receptor group. The exposure assessment involves several key steps:

- Evaluation of the exposure setting includes describing the local land and water uses and identifying the potentially exposed human populations.
- Development of the CSM includes identifying the source(s) of contamination, the transport and release mechanisms, the exposure media, the exposure routes, and the potentially exposed populations (both current and future).
- EPCs are calculated for the COPC, the exposure scenario, and medium. EPCs are the concentrations with which a receptor may come in contact at an area. The EPC is either the 95% UCL of the mean or the maximum detected concentration, whichever is lower. The 95% UCLs were calculated following the most recent USEPA guidance and USEPA's ProUCL statistical software program (Version 4.00.04, USEPA, 2009d). Note that ProUCL Version 4 restricts the use of ProUCL for sample sizes of at least five. For data sets of at least five, no decision statistics are computed when not more than one detected observation is present in the data set. The maximum detected concentration is used as the EPC for sample sizes smaller than five or for data sets with only one detected observation.
- Algorithms for calculating the exposure doses through exposure pathways to receptors are consistent with USEPA risk assessment guidance and recommendations from USEPA Region III.
- Exposure parameters with which to calculate the exposure doses were identified for each scenario and exposure routes. Guidance documents such as the following were used to identify exposure parameters:

- RAGS Volume I, Human Health Evaluation Manual, Part A, Interim Final (USEPA, 1989).
- The Exposure Factors Handbook (USEPA, 1997a).
- Supplemental Guidance for Developing Soil Screening Levels For Superfund Sites (USEPA, 2002c).
- Human Health Toxicity Values in Superfund Risk Assessments (USEPA, 2003b).
- RAGS Vol. I, Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment (USEPA, 2004b).
- RAGS Vol. I, Human Health Evaluation Manual, Part F, Supplemental Guidance for Inhalation Risk Assessment (USEPA, 2009b).
- Site-specific information and professional judgment.

- Exposure doses for both carcinogenic and noncarcinogenic effects were calculated and presented in tabular format.

7.3.1 Conceptual Site Model Development

The CSM describes the contaminant source(s), the release and transport mechanisms, the exposure media, the exposure routes, and the potentially exposed human populations. The primary objective of the CSM is to identify the complete and incomplete exposure pathways. A complete pathway has the components listed above, whereas an incomplete pathway is missing one or more. **Appendix D1,** Table D-1 RAGS Part D, Table 1 [USEPA, 2001a]) presents the exposure pathway analysis of the study area. The rationale for the selection of receptors and pathways of concern in the CSM is discussed below.

Based on the current and potential future land and water uses, the environmental setting, and the types of site activities, the following populations were identified for evaluation in the risk assessment:

- Current/future older child trespasser.
- Future commercial/industrial workers.
- Future construction workers.
- Hypothetical future residents (age-adjusted, adult, and child).

Potentially contaminated media include soils, sediments, sludge, surface water, groundwater, and wastewater.

7.3.2 Exposure Point Concentrations

EPCs are determined as representative of an RME scenario. EPCs are the COPC concentrations that a receptor may come in contact with at an area. The EPC used for each COPC in most cases was the one-sided 95 percent upper confidence limit (95% UCL) of the mean. The 95% UCLs are calculated following USEPA guidance (USEPA, 2002b, 2009d). If the 95% UCL exceeds the maximum detected concentration, then the maximum concentration is used as the EPC. USEPA's ProUCL software program is used for calculating UCLs in this risk assessment, as this program allows the user to calculate distribution-specific UCLs, as well as UCLs for data that do not exhibit a specific distribution (USEPA, 2002d, 2009d).

The data set and each COPC are considered individually and professional judgment is used to determine the EPC, guided by the ProUCL Technical Manual and User's Guide. ProUCL data outputs are provided in **Appendix D2**.

- If fewer than eight samples were collected, the maximum detected concentration for the EPC was used.
- If greater than eight samples were collected and the data set contained less than 50% detects, a nonparametric-based UCL (either Kaplan-Meier [KM] or bootstrapping derived)/EPC was calculated/adopted if there were at least four detects. If there were less than four detects, the EPC was based on an ad hoc value (i.e., maximum detected concentration for this assessment).
- If greater than eight samples were collected and the data set contained at least 50% detects, the appropriate distribution was determined and the use of estimation procedures (e.g., KM, bootstrapping) was considered (instead of the simple substitution method) in calculating UCLs/EPCs as guided by the ProUCL supporting documentation.

Distributions and subsequent summary statistics were calculated using USEPA's ProUCL software (USEPA, 2009d). ProUCL calculates both parametric (for normal, lognormal, and gamma distributions) and non-parametric UCLs and provides recommendations on which UCL to use, depending upon distributional assumptions and the skewness (as represented by the standard deviation of the data). Distributions are tested using a number of procedures:

- Graphical test based upon a Q-Q plot.

- Lilliefors test ($\alpha = 0.05$; tests for normality or lognormality for data sets with samples sizes greater than or equal to 50).
- Shapiro-Wilk W test ($\alpha = 0.05$; tests for normality or lognormality for data sets with samples sizes less than 50).
- Anderson Darling test ($\alpha = 0.05$; tests for gamma distribution).
- Kolmogorov-Smirnov test ($\alpha = 0.05$; tests for gamma distribution).

Note that there are seven monitoring wells associated with the Site. Monitoring wells MW1 and MW2 are considered upgradient wells since they are located upgradient and within 100 feet of the former WWTP structures. Well MW3 was installed near the former trickling filter and MW4 through MW7 are located cross-gradient or downgradient to the former WWTP structures. The seven monitoring wells were sampled only during one groundwater monitoring round in February 2007 and the EPCs were calculated using this single round of groundwater data.

Appendix D1, Tables D-9 through D-11 present the EPCs for the soil COPCs. **Appendix D1,** Table D-11 presents the maximum EPCs of the subsurface EPCs (Table D-9) and the surface EPCs (Table D-10), which was used in the risk calculations to demonstrate a worst-case scenario. **Appendix D1,** Table D-12 shows the EPCs for the sludge COPCs. **Appendix D1,** Tables D-13 through D-15 present the EPCs for the COPCs in groundwater, surface water, and wastewater, respectively.

7.3.3 Identification of Exposure Equations and Parameters

This section presents the equations and parameters that are used to estimate the chronic daily intakes (CDIs; exposure doses) of the COPCs for each receptor through the applicable exposure pathways. Many of the exposure parameters used are standard values recommended by USEPA.

Exposure doses are dependent upon the magnitude, frequency, and duration of exposure. They are estimated by combining the COPC concentration (i.e., the EPC) and the exposure parameters. The exposure doses are expressed as intakes in milligram per kilogram per day (mg/kg-day). Two types of doses were calculated in this risk assessment. The first, the lifetime average daily dose (LADD), which is averaged over a 70-year lifetime, was used to estimate cancer risk. The second, the average daily dose (ADD), which is averaged over the actual exposure duration for each receptor, was used to estimate noncancer health effects.

To ensure that risk estimates are conservative and protective of human health, intakes based on a combination of average and upper-end, typically the upper 90^{th} or 95^{th} percentile, exposure factors termed the reasonable maximum exposure (RME), were calculated (USEPA, 1992c). **Appendix D1,** Tables D-16 through D-23 present the dose equations and exposure parameters for the receptors that were evaluated at the Site.

7.3.3.1 Current/Future Adolescent Child Trespasser

Current and future adolescent child trespassers (7 to 16 years old) who might walk through the Site or wade in the intermittent streams that flow into Little Mosquito Creek were evaluated in the risk assessment. It is assumed that the trespasser would come into contact with on-site surface soil (0 to 0.5 ft bgs) at the Site, residual sludge materials and wastewater associated with former WWTP activities, and sediment and surface water in the intermittent stream adjacent to the Site. Surface soil exposure pathways include incidental soil ingestion, dermal contact with soil, and inhalation of outdoor dust. Sludge exposure pathways include incidental ingestion and dermal contact. Wastewater exposure pathways include dermal contact. Exposure pathways for sediment and surface water from the intermittent stream include incidental ingestion and dermal contact.

The trespasser is assumed to be exposed to the various media 50 days/year, which equates to ten times a month over the course of the warmer months (May through September). This rationale is similar to the Sites 14 and Sites 15 Wallops Island Flight Facility risk assessment with the recreational fisherman scenario. An exposure duration (ED) of 10 years is used. The averaging time for carcinogens (AT_c) is based on a 70-year lifetime (25,550 days or 613,200 hours) (USEPA, 1989). The averaging time for noncarcinogens (AT_{nc}) for the adolescent child is 3,650 days or 87,600 hours. The adolescent child body weight (BW) is 42 kilograms (kg) (USEPA, 1997a).

The ingestion rate of soil (IR_S) for the adolescent child is 100 mg/day (adult value) (USEPA, 2002c). A value of 1 is used for the fraction ingested (FI), indicating that 100% of ingested soil is from the Site. An exposure time (ET) of 2 hours per day is assumed for contact with site soil.

It is assumed that the trespasser would come into contact with sediment and surface water while wading in the intermittent streams that flow into Little Mosquito Creek. Because they are

assumed to be wading and not fully immersed, only certain body parts contact the sediment and surface water (i.e., the feet, lower legs, hands, forearms, and head). This equates to a skin surface area (SA) for the adolescent child of 3,500 square centimeters per day (cm^2/day) (USEPA, 2004b). For sediment contact, the geometric mean soil-to-skin adherence factor (AF) value for children playing in wet soil of 0.2 milligrams per square centimeter (mg/cm^2) is used (USEPA, 2004b).

Currently, there are no incidental sediment ingestion rates available. In the absence of sediment-specific data, soil ingestion rates are used. The ingestion rate of sediment (IR_S) for the adolescent child is 100 mg/day (adult value) (USEPA, 2002c). A value of 1 is used for the FI, indicating that 100% of ingested sediment is from the Site. An ET of 2 hours per day is assumed for contact with sediment.

The surface water incidental ingestion rate is 50 milliliters per hour (mL/hr) (USEPA, 1989) with an assumed ET of 2.6 hours/day. For surface water and wastewater contact, the absorbed dose per event (DA_{event}) is estimated following the approach presented in the dermal risk assessment guidance (USEPA, 2004b). The event duration (t_{event}) is 2.6 hours/event. It is assumed that the event frequency (EV) is 1 event/day.

7.3.3.2 Future Commercial/Industrial Worker

Given the potential for future commercial development, a future industrial worker is evaluated. This receptor is assumed to spend the majority of the work day indoors with exposure to COPCs through incidental ingestion of soils that have become entrained in indoor dust, dermal contact with indoor dust, and inhalation of COPCs in indoor air resulting from dust re-suspension and vapors. USEPA suggests that indoor industrial workers have no direct contact with soil (USEPA, 2002c). However, it is conservatively assumed that the industrial workers directly contact the site soil. It is also assumed that a future site worker may come into contact with residual sludge materials (incidental ingestion and dermal contact) and dermal contact with wastewater associated with former WWTP activities.

The site worker is assumed to be exposed to the various media 250 days/year (USEPA, 2002c). The default worker ED of 25 years is used (USEPA, 2002c). The AT_c is 25,550 days (i.e., 70

years x 365 days/year) (USEPA, 1989). The noncancer AT_{nc} is 9,125 days. The adult BW is 70 kg (USEPA, 1989).

The IR_S for an indoor industrial worker of 50 mg/day is used for soil exposure (USEPA, 2002c). A value of 1.0 is used for the FI, indicating that 100% of ingested soil is from the Site. For the inhalation of indoor air, the exposure time of 8 hours is used (USEPA, 2009b). A regional-specific particulate emission factor (PEF) of 1.77E+09 is used as recommended by USEPA (USEPA, 2002c). The AT_c is 613,200 hours (i.e., 70 years x 365 days/year x 24 hours/day) (USEPA, 2009b). The noncancer AT_{nc} is 219,000 hours (i.e., 25 years x 365 days/year x 24 hours/day) (USEPA, 2009b).

For dermal contact with soil, sludge, and wastewater, the exposed SA is 3,300 cm^2/day (equating to the 50th percentile values for head, forearms, and hands) (USEPA, 2004b, 2003a). The 95th percentile soil-to-skin AF value for commercial/industrial groundskeeper of 0.11 mg/cm^2 is used (USEPA, 2004b). For wastewater contact, the DA_{event} was estimated following the approach presented in the dermal risk assessment guidance (USEPA, 2004b). The t_{event} is 0.5 hours/event. It is assumed that the EV is 1 event/day.

7.3.3.3 Future Construction Worker

Given the potential for future construction activities at the Site, a construction worker scenario is evaluated. A construction worker is defined as a worker who is involved with the construction of new buildings at the Site. The construction worker is assumed to be exposed to surface and subsurface soil at the Site, residual sludge materials and wastewater associated with former WWTP activities, and groundwater in construction trenches. Exposure pathways for the construction worker include incidental soil and sludge ingestion, dermal contact with soil and sludge, and inhalation of dust emissions from soils. In addition, it is assumed that the construction worker may come in contact (dermal) with groundwater if it enters the construction trench during construction activities. It is also assumed that the construction worker would come into dermal contact with wastewater associated with former WWTP activities.

The exposure frequency (EF) for the construction worker is 120 days/year, which equates to exposure 20 days/month for 6 months. An ED of one year is used. The AT_c is 25,550 days (i.e., 70 years x 365 days/year) (USEPA, 1989). The AT_{nc} is 365 days/year. The adult BW is 70 kg

(USEPA, 1989). The IR_S for construction workers of 330 mg/day is used for soil exposure (USEPA, 2002c). A value of 1.0 is used for the FI, indicating that 100% of ingested soil is from the Site. For soil inhalation exposure, the exposure time of 8 hours is used (USEPA, 2009b). A regional-specific PEF of 1.77E+09 is used as recommended by USEPA (USEPA, 2002c). The AT_c is 613,200 hours (i.e., 70 years x 365 days/year x 24 hours/day) (USEPA, 2009b). The noncancer AT_{nc} is 8,760 hours (i.e., 1 year x 365 days/year x 24 hours/day) (USEPA, 2009b).

For dermal contact with soil, sludge, wastewater and groundwater in a trench, the exposed SA is 3,300 cm^2/day (equating to the 50^{th} percentile values for head, forearms, and hands) (USEPA, 2004b). For soil and sludge contact, the 95^{th} percentile soil-to-skin AF value for construction workers of 0.3 mg/cm^2 is used (USEPA, 2004b).

The t_{event} for groundwater and wastewater exposure is 2 hours/event. The selection of 2 hours/event assumes the construction worker will perform trench activities for 25% of the work day. It is assumed that the EV is 1 event/day. Given the unlikelihood of trench activities and the assumption that a construction worker works 8 hours per day performing a variety of construction activities, this event time seems adequate.

7.3.3.4 Hypothetical Future Resident

Future residential development is highly unlikely given the current and likely future land use at the Site and the nature of the site activities and surroundings. However, a hypothetical future residential scenario was evaluated to determine an upper-bound on the level of risks posed by the Site. Cancer risks were calculated for the age-adjusted resident and adult resident. Noncancer HQs were calculated for the adult resident and child resident. Soil exposure pathways include incidental soil ingestion, dermal contact with soil, inhalation of outdoor dust, and inhalation of indoor vapors. In addition, it is assumed that the aquifer will be developed into a potable water source for the hypothetical residents. Therefore, the groundwater ingestion, inhalation of VOCs while showering/bathing, and dermal contact with groundwater while bathing/showering scenarios were evaluated. The resident might also wade in the intermittent streams that flow into Little Mosquito Creek. It is assumed that the resident would come into contact with off-site sediment and surface water in the intermittent stream adjacent to the Site. Exposure pathways for

sediment and surface water from the intermittent stream include incidental ingestion and dermal contact.

An EF of 350 days/year is used (USEPA, 2002c). An ED of 30 years (24 years as an adult and 6 years as a child) is used (USEPA, 2002c). The AT_c is based on a 70-year lifetime (25,550 days) (USEPA, 1989). The AT_{nc} for the child and for the adult are 2,190 days and 8,760 days, respectively. The child and adult BWs are 15 kg and 70 kg, respectively (USEPA, 1997a).

The IR_S for the child and adult is 200 mg/day and 100 mg/day, respectively (USEPA, 2002c) for soil exposure. A value of 1.0 is used for the FI indicating that 100% of ingested soil is from the Site. For dermal contact with soil, the exposed SAs for the child and adult resident of 2,800 cm^2/day and 5,700 cm^2/day are used (USEPA, 2004b). The geometric mean soil-to-skin AFs of 0.2 mg/cm^2 (children playing in wet soil) and 0.07 mg/cm^2 (residential gardeners) are used for the child and adult, respectively (USEPA, 2004b).

For inhalation exposures (i.e., indoor air, dust emissions, and VOCs from soil), the 24-hour ET is assumed for the child and adult resident; therefore, it is not necessary to include an ET in the algorithm according to USEPA RAGS F Guidance (USEPA, 2009b). A regional-specific PEF of 1.77E+09 is used as recommended by USEPA (USEPA, 2002c).

For the ingestion of groundwater pathway, child and adult residents are assumed to ingest 1 L/day and 2 L/day, respectively (USEPA, 2002c). For groundwater exposure while showering/bathing, the exposed SA is 6,600 cm^2/day and 18,000 cm^2/day for the child and adult, respectively (USEPA, 2004b). The t_{event} is 1 hour/event and 0.58 hour/event for the child and adult, respectively. It is assumed that the EV is 1 event per day.

Inhalation of VOCs while showering/bathing was assessed quantitatively for the adult and child resident. The Foster-Chrostowski model (Foster and Chrostowski, 1987) is used to estimate the air concentrations of the VOCs. The ET is 0.58 and 1.0 hour/day, for the adult and child resident, respectively. The inhalation rate of air (IR_A) is 0.5 and 0.4 cubic meters per hour (m^3/hour) for the adult and child resident, respectively.

The resident is assumed to be exposed to sediment and surface water in the intermittent stream 50 days/year, which equates to ten times a month over the course of the warmer months (May

through September). The IR_S for the child and adult is 200 mg/day and 100 mg/day, respectively (USEPA, 2002c) for sediment exposure. For dermal contact with sediment, the exposed SAs for the child and adult resident of 2,800 cm^2/day and 5,700 cm^2/day are used (USEPA, 2004b). A value of 1 is used for the FI, indicating that 100% of ingested sediment is from the Site. An ET of 4 hours per day is assumed for contact with sediment.

The surface water incidental ingestion rate is 50 mL/hr (USEPA, 1989) with an assumed ET of 2.6 hours/day. For surface water contact, the absorbed DA_{event} was estimated following the approach presented in the dermal risk assessment guidance (USEPA, 2004b). The t_{event} is 2.6 hours/event. It is assumed that the EV is 1 event/day.

7.4 TOXICITY ASSESSMENT

The primary purpose of the toxicity assessment is to identify the toxicity values for the COPCs used in the estimation of potential cancer risks and noncancer health effects. It also provides a description of the terms that are used to estimate toxic effects (i.e., cancer and noncancer effects) along with the data sources.

7.4.1 Toxicity Assessment for Noncarcinogens

Noncarcinogens are chemicals that cause toxic effects other than cancer. Noncancer effects can include, for example, central nervous system damage, reproductive toxicity, and other systemic adverse effects. For noncancer effects, the toxicity values are expressed as RfDs in units of mg/kg-day. The premise of a RfD is that there is an exposure level below which deleterious noncancer effects are not expected to occur. Similar to CSFs, USEPA has developed oral RfDs (RfD_o). An RfD value is inversely proportional to the toxic potency of a chemical. Note that carcinogens were evaluated for noncancer effects if an RfD is available.

7.4.2 Toxicity Assessment for Carcinogenicity

For cancer effects, the toxicity values are expressed as CSFs in units of milligrams of COPC per kilogram of body weight per day $(mg/kg\text{-}day)^{-1}$. USEPA has developed oral CSFs (CSF_o) which relate to the route through which a receptor is exposed. The cancer potency of a COPC is directly proportional to the CSF value; the higher the CSF, the more potent the COPC is as a carcinogen.

USEPA has also assigned each chemical a "weight-of-evidence," which represents the likelihood of it being a human carcinogen (USEPA, 1989). Six weight-of-evidence categories exist:

- A – Human carcinogen.
- B1 – Probable human carcinogen, limited human data are available.
- B2 – Probable human carcinogen, sufficient evidence in animals and inadequate or no evidence in humans.
- C – Possible human carcinogen.
- D – Not classifiable as to human carcinogenicity.
- E – Evidence of noncarcinogenicity for humans.

As of 2005, USEPA revised the weight-of-evidence categories to include the following five cancer hazard descriptors (USEPA, 2005a):

- Carcinogenic to humans.
- Likely to be carcinogenic to humans.
- Suggestive evidence of carcinogenic potential.
- Inadequate information to assess carcinogenic potential.
- Not likely to be carcinogenic in humans.

Chemicals that are classified in categories A through C following the 1989 weight-of-evidence classification and in the first three categories according to the 2005 classification system are generally carried through the risk characterization step if CSFs have been developed.

7.4.3 Sources of Toxicity Values

When available, CSFs and RfDs were obtained from the following sources in the order presented (USEPA, 2003b):

- Tier 1 – Integrated Risk Information System (IRIS) (USEPA, 2009c).
- Tier 2 – USEPA's Provisional Peer Review Toxicity Values (PPRTVs) as presented in the ORNL RSL Table (USEPA, 2009a).

- Tier 3 – Other Toxicity Values can include the Agency for Toxic Substances and Disease Registry (ATSDR) Minimal Risk Levels (MRLs), toxicity values developed by state agencies (e.g., California EPA), and the Health Effects Assessment Summary Tables (HEAST) as presented on the ORNL RSL Table. HEAST is used as a last resort because it has not been updated since 1997.

The principal source of verified toxicity values used in this HHRA was the Regional Screening Levels for Chemical Contaminants at Superfund Sites screening level/preliminary remediation goal website. This website was developed with the Department of Energy (DOE) ORNL under an Interagency Agreement as an update of the USEPA Region III RBC Table, the Region VI Human Health Medium-Specific Screening Level (HHMSSL) Table, and the Region IX Preliminary Remediation Goal (PRG) Table. This website includes tables of risk-based screening levels calculated using the latest toxicity values, default exposure assumptions, physical and chemical properties, and a calculator where default parameters can be changed to reflect site-specific risks (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm).

7.4.4 Dermal Exposure

Toxicity values have not been developed for the dermal absorption pathway. Dermal toxicity values were derived from the oral toxicity values as described in USEPA dermal risk assessment guidance (USEPA, 2004b). This approach is consistent with dermal exposure assessment guidance from USEPA Region III (USEPA, 2003a). In general, the CSF_o and RfD_o are expressed as administered doses (i.e., the amount of a chemical administered per unit time and weight). Conversely, exposures resulting from the dermal pathway are expressed as absorbed doses. Therefore, it is necessary to make an adjustment to the oral toxicity value to account for the chemical-specific absorption efficiency.

The fraction of a COPC that is absorbed in the gastrointestinal tract, also known as ABS_{GI}, is a critical factor when adjusting from an administered to an absorbed dose. The ABS_{GI} values that were used in this risk assessment were obtained from USEPA (USEPA, 2004b). The oral CSFs and oral RfDs are each adjusted to an absorbed dose using different methods. The dermal CSF (CSF_d) was derived by dividing the CSF_o by the ABS_{GI} as shown below.

$$CSF_d = \frac{CSF_o}{ABS_{GI}}$$

Where:

CSF_d = Dermal cancer slope factor $(mg/kg\text{-}day)^{-1}$

CSF_o = Oral cancer slope factor $(mg/kg\text{-}day)^{-1}$

ABS_{GI} = Fraction of contaminant absorbed in the gastrointestinal tract (unitless).

The dermal reference dose (RfD_d) was derived by multiplying the RfD_o by the ABS_{GI} as shown below:

$$RfD_d = RfD_o \times ABS_{GI}$$

Where:

RfD_d = Dermal reference dose (mg/kg-day).

RfD_o = Oral reference dose (mg/kg-day).

ABS_{GI} = Fraction of contaminant absorbed in the gastrointestinal tract (unitless).

7.4.5 Inhalation Exposure

In January 2009, USEPA released the *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, (Part F Supplemental Guidance for Inhalation Risk Assessment)* (USEPA, 2009b) for use in risk assessments at Superfund sites.

The equation below presents the inhalation unit risk (IUR):

$$IUR = \frac{0.1}{LEC_{10[HEC]}}$$

Where:

IUR = Inhalation unit risk micrograms per cubic meter $(\mu g/m^3)^{-1}$

LEC = Lowest effective concentration using a 10% response level, dosimetrically adjusted to a human equivalent concentration (HEC) $(\mu g/m^3)$

The formula used for deriving the RfC is provided below:

$$RfC = \frac{NOAEL_{[HEC]}}{UF}$$

Where:

RfC = Reference concentration milligrams per cubic meter (mg/m^3).

$NOAEL_{[HEC]}$ = The no-observed-adverse-effect level (NOAEL) or analogous exposure level obtained with an alternate approach, dosimetrically adjusted to an HEC (mg/m^3).

UF = Uncertainty factor(s) applied to account for the extrapolations required from the characteristics of the experimental regimen.

7.4.6 Surrogates

When toxicity criteria are not available for some of the chemicals detected at the Site, a surrogate (substitute) chemical was selected to evaluate the potential impacts of a COPC lacking toxicity criteria. Pyrene was used as a surrogate chemical for benzo(g,h,i)perylene and phenanthrene.

7.4.7 Special Chemicals: Lead

According to USEPA, lead is classified as a B2, probable human carcinogen. However, USEPA has not identified a value for use in quantifying carcinogenic risks. In the absence of any USEPA-published toxicity values for lead, it is currently not possible to perform a quantitative risk estimate for lead exposures using standard USEPA methodology.

Blood lead levels are the indicator of excess lead exposure in humans. Modeled blood level results are compared to the established cutoff value or acceptable blood-lead threshold of 10 micrograms of lead per deciliter (µg lead/dL). This blood level is considered protective of human health for children. Where lead is a residential scenario COPC in soil, lead risks for potential future residents are evaluated using USEPA's IEUBK Lead Model (USEPA, 2004a) using an average lead concentration in soil where lead is a COPC. Where lead is an industrial scenario COPC in soil, lead is modeled using *Recommendations of the Technical Review Workgroup (TRW) for Lead for an Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil* (USEPA, 2003c).

Both the IEUBK Lead Model and the Adult Exposure to Lead Model are used to model blood lead levels for exposure to lead in soil and groundwater. When lead is considered a COPC in surface water, sediment, sludge, and wastewater, a qualitative assessment is made because the

aforementioned lead models are not designed to account for lead in surface water, sediment, sludge, and wastewater.

7.4.8 Toxicity Values Used in the Risk Assessment

Appendix D1, Tables D-24 through D-27 present the available toxicity values (oral, dermal, and inhalation) for each COPC, as well as the source, the USEPA weight-of evidence category, the route of administration, and the critical effect.

7.5 RISK CHARACTERIZATION

Carcinogenic risk and noncarcinogenic health effects in susceptible populations are determined by combining chemical-specific toxicity criteria with quantitative information from the exposure assessment. These comparisons determine whether site contamination may affect human health.

The objective of the risk characterization is to evaluate the carcinogenic risks and adverse noncarcinogenic health effects occurring as a result of exposure to COPCs. The potential for cancer risks and noncarcinogenic health effects of COPCs are evaluated separately because of differences in the processes by which these health effects are believed to occur. Cancer risks are calculated for those COPCs with evidence of carcinogenicity and for which cancer toxicity values are available. Noncarcinogenic health effects are evaluated for the COPCs, for which noncarcinogenic toxicity values are available.

Cancer risks are calculated for carcinogens through applicable exposure routes (i.e., oral or dermal). Potential cancer risks are calculated by multiplying the estimated LADD that is calculated for a COPC through an exposure route by the exposure route-specific CSF, as follows:

$$\text{Cancer Risk} = \text{LADD} \times \text{CSF}$$

Where:

LADD = Lifetime average daily intake (dose) of the carcinogen averaged over a 70-year lifetime (mg/kg-day).

CSF = COPC- and route-specific cancer slope factor $(\text{mg/kg-day})^{-1}$.

The excess cancer risk for a receptor exposed via the inhalation pathway can be estimated with the following equation:

$$\text{Cancer Risk} = \text{EC} \times \text{IUR}$$

Where:

EC = Exposure concentration ($\mu g/m^3$).

IUR = COPC-specific inhalation unit risk $(\mu g/m^3)^{-1}$.

The total lifetime excess cancer risk for the scenarios and receptors is estimated by summing the cancer risks calculated for COPCs through applicable exposure routes.

The potential for noncarcinogenic health effects as a result of exposure to a single COPC through a single exposure pathway is referred to as the HQ. HQs for the ingestion and dermal pathways are calculated using the following equation:

$$\text{HQ} = \text{ADD/RfD}$$

Where:

HQ = Hazard quotient.

ADD = Average daily dose for the COPC averaged over the exposure duration (mg/kg-day).

RfD = COPC- and route-specific reference dose (mg/kg-day).

The HQ for the inhalation pathway can be calculated with the following general equation:

$$\text{HQ} = \text{EC/Toxicity value} \times 1{,}000\ \mu g/mg.$$

Where:

HQ = Hazard quotient.

EC = Exposure concentration ($\mu g/m^3$).

RfC = COPC-specific inhalation reference concentration (mg/m^3).

HQs are summed to calculate a total HI for pathways and receptors. If the HI is less than or equal to one, it is believed that there will not be significant potential for noncarcinogenic health effects

to that receptor. If the HI exceeds one, there may be a risk of noncarcinogenic health effects. In that case, the HQs calculated for the COPCs, which reflect different chemical-specific toxic effects, may not be additive. Therefore, HIs are segregated according to target organ.

Statistical comparisons with the appropriate background data sets were performed using the background data and methodologies presented in the background report (TetraTech, 2004a). For data sets that have less than 10 samples, simple comparisons were performed and include a comparison of the site and background maximum detected concentrations and arithmetic means. While a comparison to background concentrations is not a criterion for eliminating media from evaluation, it was conducted to provide information for management decisions.

7.5.1 Overview of Risk Characterization Results

Cancer risks and noncancer health effects are presented for each chemical by scenario, exposure medium, and exposure pathway in accordance with USEPA RAGS Part D Guidance (USEPA, 2001a).

- **Appendix D1,** Tables D-28 to D-33 (RAGS Part D Tables 7.1 to 7.6) present a detailed accounting of the calculated CDIs (LADDs, ADDs), incremental lifetime cancer risks (ILCRs), HQs, and HIs for each chemical by exposure scenario, exposure medium, and exposure pathway in accordance with USEPA RAGS Part D Guidance (USEPA, 2001a).

- **Appendix D1,** Tables D-34 to D-39 (RAGS Part D Tables 9.1 to 9.6) summarize the ILCRs, HQs, and HIs for all COPCs in each scenario, but do not show the calculated CDIs, in accordance with USEPA RAGS Part D guidance. The results of the target endpoint analyses for noncarcinogens are also presented in these tables.

- **Appendix D1,** Tables D-40 to D-43 (RAGS Part D Tables 10.1 to 10.4) present the ILCRs and HQs for those COPCs by scenario exceeding 1E-06 or 1, respectively.

The following tabular index indicates the specific scenarios and study areas evaluated with their corresponding table numbers.

Scenario	Study Area	RAGS Part D, Table 7 Series (Table No.)	RAGS Part D, Table 9 Series (Table No.)	RAGS Part D, Table 10 Series (Table No.)
Current/Future Older Child Trespasser	WWTP	D-28	D-34	NA
Future Commercial/Industrial Worker	WWTP	D-29	D-35	D-40
Future Construction Worker	WWTP	D-30	D-36	NA
Future Age-Adjusted Resident	WWTP	D-31	D-37	D-41
Future Adult Resident	WWTP	D-32	D-38	D-42
Future Child Resident	WWTP	D-33	D-39	D-43

NA = Not applicable. All chemicals had ILCRs less than 1E-06 and HQs less than 1; therefore, RAGS Part Table 10 series are not presented.

Because of the large number of exposure scenarios and age groups, the presentation of risk results was summarized based on modified summary tables prepared from the RAGS Part D tables (i.e., **Tables 7-1 through 7-3**). **Table 7-1** presents risks ILCRs and HIs by scenario, medium, and exposure pathway. **Tables 7-2 and 7-3** present those COPCs that exceeded an ILCR or 1E-06 and an HQ of 1, respectively. The RAGS Part D tables (**Appendix D1,** Tables D-28 to D-43), which are appropriately cited by table number in these summary tables and associated text, follow these summary tables and can be referred to by the reader for a more detailed review of all of the risk characterization results.

7.5.2 Risk Characterization Results and Discussion

Table 7-1 summarizes the ILCRs and HIs calculated for each study area and exposure scenario by exposure pathway and medium. Media are designated SB (subsurface soils), SS (surface soils), SL (sludge), SD (sediments), GW (groundwater), SW (surface water), and WW (wastewater). Where appropriate, ILCRs and HIs from each medium were subtotaled separately, as well as combined to calculate a risk or HI for the total site (all media).

Some general observations are presented below. A fuller explanation of the risk results is provided in subsequent sections:

- The risk estimates for the age-adjusted and adult residents exceeded the high end of USEPA's risk management range of 1E-04 to 1E-06 cancer risk.
- Both the adult and child resident scenarios had HIs also greater than the noncancer HI management level of one. Risk and HI were dominated by ingestion of groundwater.

- The older child trespasser, commercial/industrial worker, and construction worker scenarios all had ILCRs and HIs within USEPA's acceptable risk/HI management ranges.

Tables 7-2 and 7-3 were condensed from RAGS Part D tables (10 series) for those scenarios and study areas that exceeded USEPA's risk management ranges for acceptability. **Table 7-2** presents those COPCs that exceeded an ILCR of 1E-06 for the future commercial/industrial worker and the future age-adjusted and adult residents. **Table 7-3** presents those COPCs exceeding an HQ of one (1) for the future adult and child residents. The second column of each table directs the reader to the appropriate RAGS Part D series 10 table. The following discussion was summarized in **Tables 7-1 through 7-3**.

7.5.2.1 Current/Future Older Child Trespasser

Cancer Risks

Cancer risk for the trespasser did not exceed 1E-06.

Noncancer Health Effects

The HI for the trespasser did not exceed 1.

7.5.2.2 Future Commercial/Industrial Worker

Cancer Risks

The ILCR for the future commercial/industrial worker is 8E-06, which is within USEPA's risk management range. **Table 7-2** presents a breakdown of those chemicals exceeding 1E-06 ILCR for the commercial/industrial worker. Arsenic contributed 23% of total site risk, primarily through ingestion of soil. Benzo(a)pyrene contributed 29% of total site risk, primarily through ingestion and dermal contact with sludge.

Noncancer Health Effects

The HI for the commercial/industrial worker did not exceed 1.

7.5.2.3 Future Construction Worker

Cancer Risks

Cancer risk for the construction worker did not exceed 1E-06.

Noncancer Health Effects

The HI for the construction worker did not exceed 1.

7.5.2.4 Future Age-Adjusted Resident

Cancer Risks

Table 7-1 shows that the total site ILCR for the age-adjusted resident was 4E-04 based on exposure to soils, groundwater, sediment, and surface water.

- The sediment and surface water pathway COPCs were all noncarcinogens, and therefore, did not contribute to the excess in cancer risk.
- The groundwater pathway ILCR was 4E-04 and accounted for approximately 96% of total site risk. Groundwater ingestion and dermal contact with tap water accounted for approximately 94% and 6% of groundwater pathway risk, respectively (i.e., 4E-04 and 2E-05). The inhalation while showering pathway was minimal (ILCR, 3.0E-07).
- The soil pathway ILCR was 2E-05 and represented approximately 4% of total site risk. Soil ingestion and dermal contact with soils accounted for approximately 88% and 12% of soil pathway risk, respectively (i.e., 1E-05 and 2E-06). The inhalation pathway ILCR for soil was negligible.

Table 7-2 presents a breakdown of those chemicals exceeding 1E-04 ILCR for the age-adjusted resident. Arsenic contributed 85% of total site risk, primarily through groundwater (82%). Additionally, PCE contributed 14% of the total site risk through groundwater.

7.5.2.5 Future Adult Resident

Cancer Risks

Table 7-1 shows that the total site ILCR for the adult resident was 3E-04 based on exposure to soils, groundwater, sediment, and surface water.

- The sediment and surface water pathway COPCs were all noncarcinogens, and therefore, did not contribute to the excess in cancer risk.
- The groundwater pathway ILCR was 3E-04 and accounted for approximately 98% of total site risk. Groundwater ingestion and dermal contact with tap water accounted for approximately 94% and 6% of groundwater pathway risk, respectively (i.e., 2E-04 and 1E-05). The inhalation while showering pathway was minimal (ILCR, 2E-07).
- The soil pathway ILCR was 5E-06 and represented approximately 2% of total site risk. Soil ingestion and dermal contact with soils accounted for approximately 85%

and 15% of soil pathway risk, respectively (i.e., 4E-06 and 8E-07). The inhalation pathway ILCR for soil was negligible.

Table 7-2 presents a breakdown of those chemicals exceeding 1E-04 ILCR for the adult resident. Arsenic contributed 86% of total site risk, primarily through groundwater (84%). Additionally, PCE contributed 14% of the total site risk through groundwater.

Noncancer Health Effects

Table 7-1 shows that the total site HI was 3, based on exposure to soils, groundwater, sediment, and surface water.

- The groundwater pathway HI was 3, with an HI of 3 for ingestion (approximately 97% of groundwater pathway), and an HI of 0.08 for dermal contact with tap water. The groundwater pathway was approximately 96% of total site risk.
- The soil pathway HI was 0.1, with an HI of 0.09 for ingestion (approximately 85% of soil pathway), HI of 0.01 for dermal contact with soil, and negligible HI for inhalation. The soil pathway was approximately 3.5% of total site risk.
- All COPCs and target organ effects were below the target HQ of 1.

7.5.2.6 Future Child Resident

Noncancer Health Effects

Table 7-1 shows that the total site HI was 8, based on exposure to soils, groundwater, sediment, and surface water.

- The groundwater pathway HI was 7, with an HI of 7 for ingestion (approximately 97% of groundwater pathway), and an HI of 0.2 for dermal contact with tap water. The groundwater pathway was approximately 88% of total site risk.
- The soil pathway HI was 0.9, with an HI of 0.9 for ingestion (approximately 99% of soil pathway), HI of 0.07 for dermal contact with soil, and negligible HI for inhalation. The soil pathway was approximately 12% of total site risk.

Table 7-3 presents a breakdown of those chemicals exceeding an HQ of one for the child resident:

- Arsenic was the chief contributor to the groundwater HI (HQ, 3 [**Appendix D1,** Table D-43]). Cobalt was the secondary contributor to the groundwater HI (HQ, 2).

Appendix D1, Table D-39 presents the detailed results (i.e., RAGS Part D Table 9.6) of the ILCRs, HQs, HIs, and target endpoint analysis for the child resident. Target endpoint HIs exceeding unity for the resident included the skin with and HI of 3. This target endpoint effect was primarily influenced by arsenic.

7.5.2.7 Lead Assessment

Lead was considered a COPC in surface soil, sludge, and wastewater. Lead in surface soil is assessed using the IEUBK model. Of the three composite sludge samples, lead concentrations ranged from 130 to 530 mg/kg. The single wastewater sample yielded a lead concentration of 29 µg/L. Lead concentrations in sludge and wastewater slightly exceeded the benchmarks with ratios of exceedances of 1.3 based on the sludge maximum and 1.9 based on the wastewater concentration. For the scenario where the Site is redeveloped for potential residential use, it is assumed that the existing former WWTP structures, including residual sludge and wastewater, would be removed from the Site during development. Thus, exposure to these media was not further evaluated.

IEUBK Model

Blood lead levels were estimated for the hypothetical future child resident scenario using the IEUBK model (USEPA, 2004a). The average lead concentration in surface soil (36.3 mg/kg) was used in the IEUBK evaluation. This concentration was used for both the indoor and outdoor dust lead levels. The child's age was assumed to be 1 to 6 years and all other default model assumptions were used. Refer to **Appendix D3,** Table D.3-1 and Figure D.3-1 for IEUBK model outputs. Based on the input parameters and assumptions, the geometric mean blood lead level for the hypothetical child resident was 1.916 µg/dL, which is significantly less than the USEPA recommended threshold of 10 µg/dL and indicates a low probability for unacceptable lead exposure. Therefore, the hypothetical future child resident is not at risk for behavioral neurotoxicity due to the lead concentrations in soil.

Adult Lead Model

The average concentration of lead in surface soil was compared to the soil target level of 400 mg/kg. This value represents the RCRA residential cleanup level for lead. Because the average

lead concentration (36.3 mg/kg) was well below the lead cleanup level, the Adult Lead Model was not run. Thus, adult users of the Site are not at risk from lead concentrations in soil.

7.5.3 Background Studies with Relation to Risk and Hazard Quotient

The background ranges and averages for metals in subsurface soils and groundwater were obtained from the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a).

7.5.3.1 Soils

Arsenic

Table 7-2 showed that arsenic in soils was responsible for ILCRs exceeding 1E-06 for the commercial/industrial worker, age-adjusted resident, and adult resident. Risks were in the 4E-06 to 1E-05 range. The range and average concentrations of arsenic at the Site were compared with subsurface and surface background data (**Table 7-4**). The results showed that arsenic levels in subsurface and surface soils were within the background range.

Lead

Lead had a maximum detected surface soil concentration of 460 mg/kg. This value exceeded its screening benchmark of 400 mg/kg. However, the average lead concentration for surface soils was 36 mg/kg. Comparisons in **Table 7-4** showed that the Site lead average was within the range of background samples.

7.5.3.2 Groundwater

Arsenic

Table 7-2 shows that arsenic in groundwater exceeded a cancer risk of 1E-04 for the age-adjusted and adult residents (3E-04 and 2E-04, respectively). Arsenic contributed greater than 80% of the total ILCR under both scenarios and was associated with drinking water ingestion under both scenarios. Arsenic also contributed to an elevated HQ from drinking water ingestion for the child resident. The child resident HQ for arsenic was 3 (**Table 7-3**). **Table 7-4** shows that the groundwater concentration ranges and averages of arsenic at the Site were within the background range.

Cobalt

Cobalt had an HQ value from groundwater exposure for the child resident of 2 at the Site (**Table 7-3**). Comparisons in **Table 7-4** showed that site cobalt levels were within the range of background samples.

7.6 UNCERTAINTY ANALYSIS

Uncertainty can be introduced into a health risk assessment at every step of the process outlined in the BHHRA. Uncertainty occurs because risk assessment is a complex process, requiring the integration of the concentrations of contaminants in different media; the fate and transport of contaminants from the source to the receptor in a variety of different and variable environments, by processes that are often poorly understood or too complex to quantify accurately; the potential for adverse health effects in humans, as extrapolated from animal studies; and the probability of adverse effects in a human population that is highly variable genetically, and in age, activity level, and lifestyle. Uncertainty is inherent in the process even when using the most accurate data and the most sophisticated models. The methods USEPA recommends in its guidance documents rely on a combination of point values, some protective and some typical, yielding a point estimate of exposure and risk that falls at an unknown percentile of the full distributions of exposure and risk, although typically at the high end (i.e., RME). Therefore, a formal uncertainty analysis is required to determine the degree of conservatism.

The objectives of the uncertainty analysis are defined in guidance documents (USEPA, 1989, 1995) and are summarized as follows:

- Provide to the appropriate decision-makers a summary of those factors that significantly influence the risk results, evaluate their range of variability, and assess the contribution of these factors to the under- or over-estimation of risk.
- Discuss the data underlying the assumptions that most significantly influence risk to highlight the strengths and weaknesses of the risk assessment results.

7.6.1 Data Uncertainties

The quality and robustness of sample data can be key factors in risk uncertainties. If exposure areas are not well characterized (i.e., samples are not collected randomly or insufficient samples

are taken), or if data are not validated according to USEPA guidelines, the resulting risks may be questionable or uncertain.

Another data issue contributing uncertainty is the number of nondetects in a given set of chemical- and medium-specific data. The analytical data usually contain some samples with positive results and others with nondetect results. The nondetect results are usually reported as the SQL. In such a case, the chemical may be present at a concentration just below the reported SQL, or it may not be present in the sample at all. The use of the full SQL is more conservative than not including any value at all or one-half the SQL (i.e., detection = 0, detection = 0.5). Non-detects (NDs) at the Site were presented at the full detection limit. In many cases, including SQLs will result in an overestimation of the EPC. However, if there are more than 50% nondetected values, the EPC will default to the maximum detected concentration. Overall, the discussed options all yield a conservative EPC.

7.6.2 Assumption of Residential Development

The risks and HIs associated with the future residential scenarios at the Site may result in a risk that is biased high. A number of COPCs had substantial risks, especially through the groundwater ingestion, dermal and inhalation pathways. Although it is possible that the Site could be developed for residential use in the future, it is not likely. Additionally, groundwater is not currently used for potable purposes and will likely not be used as such in the future.

Also, exposure to residual sludge and wastewater present in the settling tank and sludge drying beds was not evaluated for the hypothetical resident evaluation. A small amount of sludge and wastewater are present at the settling tank location. Also, approximately 6 inches of sludge underlain by approximately 1.5 feet of gravel and rock, which, in turn, overlie what appears to be native soil, is present at the two sludge drying beds. For the scenario where the Site is redeveloped for potential residential use, it is assumed that the existing former WWTP structures, including residual sludge and wastewater, would be removed from the Site during development. Thus, exposure to these media was not evaluated in the risk calculations.

7.6.3 Exposure Uncertainties

The exposure assumptions directly influence the calculated doses (daily intakes) and, ultimately, the calculation of risk. The concept of RME is used to develop the exposure potentials in standard human health benchmarks. It is defined as the "maximum exposure that is reasonably expected to occur at the site" (USEPA, 1989). The RME calculation is recognized by many risk assessors to represent an unrealistically high exposure level to the general population, i.e., only about 5 to 10% of the general population would be expected to be exposed to this dose level (USEPA, 1995). The combination of multiple 90^{th} to 95^{th} percentile RME default assumptions, which contribute to overestimation of plausible real-life exposures, and conservative toxicity values can yield site risk estimates that may be over-protective. Nevertheless, these assumptions may be appropriate when performing risk assessments of this type so that risk managers can be reasonably assured that human health risks are not underestimated (i.e., are health-protective).

The maximum EPCs of the subsurface soil EPCs and the surface soil EPCs were was used in the risk calculations to demonstrate a worst-case scenario. Arsenic was the only chemical in soil that contributed to risks in excess of risk management ranges. The surface soil EPC (5.4 mg/kg) was used as the soil EPC for all risk scenarios. The surface soil EPC defaulted to the maximum concentration since composite samples were included in the surface soil data set. The subsurface soil EPC (2.32 mg/kg) would have yielded lower risks as presented in the following table. As presented, the total site risk for the commercial/industrial worker decreased by approximately 9% using the subsurface EPC. The age-adjusted and adult residents would have a decreased total site risk of less than 1% due to the fact that groundwater ingestion was the main driver of cancer risks for the residential scenarios.

Soil Arsenic Risks - Comparison Using "Max EPC"* versus Subsurface EPC

Receptors Having Arsenic Soil Risk > 1E-06	Cancer Risk from "Max EPC"*	Cancer Risk from Subsurface EPC
Commercial/Industrial Worker	Total Soil Risk = 2.1E-06 Total Site Risk = 7.6E-06	Total Soil Risk = 1.1E-06 Total Site Risk = 6.6E-06
Age-adjusted Resident	Total Soil Risk = 1.7E-05 Total Site Risk = 8.0E-04	Total Soil Risk = 8.6E-06 Total Site Risk = 7.9E-04
Adult Resident	Total Soil Risk = 5.1E-06 Total Site Risk = 2.5E-04	Total Soil Risk = 2.7E-06 Total Site Risk = 2.5E-04

* "Max EPC" was the maximum EPC from the surface soil EPC and subsurface EPC. Surface soil samples consisted of composite samples and for that reason defaulted to the maximum detected concentration. Therefore, the "Max EPC" defaulted to the maximum detected surface soil concentration.

7.6.4 Toxicity Uncertainties

The toxicity assessment also requires the use of many assumptions because of limitations in scientific human and animal studies. Both cancer risks and noncancer health effects were evaluated using USEPA-approved toxicity criteria. However, CSFs and RfDs are derived to be health protective and tend to overestimate true toxicity in humans. Therefore, risk calculations, which are partially based on toxicity estimates, may be overestimated in general. The exact degree of overestimation cannot always be determined and each chemical must be evaluated on a case-by-case basis.

- In the development of CSFs, it is assumed that the cancer risk is related to the carcinogen's dose. CSFs are usually developed from studies in laboratory animals (although some are developed from human epidemiological data) exposed to relatively high doses of the chemical. USEPA usually derives CSFs by using the linearized multistage model (LMS) with the slope factors reflecting the 95% upper-bound confidence limit of the cancer potency of the chemical. The LMS is believed to be highly protective (i.e., it is likely to over-predict the true carcinogenic potency of a chemical). Other statistical models have been used and tend to produce less conservative CSFs. The LMS approach assumes that the cancer risk at high animal doses can be extrapolated downward to the lower environmental exposures of humans, with some risk of cancer remaining even as the dose approaches zero. This non-threshold approach assumes that even a small number of molecules of the chemical carcinogen (possibly even a single molecule) can cause changes in a cell that could eventually lead to cancer. In many cases, this may be extremely conservative (i.e., overly health protective) and result in significant overstatement of cancer risk. The extrapolation of cancer risk from laboratory animals to humans may be associated with uncertainties ranging from as much as three to five orders of

magnitude (1,000 to 100,000-fold) for selected chemicals. In addition, the extrapolation can lead to overestimation in cases where carcinogens may have threshold effects (i.e., such as has been postulated for inhalation of trichloroethylene (TCE) [USEPA, 2001b]).

- In the development of RfDs, it is assumed that a threshold dose exists below which there is no potential for adverse health effects to the most sensitive individuals in the population. The RfD is typically derived by applying several uncertainty factors (UFs) of 10 each to a NOAEL (no-observed-adverse-effect level) or a LOAEL (lowest-observed-adverse-effect level) determined from dose-response studies in animals. An additional modifying factor of from 1 to 10, which accounts for a qualitative professional assessment of additional uncertainties in the available toxicity data, also may be applied (USEPA, 1989). For practical purposes, the total safety factor (uncertainty factors times modifying factors) in deriving an RfD has a ceiling of 3,000. In general, the calculated RfD is overly protective, and its use probably results in some degree of overestimation of the potential for noncancer health effects.

- Toxicity values for dermal exposures have not been developed by USEPA. Oral RfDs and oral CSFs were adjusted and used to assess toxicity from dermal exposures. The dermal route of exposure can result in different patterns of distribution, metabolism, and excretion than occur from the oral route. When oral toxicity values for systemic effects are applied to dermal exposures, uncertainty in the risk assessment is introduced because these differences are not taken into account. Since any differences between oral and dermal pathways would depend on the specific COPC, use of oral toxicity factors can result in the over- or underestimation of risk, depending on the COPC. It is not possible to make a general statement about the direction or magnitude of this uncertainty.

- Accompanying the CSF and RfD analysis in the Integrated Risk Information System (IRIS), USEPA includes a statement of the degree of confidence that it has in the critical studies that serve as the basis for the derivations. USEPA identifies the confidence rating as “low,” “medium” or “high.” This confidence rating is based on the adequacy (i.e., experimental design factors such as the number of animals used, the presence or absence of suitable controls, the robustness of the statistical evaluation, inadequate presentation of evaluation criteria for health effects, etc.). Therefore, if the ILCR for a risk-dominant COPC is based on toxicity criteria with a low confidence rating, there may be significant uncertainty associated with the risk calculations.

- There has been considerable controversy regarding the derivation of the oral slope factor for arsenic. The IRIS database (USEPA, 2009c) indicates that the oral unit risk factor for arsenic is derived from a Taiwanese study (Tseng et al., 1968, 1977, as cited in USEPA, 2009c) where increases in the incidence of skin lesions and skin cancer were observed based on drinking water consumption. Based on these studies, a unit risk of 5E-05 mg/L was proposed using a linearized model (USEPA, 2009c). However, the Taiwanese studies have several uncertainties that may result in an over-estimation of its carcinogenic potency. This view is supported by a recent expert

panel review of arsenic carcinogenicity (ERG, 1997, as cited in USEPA, 2009c), which concluded that for each of the plausible modes of action of arsenic as a carcinogen, the dose-response relationship would either show a threshold or would be nonlinear at low doses. Although subsequent data from Taiwan and other areas of the world suggest that arsenic ingestion may be additionally associated with cancers of several internal organs (e.g., liver), dose-response data from these studies are not adequate for quantitative evaluation (USEPA, 2009c).

Considering all the above-mentioned uncertainties, the risk assessment performed for the Site would likely overestimate actual risk. Therefore, these site-related risks should be evaluated in light of this overestimation of potential risk.

7.7 RISK ASSESSMENT SUMMARY AND CONCLUSIONS

The BHHRA was conducted according to RAGS guidance (USEPA, 1989, 2001a, 2004b, 2009b) and followed all relevant supplementary USEPA guidance. Risks were calculated under baseline conditions and used RME exposure estimates. The results for the current/future older child trespasser, future commercial/industrial worker, and future construction worker were all within the risk management range of 1E-06 to 1E-04 that USEPA uses to manage site risks. Similarly, all HIs were below the USEPA target HI of 1 for the current/future older child trespasser, future commercial/industrial worker, and future construction worker.

The future age-adjusted, child, and adult residents were associated with site risks in excess of 1E-04 and/or an HI of 1. The future residential scenarios were included in the evaluation and established upper bound site risks and HIs for the Site. However, this land/water use is not likely and does not pose a reasonable estimate of site risk.

COCs that were determined for the Site and their potential impact on site risk were as follows:

- Arsenic in soil. Arsenic is a COC for soil for the future industrial worker, age-adjusted, and adult resident based on cancer risk estimates in excess of 1E-06. However, the site ranges and averages for arsenic were within the background range. Therefore, it appears arsenic risk is a function of natural levels in the soil.

- Arsenic in groundwater. Arsenic is a COC for groundwater for the age-adjusted, child, and adult resident scenarios. Arsenic risks slightly exceeded 1E-04 for the age-adjusted and adult residents. The arsenic HQ for the child resident was 3. All arsenic levels were within the background groundwater range. Arsenic was detected only at two of the seven wells, with concentrations ranging from 10 µg/L at MW5 (downgradient of the former WWTP structures) to 15 µg/L in the blind duplicate

sample, MW20, at MW3 (former trickling filter location). Background arsenic concentrations range from 3.6 µg/L to 17.7 µg/L. Therefore, it appears arsenic risk is a function of natural levels in the groundwater.

- Benzo(a)pyrene in sludge. Benzo(a)pyrene is a COC for soil for the future industrial worker based on a cancer risk estimate in excess of 1E-06. Risk through incidental sludge ingestion and dermal contact with sludge were both at 1E-06. Given the conservatism of the assumptions for sludge exposure, the risks are not likely to be of concern and are within the management range of 1E-06 to 1E-04.

- Lead in soil. Using the IEUBK Model, based on the input parameters and assumptions, the geometric mean blood lead level for the hypothetical child resident was 1.916 µg/dL, which is significantly less than the USEPA recommended threshold of 10 µg/dL and indicates a low probability for unacceptable lead exposure. Therefore, the hypothetical future child resident is not at risk for behavioral neurotoxicity due to the lead concentrations in soil

- PCE in groundwater. PCE is a COC for groundwater for the age-adjusted and adult resident scenarios. PCE posed risks in excess of 1E-05 through tap water ingestion and dermal contact while showering/bathing. These risks may be overestimates of true site risk because it is unlikely that groundwater will be used for potable purposes, and because residential development is unlikely. Additionally, risks for PCE were within the management range of 1E-06 to 1E-04 that USEPA uses to manage site risks.

- Cobalt in groundwater. Cobalt is a COC for groundwater for the child resident scenario. Cobalt posed an HQ of 2 in the child resident scenario. Cobalt was detected in three of the seven wells, with concentrations ranging from 3.9 µg/L at MW4 to 7.1 µg/L at MW6. However, cobalt is within background range of 0.61 to 18.6 µg/L. Therefore, the slightly elevated HQ for exposure to cobalt containing groundwater is reflective of background exposure.

8. ECOLOGICAL RISK ASSESSMENT

8.1 INTRODUCTION

A screening level ecological risk assessment (SLERA) was performed to evaluate the potential ecological effects from exposure to the contaminants at the Site. This multi-pathway analysis was based on reasonable, protective assumptions about the potential for ecological receptors to be exposed and/or adversely affected by exposure to chemicals of potential ecological concern (COPECs). This SLERA was conducted in accordance with guidance provided in USEPA's *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments* [USEPA/540-R-97-006], (USEPA, 1997b) and USACE's *Risk Assessment Handbook, Volume II, Environmental Evaluation* (USACE, 1996). The general approach for the risk assessment followed the federal eight-step guidance document *Framework for Ecological Risk Assessment,* (USEPA, 1992b) process as discussed below.

- STEP 1: Screening-level problem formulation and ecological effects evaluation.
- STEP 2: Screening-level exposure estimate and risk calculation.
- STEP 3: Baseline risk assessment problem formulation.
- STEP 4: Study design and data quality objective process.
- STEP 5: Field verification of sampling design.
- STEP 6: Site investigation and analysis phase.
- STEP 7: Risk characterization.
- STEP 8: Risk management.

8.2 PROBLEM FORMULATION

In the initial step, the Problem Formulation, the risk assessment objectives are stated, the problem is defined in the form of a site conceptual exposure model (SCEM), and the approach for analyzing and characterizing the ecological risk is determined. The Problem Formulation includes: (1) definition of the study area and the characterization of the exposure setting for identification of potentially exposed habitats in the assessment area; (2) discussion of site contamination; (3) evaluation of the trophic structure and dynamics, (i.e., the interaction of

plants and animals, and identification of key receptors representative of the habitats to be evaluated); and (4) selection of assessment endpoints relevant to food web structure and function, and identification of measurement endpoints.

8.2.1 Ecological Site Description

The study area has been described in detail in previous sections of this report. The Site is located on the Main Base Area, in the northernmost portion of WFF in Accomack County, Virginia (**Figure 2-1**). The WWTP is no longer active, and its remnant structures sit near the edge of an active runway at the upper edge of an unnamed tributary of Little Mosquito Creek. Little Mosquito Creek itself is located about 1,500 ft to the north of the site.

Figure 2-2 shows the close proximity between Sites 14, 15, and the former WWTP. As a result, their habitats and ecological receptors are similar, and some of the data previously collected and used to characterize risks at Sites 14 and 15 (WESTON, 2007c) have been incorporated into this assessment (e.g., in the selection of ecological receptors, derivation of bioaccumulation factors [BAFs] from tissue data collected, and use of background data).

The majority of the cover at the Main Base is developed land, consisting of impervious surfaces such as runways, parking lots, roads, and buildings. Vegetation generally consists of planted lawn grasses and areas of landscaping trees and shrubs. Small areas of old fields are found immediately to the north, east, and west of the northernmost section of runway. These old fields are dominated by switchgrass (*Panicum virgatum*), broomsedge (*Andropogon virginicus*), and fescue grass (*Festuca* sp.). Loblolly pine (*Pinus taeda*) and sweetgum (*Liquidambar styraciflua*) saplings, as well as a variety of blackberries (*Rubus* sp.) and multiflora rose (*Rosa multiflora*), are also present in this habitat.

8.2.1.1 Terrestrial Habitat

The Site consists of a disturbed area that is regenerating early successional old field vegetation, dominated by common species such as switchgrass, broomsedge, bush clover (*Lespedeza* sp.), ragweed (*Ambrosia artemesifolia*), goldenrods (*Solidago* spp.) and others. It is adjacent to a forested area to the north dominated by an overstory of sweet gum (*Liquidambar styraciflua*), red maple (*Acer rubrum)*), black cherry (*Prunus serotina*) and loblolly pine, and understories of

greenbrier (*Smilax rotundifolia*), wax myrtle (*Morella cerfera*), and ostrich fern (*Matteuccia struthiopteris*). This type of habitat is common in the forested floodplains of coastal northern Virginia.

The largest parcel of natural terrestrial habitat at WFF, a mixed deciduous/pine forest that borders Little Mosquito Creek, is adjacent to and west of the former WWTP. This forest consists of a dense canopied stand of loblolly and Virginia pine (*P. taeda* and *Pinus virginiana*), willow and black oak (*Quercus phellos* and *Qurecus velutina*), sweetgum, and red maple. Shrub and herb layers are sparse throughout the forest, except in the occasional open areas. In the shrubby areas, spicebush (*Lindera benzoin*), Tartarian honeysuckle (*Lonicera tatarica*), and principal canopy trees are found. Bracken (*Pteridium aquilinum*) and partridgeberry (*Mitchella repens*), as well as unidentified grasses, are found in the forest.

8.2.1.2 Wetlands and Aquatic Habitat

The portion of the unnamed tributary originating at the Site is surrounded by freshwater (palustrine) forested wetlands dominated by sweetgum, red maple and occasional loblolly pine. The soil and sediment samples collected during the RI were collected largely within this area.

The unnamed tributary itself receives runoff from the runway, taxiways and ramp areas, and the surrounding vicinity. It is clear on the basis of available information that the upper end of this tributary at the Site is fed primarily by stormwater flow. Site personnel indicated that the flow is intermittent or non-flowing during periods without precipitation. The tributary is fed by two existing stormwater outfalls shown in **Figure 3-1**. In addition, it is likely that the former WWTP itself provided a significant source of discharge water to the unnamed tributary because it discharged to the tributary when the WWTP was still operational (see Section 3.1). The overflow pipe's outfall could not be located during the TCRA. However, during the Site Investigation field activities, the pipe was located approximately 2 feet below grade and completely buried. The location of the suspected effluent outfall is shown in **Figure 3-1.**

During a site visit in January 2007, there was little water in the tributary. The channel of the stream had a sandy bottom and was about 6 feet wide and a foot deep. Photos 1 and 2 (**Appendix E1)** show the unnamed tributary immediately downstream of the Site.

As reported in the ecological risk assessment (ERA) for Sites 14 and 15, farther north of the Site (about 1,000 ft), the wetlands associated with the unnamed tributary are tidally-influenced and primarily herbaceous. Principal species include Spartina grasses (*Spartina alterniflora*, *S. patens*, and *S. cynosuroides*) and threesquare (*Scirpus pungent*). In the delta where the drainage ditch flows into Little Mosquito Creek, there is an area of tidally-influenced wetland scrub/shrub habitat. This habitat is dominated by wax myrtle, buttonbush (*Cephalanthus occidentalis*), and groundsel bush (*Baccharia halimifolia*). Some small trees are also found scattered in this area, primarily black willow (*Salix nigra*) and red maple. Cinnamon fern (*Osmunda cinnamomea*) and royal fern (*Osmunda regalis*) are the primary herbs found in the scrub/shrub habitat.

A very narrow margin of deciduous forested wetland exists along most of the length of the drainage ditch of the scrub/shrub area. These wetlands are not tidally-influenced and are dominated by small trees (6 to 10 inches diameter at breast height) with a 60-foot tall canopy. The primary species found there are red maple, black willow, and sweetgum. Spicebush is the most commonly found shrub, with sensitive fern (*Onoclea sensibilis*), royal fern, and cinnamon fern being the most common herbs.

8.2.2 Ecological Resources

The following narrative describes the terrestrial and aquatic ecological resources for the study area (Versar Inc., 1999). It should be noted that Versar's investigation focused on the tidal portion of the unnamed tributary:

The unnamed tributary to Little Mosquito Creek and Little Mosquito Creek support a diverse group of freshwater aquatic invertebrates. Fish commonly found in the unnamed tributary to Little Mosquito Creek at the WFF Main Base include several species of darters and mummichogs (*Fundulus* sp.). In Little Mosquito Creek, spot (*Leiostomus xanthurus*) and bay anchovy (*Anchoa mitchilli*) are seasonally most common.

Common amphibians and reptiles in the area include Fowler's toad (*Bufo woodhoussei*), green tree frog (*Hyla cinerea*), black rat snake (*Elapha obsolete*), hognose snake (*Heterodon platyrhinos*), and box turtle (*Terrapine carolina*). A considerable variety of birds is likely to

inhabit WFF throughout the year, owing to its location along the primary migratory corridor of the East Coast.

Upland bird families expected to utilize WFF habitats include owls, hawks, woodpeckers, flycatchers, swallows, crows and jays, chickadees, nuthatches, wrens, thrushes (including robins), vireos, warblers, blackbirds, and sparrows. Some of the most common terrestrial birds on the facility include red-tailed hawk (*Buteo jamaicensis*), mockingbird (*Mimus polyglottos*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), and song sparrow (*Melospiza melodia*). Other more aquatic-oriented birds, such as great blue heron (*Ardea herodias*), herring gull (*Larus argentatus*), laughing gull (*Larus atricialla*), and willet (*Catoptrophorus semipalmatus*) are common in the open tidal wetland areas along Little Mosquito Creek.

Mammals that are most likely to occur in the vicinity of the WFF Main Base include masked shrew (*Sorex cinereus*), northern short-tailed shrew (*Blarina brevicauda*), gray squirrel (*Sciurus carolinensis*), white-footed mouse (*Peromyscus leucopus*), meadow vole (*Microtus pennsylvanicus*), marsh rice rat (*Oryzomys palustris*), eastern cottontail (*Sylvilagus floridanus*), opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes)* and white-tailed deer (*Odocoileus virginianus*). It should be noted that the WFF Main Base has a sizable captive white-tailed deer population (i.e., movement restricted by fences).

8.2.3 Rare, Threatened, and Endangered Species

In 2004, information was obtained from USFWS (August 2004) regarding federally listed or proposed endangered or threatened species and designated critical habitat for the WFF. As recommended by USFWS, the Virginia Department of Game and Inland Fisheries (VDGIF), Environmental Services Section and the Virginia Department of Conservation and Recreation (VaDCR), Division of Natural Heritage databases were searched to obtain additional information to be included in the Tier I ERA (VDGIF, 2007 and VaDCR, 2006). These three reports are presented in **Appendix E2**.

VaDCR noted that Sites 14 and 15 are located within the Little Mosquito Creek Conservation Site, and, based on the description, the same would be true for the former WWTP site.

Conservation sites represent key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. The conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element, and where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. The Little Mosquito Creek Conservation Site has been assigned a biodiversity significance ranking of B4, which represents a site of general significance. (Scale = 1 to 5 with 1 being the most significant.)

Of the special status species listed, only the bald eagle is known to have been observed on the WFF Main Base. The species has nested at one observed location on Little Mosquito Creek.

8.2.4 Receptors/Exposure Pathways

After evaluating the types of populations, communities, and habitats present on the Site, key receptor species were selected considering the following (USACE, 1996; States et al., 1978):

- Likelihood of exposure.
- Sensitivity to the potential COPECs.
- Critical to the structure and function of the particular ecosystem that they inhabit.
- Threatened, endangered, or of special concern.
- Recreational value.
- Indicative of important changes in the ecosystem.
- Amount of exposure and/or toxicity data available for evaluation.

Wildlife species were selected to assess dietary exposure across a range of feeding relationships within the habitats occurring on and surrounding the Site. It is important to note that even though a select few receptor species were chosen for evaluation in this SLERA, they serve as surrogate species representing estimated exposure and, subsequently, risk to other species within comparable feeding guilds.

Receptor species and exposure pathways chosen for evaluation (as per the work plan, WESTON, 2009) are described below.

8.2.4.1 PALUSTRINE FORESTED WETLAND AND DECIDUOUS FORESTED UPLAND COMMUNITIES

The following complete exposure pathways were identified that are indicative of potential ecological risks to this community:

- Soil → Soil Invertebrates (e.g., earthworms).
- Soil → Soil Invertebrates (e.g., earthworms) → Insectivorous Mammals (e.g., short-tailed shrew) → Raptors (e.g., Red-tailed hawk) and/or Carnivorous Mammals (e.g., red fox).
- Soil → Soil Invertebrates (e.g., earthworms) → Insectivorous Birds (e.g., American robin) → Carnivorous birds (e.g., Red-tailed hawk) or Carnivorous Mammals (e.g., red fox).
- Soil → Plants →Herbivorous Mammals (e.g. white-footed mouse, deer).

The herbivorous pathway was not evaluated in this SLERA because generally the carnivorous and omnivorous pathways represent a greater likelihood of risk.

8.2.4.2 EARLY SUCCESSIONAL AND LATE SUCCESSIONAL OLD FIELD COMMUNITIES

The following complete exposure pathways were identified that are indicative of potential ecological risks to this community:

- Soil → Soil Invertebrates (e.g., earthworms).
- Soil → Soil Invertebrates (e.g., earthworms) → Insectivorous Mammals (e.g., short-tailed shrew) → Raptors (e.g., Red-tailed hawk) and/or Carnivorous Mammals (e.g., red fox).
- Soil → Soil Invertebrates (e.g., earthworms) → Insectivorous Birds (e.g., American robin) → Carnivorous Birds (e.g., Red-tailed hawk) or Carnivorous Mammals (e.g., red fox).
- Soil → Plants →Herbivorous Mammals (e.g., white-footed mouse).

The herbivorous pathway was not evaluated in this SLERA because generally the carnivorous and omnivorous pathways represent a greater likelihood of risk.

8.2.4.3 UNNAMED TRIBUTARY TO LITTLE MOSQUITO CREEK

The following potential complete exposure pathways were identified that are indicative of ecological risks to this community:

- Sediment/surface water → Benthic Macroinvertebrates.
- Sediment/surface water → Benthic Macroinvertebrates →Insectivorous Birds (e.g. Short-billed marsh wren, America robin).
- Sediment/surface water → Benthic Macroinvertebrates → Frogs (e.g., green frog), Fish (e.g., killifish) → Piscivorous birds (e.g., herons) or Piscivorous/Carnivorous Mammals (e.g., raccoon, mink).
- Sediment/surface water → Benthic Macroinvertebrates → Fish (e.g., killifish).
- Sediment/surface water → Benthic Macroinvertebrates → Fish (e.g., killifish) → Omnivorous Mammals (e.g., raccoon) or Carnivorous Birds (e.g., Great-blue heron) or Carnivorous Mammals (e.g., mink).
- Sediment/surface water →Herbivorous Mammals and Birds (e.g., Muskrat, Waterfowl).

Consistent with the approach of the risk assessment for Sites 14 and 15, the herbivorous pathway was not evaluated in this screening level assessment because the omnivorous and carnivorous pathways are more conservative and there is little habitat provided by the unnamed tributary for herbivorous mammals or waterfowl.

8.2.5 Assessment and Measurement Endpoints

Assessment endpoints are unambiguous statements or goals concerning an ecological characteristic (e.g., reproductive effects in aquatic receptors) that are to be evaluated and protected (USEPA, 1997b; 1998). They are critical to the problem formulation step because they link the risk assessment to management concerns; and they are central to conceptual model development.

Measurement endpoints link the conditions existing on-site to the goals established by the assessment endpoints (Maughan, 1993). The evaluation of the assessment endpoints is determined through measurement endpoints (e.g., reproductive effects on piscivorous birds can be measured by comparing exposure dose estimates to literature-based toxicity endpoints for reproductive effects).

The assessment and measurement endpoints selected for the Site and associated surface waters are presented in **Table 8-1**.

8.2.6 Ecological Conceptual Site Model

The culmination of the problem formulation process is the development of the CSM (USEPA, 1992b). The conceptual model consists of a written description and a visual representation of the fate, transport, and potential effects that chemical stressors may have on the ecology of the site. The conceptual model consists of a series of working hypotheses regarding how the contaminants might affect the ecological components of the natural environment. Conceptual models diagram the multiple relationships between the chemical stressors and receptors and the pathways of exposure at the site.

To assess the potential effects of contaminants released on the ecological resources of the Site, a conceptual model of the potential exposure to ecological receptors was developed. The conceptual model has been developed to describe the release and transport of COPECs in soils, surface waters, and sediments of the Site (see **Figures 8-1 and 8-2**).

8.2.6.1 Primary Contaminant Sources and Release Mechanisms

A complete description of the potential source areas associated with the former WWTP and the contaminants associated with these areas is presented in Section 5 of this RI report. Migration and distribution of COPECs throughout the terrestrial and aquatic habitats are principally the result of surface soil runoff, transport through drainage ditches and stormwater sewers, episodic flooding, groundwater infiltration to surface water, and potentially direct uptake and accumulation by flora and fauna.

8.3 METHODOLOGY

8.3.1 Data Collection and Review

8.3.1.1 Data Reduction

The analysis of the data contained in this SLERA was based on guidance presented in *Guidance for Data Usability in Risk Assessment, Part A* (USEPA, 1992c). The guidelines listed below were used when evaluating data qualifiers, sample quantitation limits, and duplicate samples, prior to the data summarization.

- U-qualified data represent a non-detect for the parameter evaluated.

- Data with "J" qualifiers were assumed to be positive identifications. "J" indicates that the numerical value is an estimated concentration (e.g., is reported below the minimum confident sample quantitation limit).

- Data with "R" qualifiers were eliminated from use as the results were rejected based upon non-adherence to standards set by the laboratory or data validator.

8.3.1.2 Selection of COPECs

To establish the list of COPECs, the USEPA Region III BTAG Screening Benchmarks were used to screen soil and sediment for ecological risks. Note that essential nutrients (i.e., calcium, magnesium, potassium, and sodium) were eliminated as COPECs in all media. If the BTAG tables did not provide a value for a detected compound, benchmarks were obtained from various sources as detailed below.

The following is a list of sources used to obtain soil screening benchmarks:

- USEPA Ecological Soil Screening Levels (ECO-SSL) (http://www.epa.gov/ecotox/ecossl/).

- ORNL. Efroymson, R.A., M.E. Will, and G.W. Suter II. Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process: 1997 Revision. ORNL. ES/ER/TM-126/R2. November. http://www.hsrd.ornl.gov/ecorisk/tm126r21.pdf

- ORNL. Efroymson, R.A., M.E. Will, G.W. Suter II, and A.C. Wooten. Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision. ORNL. ES/ER/TM-85/R3. November. http://www.hsrd.ornl.gov/ecorisk/tm85r3.pdf

- ORNL. Efroymson, R.A., G.W. Suter II, B.E. Sample, and D.S. Jones. 1997. Preliminary Remediation Goals for Ecological Endpoints. 1997 Revision. ORNL. ES/ER/TM-162/R2. August. http://www.esd.ornl.gov/programs/ecorisk/documents/tm162r2.pdf

The ORNL values were used in the absence of ECO-SSL values.

The following is a list of sources used to obtain sediment screening benchmarks:

- USEPA Region III BTAG Freshwater Sediment Screening Benchmarks, August 2006. http://www.epa.gov/reg3hwmd/risk/eco/btag/sbv/fwsed/screenbench.htm

- Interim sediment quality guideline (ISQG). Canadian Council of Ministers of the Environment (CCME). 2002. Canadian Sediment Quality Guidelines for the Protection of Aquatic Life Summary Tables.
- Probable effect level (PEL). CCME. 2002. Canadian Sediment Quality Guidelines for the Protection of Aquatic Life Summary Tables.

The ISQG and PEL values were used in the absence of a BTAG freshwater sediment value.

The following is a list of sources used to obtain surface water screening benchmarks:

- USEPA Region III BTAG Freshwater Screening Benchmarks, July 2006. http://www.epa.gov/reg3hwmd/risk/eco/btag/sbv/fw/screenbench.htm
- VDEQ Water Quality for Freshwater Acute and Chronic Aquatic Life Standards, October 2008. http://www.deq.state.va.us/wqs/documents/WQS_eff_10_22_08.pdf

The most stringent value from the aforementioned sources was used as the screening benchmark.

The final list of COPECs for which food chain modeling was conducted consisted of constituents meeting the following criteria:

1. Constituents whose maximum concentration exceeded the ecological benchmark.
2. Constituents for which ecological benchmarks were not available.
3. Bioaccumulative compounds.

Bioaccumulative compounds are those listed in Table 4-2 in *Bioaccumulative Testing and Interpretation for the Purpose of Sediment Quality Assessment, Status and Needs*, EPA-823-R-00-001, February 2000.

8.3.2 Comparison of Modeled Tissue Residue Results with Toxicity Data

To determine whether fish potentially entering the upper portion of the unnamed tributary adjacent to the Site could be impacted by contaminated surface water or sediment, potential concentrations of COPECs in fish tissue were modeled for comparison with literature-based data on toxicological effects. The projected fish tissue concentration was modeled based on derivation of BAFs using data previously collected on fish and sediment in Little Mosquito Creek during the ERA of Sites 14 and 15 (WESTON, 2007c). Sediment and fish tissue sampling locations for the Sites 14 and 15 RI are shown in **Figure 8-3**.

Because fish live their entire life in the water column and would be exposed to contaminants for a longer duration, they are conservative receptors for evaluating the unnamed tributary since the upper portion of it adjacent to the former WWTP is apparently dry for part of the year. While the CSM indicated that frogs are receptors that potentially could be at risk, a separate analysis was not undertaken for frogs due to lack of tissue data, and the fact that the analysis using fish data should be adequately protective of frogs as well.

Results of the BAFs were used to predict fish concentrations, which were then compared to effects concentrations in tissue reported in Jarvinen and Ankley (1999).

8.3.3 Food Chain Hazard Quotient Modeling

The basis for the food chain models was site-specific data on contaminant concentrations present in soil, sediment, and surface water at the Site. Where adequate sample sizes were available, the 95% UCL of the mean was used to model contaminant impacts to target receptors identified from the CSM. The 95% UCLs were calculated following the most recent USEPA guidance and USEPA's ProUCL statistical software program (Version 4.00.04, USEPA, 2009d). The ProUCL output is provided in **Appendix E3**. Note that ProUCL Version 4 restricts the use of ProUCL for sample data sets of at least 5. For data sets of at least 5, no decision statistics are computed when not more than one detected observation is present in the data set. The maximum detected concentration is used as the EPC for sample sizes smaller than 5 or for data sets with only one detected observation. Target receptors include aquatic species inhabiting downstream locations in Little Mosquito Creek, at the request of USEPA Region III BTAG. Food chain models used literature-derived life history data on ingestion rates, home range, body size, and toxicity reference values (TRVs) to evaluate the potential risks from contaminants detected at the Site, with the USEPA Wildlife Exposures Handbook being the primary reference (USEPA, 1993).

8.3.3.1 Ingestion Model, Receptor Species and Assumptions

The modeling approach used to calculate the daily dose to the receptor species follows the general form indicated below. The model is based entirely on ingestion (dietary exposure), as inhalation and skin contact would be difficult to estimate in wild animals. Two different risk scenarios were addressed by the modeling. The first was highly conservative, and evaluated risks using a no observed adverse effect level (NOAEL) as a TRV, or measure of toxicological

effect. The second scenario was more realistic as the lowest observable adverse effect level (LOAEL) was used as a measure of toxicological effect for comparison with the dose under this scenario. Both scenarios assumed that the area use factor (AUF) was proportional to the typical home range of the species. For example, if a robin typically forages over 2 acres and the site acreage is 0.8 acre, then the bird is expected to spend less than half its time foraging at the Site.

In all cases the most conservative inputs regarding food ingestion rate, body size, and TRVs were chosen for modeling. For example, if the LOAEL was used for a TRV, the lowest LOAEL value in the literature available was chosen for use in modeling.

8.3.3.2 Selection of Receptor Species and Dietary Exposure Models

There is a potential for adverse effects to wildlife as a result of contamination in the terrestrial and aquatic systems. Because of the biomagnification potential associated with some of the COPECs (e.g., mercury), it was determined that representative, upper and intermediate trophic level receptors needed to be evaluated. For the terrestrial evaluation, intermediate trophic level organisms, such as the American robin and short-tailed shrew were selected as target receptors. The red fox and Red-tailed hawk, both apex predators of terrestrial habitats, were selected as representative of a higher trophic level. Since certain species of fish often represent the highest trophic level in aquatic systems, receptors that include fish in their diet (i.e., great blue heron and mink) were selected as ecological receptors. These species potentially use the habitats associated with the Site as foraging areas; therefore, they are potentially exposed to contaminants through several pathways with primary exposure occurring through the ingestion of dietary items.

Target receptors for which dietary modeling was performed were selected for each class-specific feeding guild to be representative of other species in that guild. These species are expected to be conservative surrogates for the specified feeding niche. Receptors have been selected based on their ecological relevance, exposure potential, sensitivity, social or economic importance, and the availability of natural history information. The selection of receptors for actual modeling took into account available site-specific information already collected at nearby Sites 14 and 15. Pumpkinseed sunfish were indicated as potential receptors in the CSM for the aquatic ecosystem presented in the Work Plan (WESTON, 2009); however, uptake to killifish was modeled instead because site-specific data on killifish were available from Sites 14 and 15. Also, while frogs

were identified as potential ecological receptors in the Work Plan CSM (WESTON, 2009), insufficient data were available on frogs with which to perform modeling. Therefore, site-specific data on fish were used to model potential impacts to birds and mammals that would eat frogs at the site. This approach is conservative, since fish spend their entire life in the water column and have a greater exposure to contamination from surface water and sediment.

Other receptors shown in the CSM were not modeled. For example, the short-tailed marsh wren was identified as a potential receptor from ingestion of benthos, but no information on contaminant concentrations in benthos was available, and habitat for this species is limited primarily to areas well downstream of the Site where the unnamed tributary merges with Little Mosquito Creek. Similarly, muskrat were identified as herbivorous mammals and the white-footed mouse was identified as an omnivorous mammal, but neither was modeled because information on plant tissue concentrations was unavailable and modeling the short-tailed shrew, red fox, red-tailed hawk, and mink is a more conservative approach. Uptake of metals and organics is usually greater through insectivorous and carnivorous pathways than via the herbivorous pathway, and data were available on small mammal concentrations from the Sites 14 and 15 investigation that could be used to estimate BAFs.

A brief life history description of each target receptor is provided below.

American Robin

The American robin (*Turdus migratorius*) was selected to represent insectivorous birds in the terrestrial habitat. The American robin is a member of the thrush family, and inhabits forests, wetlands, swamps, and habitat edges where forested areas meet agricultural and range land (USEPA, 1993).

The American robin requires access to freshwater, protected nesting sites, and productive forage in areas for breeding. Breeding habitats include moist forests, swamps, open woodlands, orchards, parks, and lawns. Robins may forage on the ground, along habitat edges, stream edges, or above ground in shrubs and the lower branches of trees (USEPA, 1993). The summer foraging home range of adults feeding nestlings averages approximately 0.4 acres and those feeding fledglings approximately 2 acres. Their territory during the breeding season ranges from 0.3 – 2 acres (USEPA, 1993).

Robins eat invertebrates, seeds, and fruit (USEPA, 1993). Directly preceding and during the breeding season, robins' diet consists of greater than 90% (by volume) invertebrates and some fruit. During the rest of the year, their diet consists of 80-99% (by volume) of fruits. Fruits commonly eaten include plums, dogwood, sumac, hackberries, blackberries, cherries, greenbriers, raspberries, and juniper. Invertebrates commonly taken include beetles, caterpillars, moths, grasshoppers, spiders, millipedes, and earthworms (USEPA, 1993).

The exposure of the American robin to site-specific COPECs is assumed to occur through the ingestion of plants and invertebrates. The food ingestion rate of the American robin is assumed to be 1.52 g wet weight (WW)/g body weight (BW)-day (USEPA, 1993). Based on the approximate invertebrate to plant ingestion ratios during spring, it is assumed that the robin's diet is comprised of 100% soil invertebrates.

Northern Short-Tailed Shrew

The northern short-tailed shrew (*Blarina brevicauda*) was selected to represent the insectivorous mammal guild in the habitats. The short-tailed shrew may be found in a variety of habitats with a well-developed layer of leaf litter and humus, including grasslands, brushy thickets, meadows, old fields, and deciduous, coniferous, and mixed forest (Merritt, 1987).

Two different types of nests are constructed by the short-tailed shrew – a breeding nest and a resting nest. Both types are commonly located 6 to 16 inches below ground, or under logs, stumps, or old boards. The home range of the shrew is 0.5 to 1 acre. Population densities of the shrew range from 1 to 10 per acre (Merritt, 1987).

The short-tailed shrew's diet includes invertebrates (e.g., spiders, centipedes, slugs, snails, and earthworms), salamanders, mice, voles, and occasionally birds. It has a preference for animal food, but also eats fungi and plant material such as roots, nuts, fruits, and berries. In winter, insect larvae and pupae serve as important food sources (Merritt, 1987).

The exposure of the short-tailed shrew to site-specific COPECs is assumed to be through the ingestion of plants, soil invertebrates, and small mammals, as well as the incidental ingestion of soil and consumption of water. The food ingestion rate of the short-tailed shrew is assumed to be

0.62 kg WW/kg BW-day (USEPA, 1993). It is assumed that the shrew ingests 100% invertebrates.

Red-Tailed Hawk

The Red-tailed hawk was chosen as a representative avian species that ingests small mammals for the terrestrial invertebrate pathway. The Red-tailed hawk is the most common and widespread American bird-of-prey (Bull and Farrand, 1977). Their habitat is variable although they are commonly found in wooded areas near open land. They are also found in other habitats including plains, prairie groves, and deserts in the western United States (National Geographic Society [NGS], 1987). The Red-tailed hawk is an opportunistic feeder which hunts from a perch or on the wing for food items such as small mammals (e.g., mice, chipmunks, and rabbits), birds (usually ground-dwelling species), reptiles, insects, and occasionally larger prey items (Burton, 1989).

The breeding season of the Red-tailed hawk starts with aerial courtship displays and is often followed by mating on a perch, and nest-building activities conducted by both sexes. Nests are generally placed in tall trees, high rock ledges, or similar habitats and are often refurbished annually for use in consecutive years. Clutch sizes are generally small, consisting of two to three eggs. Both sexes take part in the incubation period, which averages 30 days in length. Juveniles are able to feed themselves at approximately 4 to 5 weeks and fledge in about 45 days (Bull and Farrand, 1977; Burton, 1989). The lower end of reported mean body weight for adult male Red-tailed hawks is 1.028 kg (Craighead and Craighead, 1956; USEPA, 1993).

The diet of the Red-tailed hawk consists of mammals, birds, reptiles, and insects, varying in importance with season and availability (USEPA, 1993). The food ingestion rates of the Red-tailed hawk range from 0.086 g/g BW/day for an adult male in summer, to 0.11 g/g BW/day for an adult female in winter (USEPA, 1993). To express this value in units of kg/day, the highest reported food ingestion rate of 0.11 g/g BW/day was multiplied by the lowest reported body weight from the same study of 1.028 kg yielding a food ingestion rate of 0.113 kg/day. A soil ingestion rate was not calculated as the amount of soil found on select prey species would be negligible (Sample and Suter, 1994).

Red Fox

The red fox (*Vulpes vulpes*) was selected to represent the carnivorous mammal guild in the terrestrial habitats. The red fox inhabits brushy successional areas such as old fields, borders of pastures, and rolling farmlands (Merritt, 1987).

The red fox is mainly nocturnal, although it does forage at dawn and dusk. It uses earthen dens commonly situated on sunny, well-drained slopes. The fox will also nest in hollow logs, rocky caverns, and sometimes, deserted outbuildings (Merritt, 1987). The territory of the fox varies from 141 to 2,111 acres (USEPA, 1993).

The red fox is an opportunist and preys upon small mammals (e.g., rabbits, meadow voles, and white-footed mice), birds (including eggs), invertebrates, frogs, snakes, vegetable matter, and carrion. Seasonal preferences reflect the availability of food items, with berries, fruits, insects, and spiders the common food items in autumn, and small mammals and rabbits hunted in the winter (Merritt, 1987).

There are few natural enemies of the red fox. Predation occurs most often by large hawks and owls on kits (Merritt, 1987).

The exposure of the red fox to site-specific COPECs is assumed to occur through the ingestion of fruits and berries, soil invertebrates, insectivorous birds, and herbivorous and insectivorous mammals; as well as the incidental ingestion of soil and consumption of water. The food ingestion rate of the red fox is assumed to be 0.16 kg WW/kg BW-day (USEPA, 1993). It is assumed that the fox diet is composed of 100% small mammals (USEPA, 1993).

Great Blue Heron

The great blue heron (*Ardea herodias*) is common along the margins of most freshwater bodies and wetlands. The dietary mainstay of the great blue heron is fish ranging from 5 to 30 cm in length (Butler, 1992). Fish comprise the majority of the heron's diet, but great blue heron also eat small rodents, amphibians, snakes, lizards, insects, crustaceans, and occasionally, small birds (Zeiner et al., 1990; Martin et al., 1951). When fishing, heron will either stand still and wait for fish to swim within striking distance or will slowly wade to catch more sedentary prey. The heron requires shallow waters (up to 0.5 m) with a firm substrate to catch fish.

Great blue herons nest colonially and often use a nest for more than one year. In freshwater marshes, the mean shoreline length defended by a great blue heron is 129 meters and the mean territory area is 0.6 hectare (Bayer, 1978). Reported mean body weights for adult herons range from 2,204 g for females to 2,576 g for males (USEPA, 1993), with an average body weight of 2,390 g (Sample and Suter, 1994; Dunning, 1984).

For this assessment, the potential dietary exposure to COPECs in Little Mosquito Creek was evaluated based on the consumption of mussels, crabs, fish, and small mammals; ingestion of surface water; and incidental ingestion of sediment. The contribution of COPEC concentrations to the great blue heron as a result of mussel ingestion was used as a surrogate for dietary exposure from plants and insects. Although mussels are not normally a dietary item of the great blue heron, this assumption is conservative as mussels occupy a higher trophic level than plants and have a greater duration of intimate contact with sediment than aquatic insects and, therefore, should have higher contaminant concentrations. In addition, the great blue heron serves as a surrogate receptor for other piscivores foraging in Little Mosquito Creek that do ingest mussels (e.g., various gulls, ducks). The food ingestion rate of the heron is assumed to be 0.18 kg WW/kg BW-day (USEPA, 1993). It is assumed that the heron's diet is composed of 100% fish.

Raccoon

The raccoon was chosen as a representative omnivorous mammal for modeling the pathway to higher receptors in aquatic areas of the Site. Raccoons are distributed over much of North America and can be found in virtually any habitat containing permanent water. Preferred aquatic habitats include hardwood swamps, floodplains, freshwater wetlands, and salt marshes (Kaufmann, 1982).

Raccoons are active primarily from dawn to dusk (Stuewer, 1943), but will alter their activities to opportunistically feed on whatever is available (Sanderson, 1987). For example, raccoons living near a salt marsh may become active during the day to take advantage of feeding opportunities during low tide (Ivey, 1948). Raccoons feed primarily on fruits, nuts, acorns, insects, frogs, crayfish, and eggs (Palmer and Fowler, 1975). Adult raccoons weigh from 3.67 kg to 7.6 kg (Johnson, 1970; Sanderson, 1984; USEPA, 1993). For this assessment, exposure of raccoons was evaluated based on ingestion of fish tissue. Although raccoons are known to

consume a variety of prey items (Palmer and Fowler, 1975), it was conservatively assumed that fish comprise 100% of the diet for the raccoon. A predicted food ingestion rate of 0.315 kg/day was calculated based on a lower end adult female body weight 6.0 kg (USEPA, 1993).

Mink

The mink is a small fur-bearing animal belonging to the mustelid family. Mustelids are characterized by long, slender bodies, short legs, and the presence of a musk gland and include the least (*Mustela nivalis*) and long-tailed (*Mustela frenata*) weasels, striped (*Mephitis mephitis*) and spotted skunks (*Spilogale putorius*) and river otter (*Lutra canadensis*) (USEPA, 1993). Mink are one of the most widespread mammalian carnivores in North America. Its range includes much of the continental USA and Canada. In Virginia, the mink is distributed widely, and it is expected to be an inhabitant of the coastal wetlands and forests.

Mink are found in a variety of wetland, riverine, and lacustrine habitats such as wetlands, small streams, rivers, lakes, tidal flats, cattail marshes, bogs, swamps, and bottomland woods. Habitats associated with small stream are preferred to habitats near large, broad rivers. They prefer irregular shorelines with bushy cover that provides ample prey and den sites. This species will also use upland habitat provided that there is sufficient cover and prey.

The size of a water body and water depth can also affect habitat use by this species. For example, large open water areas are not suitable for mink, unless water is shallow. It is hypothesized that mink lack the underwater endurance necessary for locating and pursuing prey (Dunstone and O'Connnor, 1979). In large open water areas, mink are capable of efficient hunting only when water is shallow or fish density is high (Dunstone, 1983; Allen, 1986). In streams and rivers, pools less than 3 feet deep appear to provide suitable foraging opportunities for mink (Burgess, 1978; Allen, 1986). Mink are common where abundant deadfall and debris create cover for foraging. Logjams in streams create crayfish and fish habitat and shelter for mink.

Since foraging in riverine and lacustrine systems occurs primarily along the shoreline, cover and structural diversity within the riparian vegetative community affect habitat use by mink. Cover can be provided by overhanging or emergent vegetation, rocks or rock crevices, exposed roots, debris, log jams, undercut banks, or boulders (Allen, 1986). The availability of suitable den sites may also affect habitat use by mink. Typically, several den sites are located close to preferred

foraging sites within an individual's home range (Allen, 1986). Dens are established in burrows excavated by other animals (typically muskrats), tree root cavities, rock piles, logjams, and beaver lodges. Several dens may be established and used at the same time. Dens are found within 200 m of the shoreline (Eagle and Sargeant, 1985; Allen, 1986; Lariviere, 1999).

The actual shape of home territories ranges from linear for riverine habitats to circular for marsh habitats (Birks and Linn, 1982; USEPA, 1993). Home range size depends on food availability, age and sex of mink, season, and social stability. Adult males have larger home ranges (average 85.4% larger) than adult females and adults occupy larger home ranges than juveniles (Gerell, 1970; Lariviere, 1999; Birks and Linn, 1982; Allen, 1986; Whitaker and Hamilton, 1998). Expressed as shoreline length, the average adult home range encompasses 2,600 m for males and 1,800 m for females in stream and riverine habitats (Whitaker and Hamilton, 1998). However, linear home ranges may be larger depending of the availability of food and the condition of habitat (Lariviere, 1999). Population density ranges from 3 to 20 mink per square mile. Adult males occupy home ranges that are exclusive of other adult males, but include the home ranges of one or more females (Mitchell, 1961; Birks and Dunstone, 1985; Whitaker and Hamilton, 1998). Suitable mink habitat occurs throughout much of the WFF.

Mink are almost exclusively carnivorous. A number of factors influence mink's dietary composition. Mink diet varies with season, habitat and availability of prey (Proulx et al., 1987). Shallow water and low flow rates contribute to effective aquatic foraging by mink. Commonly important items include fish, crayfish, clams, frogs, snakes, muskrat, voles, and birds. Mink tend to consume more fish in winter and crayfish in spring and summer. In autumn, terrestrial species may increase in importance as prey. Females tend to feed on smaller prey (e.g., fish, crustaceans, and birds), while males prefer larger prey (e.g., rabbit and muskrat) (Birks and Dunstone, 1985). Females will take juvenile rabbits in summer (Birks and Dunstone, 1985). In coastal Virginia, principal predators of mink, beside man, are red fox and great horned owl.

Piscivorous mammals such as mink are at risk to COPEC exposure because of their preference for high trophic level aquatic prey. Their diet, consisting of fish, crayfish, amphibians, and waterfowl (Linscombe et al., 1982) makes mink susceptible to exposure to bioaccumulative substances (Moore et al., 1997, 1999). As a consequence, mink have a high potential for

significant exposure to water-borne chemicals.

The exposure of the mink to site-specific COPECs is assumed to occur through the ingestion of aquatic invertebrates (e.g., crabs and mussels), fish, and surface water, as well as the incidental ingestion of soil/sediment. The food ingestion rate of the mink is 0.22 kg WW/kg BW-day (USEPA, 1993). When assessing risks associated with the intermittent tributary, it was conservatively assumed that the mink's diet was comprised of 100% fish.

8.3.3.3 Derivation of Bioaccumulation Factors

The food chain ingestion models employed to assess potential risks to piscivorous birds and mammals used killifish as the exclusive food item. The concentration in the fish tissue was modeled using site-specific data collected previously during the Sites 14 and 15 RI (WESTON, 2007c). Maximum concentrations of analytes detected in killifish collected in Little Mosquito Creek were divided by maximum sediment concentrations of the same analytes to determine the fraction of contaminants potentially accumulating into fish tissue, or BAF. The fish tissue BAF was then multiplied by the maximum concentration of analytes detected in sediment in the two samples collected adjacent to the former WWTP. The analysis was limited to those analytes that were COPECs, that is, that were considered bioaccumulative, or which did not have a sediment benchmark available. No analytes were detected in sediment above screening benchmarks.

Table 8-2 reports the resultant BAFs by analyte that were used to estimate tissue concentrations of killifish potentially entering the upper portion of the unnamed tributary.

To model impacts from contaminated soils to higher terrestrial receptors such as red fox and Red-tailed hawk, small mammals were assumed to be the exclusive food item. Concentrations of analytes present in small mammal tissue were modeled based on derivation of BAFs from the Sites 14 and 15 RI (WESTON, 2007c).

Table 8-3 provides results of the BAFs derived for small mammals using the maximum soil concentrations by analyte, and maximum tissue concentrations by analyte in small mammals previously collected during the SLERA for Sites 14 and 15 (WESTON, 2007c).

8.3.3.4 Toxicity Reference Values

Regulatory TRVs for the protection of avian and mammalian wildlife are not generally available. Therefore, TRVs were derived using peer-reviewed methods and assumptions for specifically selected ecological receptors at the Site. TRVs are dose-based levels of contaminants that are not expected to elicit adverse effects.

Doses used for avian and mammalian TRVs were obtained from either USEPA, 1993; Sample et al., 1996; current USEPA Eco-SSLs; or in-house peer-reviewed primary research articles. The process used to identify primary research articles for use as TRVs included a review of literature searches, database searches, and secondary sources. If primary research articles could not be obtained, data from secondary sources were used. To be considered as a TRV, studies had to meet the following criteria:

- Test species similar to the target receptor.
- In vivo study.
- Oral administration via food, drinking water, or gavage (feeding study preferred).
- NOAEL or LOAEL identifiable.
- Effects of potential "ecological significance" evaluated.

Articles meeting the criteria were summarized, with information noted on study parameters, effects evaluated, and results. After suitable articles were summarized for a specific chemical, both the studies and doses most appropriate for TRVs were selected. Primary considerations in the selection process included study species, study duration, effect level, and toxicological endpoint. The following paragraphs present the considerations used in the study and dose selection process.

Studies using the typical target wildlife species (e.g., red fox and great blue heron) were preferentially sought. However, toxicological data for most target wildlife species were unavailable; therefore, studies using species as closely related to the target species with similar diets and digestive systems as data would allow were chosen.

8.4 RISK CHARACTERIZATION

8.4.1 Comparison of Analytical Data with Ecological Screening Benchmarks

8.4.1.1 Terrestrial Ecosystem

The maximum concentration of each chemical detected in surficial soils was compared with its respective ecological soil benchmark developed for the protection of terrestrial plants, soil invertebrates and soil microbial processes. The results of these comparisons are presented in **Table 8-4.**

The majority of chemicals with maximum values in excess of ecologically based soil screening benchmarks were metals. These included aluminum, antimony, cadmium, iron, lead, manganese, mercury, vanadium and zinc. Aluminum, iron, and mercury exhibited the highest frequency of exceedances. As noted in the Site Assessment Memo for WFF PA II, "the potential for soil or groundwater contamination due solely to lead-based paint or ACM deposition from building maintenance or demolition activities will not be considered further"; therefore, the additional lead detections noted in 2012 were not included in this SLERA because their presence in soils is related to flaking paint chips from the Pump House building.

In addition, 4,4'-DDT, dieldrin and Aroclor 1260 concentrations exceeded their respective ecological soil benchmarks at a minimum of one location each.

Comparison with background soil samples collected at WFF by Tetra Tech (Tetra Tech, 2004a) indicated that maximum soil concentrations of parameters exceeding ecological benchmarks, many of which, such as aluminum, cadmium, iron, manganese, mercury, and vanadium, fell within the range reported for background soil concentrations (**Table 8-5**). However, antimony, lead, zinc, and dieldrin concentrations detected on-site exceeded background. However, all chemicals detected within background range were retained along with chemicals detected above background ranges, chemicals for which no benchmarks were available (cyanide, bis[2-ethylhexyl)phthalate, acetone, methyl ethyl ketone, and methyl isobutyl ketone), and bioaccumulative chemicals (mercury and DDTs) for analysis of potential food chain impacts using modeling. PCBs were not analyzed as part of the background evaluation, thus Aroclor-1260 was also retained for further assessment.

Composite sludge samples collected within the former WWTP structure were compared to soil ecological benchmarks (**Table 8-6**). The sludge is now dried and contained within concrete-walled cells that are part of the former infrastructure. The sludge is open to the environment in the sense that precipitation could carry sludge particles into adjacent soil and potentially the unnamed tributary (Photos 3 and 4, **Appendix E1**).

The three samples collected had concentrations of several metals (aluminum, antimony, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, vanadium and zinc) detected at concentrations exceeding the ecological soil screening benchmarks. DDT compounds, dieldrin, PAHs, and toluene also exhibited concentrations exceeding the ecological screening benchmarks in at least one of the three samples.

Because the sludge is contained within concrete structures and limited to a small area, composite sludge samples were not evaluated further for ecological impacts; however, based on a comparison of analytical data with ecological soil screening benchmarks, metals, DDT, dieldrin, PAHs, and toluene might pose potential ecological risks if ecological receptors used the sludge beds as primary habitat or if the sludge were released via a major storm event. Examples of maximum concentrations of metals in sludge that could pose a threat include lead (530 mg/kg), mercury (28 mg/kg), silver (130 mg/kg) and zinc (680 mg/kg). As such, the presence of contaminated sludge, while not posing a significant ecological threat at present, could pose a long-term threat if it was used as primary habitat or if it was released to the environment. Therefore, the integrity of the existing concrete structure and the likelihood of release should be examined as part of an evaluation of potential remedial action options for the remaining sludge which is anticipated to be conducted during the feasibility study (FS).

8.4.1.2 Aquatic Ecosystem

Table 8-7 provides a comparison of groundwater data from the three WWTP wells located closest to the unnamed tributary (MW4, MW6, and MW7), with BTAG freshwater screening benchmarks for surface water. Results of the comparison indicate that groundwater concentrations of aluminum, barium, iron, and manganese exceed the benchmarks. This implies that groundwater, upon entering the tributary before being diluted, is capable of posing potential ecological risks.

Comparison with background groundwater data (**Table 8-8**) indicates that the concentrations of these metals fall within the concentration range for these metals in background wells reported in the NASA Wallops Flight Facility Background Report for the Main Base (Tetra Tech, 2004a).

Comparison with upstream surface water data in Little Mosquito Creek (**Table 8-9**) collected in 1996 indicate that the concentration ranges of these metals detected in unnamed tributary surface water exceed the background concentration range for Little Mosquito Creek. However, the background surface water data collected by Versar in 1996 represent filtered concentrations, so the results are not directly comparable.

Surface water concentrations detected in the single sample collected within the unnamed tributary as part of the former WWTP investigation indicate that concentrations of aluminum, barium, iron, and manganese exceed the BTAG freshwater benchmarks (**Table 8-9**). The fact that concentrations of metals detected above benchmarks in groundwater (aluminum, barium, iron, manganese) also have surface water concentrations exceeding BTAG freshwater benchmarks indicates that groundwater concentrations of these metals could be contributing to the exceedance concentrations in surface water.

Surface water samples collected in Little Mosquito Creek and the unnamed tributary as part of the Sites 14 and 15 (WESTON, 2007c) reported metals concentrations as total recoverable in the four samples collected from the unnamed tributary (locations 101, 102, 103, and 104) and the five samples collected from Little Mosquito Creek (locations 106, 107, 110, 111, and 113). These prior sampling locations are shown in **Figure 8-3**. Of the metals detected in the unnamed tributary during the Sites 14/15 investigation, aluminum, barium, iron, manganese, and zinc exceeded BTAG freshwater screening benchmarks (Table 7-22 of WESTON, 2007c). Sample stations 101 and 102 are located in a branch of the unnamed tributary upgradient of the former WWTP, whereas sampling stations 103 and 104 are downgradient of the former WWTP.

Aluminum detected at the WWTP sampling location was 2.5 mg/L, whereas aluminum ranged from 0.11 to 0.13 mg/L at locations 101 and 102 and from 0.096 to 0.2 mg/L at locations 103 and 104. Barium detected at the WWTP sampling location was 0.031 mg/L, whereas barium ranged from 0.016 to 0.018 mg/L at locations 101 and 102 and from 0.016 to 0.021 mg/L at locations 103 and 104. Iron detected at the WWTP sampling location was 7.2 mg/L, whereas

iron ranged from 1.6 to 2.7 mg/L at locations 101 and 102 and from 0.95 to 2.0 mg/L at locations 103 and 104. Manganese detected at the WWTP sampling location was 0.46 mg/L, whereas manganese ranged from 0.14 to 0.22 mg/L at locations 101 and 102 and from 0.084 to 1.2 mg/L at locations 103 and 104. Refer to Table 4-19 of the Site 14 and 15 RI for analytical data (WESTON, 2007c).

4,4'-DDT, chromium, copper, and zinc concentrations in surface water from Little Mosquito Creek exceeded the BTAG estuarine screening benchmarks (Table 7-23 of WESTON, 2007c). Note that BTAG estuarine screening benchmarks were not available for aluminum, barium, iron, and manganese.

Table 8-10 summarizes comparison of maximum concentrations of analytes detected in the two sediment samples collected within the unnamed tributary immediately downgradient of the Site with corresponding ecological screening benchmarks. Results of the comparison did not indicate any exceedances of screening benchmarks, again indicating no evidence of potential contaminant transfer to Little Mosquito Creek.

Several analytes for which ecological screening benchmarks were unavailable (e.g., barium, beryllium, vanadium), or which are considered bioaccumulative (e.g., mercury, DDT compounds) were retained in the assessment and included in the food chain modeling where sufficient information was available on potential toxic effects.

As reported in the prior RI for Sites 14 and 15, 4,4'-DDT and its metabolites were detected in several sediment samples, and the highest detected concentrations were located in sample 108, which is located in the tidally influenced wetland area where the unnamed tributary discharges into Little Mosquito Creek. Several metals exceeded benchmark values in samples collected from the unnamed tributary and Little Mosquito Creek during the Sites 14 and 15 RI. Although DDT, its breakdown products, and several metals were detected in soil at the Site, there is no evidence from the two sediment samples collected in the current investigation of the former WWTP area that this contamination originated specifically from the WWTP.

8.4.2 Comparison of Tissue Residue Results with Toxicity Data

Table 8-11 provides results of the comparison of modeled killifish data using BAFs derived from Sites 14 and 15, with data on toxicological effects in fish from the Jarvinen and Ankley (1999) database. The comparison was performed for COPECs in sediment.

Results of the comparison of modeled fish tissue data with effects concentrations in tissue reported in Jarvinen and Ankley (1999) indicated that none of the COPECs in sediment in the unnamed tributary adjacent to the Site would have predicted fish tissue concentrations exceeding toxicological effects data in fish (**Table 8-11**).

8.4.3 Food Chain Hazard Quotient Modeling Results

8.4.3.1 Terrestrial Ecosystems

Results of food chain HQ modeling of terrestrial receptors are summarized in **Table 8-12**. Results indicate the potential for ecological risks to American robins and short-tailed shrews from ingestion of earthworms contaminated with site soils. HQs greater than 1.0 calculated using the NOAEL as a toxicological reference were noted for the American robin from ingestion of earthworms contaminated with DDD (HQ=4), DDE (HQ=6.8), DDT (HQ=24), Aroclor-1260 (HQ=5.3), aluminum (HQ=620), lead (HQ=990), mercury (HQ=48), vanadium (HQ=4.3), and zinc (HQ=35). HQs greater than 1.0 calculated using the LOAEL as a toxicological reference were noted for the American robin from ingestion of earthworms contaminated with DDT (HQ=2.5), aluminum (HQ=620), lead (HQ=99), mercury (HQ=4.5), and zinc (HQ=3.9). HQs greater than 1.0 calculated using the NOAEL as a toxicological reference were noted for the short-tailed shrew from Aroclor-1260 (HQ=2.3), aluminum (HQ=1,900), antimony (HQ=7), lead (HQ=10), and vanadium (HQ=18). HQs greater than 1.0 calculated using the LOAEL as a toxicological reference were noted for the short-tailed shrew from aluminum (HQ=190) and vanadium (HQ=1.8). Complete HQ tables for terrestrial receptors are provided in **Tables 8-13 through 8-20**.

Concentrations of DDT, aluminum, mercury, and vanadium in soils at the WWTP are within range of the concentrations detected in the background investigation (TetraTech, 2004a).

Background ranges are not available for DDD, DDE, Aroclor-1260 and antimony. Concentrations of lead and zinc in site soil exceeded the background range.

Elevated HQs for several chemicals (i.e., Aroclor-1260, lead, and zinc) may be attributed to chemical concentrations at one sample location, SS1, that may be considered an outlier. Sample location SS1 is adjacent to the former transformer area where three electrical transformers were located adjacent to the south side of the control/pump house. Aroclor-1260 was detected only at location SS1 at concentrations of 190 and 290 µg/kg in the parent and duplicate samples, respectively. Also, the concentrations for lead were 400 and 460 mg/kg, and zinc concentrations were 240 and 250 mg/kg in the parent and duplicate samples at location SS1. After excluding data from location SS1, the 95% UCLs were re-calculated for chemicals with an HQ greater than one for either the robin or short-tailed shrew—DDT compounds, aluminum, antimony, lead, mercury, vanadium, and zinc. The 95% UCL was not recalculated for Aroclor-1260 since it was detected only at location SS1.

A summary of the HQ modeling, excluding sample location SS1, is presented in **Table 8-12a**. HQs greater than 1.0 calculated using the NOAEL as a toxicological reference were noted for the American robin from ingestion of earthworms contaminated with DDD (HQ=2.1), DDE (HQ=8.6), DDT (HQ=2.8), aluminum (HQ=620), lead (HQ=21), mercury (HQ=36), vanadium (HQ=4.1), and zinc (HQ=14). HQs greater than 1.0 calculated using the LOAEL as a toxicological reference were noted for the American robin from ingestion of earthworms contaminated with aluminum (HQ=620), lead (HQ=2.1), mercury (HQ=3.3), and zinc (HQ=1.5). HQs greater than 1.0 calculated using the NOAEL as a toxicological reference were noted for the short-tailed shrew from aluminum (HQ=1,900), antimony (HQ=2.5), and vanadium (HQ=18). HQs greater than 1.0 calculated using the LOAEL as a toxicological reference were noted for the short-tailed shrew from aluminum (HQ=190) and vanadium (HQ=1.8). As previously noted, concentrations of DDT, aluminum, mercury, and vanadium in soils at the WWTP are within range of the concentrations detected in the background investigation (TetraTech, 2004a). Thus, removing soil contamination at location SS1 would reduce the HQ for shrews to <1 using the LOAEL for all contaminants except aluminum and vanadium, which fall within background levels. Removing soil contamination at SS1 would reduce the HQ for robins to <1 using the LOAEL from all contaminants except aluminum, lead, mercury, and zinc. Aluminum and

mercury concentrations fall within background. Remaining lead concentrations would result in an HQ of 2.1 reduced from an HQ of 99. Remaining zinc concentrations would result in an HQ of 1.5 for robins reduced from 3.9. These remaining risks should be considered minimal and occur over a very limited area. Hence, population level effects to either receptor would not be observable. Complete HQ tables for terrestrial receptors, excluding sample location SS1, are provided in **Tables 8-13a through 8-20a**.

8.4.3.2 Aquatic Ecosystems

Results of food chain HQ modeling of aquatic receptors are summarized in **Table 8-21**. No HQs greater than 1.0 were noted for the receptors evaluated. Complete food chain HQ modeling results for aquatic receptors are provided in **Tables 8-22** through **8-27**.

8.5 UNCERTAINTY ANALYSIS

The following sources of potential uncertainty were identified pertinent to this SLERA:

- This SLERA is based on 24 soil samples, one surface water sample and three sediment samples. The low sample size introduces uncertainty into the assessment because sampling may have underestimated or overestimated the true mean concentration of each analyte, potentially affecting the estimate of true exposure and, hence, risk. However, this uncertainty is offset at least in part by the fact that a baseline risk assessment was conducted of downstream reaches of the unnamed tributary as well as Little Mosquito Creek, without risks being identified from former DoD-related activities. The baseline ecological risk assessment for Sites 14 and 15 integrated data on chemistry and site-specific ecological data (e.g., tissue concentrations); therefore, downstream sections of the unnamed tributary and Little Mosquito Creek were evaluated with significantly less uncertainty.

- The original sludge sampling (composite sample of five discrete samples collected from each of the three drying beds, which are contained in open top metal structures) was conducted for waste characterization purposes. When EPA indicated interest in including the sludge piles in the ecological risk assessment, although different than the soil and sediment sampling, which were discrete sampling of the 0 to 6 inch depth, the available composite sample data were used because the 0 to 2 ft interval is still what would be evaluated in accordance with EPA guidance for assessing ecological risks. The 0 to 2 ft level indicates the extent to which earthworms could expect to live within the soil column, migrating vertically with changes in soil moisture. Data were considered adequate to assess human health risk.

- Factors unrelated to site contaminants may influence the number and composition of species that reproduce or forage on-site and the frequency of their exposure to site-related contamination. Examples of these types of factors include habitat modification

in the vicinity of the site, natural population fluctuations, and non-site related contaminant release and migration.

- Spatial and temporal variations in soil, surface water, and sediment conditions (both physical and chemical) are often observed at very small scales. Given the heterogeneity of the environment, sample size and location greatly affect the certainty associated with determination of exposure.

- Detected concentrations may not be indicative of bioavailable concentrations. This is addressed throughout the remainder of the uncertainty analysis.

- The use of 95% UCL values or maximum detected concentrations for EPC values may overestimate risk.

- The 95% UCL values were biased high for lead and zinc due to elevated concentrations present at one sample location, SS1. The EPC for Aroclor 1260 was similarly biased high in that it was detected at only one location and the maximum value at that location was used for the EPC because a 95% UCL could not be calculated.

- Target receptors were selected to represent a variety of organisms with similar feeding and behavioral strategies and to assist in the evaluation of measurement endpoints. However, species-specific exposure within similar feeding groups may vary and result in differing risk potential. Target receptors were selected with the intent of optimizing exposure and assuming that a significant portion of their life cycles was restricted to the area of contamination. The assumption that the larger mammalian and avian target receptors spend a significant portion or their life cycles at the Site is conservative.

- There is considerable uncertainty associated with the application of ecological screening benchmarks as they are based on literature studies that may not be applicable to site conditions.

- Although the concentrations in tissues associated with adverse effects have been measured in some studies, the significance of the link between the concentration within tissues and exhibition of toxic effects is not known. Comparisons between tissue concentrations and literature values may under- or overestimate the potential for adverse effects in target receptors because toxicity may be dependent upon the concentration within a particular organ not well represented by whole body concentrations. In addition, critical body residues developed from laboratory studies do not have the ability to consider potential adaptive behavior by organisms within a contaminated area.

- Risks were calculated on a COPEC-specific basis. Calculating risk in this manner does not account for additivity, synergism, or antagonism of specific COPECs to which receptors are exposed. Calculating risks on a chemical-by-chemical basis may result in an over- or underestimation of total potential risk.

- The ingestion route is the only exposure route evaluated in the food chain HQ modeling because there is limited information to assess other potential exposure routes such as dermal absorption and inhalation.

- For receptors evaluated at the Site that were assumed to be exposed to COPECs through the soil invertebrates ingestion route, the estimation of concentrations in soil invertebrate due to bioaccumulation from the soil is a principal source of uncertainty. Environmental variables, such as soil characteristics, obscure the underlying relationship between concentrations in soil and earthworms. Earthworms feed on plant debris and soil organic matter. Consequently soil concentrations may not be directly proportional to true exposure concentrations. Also, different earthworm species bioaccumulate chemicals at different rates. Thus there is uncertainty associated with applying a derived BAF to the Site from an adjacent area.

- For receptors evaluated at the Site that were assumed to be exposed to COPECs through the ingestion of small mammals, the estimated small mammal tissue concentration using a BAF from soil is a principal source of uncertainty. Environmental variables, such as soil characteristics, obscure the underlying relationship between concentrations in soil and small mammals.

8.6 CONCLUSIONS

The conclusions that can be drawn from this SLERA are described in the following subsections.

8.6.1 Terrestrial Ecosystem

8.6.1.1 Soil

1. Maximum concentrations of metals (aluminum, antimony, cadmium, iron, lead, manganese, mercury, vanadium, and zinc) as well as 4,4,-DDT, dieldrin, and Aroclor-1260 exceeded soil ecological benchmarks at the Site. Of these, antimony, lead, zinc, and dieldrin, exceeded WFF background soil concentrations. Lead exceedances are most likely related to flaking lead-based paint from the exterior of the Pump House structure. All chemicals detected within background range were retained along with chemicals detected above background ranges, chemicals for which no benchmarks were available (cyanide, bis[2-ethylhexyl)phthalate, acetone, methyl ethyl ketone, and methyl isobutyl ketone), and bioaccumulative chemicals (mercury and DDTs) for analysis of potential food chain impacts using modeling. PCBs were not analyzed as part of the background evaluation, thus Aroclor-1260 was also retained for further assessment.

2. Food chain HQ modeling of COPECs indicated that the American robin and short-tailed shrew would be at risk from ingestion of soil invertebrates. HQs are summarized in **Table 8-12**. Modeling using the NOAEL as a toxicological reference indicated risks from robins ingesting soil invertebrates contaminated with DDD, DDE, DDT, Aroclor-1260, aluminum, lead, mercury, vanadium, and zinc. Modeling using the LOAEL as a toxicological reference indicated risks from robins ingesting

soil invertebrates contaminated with DDT, aluminum, lead, mercury, and zinc. Modeling using the NOAEL indicated risks to shrews from Aroclor-1260, antimony, lead and vanadium. Modeling using the LOAEL indicated risks to shrews from lead and vanadium. Concentrations of DDT, aluminum, mercury, and vanadium in soils at the WWTP are within range of the concentrations detected in the background investigation (TetraTech, 2004a). Background ranges are not available for DDD, DDE, Aroclor-1260 and antimony. Concentrations of lead and zinc in site soil exceeded the background range.

3. The detected concentrations of several chemicals (i.e., Aroclor-1260, lead, and zinc) were elevated at one sample location, SS1. After excluding data from location SS1, the 95% UCLs were re-calculated for chemicals with an HQ greater than one for either the robin or short-tailed shrew—DDT compounds, aluminum, antimony, lead, mercury, vanadium, and zinc. Thus removing soil contamination at location SS1 would reduce HQ for shrews to <1 using the LOAEL for all contaminants except aluminum and vanadium, which fall within background levels. Removing soil contamination at SS1 would reduce HQ for robins to <1 using the LOAEL from all contaminants except aluminum, lead, mercury, and zinc. Aluminum and mercury concentrations fall within background. Remaining lead concentrations would result in an HQ of 2.1 reduced from an HQ of 99. Remaining zinc concentrations would result in an HQ of 1.5 to robins reduced from 3.9. Given the low degree of risk over a limited geographic area, population impacts to these species are unlikely.

4. Remaining receptors (red fox, Red-tailed hawk) modeled did not show evidence of potential ecological risks from soil.

8.6.1.2 Sludge

1. Three composite sludge samples collected within an area contained by former concrete infrastructure but open to the air exhibited maximum concentrations of metals aluminum, antimony, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, vanadium and zinc and dieldrin, DDT compounds, PAHs, and toluene that exceed ecological benchmarks. Concentrations of several metals (e.g., lead at 530 mg/kg, mercury at 28 mg/kg, silver at 130 mg/kg and zinc at 680 mg/kg) exceeded background concentrations. PAH concentrations were also detected in excess of background concentrations. A quantitative ecological evaluation of sludge data was not conducted since the area is small and contained and not viewed to be adequate for ecological receptor habitat. However, potential remedial alternatives for the beds should be evaluated as part of the FS due to the fact that the sludge beds may be used as primary habitat for ecological receptors and the likelihood of release could occur in the future which could result in ecological risk.

8.6.2 Aquatic Ecosystem

1. Concentrations of aluminum, barium, iron and manganese in the one surface water sample collected from within the unnamed tributary of Little Mosquito Creek exceeded their respective Region III BTAG freshwater ecological benchmarks and

thus represent a potential contamination source to Little Mosquito Creek. However, prior surface water data collected as part of the Sites 14 and 15 RI did not indicate exceedances of these metals in Little Mosquito Creek; thus, there is little likelihood of impact within the estuarine ecosystem of the creek.

2. Groundwater concentrations of metals (aluminum, barium, iron, and manganese) collected from the three wells closest to the unnamed tributary (MW4, MW6, and MW7) exceeded BTAG Region III freshwater surface water screening benchmarks. However, groundwater concentrations fell within the range of background groundwater concentrations detected in the background investigation (TetraTech, 2004a). As a result, it is unlikely that any surface water impacts are attributable to groundwater from former WWTP activities.

3. No analytes were detected in sediment within the unnamed tributary to Little Mosquito Creek at concentrations that exceeded ecological screening benchmarks.

4. Modeling undertaken to evaluate whether fish potentially entering the upper portion of the unnamed tributary to Little Mosquito Creek could be at risk indicated that modeled tissue concentrations would not exceed toxicological effects levels reported in Jarvinen and Ankley (1999). Food chain HQ modeling indicated that no HQs greater than 1.0 were noted for any receptors evaluated.

9. SUMMARY AND CONCLUSIONS

This section presents a summary of the findings and conclusions for the nature and extent of contamination, fate and transport, and risk assessments based on the results of the field investigations conducted at the former WWTP as well as recommendations related to further action at the Site.

9.1 NATURE AND EXTENT OF CONTAMINATION

This subsection presents the results of the RI data and the findings and conclusions of the investigations conducted at the Site.

9.1.1 Metals

9.1.1.1 Soils

Most metals were detected in site soils; however, concentrations of seven metals, including aluminum, antimony, arsenic, cobalt, iron, lead, and manganese, exceeded residential direct contact screening levels. Arsenic was also detected at concentrations exceeding the industrial direct contact screening level. Metals concentrations in site soils are widespread across the site, and all detected concentrations of metals in soil other than antimony are within background concentrations as presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24) and detailed as follows:

- Aluminum concentrations in soil ranged from 1,300 to 13,000 mg/kg with eight samples exceeding the residential direct contact screening level of 7,700 mg/kg but not exceeding the industrial direct contact screening level in any samples. The background range of aluminum is 1,870 to 13,900 mg/kg in soils.

- Antimony concentrations in soil ranged from 0.54 to 3.2 mg/kg with only one sample slightly exceeding the residential direct contact screening level of 3.1 mg/kg but not exceeding the industrial direct contact screening level in any samples. Background values are not available for antimony; however, the one sample only slightly exceeded the residential screening level.

- Arsenic concentrations in soil ranged, from 0.76 to 5.4 mg/kg with 19 samples exceeding the residential direct contact screening level of 0.39 mg/kg and 13 samples exceeding the industrial direct contact screening level of 1.6 mg/kg. The background range of arsenic is 0.78 to 14.2 mg/kg in soils.

- Cobalt concentrations in soil ranged from 0.23 to 3.3 mg/kg with five samples exceeding the residential direct contact screening level of 2.3 mg/kg but not exceeding the industrial direct contact screening level in any samples. The background range of cobalt is 0.35 to 7.3 mg/kg in soils.

- Iron concentrations in soil ranged from 1,400 to 10,000 mg/kg with seven samples exceeding the residential direct contact screening level of 5,500 mg/kg but not exceeding the industrial direct contact screening level in any samples. The background range of iron is 1,740 to 10,900 mg/kg in soils.

- Lead concentrations in soil ranged from 1.2 to 2,450 mg/kg with four samples exceeding the residential direct contact screening level of 400 mg/kg and one sample exceeding the industrial direct contact screening level of 800 mg/kg. The background range of lead is 4.9 to 124 mg/kg in soils. All four samples with lead exceedances were located adjacent to the Pump House, which has flaking paint containing lead concentrations at approximately 9 percent indicating the exceedences are associated with flaking lead-based paint from the exterior of the Pump House.

- Manganese concentrations in soil ranged from 5.5 to 320 mg/kg with one sample exceeding the residential direct contact screening level of 180 mg/kg but not exceeding the industrial direct contact screening level in any samples. The background range of manganese is 8.4 to 781 mg/kg in soils.

With the exception of lead, metals in soil at the Site may be attributable to background concentrations in soil at the Site and are not indicative of a release or source area. The lead detected in soil samples collected around the transformer pad was found to have originated from the lead-based paints currently flaking off the exterior of the Pump House.

9.1.1.2 Sludge

Numerous metals were detected in the three composite sludge samples collected from the sludge drying beds and settling tank at the Site. Eight metals, including antimony, arsenic, cobalt, iron, lead, manganese, mercury, and silver, were detected at concentrations exceeding residential direct contact screening levels. Arsenic and mercury were also detected at concentrations exceeding industrial direct contact screening levels. In general, the maximum metal concentrations were detected in the composite sludge samples collected from the sludge drying beds, SL02 and SL03. The concentration ranges of metals, along with a comparison to background concentrations as presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24), are described as follows:

- Arsenic was detected in the two samples collected from the sludge drying beds at concentrations ranging from 2.6 to 3.2 mg/kg. Results from both samples exceeded the residential direct contact screening level of 0.39 mg/kg and the industrial direct contact screening level of 1.6 mg/kg. The background range of arsenic is 0.78 to 14.2 mg/kg in soils.

- Cobalt was detected in the two samples collected from the sludge drying beds at concentrations ranging from 2.0 to 2.6 mg/kg. Results from one of the samples exceeded the residential direct contact screening level of 2.3 mg/kg. The background range of cobalt is 0.35 to 7.3 mg/kg in soils.

- Iron was detected in all composite sludge samples at concentrations ranging from 12,000 to 15,000 mg/kg. Concentrations of iron exceeded the residential direct contact screening level of 5,500 mg/kg in all composite sludge samples. The background range of iron is 1,740 to 10,900 mg/kg in soils. Iron detected in the composite sludge samples exceeded the background range.

- Lead was detected in all composite sludge samples at concentrations ranging from 130 to 530 mg/kg. Results from one of the samples collected from the sludge drying beds exceeded the residential direct contact screening level of 400 mg/kg. The background range of lead is 4.9 to 124 mg/kg in soils. Lead detected in the composite sludge samples exceeded the background range with one sample exceeding the residential soil screening level.

- Manganese was detected in all composite sludge samples at concentrations ranging from 160 to 270 mg/kg. Results from two of the samples exceeded the residential direct contact screening level of 180 mg/kg. The background range of manganese is 8.4 to 781 mg/kg in soils.

- Mercury was detected in all composite sludge samples at concentrations ranging from 0.17 to 28 mg/kg. The two composite sludge samples collected from the sludge drying beds contained mercury concentrations exceeding the residential direct contact screening level of 0.67 mg/kg and the industrial direct contact screening level of 2.8 mg/kg. The background range of mercury is 0.025 to 0.25 mg/kg in soils. Mercury concentrations in sludge exceeded the background soil range.

- Silver was detected in the two samples collected from the sludge drying beds at concentrations ranging from 110 to 130 mg/kg. Results from both samples exceeded the residential direct contact screening level of 39 mg/kg. The background range of silver is 0.15 to 0.3 mg/kg in soils. Silver concentrations in sludge exceeded the background soil range.

Concentrations of arsenic, cobalt, and manganese in WWTP sludge may be attributable to background concentrations in soil at the Site. Concentrations of iron, lead, mercury, and silver in sludge exceeded the background range and the respective residential screening levels. The source of mercury is likely the result of residual concentrations from contact with the trickling filter.

Sludge contaminants, including iron, lead, mercury, and silver, are confined to areas of the Site where sludge is located.

9.1.1.3 Sediment

A total of 18 metals were detected in the sediment samples, with all but one of the maximum concentrations detected in SD2. Of these 18 metals, one metal, arsenic, was detected at concentrations exceeding residential direct contact screening levels. No metals were detected in sediment samples at concentrations exceeding ecological-based screening levels. Currently, no human-health based screening levels exist for sediment exposure; therefore, the concentrations were compared to soil screening levels. Arsenic was detected in both sediment samples at concentrations ranging from 1.4 mg/kg to 2.7 mg/kg exceeding the residential direct contact soil screening level of 0.39 mg/kg. The presence of arsenic in sediment adjacent to the Site is likely a result of transport via stormwater runoff. Arsenic was detected in Site soil samples at concentrations ranging from 0.76 mg/kg to 5.4 mg/kg, which is consistent with the background range (0.78 to 14.2 mg/kg) of arsenic in surface soils as obtained from the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24). Sources of arsenic were not identified at the Site but the presence of arsenic in site soils may be attributable to background conditions. The presence of arsenic in sediment adjacent to the Site is likely a result of the background concentrations of arsenic in soil at the Site and other areas of WFF that discharge to the intermittent tributary.

9.1.1.4 Surface Water

Numerous metals, including aluminum, barium, calcium, cobalt, iron, magnesium, manganese, potassium, sodium, and vanadium, were detected in the surface water sample. Aluminum, barium, iron, and manganese were detected at concentrations exceeding surface water screening levels. Metals concentrations in surface water may be associated with the migration of sediment-laden stormwater from various areas of WFF discharged through the outfalls to the intermittent stream.

9.1.1.5 Wastewater

A total of 12 metals were detected in the wastewater sample collected from the settling tank at the Site. Aluminum, barium, iron, lead, and manganese were detected at concentrations exceeding surface water screening levels. The settling tank is not covered and is open to the

outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank. The presence of metals in the water collected from the settling tank is likely a result of suspended particles present in the sample. Aluminum, barium, iron, lead, and manganese were also detected in the sludge sample collected from the settling tank.

9.1.1.6 Groundwater

Numerous total metals, including aluminum, arsenic, barium, calcium, chromium, cobalt, iron, magnesium, manganese, potassium, sodium, and vanadium, were detected in groundwater at the Site. Concentrations of arsenic and manganese exceeded screening criteria. Arsenic was detected at 0.01 mg/L at MW5 (downgradient of the former WWTP structures) and in the investigative, field duplicate, and blind duplicate samples collected from MW3 (adjacent to former trickling filter) ranging from 0.011 to 0.015 mg/L. The tapwater RSL for arsenic is 0.000045 mg/L. The MCL for arsenic is 0.01 mg/L. The background range of arsenic in groundwater is 0.0036 to 0.0177 mg/L as obtained from the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.6). The arsenic concentrations detected in site monitoring wells are within the background range for WFF.

9.1.2 Pesticides

Pesticides were detected in soil, sludge, and sediment samples collected during the site investigations. Pesticides were not detected in surface water, wastewater, or groundwater samples.

A total of four pesticides were detected in multiple soil samples, including 4,4'-DDD; 4,4'-DDE; 4,4'-DDT; and dieldrin. 4,4’-DODD was detected at a range of 0.57 to 12 µg/kg; 4,4’-DDE was detected at a range of 0.41 to 14 µg/kg; 4,4’-DDT was detected at a range of 0.79 to 43 µg/kg; and dieldrin was detected at a range of 3.9 to 5.7 µg/kg. The detected pesticide concentrations in soil were significantly lower than the residential direct contact screening levels.

A total of four pesticides were detected in the composite sludge samples, including 4,4'-DDD; 4,4'-DDE; 4,4'-DDT; and dieldrin. 4,4’-DDD was detected at a range of 110 to 1,200 µg /kg; 4,4’-DDE was detected at a range of 67 to 1,400 µg/kg; 4,4’-DDT was detected at a range of 110 to 1,100 µg/kg; and dieldrin was detected at a range of 5.6 to 9.9 µg/kg. The pesticide

concentrations in sludge were significantly higher than the concentrations of pesticides detected in soils collected from the Site. However, no pesticides were detected in composite sludge samples at concentrations exceeding residential direct contact screening levels. In addition, concentrations of 4,4'-DDE and 4,4'-DDT are within background concentrations ranges presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a, Table 4.24). Background ranges are not available for 4,4-DDD and dieldrin.

A total of three pesticides (4,4'-DDD; 4,4'-DDE; and 4,4'-DDT) were detected in the sediment samples. 4,4'-DDD was detected at 2.7 µg/kg in one sample; 4,4'-DDE was detected at a range of 1.8 to 2.6 µg/kg; and 4,4'-DDT was detected at a range of 0.77 to 1.6 µg/kg. The concentrations of pesticides in sediment are within the range of concentrations of pesticides detected in soil. These pesticides were not detected at concentrations exceeding human health or ecological-based screening levels.

9.1.3 PCBs

PCBs were detected only in soil samples collected during the site investigations. PCBs were not detected in sludge, sediment, surface water, wastewater, or groundwater samples.

Analysis for PCBs revealed Aroclor-1260 at one soil sampling location in the former transformer area. Three electrical transformers were formerly located adjacent to the south side of the control/pump house. The detected concentrations of Aroclor-1260 were 190 and 290 µg/kg from the parent and duplicate sample at location SS1. The maximum concentrations exceeded the residential direct contact screening level of 220 µg/kg. The presence of Aroclor-1260 at location SSl near the former transformer area was the only PCB detection at the WWTP site.

9.1.4 SVOCs

SVOCs were detected in soil, sludge, wastewater, and groundwater samples collected during the site investigations. SVOCs were not detected in sediment or surface water samples.

SVOCs were detected in 5 of the 26 soil samples collected at the Site with 6 SVOCs detected in the soil samples. SVOCs were detected at soil sampling locations in the 0 to 0.5, 0.5 to 2, and the 19 to 21 ft bgs sampling depths at location MW2, the 0.5 to 2 ft bgs sampling depth at location

MW4, the 0 to 0.5 ft bgs sampling depth at location MW6, and the 0 to 2 ft bgs sampling depth at location SS7 (duplicate of SS5). Of the six detected SVOCs, two PAHs (benzo(a)pyrene and dibenz(a,h)anthracene) were detected at concentrations exceeding their respective residential direct contact screening levels. Benzo(a)pyrene exceeded the residential direct contact screening level of 15 µg/kg at concentrations of 34 and 30 µg/kg at sampling location MW2 from the 0 to 0.5 ft bgs and 19 to 21 ft bgs sampling depths. The surface and subsurface soil concentrations were comparable at this sampling location. The background range for benzo(a)pyrene at WFF is 46 to 410 µg/kg as obtained from Table 4.24 of the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a). Dibenz(a,h,)anthracene concentrations for four soil samples, including the 0 to 0.5 ft bgs and 19 to 21 ft bgs samples from location MW2, the 0.5 to 2 ft bgs sample from location MW4, and the 0 to 0.5 ft bgs sample from location MW6, exceeded the residential direct contact screening level of 15 µg/kg. Dibenz(a,h)anthracene concentrations in soil ranged from 33 to 50 µg/kg. A background range is not available for dibenz(a,h)anthracene; however, the detected concentrations for the surface soils (depth of 0 to 2 feet bgs) are within the range of the other PAH constituent background concentration ranges presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a). The concentrations of SVOCs within surface soils at the Site may be attributable to background conditions at WFF. It should be noted that there is no evidence available indicating historical use of PAHs at the base. Other military bases used petroleum compounds possibly containing the constituents of interest for dust control and may be the source of PAHs in surface soils throughout WFF. The PAHs detected in the 19 to 21 ft bgs sample from MW2 are probably the result of cross-contamination associated with the transport of contaminants by the drill rig auger from the surface zone to the subsurface soils because there is no identified source for contaminants at this depth at the site. If there was vertical migration of PAHs from the surface at this site, concentrations would have been expected to be significantly lower than those detected at the surface but the PAH concentrations from the 19 to 21 ft bgs depth were similar to the levels detected in the surface samples. The presence of PAHs in the walled settling tank and sludge drying beds is thought to be attributed to the treatment of industrial water received via sanitary sewers at the WWTP and not as a result of background conditions.

Seventeen SVOCs were detected in the composite sludge samples. In general, the maximum SVOC concentrations were detected in the sludge sample collected from the primary settling

tank (SL01). Of the 17 detected SVOCs, 6 PAHs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene, were detected at concentrations exceeding their respective residential direct contact screening levels. PAH concentrations in sludge at the Site are higher than the concentrations detected in soil at WFF as presented in the *NASA Wallops Flight Facility Report for the Main Base* (TetraTech, 2004a). The extent of PAH contamination is limited to the sludge within the sludge drying beds and primary settling tank. The samples were all collected from 0 to 2 ft bgs; therefore, the depth of contamination is not known. The suspected depth of PAH contamination at the Site is limited to the depth of the sludge. The presence of PAHs in the walled settling tank and sludge drying beds is thought to be attributed to the treatment of industrial water received via sanitary sewers at the WWTP and not as a result of background conditions.

Three PAH constituents (fluoranthene, phenanthrene, and pyrene) were also detected in the wastewater sample collected from the primary settling tank. Each of the SVOCs was detected at concentrations exceeding screening levels. As previously discussed, PAHs were also detected in the sludge collected from the settling tank. Very little wastewater was observed at the settling tank location. It should be noted that the settling tank is not covered and is open to the outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank.

Five SVOCs, 2,4-dimethylphenol, 3 and 4 methylphenol, bis(2-ethylhexyl)phthalate, diethyl phthalate, and phenol, were detected in at least one groundwater sample. The SVOC constituents detected in soil and sludge at the Site included mainly PAH constituents. SVOCs in groundwater are not attributable to leaching from soil. Phthalate esters are commonly used in laboratories and the source of these detections may be attributable to laboratory contamination. None of the SVOCs were detected at concentrations exceeding their respective screening levels.

9.1.5 VOCs

VOCs were detected in soil, sludge, sediment, surface water, wastewater, and groundwater samples collected during the site investigations.

Six VOCs, acetone, MEK, MIBK, PCE, toluene, and total xylenes, were detected in the soil samples. Analytical results reveal that none of these VOCs exceeded the residential and

industrial direct contact screening levels. Acetone and MEK are common laboratory contaminants and were detected in several soil samples at low concentrations that may be attributable to laboratory contamination. PCE was detected at a concentration of 6.7 µg/kg in one of the 26 samples, SS9, collected from the sludge drying bed. PCE was also detected in the composite sludge sample (SL02) collected from the same sludge drying bed. PCE in soil is limited to the soil within the sludge drying bed. However, the concentrations in soil and sludge did not exceed residential direct contact screening levels. Toluene was detected in 2 of the 26 samples analyzed for this parameter at estimated concentrations below the detection limit in the 4 to 6 ft bgs sample collected at the MW3 location and the 0 to 0.5 ft bgs sample collected at the MW1 location. These concentrations were much lower than the residential screening level. Similarly, total xylenes was detected in one of the 26 samples analyzed for this parameter in the 4 to 6 ft bgs sample collected at the MW3 location at a concentration well below the residential screening level. The presence of toluene and xylenes below the concrete-bottomed trickling filter at MW3 is likely attributable to the waste stream received at the WWTP from basewide industrial processes (concentrations observed are lower than the screening levels). Similar to the VOCs present below the trickling filter, the presence of VOCs in the settling tank and drying beds is likely a result of the influent wastewater received at the WWTP from other locations at the base. Toluene and total xylenes were not detected in any of the groundwater samples collected at the Site.

Seven VOCs, 1,1,2,2-tetrachloroethane, 2-hexanone, acetone, MEK, MIBK, PCE, and toluene, were detected in the composite sludge samples. Analytical results reveal that none of the detected VOCs exceeded the residential direct contact screening levels. Acetone and MEK are common laboratory contaminants and were detected in the composite sludge samples at low concentrations that may be attributable to laboratory contamination. PCE was detected in only one of the three composite sludge samples at SL02 at a concentration of 5.1 µg/kg. PCE in soil is limited to the soil and sludge within the sludge drying bed. However, the concentrations in soil and sludge did not exceed residential direct contact screening levels. Toluene was detected in 2 of the composite sludge samples at 6.2 µg/kg at SL02 and 1,200 µg/kg at SL01. The concentration of toluene was much higher in the sludge collected from within the primary settling tank. These concentrations did not exceed the residential direct contact soil screening

level of 500,000 µg/kg. The extent of VOCs in the sludge is limited to the sludge located within the primary settling tank and sludge drying beds.

One VOC, chloromethane, was detected in the surface water at an estimated concentration of 0.53 µg/L. A surface water screening level is not available for chloromethane. Choromethane was not detected in any other media at the Site.

Two common laboratory contaminants, acetone and MEK, were detected in the sediment, wastewater, and groundwater samples. Analytical results reveal that neither VOC exceeded screening levels for sediment, wastewater, or groundwater. The presence of acetone and MEK in the samples may be attributable to laboratory contamination.

PCE was also detected at a concentration of 4.4 µg/L in groundwater collected from the upgradient monitoring well MW1. This concentration exceeds the tapwater RSL of 0.11 µg/L but is lower than the MCL of 5 µg/L. Although the VOC PCE was detected at low levels in groundwater at well MW1 (located upgradient to the former WWTP structures), its presence is potentially attributable to migration from an unknown upgradient source.

9.2 FATE AND TRANSPORT

9.2.1 Potential Source Areas

Potential sources of contamination at the Site include the two sludge drying beds thought to contain residual sludge materials associated with former WWTP activities, residual sludge piles, and the trickling filter. Some contaminants at the Site are likely the result of the historical use of pesticides (e.g., DDT) or accumulation of stormwater runoff from multiple sources (e.g., PAHs).

9.2.2 Contaminant Migration

This section presents the contaminant fate and transport pathways for the potential affected media areas.

9.2.2.1 Soil and Sludge

Metals, pesticides, SVOCs, and VOCs were detected in site soils and sludge, and PCBs were detected in soil. With the exception of lead, metals in soil at the WWTP may be attributable to

background concentrations in soil at the Site and are not indicative of a release or source area. Lead concentrations in surface soils samples adjacent to the transformer pad and Pump House structure exceeded the background range and the residential screening level. The exceedances are due to the presence of lead-based paint flaking from the exterior of the structure. Concentrations of metals, including arsenic, cobalt, and manganese in WWTP sludge, are attributable to the treatment of industrial water received via sanitary sewers at the WWTP and not as a result of background conditions. The source of mercury is likely the result of residual concentrations from contact with the trickling filter. Sludge contaminants, including iron, lead, mercury, and silver, are confined to areas of the Site where sludge is located. The sludge drying beds and settling tank are partially contained by concrete walls but are open to the atmosphere. Metals are unlikely to migrate from these structures unless the integrity of the structures is compromised.

Residual levels of pesticides present in soil are likely a result of former pest control at WFF. The pesticide concentrations in sludge were significantly higher than the concentrations of pesticides detected in soils collected from the Site. However, no pesticides were detected in composite sludge samples at concentrations exceeding residential direct contact screening levels and pesticide concentrations were within available background ranges. The presence of Aroclor-1260 at location SS1 is an isolated occurrence of the contaminant at the former transformer location and is the only area of the WWTP site where PCBs were detected.

Except for the PAH detects at the 19 to 21 ft depth sample from MW2, the concentrations of SVOCs in soil at the WWTP site may be attributable to background conditions at WFF. PAH concentrations in sludge at the WWTP are higher than the concentrations detected in background soil at WFF. The extent of PAH contamination is limited to the sludge within the sludge drying beds and primary settling tank. The sludge drying beds and settling tank are partially contained within concrete walls but are open to the atmosphere. PAHs are unlikely to migrate from these structures unless the integrity of the structures is compromised.

VOCs were detected in the soil and composite sludge samples. Analytical results revealed that none of these VOCs exceeded the residential and industrial direct contact screening levels. Acetone and MEK are common laboratory contaminants and were detected in several samples at

low concentrations that may be attributable to laboratory contamination. PCE was detected at a concentration of 6.7 µg/kg in one of the soil samples collected from the sludge drying bed. PCE was also detected in the composite sludge sample (SL02) collected from the same sludge drying bed. PCE in soil is limited to the soil within the sludge drying bed. However, the concentrations in soil and sludge did not exceed residential direct contact screening levels.

9.2.2.2 Sediment and Surface Water

Contaminants from soil, sludge, and groundwater at the former WWTP may impact sediment and surface water when stormwater carries particles along its path and when groundwater discharges to the unnamed tributary to Little Mosquito Creek. The sediments and surface water are also impacted by runoff or discharge from other contaminated sites within the same discharge area.

Two sediment samples were collected from the intermittent stream in the northern portion of the site to represent areas of the stream that may receive surface water runoff from the WWTP site. One sediment sample, SD2, was collected from the closest point beneath the effluent outfall (Outfall 005), and a second sediment sample, SD1, and surface water sample, SW1, were collected at the confluence of the intermittent streams downstream of the WWTP site and both Outfalls 005 and 013.

Metals were detected in the sediment samples with arsenic being the only metal detected at concentrations exceeding screening levels. The presence of arsenic in sediment adjacent to the Site is likely a result of background concentrations of arsenic in soil at the Site and other areas of WFF that discharge to the intermittent tributary. Metals concentrations in surface water may be associated with the migration of sediment-laden stormwater from various areas of WFF discharged through the outfalls to the intermittent stream. Pesticides were also detected in sediment in the intermittent stream at low concentrations. Residual levels of pesticides present in sediment are likely a result of former pest control at WFF.

9.2.2.3 Wastewater

The contaminants present in wastewater within the former settling tank include PAHs and metals. Constituents detected at concentrations exceeding the screening levels for wastewater include metals (aluminum, barium, iron, lead, and manganese) and PAHs (fluoranthene,

phenanthrene, and pyrene). The presence of metals in the water collected from the settling tank is likely a result of suspended particles present in the sample. PAHs were also detected in the sludge collected from the settling tank. Very little wastewater was observed at the settling tank location. It should be noted that the settling tank is not covered and is open to the outside. As a result, the tank continues to receive rainwater and material from outside the clarifier tank. Residual wastewater is likely the result of mixing rainwater with residual sludge. Residual wastewater may migrate via overland flow or downward migration to groundwater.

9.2.2.4 Groundwater

The impact to groundwater from WWTP operations occurs by leaching through soil and sludge to underlying groundwater. Limited contamination in groundwater has been observed in samples collected from monitoring wells at the Site. The contaminants present in groundwater underlying the WWTP include metals, SVOCs, and VOCs. Constituents detected at concentrations exceeding the screening levels for groundwater include metals (arsenic and manganese) and PCE. Although the VOC PCE has been detected at low levels in groundwater at MW1 (located upgradient to the former WWTP structures), its presence may be attributable to an upgradient source. Metals detected in groundwater at concentrations exceeding screening criteria (arsenic and manganese) may in part be the result of migration from adjacent upgradient sites that also contain high levels of metals, and also the result of leaching of metals from material within the sludge and surrounding soils.

9.3 HUMAN HEALTH RISK ASSESSMENT

The BHHRA was conducted to assess potential health impacts to humans at the Site considering both the current and future uses at the WFF. The objectives of the BHHRA were to estimate potential risk to people contacting site-related COPCs under scenarios of current and plausible future land uses, to provide an analysis of risks and help determine the need for remedial action(s) at the Site, and to identify specific media and areas associated with unacceptable risk, as applicable.

9.3.1 Exposure Scenarios

The following exposure scenarios were identified for assessment for the Site:

- *Current/future adolescent child trespasser* – The current land use for the Site is considered to be limited to the occasional trespasser due to the relative inaccessibility of this area. Current and future adolescent child trespassers (7 to 16 years old) who might walk through the site or wade in the intermittent streams that flow into Little Mosquito Creek were evaluated in the risk assessment. It was assumed that the trespasser would come into contact with site soil, residual sludge materials and wastewater associated with former WWTP activities, and off-site sediment and surface water in the intermittent stream adjacent to the Site. Soil exposure pathways include incidental soil ingestion, dermal contact with soil, and inhalation of outdoor dust. Sludge exposure pathways include incidental ingestion and dermal contact. Wastewater exposure includes dermal contact. Exposure pathways for sediment and surface water from the intermittent stream include incidental ingestion and dermal contact.

- *Future commercial/industrial workers* – Given the potential for future commercial development, a future industrial worker was evaluated. This receptor is assumed to spend the majority of the work day indoors with exposure to COPCs through incidental ingestion of soils that have become entrained in indoor dust, dermal contact with indoor dust, and inhalation of COPCs in indoor air resulting from dust resuspension and vapors. It is also assumed that a future site worker may come into contact with residual sludge materials (incidental ingestion and dermal contact) and dermal contact with wastewater associated with former WWTP activities.

- *Future construction workers* – Given the potential for future construction activities at the Site, a construction worker scenario was evaluated. A construction worker is defined as a worker who is involved with the construction of new buildings at the Site. The construction worker is assumed to be exposed to site soils, residual sludge materials and wastewater associated with former WWTP activities, and groundwater in construction trenches. Exposure pathways for the construction worker include incidental soil and sludge ingestion, dermal contact with soil and sludge, and inhalation of dust emissions from soils. In addition, it is assumed that the construction worker may come in contact (dermal) with groundwater if it enters the construction trench during construction activities. It is also assumed that the construction worker would come into dermal contact with wastewater associated with former WWTP activities.

- *Hypothetical future child and adult residents* – Future residential development is highly unlikely given the current and likely future land use at the Site and the nature of the site activities and surroundings. However, a hypothetical future residential scenario was evaluated to determine an upper-bound on the level of risks posed by each site. Cancer risks were calculated for the age-adjusted resident and adult resident. Noncancer HQs were calculated for the adult resident and child resident. Soil exposure pathways include incidental soil ingestion, dermal contact with soil, inhalation of outdoor dust, and inhalation of indoor vapors. In addition, it is assumed that the aquifer will be developed into a potable water source for the hypothetical residents. Therefore, the groundwater ingestion, inhalation of VOCs while showering/bathing, and dermal contact with groundwater while bathing/showering

exposure scenarios were evaluated. The resident might also wade in the intermittent streams that flow into Little Mosquito Creek. It is assumed that the resident would come into contact with off-site sediment and surface water in the intermittent stream adjacent to the Site. Exposure pathways for sediment and surface water from the intermittent stream include incidental ingestion and dermal contact.

9.3.2 Risk Characterization Results

The results of the risk characterization are presented as follows:

- The risk estimates for the hypothetical future residents exceeded the high end of USEPA's risk management range of 1E-04 to 1E-06 cancer risk with ILCRs of 4E-04 for the age-adjusted adult and 3E-04 for the future adult resident.
- The risk estimates for the current/future adolescent child trespasser, future commercial/industrial worker, and future construction worker were all within USEPA's risk management range of 1E-04 to 1E-06 with ILCRs of 9E-07, 8E-06, and 8E-07, respectively.
- The future adult and child resident scenarios had HIs greater than the noncancer HI management level of 1 with HIs of 3 and 8, respectively. HIs were dominated by groundwater ingestion in the future child and adult residents and soil ingestion for the future child resident.
- The current/future adolescent child trespasser, future commercial/industrial worker, and future construction worker scenarios had HIs that did not exceed the noncancer HI management level of 1 with HIs of 0.02, 0.4, and 1, respectively.

9.3.3 Summary

In summary, two exposure scenarios, the hypothetical future child and adult residents, exceeded the high end of USEPA's risk management range of 1E-04 to 1E-06 cancer risk, whereas the risk estimates for the current/future adolescent child trespasser, future commercial/industrial worker, and future construction worker were all within USEPA's risk management range of 1E-04 to 1E-06. The future adult and child resident scenarios had HIs greater than the noncancer HI management level of 1. HIs were dominated by groundwater ingestion in the future child and adult residents and to a lesser extent soil ingestion for all other HI exceedances. The future residential scenarios were included in the evaluation and established upper bound site risks and HIs for the Site. However, this land/water use is not likely and does not pose a reasonable estimate of site risk.

COCs that were determined for the Site and their potential impact on site risk were as follows:

- Arsenic in soil. Arsenic is a COC for soil for the future industrial worker, age-adjusted, and adult resident based on cancer risk estimates in excess of 1E-06. However, the site ranges and averages for arsenic were within the background range. Therefore, it appears arsenic risk is a function of natural levels in the soil.

- Arsenic in groundwater. Arsenic is a COC for groundwater for the age-adjusted, child, and adult resident scenarios. Arsenic risks slightly exceeded 1E-04 for the age-adjusted and adult residents. The arsenic HQ for the child resident was 3. All arsenic levels were within the background groundwater range. Arsenic was detected at only two of the seven wells, with concentrations ranging from 10 µg/L at MW5 (downgradient of the former WWTP structures) to 15 µg/L in the blind duplicate sample, MW20, at MW3 (former trickling filter location). Background arsenic concentrations range from 3.6 µg/L to 17.7 µg/L. Therefore, it appears arsenic risk is a function of natural levels in the groundwater.

- Benzo(a)pyrene in sludge. Benzo(a)pyrene is a COC for soil for the future industrial worker based on a cancer risk estimate in excess of 1E-06. Risk through incidental sludge ingestion and dermal contact with sludge were both at 1E-06. Given the conservatism of the assumptions for sludge exposure, the risks are not likely to be of concern and are within the management range of 1E-06 to 1E-04.

- PCE in groundwater. PCE is a COC for groundwater for the age-adjusted and adult resident scenarios. PCE posed risks in excess of 1E-05 through tap water ingestion and dermal contact while showering/bathing. Although the shallow groundwater is periodically used as a drinking water source by the Town of Chincoteague, these risks may be overestimates of true site risk because it is unlikely that groundwater will be used for potable purposes at the Site and because residential development is unlikely. The closest production well is located approximately 0.75 mile to the west of the WWTP site and none of the Town of Chincoteague wells are downgradient of the WWTP. Additionally, risks for PCE were within the management range of 1E-06 to 1E-04 that USEPA uses to manage site risks. It should be noted that PCE concentrations detected in groundwater were upgradient of the former WWTP structures and were below the USEPA MCL of 5 µg/L for drinking water.

- Cobalt in groundwater. Cobalt is a COC for groundwater for the child resident scenario. Cobalt posed an HQ of 2 in the child resident scenario. Cobalt was detected in three of the seven wells, with concentrations ranging from 3.9 µg/L at MW4 to 7.1 µg/L at MW6. However, cobalt is within the background range of 0.61 to 18.6 µg/L. Therefore, the slightly elevated HQ for exposure to cobalt containing groundwater is reflective of background exposure.

Based on the following uncertainties and conclusions, there is minimal human health risk identified for the Site related to site contaminants due to potential source areas:

- Although arsenic concentrations resulted in unacceptable risk for several scenarios, arsenic concentrations in soil and groundwater are consistent with background.

- The risk associated with benzo(a)pyrene in sludges was at the lower end of the risk management goal.

- Although there is apparently risk from groundwater consumption and contact because of PCE concentrations at one well, the impacted well is located upgradient of the source area at the site, indicating the presence of PCE is likely related to an upgradient site. Additionally, the one detected PCE concentration is less than the USEPA MCL for drinking water.

- Although there is noncancer risk associated with cobalt in groundwater, similar to arsenic, the detected concentrations are consistent with background.

9.4 SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT

The SLERA was performed to evaluate the potential ecological effects from exposure to the contaminants at the Site. This multi-pathway analysis was based on reasonable, protective assumptions about the potential for ecological receptors to be exposed and/or adversely affected by exposure to COPECs. To establish the list of COPECs, the USEPA Region III BTAG Screening Benchmarks and other available sources were used to screen soil, sludge, sediment, groundwater, and surface water for ecological risks. Food chain modeling was conducted for COPECs meeting the following criteria:

- Constituents whose maximum concentration exceeded the ecological benchmark.
- Constituents for which ecological benchmarks were not available.
- Bioaccumulative compounds.

To determine whether fish potentially entering the upper portion of the unnamed tributary adjacent to the Site could be impacted by contaminated surface water or sediment, potential concentrations of COPECs in fish tissue were modeled for comparison with literature-based data on toxicological effects. The projected fish tissue concentration was modeled based on derivation of BAFs using data previously collected on fish and sediment in Little Mosquito Creek during the ecological risk assessment of Sites 14 and 15 (WESTON, 2007c).

Specific results of the SLERA evaluation are summarized in the following subsections.

9.4.1 Terrestrial Ecosystem

- Maximum concentrations of metals in soil (aluminum, antimony, cadmium, iron, lead, manganese, mercury, vanadium, and zinc) as well as 4,4,-DDT, dieldrin, and Aroclor-1260 exceeded soil ecological benchmarks at the Site. Of these, antimony, lead, zinc, and dieldrin exceeded WFF background soil concentrations; however, lead concentrations are related to lead-based paint flaking off the exterior of the Pump House All chemicals detected within background range were retained along with chemicals detected above background ranges, chemicals for which no benchmarks were available (cyanide, bis[2-ethylhexyl)phthalate, acetone, methyl ethyl ketone, and methyl isobutyl ketone), and bioaccumulative chemicals (mercury and DDT compounds) for analysis of potential food chain impacts using modeling. PCBs were not analyzed as part of the background evaluation, thus Aroclor-1260 was also retained for further assessment.

- Food chain HQ modeling of COPECs indicated that the American robin and short-tailed shrew would be at risk from ingestion of soil invertebrates. Modeling using the NOAEL as a toxicological reference indicated risks from robins ingesting soil invertebrates contaminated with DDD, DDE, DDT, Aroclor-1260, aluminum, lead, mercury, vanadium, and zinc. Modeling using the LOAEL as a toxicological reference indicated risks from robins ingesting soil invertebrates contaminated with DDT, aluminum, lead, mercury, and zinc. Modeling using the NOAEL indicated risks to shrews from Aroclor-1260, antimony, lead and vanadium. Modeling using the LOAEL indicated risks to shrews from lead and vanadium. Concentrations of DDT, aluminum, mercury, and vanadium in soils at the WWTP are within range of the concentrations detected in the background investigation (TetraTech, 2004a). Background ranges are not available for DDD, DDE, Aroclor-1260 and antimony. Concentrations of lead and zinc in site soil exceeded the background range but lead in soils is associated with lead-based paint flaking from the exterior of the Pump House.

- The detected concentrations of several chemicals (i.e., Aroclor-1260, lead, and zinc) were elevated at one sample location, SS1. After excluding data from location SS1, the 95% UCLs were re-calculated for chemicals with an HQ greater than one for either the robin or short-tailed shrew—DDT compounds, aluminum, antimony, lead, mercury, vanadium, and zinc. Thus, removing soil contamination at location SS1 would reduce HQ for shrews to <1 using the LOAEL for all contaminants except aluminum and vanadium, which fall within background levels. Removing soil contamination at SS1 would reduce HQ for robins to <1 using the LOAEL from all contaminants except aluminum, lead, mercury, and zinc. Aluminum and mercury concentrations fall within background. Remaining lead concentrations would result in an HQ of 2.1 reduced from an HQ of 99. Remaining zinc concentrations would result in an HQ of 1.5 to robins reduced from 3.9. Given the low degree of risk over a limited geographic area, population impacts to these species are unlikely.

- Remaining receptors (red fox, red-tailed hawk) modeled did not show evidence of potential ecological risks from soil.

- Three composite sludge samples collected from an area contained within the former concrete infrastructure, but open to the air, exhibited maximum concentrations of the metals aluminum, antimony, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, vanadium and zinc; and dieldrin; DDT compounds; PAHs; and toluene that exceed ecological benchmarks. Concentrations of several metals (e.g., lead at 530 mg/kg, mercury at 28 mg/kg, silver at 130 mg/kg and zinc at 680 mg/kg) exceeded background concentrations. PAH concentrations were also detected in excess of background concentrations. No further ecological evaluation was conducted since the area is small and contained. However, if the sludge beds were used as primary habitat for ecological receptors or if a release of sludge from the beds occurred in the future there may be a risk to ecological receptors. Therefore, remedial alternatives for the beds should be evaluated as part of the FFS.

9.4.2 Aquatic Ecosystem

- Concentrations of aluminum, barium, iron, and manganese in the one surface water sample collected from within the unnamed tributary of Little Mosquito Creek exceeded their respective Region III BTAG freshwater ecological benchmarks and thus represents a potential contamination source to Little Mosquito Creek. However, prior surface water data collected as part of the Sites 14 and 15 RI did not indicate exceedances of these metals in Little Mosquito Creek; thus, there is little likelihood of impact within the estuarine ecosystem of the creek.

- Groundwater concentrations of metals (aluminum, barium, iron, and manganese) collected from the three wells closest to the unnamed tributary (MW4, MW6, and MW7) exceeded BTAG Region III freshwater surface water screening benchmarks. However, groundwater concentrations fell within the range of background groundwater concentrations detected in the background investigation (TetraTech, 2004a). As a result, it is unlikely that any surface water impacts are attributable to groundwater from former WWTP activities.

- No analytes were detected in sediment within the unnamed tributary to Little Mosquito Creek at concentrations that exceeded ecological screening benchmarks.

- Modeling undertaken to evaluate whether fish potentially entering the upper portion of the unnamed tributary to Little Mosquito Creek could be at risk indicated that modeled tissue concentrations would not exceed toxicological effects levels reported in Jarvinen and Ankley (1999). Food chain HQ modeling indicated that no HQs greater than 1.0 were noted for any receptors evaluated.

9.5 RECOMMENDATIONS

The recommendations for the Site are based on the nature and extent of contamination, fate and transport characteristics, and the results of the BHHRA and SLERA. A focused feasibility study (FFS) is recommended for the Site, which would include the development and analysis of

remedial alternatives to address a potential release of the contained sludge. A brief summary of the results that are the basis for the FFS recommendation is provided in the following paragraphs.

Food chain modeling in the SLERA indicated that the American robin and/or the short-tailed shrew would be at risk from ingestion of soil invertebrates contaminated with DDT compounds, Aroclor-1260, aluminum, antimony, lead, mercury, vanadium, and zinc at the Site. Elevated HQs for several chemicals (i.e., Aroclor-1260, lead, and zinc) may be attributed to chemical concentrations at one sample location, SS1. Elevated chemical concentrations at location SS1 may be considered data outliers. Sample location SS1 is adjacent to the former transformer area where three electrical transformers were located adjacent to the south side of the control/pump house. The 95% UCL values were biased high for Aroclor-1260, lead, and zinc due to the elevated concentrations present at sample location SS1. When the models were re-calculated excluding that one location, HQs for lead and zinc were significantly decreased. It should be noted that Aroclor-1260 was not detected at any other sampling locations at the Site and the lead is associated with lead-based paint flaking from the exterior of the Pump House.

Three composite sludge samples collected in an area within the former concrete infrastructure but open to the air exhibited maximum concentrations of the metals aluminum, antimony, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, vanadium, and zinc, and dieldrin, DDT compounds, PAHs, and toluene that exceed ecological benchmarks. Concentrations of several metals (e.g., lead at 530 mg/kg, mercury at 28 mg/kg, silver at 130 mg/kg, and zinc at 680 mg/kg) exceeded background concentrations. PAH concentrations were also detected in excess of background concentrations. No further ecological evaluation was conducted since the area is small and contained. However, if the sludge beds were used as primary habitat for ecological receptors or if a release of sludge from the beds occurred in the future there may be a risk to ecological receptors. Therefore, remedial alternatives for the beds should be evaluated as part of the FFS.

SECTION 4
TABLES

Table 4-1
Summary of Sampling
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Location/Sample Description	Field Sample ID	Upper Depth (feet)	Lower Depth (feet)	TAL Metals and CN	TCL Pests/PCBs	TCL SVOCS	TCL VOCS
Matrix: Surface Soil (0 to 2 feet below grade)							
Soil Boring - Split-Spoon							
Upgradient/background	WFF1-MW1-0-0.5	0	0.5	X	X	X	X
Upgradient/background	WFF1-MW1-0.5-2	0.5	2	X	X	X	X
Upgradient/background	WFF1-MW2-0-0.5	0	0.5	X	X	X	X
Upgradient/background	WFF1-MW2-0.5-2	0.5	2	X	X	X	X
On site - crossgradient	WFF1-MW4-0-0.5	0	0.5	X	X	X	X
On site - crossgradient	WFF1-MW4-0.5-2	0.5	2	X	X	X	X
On site - downgradient	WFF1-MW5-0-0.5	0	0.5	X	X	X	X
On site - downgradient	WFF1-MW5-0.5-2	0.5	2	X	X	X	X
On site - crossgradient	WFF1-MW6-0-0.5	0	0.5	X	X	X	X
On site - crossgradient	WFF1-MW6-0.5-2	0.5	2	X	X	X	X
On site - downgradient	WFF1-MW7-0-0.5	0	0.5	X	X	X	X
On site - downgradient	WFF1-MW7-0.5-2	0.5	2	X	X	X	X
Soil Boring - Hand Auger							
On site - former electrical transformer	WFF1-SS1	0	2	X	X	X	X
On site - suspected sludge pile	WFF1-SS2	0	2				X
On site - suspected sludge pile	WFF1-SS2-A	0	2	X	X	X	
On site - suspected sludge pile	WFF1-SS3	0	2				X
On site - suspected sludge pile	WFF1-SS3-A	0	2	X	X	X	
On site - suspected sludge pile	WFF1-SS4	0	2				X
On site - suspected sludge pile	WFF1-SS4-A	0	2	X	X	X	
On site - suspected sludge pile	WFF1-SS5	0	2	X	X	X	X
On site - former trickling filter overflow pipe	WFF1-SS8	0	2	X	X	X	X
On site - beneath sludge drying bed	WFF1-SS9	0	2	X	X	X	X
On site - beneath sludge drying bed	WFF1-SS10	0	2	X	X	X	X
			Total Samples Analyzed:	19	19	19	19
Matrix: Subsurface Soil (>2 feet below grade)							
Soil Boring - Split-Spoon							
Upgradient/background	WFF1-MW1-18-20	18	20	X	X	X	X
Upgradient/background	WFF1-MW2-19-21	19	21	X	X	X	X
On site - former trickling filter	WFF1-MW3-4-6	4	6	X	X	X	X
On site - crossgradient	WFF1-MW4-3-5	3	5	X	X	X	X
On site - downgradient	WFF1-MW5-2-4	2	4	X	X	X	X
On site - crossgradient	WFF1-MW6-2-4	2	4	X	X	X	X
			Total Samples Analyzed:	6	6	6	6
Matrix: Sediment							
Downgradient - intermittent stream/stormwater drainage ditch	WFF1-SD1	0	0.25	X	X	X	X
Downgradient - WWTP effluent outfall - intermittent stream/ stormwater drainage ditch	WFF1-SD2	0	0.25	X	X	X	X
			Total Samples Analyzed:	2	2	2	2
Matrix: Surface Water							
Downgradient - intermittent stream/stormwater drainage ditch	WFF1-SW1	0	0	X	X	X	X
			Total Samples Analyzed:	1	1	1	1

Table 4-1
Summary of Sampling
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Location/Sample Description	Field Sample ID	Upper Depth (feet)	Lower Depth (feet)	TAL Metals and CN	TCL Pests/PCBs	TCL SVOCS	TCL VOCS
Matrix: Groundwater							
Upgradient/background	WFF1-MW1	16	26	X	X	X	X
Upgradient/background	WFF1-MW2	16	26	X	X	X	X
On site - former trickling filter	WFF1-MW3	3	13	X	X	X	X
On site - crossgradient	WFF1-MW4	3	13	X	X	X	X
On site - downgradient	WFF1-MW5	2	12	X	X	X	X
On site - crossgradient	WFF1-MW6	2	12	X	X	X	X
On site - downgradient	WFF1-MW7	2	12	X	X	X	X
			Total Samples Analyzed:	7	7	7	7
Matrix: Sludge							
On site - primary settling tank	WFF1-SL01	0	2	X	X	X	X
On site - sludge drying bed	WFF1-SL02	0	2	X	X	X	X
On site - sludge drying bed	WFF1-SL03	0	2	X	X	X	X
			Total Samples Analyzed:	3	3	3	3
Matrix: Wastewater							
On site - primary settling tank	WFF1-WW01	0	0	X	X	X	X
			Total Samples Analyzed:	4	4	4	4

Notes:

All samples were collected by WESTON between 19 and 23 February 2007 as part of WWTP Site Investigation field activities.

CN = cyanide

Pests/PCBs = pesticides/polychlorinated biphenyls

SVOCs = semivolatile organic compounds

TAL = target analyte list

TCL = target compound list

VOCs = volatile organic compounds

Table 4-2
Monitor Well Construction Summary
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Well ID	Date Installed	Northing (ft)	Easting (ft)	Casing Diam.	Location Elevation [1] (ft amsl)		Total Depth		Screened Interval		Description of Material in Screened Interval
		Virginia State Plane Coordinates - South, North American Datum 1983, ft		(inches)	Ground Surface	Top of Inner Casing	(ft bgs)	(ft amsl)	Depth (ft bgs)	Elevation (ft amsl)	
WWTP-MW-01	2/21/2007	3881302.3080	12357100.2520	2	34.00	36.59	26.5	7.5	16.0 to 26.0	18.0 to 8.0	Overburden - silty sand
WWTP-MW-02	2/19/2007	3881448.9110	12357282.5320	2	32.80	35.65	27.5	5.3	16.0 to 26.0	16.8 to 6.8	Overburden - silty sand
WWTP-MW-03	2/20/2007	3881434.6540	12357113.8090	2	19.30	21.99	13.5	5.8	3.0 to 13.0	16.3 to 6.3	Overburden - silty sand with some gravel
WWTP-MW-04	2/20/2007	3881434.5370	12357063.2990	2	18.40	21.60	13.5	4.9	3.0 to 13.0	15.4 to 5.4	Overburden - silty sand
WWTP-MW-05	2/20/2007	3881455.4560	12357154.8020	2	16.10	19.34	12.5	3.6	2.0 to 12.0	14.1 to 4.1	Overburden - silty sand
WWTP-MW-06	2/20/2007	3881467.3410	12357033.4200	2	15.70	18.35	12.5	3.2	2.0 to 12.0	13.7 to 3.7	Overburden - silty sand
WWTP-MW-07	2/20/2007	3881553.5110	12357039.5570	2	13.30	16.65	12.5	0.8	2.0 to 12.0	11.3 to 1.3	Overburden - silty sand

Notes:

[1] Well measuring point and ground surface elevations surveyed by Baldwin & Gregg, Ltd Virginia registered land surveyors) on 23 February 2007.

ft - feet

amsl - above mean sea level

bgs - below ground surface

Table 4-3
Groundwater Elevations - February 2007
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Well ID	Top of Inner Casing Elevation (ft amsl)	Water Level (ft btoc)	Water Level Elevation (ft amsl)	Ground Surface Elevation (ft amsl)	Water Level (ft bgs)
WWTP-MW-01	36.59	20.22	16.37	34.00	17.63
WWTP-MW-02	35.65	19.51	16.14	32.80	16.66
WWTP-MW-03	21.99	5.96	16.03	19.30	3.27
WWTP-MW-04	21.60	4.89	16.71	18.40	1.69
WWTP-MW-05	19.34	2.84	16.50	16.10	-0.40
WWTP-MW-06	18.35	1.10	17.25	15.70	-1.55
WWTP-MW-07	16.65	0.90	15.75	13.30	-2.45

Notes:
ft - feet
amsl - above mean sea level
btoc - below top of casing

Groundwater levels measured by Weston Solutions, Inc. on 23 February 2007 as part of WWTP Site Investigation.

SECTION 5
TABLES

Table 5-1
Soil and Sludge Screening Levels
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte[1]	Human Health Screening Levels				Screening Level	
		Regional RSL[2]					
		Residential (Carcinogenic Risk = 1E-06)	Residential (Noncancer HI =0.1)	Industrial (Carcinogenic Risk = 1E-06)	Industrial (Noncancer HI =0.1)	Residential	Industrial
	INORGANICS (MG/KG)						
7429-90-5	Aluminum, Total	NA	7700	NA	99000	7700	99000
7440-36-0	Antimony, Total	NA	3.1	NA	41	3.1	41
7440-38-2	Arsenic, Total	0.39	2.2	1.6	26	0.39	1.6
7440-39-3	Barium, Total	NA	1500	NA	19000	1500	19000
7440-41-7	Beryllium, Total	1400	16	6900	200	16	200
7440-43-9	Cadmium, Total	1800	7	9300	80	7	80
7440-70-2	Calcium, Total	NA	NA	NA	NA	NA	NA
7440-47-3	Chromium, Total	280	NA	1400	NA	280	1400
7440-48-4	Cobalt, Total	370	2.3	1900	30	2.3	30
7440-50-8	Copper, Total	NA	310	NA	4100	310	4100
57-12-5	Cyanide, Total	NA	160	NA	2000	160	2000
7439-89-6	Iron, Total	NA	5500	NA	72000	5500	72000
7439-92-1	Lead, Total	NA	400	NA	800	400	800
7439-95-4	Magnesium, Total	NA	NA	NA	NA	NA	NA
7439-96-5	Manganese, Total	NA	180	NA	2300	180	2300
7439-97-6	Mercury, Total	NA	0.43	NA	2.4	0.43	2.4
7440-02-0	Nickel, Total	NA	150	NA	2000	150	2000
7440-09-7	Potassium, Total	NA	NA	NA	NA	NA	NA
7440-22-4	Silver, Total	NA	39	NA	510	39	510
7440-23-5	Sodium, Total	NA	NA	NA	NA	NA	NA
7440-62-2	Vanadium, Total	NA	55	NA	720	55	720
7440-66-6	Zinc, Total	NA	2300	NA	31000	2300	31000
	PESTICIDES (UG/KG)						
72-54-8	4,4'-DDD	2000	NA	7200	NA	2000	7200
72-55-9	4,4'-DDE	1400	NA	5100	NA	1400	5100
50-29-3	4,4'-DDT	1700	3600	7000	43000	1700	7000
60-57-1	Dieldrin	30	310	110	3100	30	110
	PCBs (UG/KG)						
11096-82-5	PCB-1260	220	NA	740	NA	220	740
	SVOCs (UG/KG)						
106-46-7	1,4-Dichlorobenzene	2,600	10,000	13,000	42,000	2,600	13,000
120-12-7	Anthracene	NA	1700000	NA	17000000	1700000	17000000
56-55-3	Benzo[a]anthracene	150	NA	2100	NA	150	2100
50-32-8	Benzo[a]pyrene	15	NA	210	NA	15	210
205-99-2	Benzo[b]fluoranthene	150	NA	2100	NA	150	2100
191-24-2	Benzo[g,h,i]perylene[3]	NA	170000	NA	1700000	170000	1700000
207-08-9	Benzo[k]fluoranthene	1500	NA	21000	NA	1500	21000
117-81-7	Bis(2-ethylhexyl) phthalate	35000	120000	120000	1200000	35000	120000
86-74-8	Carbazole	NA	NA	NA	NA	NA	NA
218-01-9	Chrysene	15000	NA	210000	NA	15000	210000
53-70-3	Dibenz(a,h)anthracene	15	NA	210	NA	15	210
84-66-2	Diethyl phthalate	NA	4900000	NA	49000000	4900000	49000000
84-74-2	Di-n-butyl phthalate	NA	610000	NA	6200000	610000	6200000
206-44-0	Fluoranthene	NA	230000	NA	2200000	230000	2200000
86-73-7	Fluorene	NA	230000	NA	2200000	230000	2200000
193-39-5	Indeno[1,2,3-cd]pyrene	150	NA	2100	NA	150	2100
85-01-8	Phenanthrene[3]	NA	170000	NA	1700000	170000	1700000
129-00-0	Pyrene	NA	170000	NA	1700000	170000	1700000

Table 5-1
Soil and Sludge Screening Levels
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte[1]	Human Health Screening Levels				Screening Level	
		Regional RSL[2]					
		Residential (Carcinogenic Risk = 1E-06)	Residential (Noncancer HI =0.1)	Industrial (Carcinogenic Risk = 1E-06)	Industrial (Noncancer HI =0.1)	Residential	Industrial
	VOCs (UG/KG)						
79-34-5	1,1,2,2-Tetrachloroethane	590	31000	2900	410000	590	2900
591-78-6	2-Hexanone	NA	NA	NA	NA	NA	NA
67-64-1	Acetone	NA	6100000	NA	61000000	6100000	61000000
78-93-3	Methyl Ethyl Ketone	NA	2800000	NA	19000000	2800000	19000000
108-10-1	Methyl isobutyl ketone	NA	530000	NA	5200000	530000	5200000
127-18-4	Tetrachloroethene	570	38000	2700	240000	570	2700
108-88-3	Toluene	NA	500000	NA	4600000	500000	4600000
1330-20-7	Xylenes, Total	NA	60000	NA	260000	60000	260000

Notes:

Color shaded cell indicates selected screening value.

CAS = Chemical Abstracts Service

HI = Hazard Index

MG/KG = milligram per kilogram

NA = Not Available

PCBs = polychlorinated biphenyls

SVOCs = Semivolatile organic compounds

UG/KG = microgram per kilogram

VOCs = Volatile organic compounds

1 = Analyte list only includes chemicals detected in soil and/or sludge.

2 = United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs): Direct Contact Exposure Pathways. 19 May 2009.

3 = Pyrene was used as a surrogate for benzo(g,h,i)perylene and phenanthrene.

Table 5-2
Sediment Screening Levels
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte[1]	Human Health Screening Regional RSL[2]		Ecological Screening	Screening Level	
		Residential (Carcinogenic Risk = 1E-06)	Residential (Noncancer HI =0.1)	BTAG Freshwater[3]	Residential	Ecological
	INORGANICS (MG/KG)					
7429-90-5	Aluminum, Total	NA	7700	NA	7700	NA
7440-38-2	Arsenic, Total	0.39	2.2	9.8	0.39	9.8
7440-39-3	Barium, Total	NA	1500	NA	1500	NA
7440-41-7	Beryllium, Total	1400	16	NA	16	NA
7440-70-2	Calcium, Total	NA	NA	NA	NA	NA
7440-47-3	Chromium, Total	280	NA	43.4	280	43.4
7440-48-4	Cobalt, Total	370	2.3	50	2.3	50
7440-50-8	Copper, Total	NA	310	31.6	310	31.6
7439-89-6	Iron, Total	NA	5500	20000	5500	20000
7439-92-1	Lead, Total	NA	400	35.8	400	35.8
7439-95-4	Magnesium, Total	NA	NA	NA	NA	NA
7439-96-5	Manganese, Total	NA	180	460	180	460
7487-94-7	Mercury, Total	NA	0.43	0.18	0.43	0.18
7440-02-0	Nickel, Total	NA	150	22.7	150	22.7
7440-09-7	Potassium, Total	NA	NA	NA	NA	NA
7440-23-5	Sodium, Total	NA	NA	NA	NA	NA
7440-62-2	Vanadium, Total	NA	55	NA	55	NA
7440-66-6	Zinc, Total	NA	2300	121	2300	121
	PESTICIDES (UG/KG)					
72-54-8	4,4'-DDD	2000	NA	4.88	2000	4.88
72-55-9	4,4'-DDE	1400	NA	3.16	1400	3.16
50-29-3	4,4'-DDT	1700	3600	4.16	1700	4.16
	VOCs (UG/KG)					
67-64-1	Acetone	NA	6,100,000	NA	6,100,000	NA
78-93-3	Methyl Ethyl Ketone	NA	2,800,000	NA	2,800,000	NA

Notes:

Color shaded cell indicates selected screening value.

CAS = Chemical Abstracts Service

HI = Hazard Index

NA = Not Available

MG/KG = milligram per kilogram

SVOCs = Semivolatile organic compounds

VOCs = Volatile organic compounds

UG/KG = microgram per kilogram

1 = Analyte list only includes chemicals detected in sediment.

2 = United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs): Direct Contact Exposure Pathways. 12 September 2008.

3 = USEPA Region III Biological Technical Assistance Group (BTAG) Freshwater Sediment Screening Benchmarks, August 2006.

Table 5-3
Surface Water and Wastewater Screening Levels
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte[1]	BTAG Freshwater[2]	VDEQ[3] Aquatic Life Freshwater Acute	VDEQ[3] Aquatic Life Freshwater Chronic	VDEQ[3] Human Health All Other Surface Waters	Screening Level
	INORGANICS (MG/L)					
7429-90-5	Aluminum, Total	0.087	NA	NA	NA	0.087
7440-39-3	Barium, Total	0.004	NA	NA	NA	0.004
7440-70-2	Calcium, Total	116	NA	NA	NA	116
7440-48-4	Cobalt, Total	0.023	NA	NA	NA	0.023
7440-50-8	Copper, Total	0.009	0.013	0.009	NA	0.009
7439-92-1	Iron, Total	0.3	NA	NA	NA	0.3
7439-92-1	Lead, Total	0.0025	0.120	0.014	NA	0.0025
7439-95-4	Magnesium, Total	82	NA	NA	NA	82
7439-96-5	Manganese, Total	0.12	NA	NA	NA	0.12
7439-97-6	Mercury, Total	0.000026	0.0014	0.00077	0.000051	0.000026
7440-09-7	Potassium, Total	53	NA	NA	NA	53
7440-23-5	Sodium, Total	680	NA	NA	NA	680
7440-62-2	Vanadium, Total	0.02	NA	NA	NA	0.02
7440-66-6	Zinc, Total	0.12	0.12	0.12	69	0.12
	SVOCs (UG/L)					
206-44-0	Fluoranthene	0.04	NA	NA	370	0.04
85-01-8	Phenanthrene	0.4	NA	NA	NA	0.4
129-00-0	Pyrene	0.025	NA	NA	11,000	0.025
	VOCs (UG/L)					
67-64-1	Acetone	1500	NA	NA	NA	1500
74-87-3	Chloromethane	NA	NA	NA	NA	NA
78-93-3	Methyl Ethyl Ketone	14000	NA	NA	NA	14000

Notes:

Color shaded cell indicates selected screening value.

CAS = Chemical Abstracts Service

MG/L = milligram per liter

NA = Not Available

VOCs = Volatile organic compounds

UG/L = microgram per liter

1 = Analyte list only includes chemicals detected in surface water and/or wastewater.

2 = United States Environmental Protection Agency (USEPA) Region III Biological Technical Assistance Group (BTAG) Freshwater Screening Benchmarks, July 2006.

3 = Virginia Department of Environmental Quality (VDEQ) Water Quality for Freshwater Acute and Chronic Aquatic Life Standards, October 2008.

Table 5-4
Groundwater Screening Levels
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte[1]	Tap Water Regional RSL[2] (Carcinogenic Risk = 1E-06)	Tap Water Regional RSL[2] (Noncancer HI =1)	VDEQ[3]	Screening Level
	INORGANICS (MG/L)				
7429-90-5	Aluminum, Total	NA	37	NA	37
7440-38-2	Arsenic, Total	0.000045	0.011	0.05	0.000045
7440-39-3	Barium, Total	NA	7.3	1	1
7440-70-2	Calcium, Total	NA	NA	NA	NA
7440-47-3	Chromium, Total	NA	NA	0.05	0.05
7440-48-4	Cobalt, Total	NA	0.011	NA	0.011
7439-89-6	Iron, Total	NA	26	NA	26
7439-95-4	Magnesium, Total	NA	NA	NA	NA
7439-96-5	Manganese, Total	NA	0.88	NA	0.88
7440-09-7	Potassium, Total	NA	NA	NA	NA
7440-23-5	Sodium, Total	NA	NA	NA	NA
7440-62-2	Vanadium, Total	NA	0.26	NA	0.26
	SVOCs (UG/L)				
105-67-9	2,4-Dimethylphenol	NA	730	NA	730
106-44-5	3 & 4 Methylphenol	NA	180	NA	180
117-81-7	Bis(2-ethylhexyl) phthalate	4.8	730	NA	4.8
84-66-2	Diethyl phthalate	NA	29000	NA	29000
108-95-2	Phenol	NA	11000	NA	11000
	VOCs (UG/L)				
67-64-1	Acetone	NA	22000	NA	22000
78-93-3	Methyl Ethyl Ketone	NA	7100	NA	7100
127-18-4	Tetrachloroethene	0.11	220	NA	0.11

Notes:

Color shaded cell indicates selected screening value.

CAS = Chemical Abstracts Service

HI = Hazard Index

MG/L = milligram per liter

NA = Not Available

VOCs = Volatile organic compounds

UG/L = microgram per liter

1 = Analyte list only includes chemicals detected in groundwater.

2 = United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs): Tapwaters. 12 September 2008.

3 = Virginia Department of Environmental Quality (VDEQ) Groundwater Quality Standards. 12 February 2004.

Table 5-5
Summary of Chemical Constituents in Soil Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
	INORGANICS (MG/KG)														
7429-90-5	Aluminum, Total	26	26	1300	13000	23-Feb-2007 / 19-Feb-2007	WFF1-SS5-D/ WFF1-MW2-0-0.5	0 / 0	2 / 0.5	20	25	7700	8	99000	0
7440-36-0	Antimony, Total	26	4	0.54	3.2	20-Feb-2007	WFF1-SS6	0	2	2	2.5	3.1	1	41	0
7440-38-2	Arsenic, Total	26	22	0.76	5.4	20-Feb-2007	WFF1-MW7-0-0.5	0	0.5	0.98	1.2	0.39	19	1.6	13
7440-39-3	Barium, Total	26	26	5.9	100	20-Feb-2007	WFF1-SS1	0	2	0.98	1.2	1500	0	19000	0
7440-41-7	Beryllium, Total	26	22	0.084	0.44	21-Feb-2007	WFF1-MW1-0-0.5	0	0.5	0.39	0.5	16	0	200	0
7440-43-9	Cadmium, Total	26	3	0.29	0.37	20-Feb-2007	WFF1-SS6	0	2	0.49	0.62	7	0	80	0
7440-70-2	Calcium, Total	26	23	140	42000	21-Feb-2007	WFF1-MW1-0-0.5	0	0.5	49	62	--	--	--	--
7440-47-3	Chromium, Total	26	25	2	13	23-Feb-2007 / 20-Feb-2007 / 19-Feb-2007	WFF1-SS5-D / WFF1-MW7-0-0.5 / WFF1-MW2-0-0.5	0 / 0 / 0	2 / 0.5 / 0.5	0.98	1.2	280	0	1400	0
7440-48-4	Cobalt, Total	26	26	0.23	3.3	23-Feb-2007 / 20-Feb-2007	WFF1-SS5-D / WFF1-MW7-0-0.5	0 / 0	2 / 0.5	0.98	1.2	2.3	5	30	0
7440-50-8	Copper, Total	26	23	0.85	15	20-Feb-2007	WFF1-SS1-D	0	2	2	2.5	310	0	4100	0
57-12-5	Cyanide, Total	28	1	0.34	0.34	20-Feb-2007	WFF1-MW6-0-0.5	0	0.5	0.53	0.65	160	0	2000	0
7439-89-6	Iron, Total	26	24	1400	10000	23-Feb-2007	WFF1-SS5-D	0	2	4.9	6.2	5500	7	72000	0
7439-92-1	Lead, Total	26	23	1.2	460	20-Feb-2007	WFF1-SS1-D	0	2	0.49	0.62	400	1	800	0
7439-95-4	Magnesium, Total	26	26	85	1100	20-Feb-2007	WFF1-MW7-0-0.5	0	0.5	49	62	--	--	--	--
7439-96-5	Manganese, Total	26	26	5.5	320	21-Feb-2007	WFF1-MW1-0-0.5	0	0.5	0.98	1.2	180	1	2300	0
7439-97-6	Mercury, Total	26	24	0.0046	0.25	22-Feb-2007	WFF1-SS10	0	2	0.02	0.027	0.43	0	2.4	0
7440-02-0	Nickel, Total	26	17	1.2	7.7	23-Feb-2007 / 20-Feb-2007	WFF1-SS5-D / WFF1-MW7-0-0.5	0 / 0	2 / 0.5	3.9	5	150	0	2000	0
7440-09-7	Potassium, Total	26	26	120	640	23-Feb-2007	WFF1-SS5-D	0	2	98	120	--	--	--	--
7782-49-2	Selenium, Total	26	0	--	--	--	--	--	--	2.5	3.1	--	--	--	--
7440-22-4	Silver, Total	26	2	0.12	0.64	22-Feb-2007	WFF1-SS10	0	2	0.98	1.2	39	0	510	0
7440-23-5	Sodium, Total	26	26	57	480	21-Feb-2007	WFF1-MW1-0-0.5	0	0.5	98	120	--	--	--	--
7440-28-0	Thallium, Total	26	0	--	--	--	--	--	--	2.5	3.1	--	--	--	--
7440-62-2	Vanadium, Total	26	26	1.8	24	20-Feb-2007	WFF1-MW7-0-0.5	0	0.5	0.98	1.2	55	0	720	0
7440-66-6	Zinc, Total	26	24	3.8	250	20-Feb-2007	WFF1-SS1-D	0	2	2	2.5	2300	0	31000	0
	PESTICIDES (UG/KG)														
72-54-8	4,4'-DDD	26	5	0.57	12	20-Feb-2007	WFF1-SS1/ WFF1-SS1-D	0	2	3.5	8.1	2000	0	7200	0
72-55-9	4,4'-DDE	26	13	0.41	14	20-Feb-2007	WFF1-MW6-0-0.5	0	0.5	3.5	8.1	1400	0	5100	0
50-29-3	4,4'-DDT	26	7	0.79	43	20-Feb-2007	WFF1-SS6	0	2	3.5	8.1	1700	0	7000	0
309-00-2	Aldrin	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
319-84-6	alpha-BHC	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
319-85-7	beta-BHC	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
57-74-9	Chlordane (technical)	26	0	--	--	--	--	--	--	18	42	--	--	--	--
319-86-8	delta-BHC	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
60-57-1	Dieldrin	26	1	3.9	5.7	20-Feb-2007	WFF1-SS1	0	2	3.5	8.1	30	0	110	0

Table 5-5
Summary of Chemical Constituents in Soil Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
959-98-8	Endosulfan I	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
33213-65-9	Endosulfan II	26	0	--	--	--	--	--	--	3.5	8.1	--	--	--	--
1031-07-8	Endosulfan Sulfate	26	0	--	--	--	--	--	--	3.5	8.1	--	--	--	--
72-20-8	Endrin	26	0	--	--	--	--	--	--	3.5	8.1	--	--	--	--
7421-93-4	Endrin Aldehyde	26	0	--	--	--	--	--	--	3.5	8.1	--	--	--	--
53494-70-5	Endrin Ketone	26	0	--	--	--	--	--	--	3.5	8.1	--	--	--	--
58-89-9	gamma-BHC (Lindane)	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
76-44-8	Heptachlor	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
1024-57-3	Heptachlor epoxide	26	0	--	--	--	--	--	--	1.8	4.2	--	--	--	--
72-43-5	Methoxychlor	26	0	--	--	--	--	--	--	18	42	--	--	--	--
8001-35-2	Toxaphene	26	0	--	--	--	--	--	--	180	420	--	--	--	--
	PCBs (UG/KG)														
12674-11-2	PCB-1016	26	0	--	--	--	--	--	--	35	81	--	--	--	--
11104-28-2	PCB-1221	26	0	--	--	--	--	--	--	72	170	--	--	--	--
11141-16-5	PCB-1232	26	0	--	--	--	--	--	--	35	81	--	--	--	--
53469-21-9	PCB-1242	26	0	--	--	--	--	--	--	35	81	--	--	--	--
12672-29-6	PCB-1248	26	0	--	--	--	--	--	--	35	81	--	--	--	--
11097-69-1	PCB-1254	26	0	--	--	--	--	--	--	35	81	--	--	--	--
11096-82-5	PCB-1260	26	1	190	290	20-Feb-2007	WFF1-SS1 / WFF1-SS1-D	0	2	35	81	220	1	740	0
	SVOCs (UG/KG)														
120-82-1	1,2,4-Trichlorobenzene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
95-50-1	1,2-Dichlorobenzene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
541-73-1	1,3-Dichlorobenzene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
106-46-7	1,4-Dichlorobenzene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
95-95-4	2,4,5-Trichlorophenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
88-06-2	2,4,6-Trichlorophenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
120-83-2	2,4-Dichlorophenol	26	0	--	--	--	--	--	--	360	2000	--	--	--	--
105-67-9	2,4-Dimethylphenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
51-28-5	2,4-Dinitrophenol	26	0	--	--	--	--	--	--	1900	2300	--	--	--	--
121-14-2	2,4-Dinitrotoluene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
606-20-2	2,6-Dinitrotoluene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
91-58-7	2-Chloronaphthalene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
95-57-8	2-Chlorophenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
91-57-6	2-Methylnaphthalene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
95-48-7	2-Methylphenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
88-74-4	2-Nitroaniline	26	0	--	--	--	--	--	--	1900	2300	--	--	--	--
88-75-5	2-Nitrophenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
106-44-5	3 & 4 Methylphenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
91-94-1	3,3'-Dichlorobenzidine	26	0	--	--	--	--	--	--	720	880	--	--	--	--
99-09-2	3-Nitroaniline	26	0	--	--	--	--	--	--	1900	2300	--	--	--	--
534-52-1	4,6-Dinitro-2-methylphenol	26	0	--	--	--	--	--	--	1900	2300	--	--	--	--
101-55-3	4-Bromophenyl phenyl ether	26	0	--	--	--	--	--	--	360	440	--	--	--	--
59-50-7	4-Chloro-3-methylphenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
106-47-8	4-Chloroaniline	26	0	--	--	--	--	--	--	720	880	--	--	--	--

Table 5-5
Summary of Chemical Constituents in Soil Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
7005-72-3	4-Chlorophenyl phenyl ether	26	0	--	--	--	--	--	--	360	440	--	--	--	--
100-01-6	4-Nitroaniline	26	0	--	--	--	--	--	--	1900	2300	--	--	--	--
100-02-7	4-Nitrophenol	26	0	--	--	--	--	--	--	1900	2300	--	--	--	--
83-32-9	Acenaphthene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
208-96-8	Acenaphthylene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
120-12-7	Anthracene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
56-55-3	Benzo[a]anthracene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
50-32-8	Benzo[a]pyrene	26	2	30	34	19-Feb-2007	WFF1-MW2-0-0.5	0	0.5	360	440	15	2	210	0
205-99-2	Benzo[b]fluoranthene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
191-24-2	Benzo[g,h,i]perylene	26	5	31	63	20-Feb-2007	WFF1-MW4-0.5-2	0.5	2	360	440	170000	0	170000	0
207-08-9	Benzo[k]fluoranthene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
111-91-1	Bis(2-chloroethoxy)methane	26	0	--	--	--	--	--	--	360	440	--	--	--	--
111-44-4	Bis(2-chloroethyl)ether	26	0	--	--	--	--	--	--	360	440	--	--	--	--
117-81-7	Bis(2-ethylhexyl) phthalate	26	1	59	59	20-Feb-2007	WFF1-MW4-0.5-2	0.5	2	360	440	35000	0	120000	0
108-60-1	bis(chloroisopropyl) ether	26	0	--	--	--	--	--	--	360	440	--	--	--	--
85-68-7	Butyl benzyl phthalate	26	0	--	--	--	--	--	--	360	440	--	--	--	--
86-74-8	Carbazole	26	0	--	--	--	--	--	--	360	440	--	--	--	--
218-01-9	Chrysene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
53-70-3	Dibenz(a,h)anthracene	26	4	33	50	19-Feb-2007	WFF1-MW2-0-0.5	0	0.5	360	440	15	4	210	0
132-64-9	Dibenzofuran	26	0	--	--	--	--	--	--	360	440	--	--	--	--
84-66-2	Diethyl phthalate	26	0	--	--	--	--	--	--	360	440	--	--	--	--
131-11-3	Dimethyl phthalate	26	0	--	--	--	--	--	--	360	440	--	--	--	--
84-74-2	Di-n-butyl phthalate	26	1	36	58	20-Feb-2007	WFF1-MW4-0.5-2	0.5	2	360	440	610000	0	6200000	0
117-84-0	Di-n-octyl phthalate	26	0	--	--	--	--	--	--	360	440	--	--	--	--
206-44-0	Fluoranthene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
86-73-7	Fluorene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
118-74-1	Hexachlorobenzene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
87-68-3	Hexachlorobutadiene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
77-47-4	Hexachlorocyclopentadiene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
67-72-1	Hexachloroethane	26	0	--	--	--	--	--	--	360	440	--	--	--	--
193-39-5	Indeno[1,2,3-cd]pyrene	26	4	30	52	19-Feb-2007	WFF1-MW2-0-0.5	0	0.5	360	440	150	0	2100	0
78-59-1	Isophorone	26	0	--	--	--	--	--	--	360	440	--	--	--	--
91-20-3	Naphthalene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
98-95-3	Nitrobenzene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
621-64-7	N-Nitrosodi-n-propylamine	26	0	--	--	--	--	--	--	360	440	--	--	--	--
86-30-6	N-Nitrosodiphenylamine	26	0	--	--	--	--	--	--	360	440	--	--	--	--
87-86-5	Pentachlorophenol	26	0	--	--	--	--	--	--	1900	2300	--	--	--	--
85-01-8	Phenanthrene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
108-95-2	Phenol	26	0	--	--	--	--	--	--	360	440	--	--	--	--
129-00-0	Pyrene	26	0	--	--	--	--	--	--	360	440	--	--	--	--
	VOCs (UG/KG)														
71-55-6	1,1,1-Trichloroethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
79-34-5	1,1,2,2-Tetrachloroethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
79-00-5	1,1,2-Trichloroethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
75-34-3	1,1-Dichloroethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--

Table 5-5
Summary of Chemical Constituents in Soil Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
75-35-4	1,1-Dichloroethene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
107-06-2	1,2-Dichloroethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
78-87-5	1,2-Dichloropropane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
591-78-6	2-Hexanone	26	0	--	--	--	--	--	--	19	37	--	--	--	--
67-64-1	Acetone	26	23	9.5	370	21-Feb-2007	WFF1-MW1-0-0.5	0	0.5	30	73	6100000	0	61000000	0
71-43-2	Benzene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
75-25-2	Bromoform	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
74-83-9	Bromomethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
75-15-0	Carbon disulfide	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
56-23-5	Carbon tetrachloride	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
108-90-7	Chlorobenzene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
124-48-1	Chlorodibromomethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
75-00-3	Chloroethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
67-66-3	Chloroform	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
74-87-3	Chloromethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
156-59-2	cis-1,2-Dichloroethene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
10061-01-5	cis-1,3-Dichloropropene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
75-27-4	Dichlorobromomethane	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
100-41-4	Ethylbenzene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
78-93-3	Methyl Ethyl Ketone	26	15	4.6	46	20-Feb-2007	WFF1-MW3-4-6	4	6	15	37	2800000	0	19000000	0
108-10-1	Methyl isobutyl ketone	26	9	6.1	340	19-Feb-2007	WFF1-MW2-0-0.5	0	0.5	19	37	530000	0	5200000	0
75-09-2	Methylene Chloride	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
100-42-5	Styrene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
127-18-4	Tetrachloroethene	26	1	6.7	6.7	22-Feb-2007	WFF1-SS9	0	2	3.7	7.3	570	0	2700	0
108-88-3	Toluene	26	2	2.7	2.9	20-Feb-2007	WFF1-MW3-4-6	4	6	3.8	7.3	500000	0	4600000	0
156-60-5	trans-1,2-Dichloroethene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
10061-02-6	trans-1,3-Dichloropropene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
79-01-6	Trichloroethene	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
75-01-4	Vinyl chloride	26	0	--	--	--	--	--	--	3.8	7.3	--	--	--	--
1330-20-7	Xylenes, Total	26	1	12	12	20-Feb-2007	WFF1-MW3-4-6	4	6	7.5	15	60000	0	260000	0

Notes:

CAS = Chemical Abstracts Service

MG/KG = milligram per kilogram

PCBs = Polychlorinated biphenyls

UG/KG = microgram per kilogram

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

-- = not applicable

1 = Does not includes duplicate samples. However, analytical results for duplicate samples are included in the Minimum and Maximum Detected Concentration columns.

2 = Development of screening levels presented in Table 5-1.

Table 5-6
Summary of Chemical Constituents in Sediment Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Ecological Screening Level[2]	No. Samples Exceeding Eco. Screening Level
INORGANICS (MG/KG)															
7429-90-5	Aluminum, Total	2	2	3400	5500	21-Feb-2007	WFF1-SD2	0	0.25	24	25	7700	0	--	--
7440-36-0	Antimony, Total	2	0	--	--	--	--	--	--	2.4	2.5	--	--	--	--
7440-38-2	Arsenic, Total	2	2	1.4	2.7	21-Feb-2007	WFF1-SD2	0	0.25	1.2	1.2	0.39	2	9.8	0
7440-39-3	Barium, Total	2	2	16	23	21-Feb-2007	WFF1-SD2	0	0.25	1.2	1.2	1500	0	--	--
7440-41-7	Beryllium, Total	2	2	0.11	0.18	21-Feb-2007	WFF1-SD2	0	0.25	0.47	0.49	16	0	--	--
7440-43-9	Cadmium, Total	2	0	--	--	--	--	--	--	0.59	0.62	--	--	--	--
7440-70-2	Calcium, Total	2	2	200	650	21-Feb-2007	WFF1-SD2	0	0.25	59	62	--	--	--	--
7440-47-3	Chromium, Total	2	2	4.2	6.8	21-Feb-2007	WFF1-SD2	0	0.25	1.2	1.2	280	0	43.4	0
7440-48-4	Cobalt, Total	2	2	0.74	1.9	21-Feb-2007	WFF1-SD2	0	0.25	1.2	1.2	2.3	0	50	0
7440-50-8	Copper, Total	2	2	1.3	2.9	21-Feb-2007	WFF1-SD2	0	0.25	2.4	2.5	310	0	31.6	0
57-12-5	Cyanide, Total	2	0	--	--	--	--	--	--	0.6	0.62	--	--	--	--
7439-89-6	Iron, Total	2	2	2600	4100	21-Feb-2007	WFF1-SD2	0	0.25	5.9	6.2	5500	0	20000	0
7439-92-1	Lead, Total	2	2	4	7.9	21-Feb-2007	WFF1-SD2	0	0.25	0.59	0.62	400	0	35.8	0
7439-95-4	Magnesium, Total	2	2	260	440	21-Feb-2007	WFF1-SD2	0	0.25	59	62	--	--	--	--
7439-96-5	Manganese, Total	2	2	44	95	21-Feb-2007	WFF1-SD2	0	0.25	1.2	1.2	180	0	460	0
7439-97-6	Mercury, Total	2	2	0.0093	0.044	21-Feb-2007	WFF1-SD2	0	0.25	0.022	0.023	0.43	0	0.18	0
7440-02-0	Nickel, Total	2	2	1.8	3.1	21-Feb-2007	WFF1-SD2	0	0.25	4.7	4.9	150	0	22.7	0
7440-09-7	Potassium, Total	2	2	220	320	21-Feb-2007	WFF1-SD2	0	0.25	120	120	--	--	--	--
7782-49-2	Selenium, Total	2	0	--	--	--	--	--	--	3	3.1	--	--	--	--
7440-22-4	Silver, Total	2	0	--	--	--	--	--	--	1.2	1.2	--	--	--	--
7440-23-5	Sodium, Total	2	2	60	71	21-Feb-2007	WFF1-SD1	0	0.25	120	120	--	--	--	--
7440-28-0	Thallium, Total	2	0	--	--	--	--	--	--	3	3.1	--	--	--	--
7440-62-2	Vanadium, Total	2	2	5.9	8.8	21-Feb-2007	WFF1-SD2	0	0.25	1.2	1.2	55	0	--	--
7440-66-6	Zinc, Total	2	2	9.6	20	21-Feb-2007	WFF1-SD2	0	0.25	2.4	2.5	2300	0	121	0
PESTICIDES (UG/KG)															
72-54-8	4,4'-DDD	2	1	2.7	2.7	21-Feb-2007	WFF1-SD2	0	0.25	4	4.3	2000	0	4.88	0
72-55-9	4,4'-DDE	2	2	1.8	2.6	21-Feb-2007	WFF1-SD2	0	0.25	4	4.3	1400	0	3.16	0
50-29-3	4,4'-DDT	2	2	0.77	1.6	21-Feb-2007	WFF1-SD2	0	0.25	4	4.3	1700	0	4.16	0
309-00-2	Aldrin	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
319-84-6	alpha-BHC	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
319-85-7	beta-BHC	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
57-74-9	Chlordane (technical)	2	0	--	--	--	--	--	--	21	22	--	--	--	--
319-86-8	delta-BHC	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
60-57-1	Dieldrin	2	0	--	--	--	--	--	--	4	4.3	--	--	--	--
959-98-8	Endosulfan I	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
33213-65-9	Endosulfan II	2	0	--	--	--	--	--	--	4	4.3	--	--	--	--
1031-07-8	Endosulfan Sulfate	2	0	--	--	--	--	--	--	4	4.3	--	--	--	--
72-20-8	Endrin	2	0	--	--	--	--	--	--	4	4.3	--	--	--	--
7421-93-4	Endrin Aldehyde	2	0	--	--	--	--	--	--	4	4.3	--	--	--	--
53494-70-5	Endrin Ketone	2	0	--	--	--	--	--	--	4	4.3	--	--	--	--
58-89-9	gamma-BHC (Lindane)	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
76-44-8	Heptachlor	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
1024-57-3	Heptachlor epoxide	2	0	--	--	--	--	--	--	2.1	2.2	--	--	--	--
72-43-5	Methoxychlor	2	0	--	--	--	--	--	--	21	22	--	--	--	--
8001-35-2	Toxaphene	2	0	--	--	--	--	--	--	210	220	--	--	--	--

Table 5-6
Summary of Chemical Constituents in Sediment Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Ecological Screening Level[2]	No. Samples Exceeding Eco. Screening Level
PCBs (UG/KG)															
12674-11-2	PCB-1016	2	0	--	--	--	--	--	--	40	43	--	--	--	--
11104-28-2	PCB-1221	2	0	--	--	--	--	--	--	81	87	--	--	--	--
11141-16-5	PCB-1232	2	0	--	--	--	--	--	--	40	43	--	--	--	--
53469-21-9	PCB-1242	2	0	--	--	--	--	--	--	40	43	--	--	--	--
12672-29-6	PCB-1248	2	0	--	--	--	--	--	--	40	43	--	--	--	--
11097-69-1	PCB-1254	2	0	--	--	--	--	--	--	40	43	--	--	--	--
11096-82-5	PCB-1260	2	0	--	--	--	--	--	--	40	43	--	--	--	--
SVOCs (UG/KG)															
120-82-1	1,2,4-Trichlorobenzene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
95-50-1	1,2-Dichlorobenzene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
541-73-1	1,3-Dichlorobenzene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
106-46-7	1,4-Dichlorobenzene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
95-95-4	2,4,5-Trichlorophenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
88-06-2	2,4,6-Trichlorophenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
120-83-2	2,4-Dichlorophenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
105-67-9	2,4-Dimethylphenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
51-28-5	2,4-Dinitrophenol	2	0	--	--	--	--	--	--	2100	2200	--	--	--	--
121-14-2	2,4-Dinitrotoluene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
606-20-2	2,6-Dinitrotoluene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
91-58-7	2-Chloronaphthalene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
95-57-8	2-Chlorophenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
91-57-6	2-Methylnaphthalene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
95-48-7	2-Methylphenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
88-74-4	2-Nitroaniline	2	0	--	--	--	--	--	--	2100	2200	--	--	--	--
88-75-5	2-Nitrophenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
106-44-5	3 & 4 Methylphenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
91-94-1	3,3'-Dichlorobenzidine	2	0	--	--	--	--	--	--	810	860	--	--	--	--
99-09-2	3-Nitroaniline	2	0	--	--	--	--	--	--	2100	2200	--	--	--	--
534-52-1	4,6-Dinitro-2-methylphenol	2	0	--	--	--	--	--	--	2100	2200	--	--	--	--
101-55-3	4-Bromophenyl phenyl ether	2	0	--	--	--	--	--	--	410	430	--	--	--	--
59-50-7	4-Chloro-3-methylphenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
106-47-8	4-Chloroaniline	2	0	--	--	--	--	--	--	810	860	--	--	--	--
7005-72-3	4-Chlorophenyl phenyl ether	2	0	--	--	--	--	--	--	410	430	--	--	--	--
100-01-6	4-Nitroaniline	2	0	--	--	--	--	--	--	2100	2200	--	--	--	--
100-02-7	4-Nitrophenol	2	0	--	--	--	--	--	--	2100	2200	--	--	--	--
83-32-9	Acenaphthene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
208-96-8	Acenaphthylene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
120-12-7	Anthracene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
56-55-3	Benzo[a]anthracene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
50-32-8	Benzo[a]pyrene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
205-99-2	Benzo[b]fluoranthene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
191-24-2	Benzo[g,h,i]perylene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
207-08-9	Benzo[k]fluoranthene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
111-91-1	Bis(2-chloroethoxy)methane	2	0	--	--	--	--	--	--	410	430	--	--	--	--
111-44-4	Bis(2-chloroethyl)ether	2	0	--	--	--	--	--	--	410	430	--	--	--	--

Table 5-6
Summary of Chemical Constituents in Sediment Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Ecological Screening Level[2]	No. Samples Exceeding Eco. Screening Level
117-81-7	Bis(2-ethylhexyl) phthalate	2	0	--	--	--	--	--	--	410	430	--	--	--	--
108-60-1	bis(chloroisopropyl) ether	2	0	--	--	--	--	--	--	410	430	--	--	--	--
85-68-7	Butyl benzyl phthalate	2	0	--	--	--	--	--	--	410	430	--	--	--	--
86-74-8	Carbazole	2	0	--	--	--	--	--	--	410	430	--	--	--	--
218-01-9	Chrysene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
53-70-3	Dibenz(a,h)anthracene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
132-64-9	Dibenzofuran	2	0	--	--	--	--	--	--	410	430	--	--	--	--
84-66-2	Diethyl phthalate	2	0	--	--	--	--	--	--	410	430	--	--	--	--
131-11-3	Dimethyl phthalate	2	0	--	--	--	--	--	--	410	430	--	--	--	--
84-74-2	Di-n-butyl phthalate	2	0	--	--	--	--	--	--	410	430	--	--	--	--
117-84-0	Di-n-octyl phthalate	2	0	--	--	--	--	--	--	410	430	--	--	--	--
206-44-0	Fluoranthene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
86-73-7	Fluorene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
118-74-1	Hexachlorobenzene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
87-68-3	Hexachlorobutadiene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
77-47-4	Hexachlorocyclopentadiene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
67-72-1	Hexachloroethane	2	0	--	--	--	--	--	--	410	430	--	--	--	--
193-39-5	Indeno[1,2,3-cd]pyrene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
78-59-1	Isophorone	2	0	--	--	--	--	--	--	410	430	--	--	--	--
91-20-3	Naphthalene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
98-95-3	Nitrobenzene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
621-64-7	N-Nitrosodi-n-propylamine	2	0	--	--	--	--	--	--	410	430	--	--	--	--
86-30-6	N-Nitrosodiphenylamine	2	0	--	--	--	--	--	--	410	430	--	--	--	--
87-86-5	Pentachlorophenol	2	0	--	--	--	--	--	--	2100	2200	--	--	--	--
85-01-8	Phenanthrene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
108-95-2	Phenol	2	0	--	--	--	--	--	--	410	430	--	--	--	--
129-00-0	Pyrene	2	0	--	--	--	--	--	--	410	430	--	--	--	--
	VOCs (UG/KG)														
71-55-6	1,1,1-Trichloroethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
79-34-5	1,1,2,2-Tetrachloroethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
79-00-5	1,1,2-Trichloroethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
75-34-3	1,1-Dichloroethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
75-35-4	1,1-Dichloroethene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
107-06-2	1,2-Dichloroethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
78-87-5	1,2-Dichloropropane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
591-78-6	2-Hexanone	2	0	--	--	--	--	--	--	26	26	--	--	--	--
67-64-1	Acetone	2	2	45	270	21-Feb-2007	WFF1-SD2	0	0.25	42	44	6100000	0	--	--
71-43-2	Benzene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
75-25-2	Bromoform	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
74-83-9	Bromomethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
75-15-0	Carbon disulfide	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
56-23-5	Carbon tetrachloride	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
108-90-7	Chlorobenzene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
124-48-1	Chlorodibromomethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
75-00-3	Chloroethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
67-66-3	Chloroform	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--

Table 5-6
Summary of Chemical Constituents in Sediment Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Ecological Screening Level[2]	No. Samples Exceeding Eco. Screening Level
74-87-3	Chloromethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
156-59-2	cis-1,2-Dichloroethene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
10061-01-5	cis-1,3-Dichloropropene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
75-27-4	Dichlorobromomethane	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
100-41-4	Ethylbenzene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
78-93-3	Methyl Ethyl Ketone	2	1	18	18	21-Feb-2007	WFF1-SD2	0	0.25	22	26	2800000	0	--	--
108-10-1	Methyl isobutyl ketone	2	0	--	--	--	--	--	--	26	26	--	--	--	--
75-09-2	Methylene Chloride	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
100-42-5	Styrene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
127-18-4	Tetrachloroethene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
108-88-3	Toluene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
156-60-5	trans-1,2-Dichloroethene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
10061-02-6	trans-1,3-Dichloropropene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
79-01-6	Trichloroethene	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
75-01-4	Vinyl chloride	2	0	--	--	--	--	--	--	5.2	5.3	--	--	--	--
1330-20-7	Xylenes, Total	2	0	--	--	--	--	--	--	10	11	--	--	--	--

Notes:

CAS = Chemical Abstracts Service

MG/KG = milligram per kilogram

PCBs = Polychlorinated biphenyls

UG/KG = microgram per kilogram

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

-- = not applicable

1 = Does not includes duplicate samples. However, analytical results for duplicate samples are included in the Minimum and Maximum Detected Concentration columns.

2 = Development of screening levels presented in Table 5-2.

Table 5-7
Summary of Chemical Constituents in Surface Water Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Location of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
	INORGANICS (MG/L)								
7429-90-5	Aluminum, Total	1	1	2.5	21-Feb-2007	WFF1-SW1	0.2	0.087	1
7440-36-0	Antimony, Total	1	0	--	--	--	0.02	--	--
7440-38-2	Arsenic, Total	1	0	--	--	--	0.01	--	--
7440-39-3	Barium, Total	1	1	0.031	21-Feb-2007	WFF1-SW1	0.01	0.004	1
7440-41-7	Beryllium, Total	1	0	--	--	--	0.004	--	--
7440-43-9	Cadmium, Total	1	0	--	--	--	0.005	--	--
7440-70-2	Calcium, Total	1	1	8.8	21-Feb-2007	WFF1-SW1	0.5	116	0
7440-47-3	Chromium, Total	1	0	--	--	--	0.01	--	--
7440-48-4	Cobalt, Total	1	1	0.0035	21-Feb-2007	WFF1-SW1	0.01	0.023	0
7440-50-8	Copper, Total	1	0	--	--	--	0.02	--	--
57-12-5	Cyanide, Total	1	0	--	--	--	0.01	--	--
7439-89-6	Iron, Total	1	1	7.2	21-Feb-2007	WFF1-SW1	0.05	0.3	1
7439-92-1	Lead, Total	1	0	--	--	--	0.005	--	--
7439-95-4	Magnesium, Total	1	1	1.2	21-Feb-2007	WFF1-SW1	0.5	82	0
7439-96-5	Manganese, Total	1	1	0.46	21-Feb-2007	WFF1-SW1	0.01	0.12	1
7439-97-6	Mercury, Total	1	0	--	--	--	0.0002	--	--
7440-02-0	Nickel, Total	1	0	--	--	--	0.04	--	--
7440-09-7	Potassium, Total	1	1	1.6	21-Feb-2007	WFF1-SW1	1	53	0
7782-49-2	Selenium, Total	1	0	--	--	--	0.01	--	--
7440-22-4	Silver, Total	1	0	--	--	--	0.01	--	--
7440-23-5	Sodium, Total	1	1	6.3	21-Feb-2007	WFF1-SW1	1	680	0
7440-28-0	Thallium, Total	1	0	--	--	--	0.025	--	--
7440-62-2	Vanadium, Total	1	1	0.0035	21-Feb-2007	WFF1-SW1	0.01	0.02	0
7440-66-6	Zinc, Total	1	0	--	--	--	0.02	--	--
	PESTICIDES (UG/L)								
72-54-8	4,4'-DDD	1	0	--	--	--	0.096	--	--
72-55-9	4,4'-DDE	1	0	--	--	--	0.096	--	--
50-29-3	4,4'-DDT	1	0	--	--	--	0.096	--	--
309-00-2	Aldrin	1	0	--	--	--	0.048	--	--
319-84-6	alpha-BHC	1	0	--	--	--	0.048	--	--
319-85-7	beta-BHC	1	0	--	--	--	0.048	--	--
57-74-9	Chlordane (technical)	1	0	--	--	--	0.48	--	--
319-86-8	delta-BHC	1	0	--	--	--	0.048	--	--
60-57-1	Dieldrin	1	0	--	--	--	0.096	--	--
959-98-8	Endosulfan I	1	0	--	--	--	0.048	--	--
33213-65-9	Endosulfan II	1	0	--	--	--	0.096	--	--
1031-07-8	Endosulfan Sulfate	1	0	--	--	--	0.096	--	--
72-20-8	Endrin	1	0	--	--	--	0.096	--	--
7421-93-4	Endrin Aldehyde	1	0	--	--	--	0.096	--	--
53494-70-5	Endrin Ketone	1	0	--	--	--	0.096	--	--

Table 5-7
Summary of Chemical Constituents in Surface Water Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Location of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
58-89-9	gamma-BHC (Lindane)	1	0	--	--	--	0.048	--	--
76-44-8	Heptachlor	1	0	--	--	--	0.048	--	--
1024-57-3	Heptachlor epoxide	1	0	--	--	--	0.048	--	--
72-43-5	Methoxychlor	1	0	--	--	--	0.48	--	--
8001-35-2	Toxaphene	1	0	--	--	--	4.8	--	--
	PCBs (UG/L)								
12674-11-2	PCB-1016	1	0	--	--	--	0.96	--	--
11104-28-2	PCB-1221	1	0	--	--	--	1.9	--	--
11141-16-5	PCB-1232	1	0	--	--	--	0.96	--	--
53469-21-9	PCB-1242	1	0	--	--	--	0.96	--	--
12672-29-6	PCB-1248	1	0	--	--	--	0.96	--	--
11097-69-1	PCB-1254	1	0	--	--	--	0.96	--	--
11096-82-5	PCB-1260	1	0	--	--	--	0.96	--	--
	SVOCs (UG/L)								
120-82-1	1,2,4-Trichlorobenzene	1	0	--	--	--	9.4	--	--
95-50-1	1,2-Dichlorobenzene	1	0	--	--	--	9.4	--	--
541-73-1	1,3-Dichlorobenzene	1	0	--	--	--	9.4	--	--
106-46-7	1,4-Dichlorobenzene	1	0	--	--	--	9.4	--	--
95-95-4	2,4,5-Trichlorophenol	1	0	--	--	--	9.4	--	--
88-06-2	2,4,6-Trichlorophenol	1	0	--	--	--	9.4	--	--
120-83-2	2,4-Dichlorophenol	1	0	--	--	--	9.4	--	--
105-67-9	2,4-Dimethylphenol	1	0	--	--	--	9.4	--	--
51-28-5	2,4-Dinitrophenol	1	0	--	--	--	47	--	--
121-14-2	2,4-Dinitrotoluene	1	0	--	--	--	9.4	--	--
606-20-2	2,6-Dinitrotoluene	1	0	--	--	--	9.4	--	--
91-58-7	2-Chloronaphthalene	1	0	--	--	--	9.4	--	--
95-57-8	2-Chlorophenol	1	0	--	--	--	9.4	--	--
91-57-6	2-Methylnaphthalene	1	0	--	--	--	9.4	--	--
95-48-7	2-Methylphenol	1	0	--	--	--	9.4	--	--
88-74-4	2-Nitroaniline	1	0	--	--	--	47	--	--
88-75-5	2-Nitrophenol	1	0	--	--	--	9.4	--	--
106-44-5	3 & 4 Methylphenol	1	0	--	--	--	9.4	--	--
91-94-1	3,3'-Dichlorobenzidine	1	0	--	--	--	19	--	--
99-09-2	3-Nitroaniline	1	0	--	--	--	47	--	--
534-52-1	4,6-Dinitro-2-methylphenol	1	0	--	--	--	47	--	--
101-55-3	4-Bromophenyl phenyl ether	1	0	--	--	--	9.4	--	--
59-50-7	4-Chloro-3-methylphenol	1	0	--	--	--	9.4	--	--
106-47-8	4-Chloroaniline	1	0	--	--	--	19	--	--
7005-72-3	4-Chlorophenyl phenyl ether	1	0	--	--	--	9.4	--	--
100-01-6	4-Nitroaniline	1	0	--	--	--	47	--	--
100-02-7	4-Nitrophenol	1	0	--	--	--	47	--	--

Table 5-7
Summary of Chemical Constituents in Surface Water Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Location of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
83-32-9	Acenaphthene	1	0	--	--	--	9.4	--	--
208-96-8	Acenaphthylene	1	0	--	--	--	9.4	--	--
120-12-7	Anthracene	1	0	--	--	--	9.4	--	--
56-55-3	Benzo[a]anthracene	1	0	--	--	--	9.4	--	--
50-32-8	Benzo[a]pyrene	1	0	--	--	--	9.4	--	--
205-99-2	Benzo[b]fluoranthene	1	0	--	--	--	9.4	--	--
191-24-2	Benzo[g,h,i]perylene	1	0	--	--	--	9.4	--	--
207-08-9	Benzo[k]fluoranthene	1	0	--	--	--	9.4	--	--
111-91-1	Bis(2-chloroethoxy)methane	1	0	--	--	--	9.4	--	--
111-44-4	Bis(2-chloroethyl)ether	1	0	--	--	--	9.4	--	--
117-81-7	Bis(2-ethylhexyl) phthalate	1	0	--	--	--	9.4	--	--
108-60-1	bis(chloroisopropyl) ether	1	0	--	--	--	9.4	--	--
85-68-7	Butyl benzyl phthalate	1	0	--	--	--	9.4	--	--
86-74-8	Carbazole	1	0	--	--	--	9.4	--	--
218-01-9	Chrysene	1	0	--	--	--	9.4	--	--
53-70-3	Dibenz(a,h)anthracene	1	0	--	--	--	9.4	--	--
132-64-9	Dibenzofuran	1	0	--	--	--	9.4	--	--
84-66-2	Diethyl phthalate	1	0	--	--	--	9.4	--	--
131-11-3	Dimethyl phthalate	1	0	--	--	--	9.4	--	--
84-74-2	Di-n-butyl phthalate	1	0	--	--	--	9.4	--	--
117-84-0	Di-n-octyl phthalate	1	0	--	--	--	9.4	--	--
206-44-0	Fluoranthene	1	0	--	--	--	9.4	--	--
86-73-7	Fluorene	1	0	--	--	--	9.4	--	--
118-74-1	Hexachlorobenzene	1	0	--	--	--	9.4	--	--
87-68-3	Hexachlorobutadiene	1	0	--	--	--	9.4	--	--
77-47-4	Hexachlorocyclopentadiene	1	0	--	--	--	9.4	--	--
67-72-1	Hexachloroethane	1	0	--	--	--	9.4	--	--
193-39-5	Indeno[1,2,3-cd]pyrene	1	0	--	--	--	9.4	--	--
78-59-1	Isophorone	1	0	--	--	--	9.4	--	--
91-20-3	Naphthalene	1	0	--	--	--	9.4	--	--
98-95-3	Nitrobenzene	1	0	--	--	--	9.4	--	--
621-64-7	N-Nitrosodi-n-propylamine	1	0	--	--	--	9.4	--	--
86-30-6	N-Nitrosodiphenylamine	1	0	--	--	--	9.4	--	--
87-86-5	Pentachlorophenol	1	0	--	--	--	47	--	--
85-01-8	Phenanthrene	1	0	--	--	--	9.4	--	--
108-95-2	Phenol	1	0	--	--	--	9.4	--	--
129-00-0	Pyrene	1	0	--	--	--	9.4	--	--
	VOCs (UG/L)								
71-55-6	1,1,1-Trichloroethane	1	0	--	--	--	1	--	--
79-34-5	1,1,2,2-Tetrachloroethane	1	0	--	--	--	1	--	--
79-00-5	1,1,2-Trichloroethane	1	0	--	--	--	1	--	--

Table 5-7
Summary of Chemical Constituents in Surface Water Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Location of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
75-34-3	1,1-Dichloroethane	1	0	--	--	--	1	--	--
75-35-4	1,1-Dichloroethene	1	0	--	--	--	1	--	--
107-06-2	1,2-Dichloroethane	1	0	--	--	--	1	--	--
78-87-5	1,2-Dichloropropane	1	0	--	--	--	1	--	--
591-78-6	2-Hexanone	1	0	--	--	--	10	--	--
67-64-1	Acetone	1	0	--	--	--	25	--	--
71-43-2	Benzene	1	0	--	--	--	1	--	--
75-25-2	Bromoform	1	0	--	--	--	1	--	--
74-83-9	Bromomethane	1	0	--	--	--	1	--	--
75-15-0	Carbon disulfide	1	0	--	--	--	2	--	--
56-23-5	Carbon tetrachloride	1	0	--	--	--	1	--	--
108-90-7	Chlorobenzene	1	0	--	--	--	1	--	--
124-48-1	Chlorodibromomethane	1	0	--	--	--	1	--	--
75-00-3	Chloroethane	1	0	--	--	--	1	--	--
67-66-3	Chloroform	1	0	--	--	--	1	--	--
74-87-3	Chloromethane	1	1	0.53	21-Feb-2007	WFF1-SW1	1	--	--
156-59-2	cis-1,2-Dichloroethene	1	0	--	--	--	1	--	--
10061-01-5	cis-1,3-Dichloropropene	1	0	--	--	--	1	--	--
75-27-4	Dichlorobromomethane	1	0	--	--	--	1	--	--
100-41-4	Ethylbenzene	1	0	--	--	--	1	--	--
78-93-3	Methyl Ethyl Ketone	1	0	--	--	--	10	--	--
108-10-1	Methyl isobutyl ketone	1	0	--	--	--	10	--	--
75-09-2	Methylene Chloride	1	0	--	--	--	5	--	--
100-42-5	Styrene	1	0	--	--	--	1	--	--
127-18-4	Tetrachloroethene	1	0	--	--	--	1	--	--
108-88-3	Toluene	1	0	--	--	--	1	--	--
156-60-5	trans-1,2-Dichloroethene	1	0	--	--	--	1	--	--
10061-02-6	trans-1,3-Dichloropropene	1	0	--	--	--	1	--	--
79-01-6	Trichloroethene	1	0	--	--	--	1	--	--
75-01-4	Vinyl chloride	1	0	--	--	--	1	--	--
1330-20-7	Xylenes, Total	1	0	--	--	--	2	--	--

Notes:

CAS = Chemical Abstracts Service

MG/L = milligram per liter

PCBs = Polychlorinated biphenyls

UG/L = microgram per liter

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

-- = not applicable

1 = Does not includes duplicate samples. However, analytical results for duplicate samples are included in the Detected Concentration column.

2 = Development of screening levels presented in Table 5-3.

Table 5-8
Summary of Chemical Constituents in Groundwater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Screen Depth of (feet bgs)	Minimum Detection Limit	Maximum Detection Limit	Groundwater Screening Level[2]	No. Samples Exceeding Screening Level
	INORGANICS (MG/L)											
7429-90-5	Aluminum, Total	7	7	0.62	2.2	22-Feb-2007	WFF1-MW6	2-12	0.2	0.2	37	0
7440-36-0	Antimony, Total	7	0	--	--	--	--	--	0.02	0.02	--	--
7440-38-2	Arsenic, Total	7	2	0.01	0.015	23-Feb-2007	WFF1-MW20	3-13	0.01	0.01	4.5E-05	2
7440-39-3	Barium, Total	7	7	0.023	0.057	22-Feb-2007	WFF1-MW6	2-12	0.01	0.01	1	0
7440-41-7	Beryllium, Total	7	0	--	--	--	--	--	0.004	0.004	--	--
7440-43-9	Cadmium, Total	7	0	--	--	--	--	--	0.005	0.005	--	--
7440-70-2	Calcium, Total	7	7	10	64	23-Feb-2007	WFF1-MW20	3-13	0.5	0.5	--	--
7440-47-3	Chromium, Total	7	1	0.017	0.017	23-Feb-2007	WFF1-MW2	16-26	0.01	0.01	0.05	0
7440-48-4	Cobalt, Total	7	3	0.0039	0.0071	22-Feb-2007	WFF1-MW6	2-12	0.01	0.01	0.011	0
7440-50-8	Copper, Total	7	0	--	--	--	--	--	0.02	0.02	--	--
57-12-5	Cyanide, Total	7	0	--	--	--	--	--	0.01	0.01	--	--
7439-89-6	Iron, Total	7	7	0.17	11	23-Feb-2007	WFF1-MW20	3-13	0.05	0.05	26	0
7439-92-1	Lead, Total	7	0	--	--	--	--	--	0.005	0.005	--	--
7439-95-4	Magnesium, Total	7	7	1.8	4.5	22-Feb-2007	WFF1-MW7	2-12	0.5	0.5	--	--
7439-96-5	Manganese, Total	7	7	0.022	1.5	22-Feb-2007	WFF1-MW6	2-12	0.01	0.01	0.88	1
7439-97-6	Mercury, Total	7	0	--	--	--	--	--	0.0002	0.0002	--	--
7440-02-0	Nickel, Total	7	0	--	--	--	--	--	0.04	0.04	--	--
7440-09-7	Potassium, Total	7	7	1.4	3.4	23-Feb-2007	WFF1-MW2 / WFF1-MW5	16-26 / 2-12	1	1	--	--
7782-49-2	Selenium, Total	7	0	--	--	--	--	--	0.01	0.01	--	--
7440-22-4	Silver, Total	7	0	--	--	--	--	--	0.01	0.01	--	--
7440-23-5	Sodium, Total	7	7	5.4	16	22-Feb-2007	WFF1-MW6	2-12	1	1	--	--
7440-28-0	Thallium, Total	7	0	--	--	--	--	--	0.025	0.025	--	--
7440-62-2	Vanadium, Total	7	2	0.0016	0.0019	22-Feb-2007	WFF1-MW6	2-12	0.01	0.01	0.26	0
7440-66-6	Zinc, Total	7	0	--	--	--	--	--	0.02	0.02	--	--
	PESTICIDES (UG/L)											
72-54-8	4,4'-DDD	7	0	--	--	--	--	--	0.094	0.1	--	--
72-55-9	4,4'-DDE	7	0	--	--	--	--	--	0.094	0.1	--	--
50-29-3	4,4'-DDT	7	0	--	--	--	--	--	0.094	0.1	--	--
309-00-2	Aldrin	7	0	--	--	--	--	--	0.047	0.051	--	--
319-84-6	alpha-BHC	7	0	--	--	--	--	--	0.047	0.051	--	--
319-85-7	beta-BHC	7	0	--	--	--	--	--	0.047	0.051	--	--
57-74-9	Chlordane (technical)	7	0	--	--	--	--	--	0.47	0.51	--	--
319-86-8	delta-BHC	7	0	--	--	--	--	--	0.047	0.051	--	--
60-57-1	Dieldrin	7	0	--	--	--	--	--	0.094	0.1	--	--
959-98-8	Endosulfan I	7	0	--	--	--	--	--	0.047	0.051	--	--
33213-65-9	Endosulfan II	7	0	--	--	--	--	--	0.094	0.1	--	--
1031-07-8	Endosulfan Sulfate	7	0	--	--	--	--	--	0.094	0.1	--	--
72-20-8	Endrin	7	0	--	--	--	--	--	0.094	0.1	--	--
7421-93-4	Endrin Aldehyde	7	0	--	--	--	--	--	0.094	0.1	--	--

Table 5-8
Summary of Chemical Constituents in Groundwater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Screen Depth of (feet bgs)	Minimum Detection Limit	Maximum Detection Limit	Groundwater Screening Level[2]	No. Samples Exceeding Screening Level
53494-70-5	Endrin Ketone	7	0	--	--	--	--	--	0.094	0.1	--	--
58-89-9	gamma-BHC (Lindane)	7	0	--	--	--	--	--	0.047	0.051	--	--
76-44-8	Heptachlor	7	0	--	--	--	--	--	0.047	0.051	--	--
1024-57-3	Heptachlor epoxide	7	0	--	--	--	--	--	0.047	0.051	--	--
72-43-5	Methoxychlor	7	0	--	--	--	--	--	0.47	0.51	--	--
8001-35-2	Toxaphene	7	0	--	--	--	--	--	4.7	5.1	--	--
	PCBs (UG/L)											
12674-11-2	PCB-1016	7	0	--	--	--	--	--	0.94	1	--	--
11104-28-2	PCB-1221	7	0	--	--	--	--	--	1.9	2	--	--
11141-16-5	PCB-1232	7	0	--	--	--	--	--	0.94	1	--	--
53469-21-9	PCB-1242	7	0	--	--	--	--	--	0.94	1	--	--
12672-29-6	PCB-1248	7	0	--	--	--	--	--	0.94	1	--	--
11097-69-1	PCB-1254	7	0	--	--	--	--	--	0.94	1	--	--
11096-82-5	PCB-1260	7	0	--	--	--	--	--	0.94	1	--	--
	SVOCs (UG/L)											
120-82-1	1,2,4-Trichlorobenzene	7	0	--	--	--	--	--	9.4	10	--	--
95-50-1	1,2-Dichlorobenzene	7	0	--	--	--	--	--	9.4	10	--	--
541-73-1	1,3-Dichlorobenzene	7	0	--	--	--	--	--	9.4	10	--	--
106-46-7	1,4-Dichlorobenzene	7	0	--	--	--	--	--	9.4	10	--	--
95-95-4	2,4,5-Trichlorophenol	7	0	--	--	--	--	--	9.4	10	--	--
88-06-2	2,4,6-Trichlorophenol	7	0	--	--	--	--	--	9.4	10	--	--
120-83-2	2,4-Dichlorophenol	7	0	--	--	--	--	--	9.4	10	--	--
105-67-9	2,4-Dimethylphenol	7	0	100	100	23-Feb-2007	WFF1-MW20	3-13	9.4	10	--	--
121-14-2	2,4-Dinitrotoluene	7	0	--	--	--	--	--	9.4	10	--	--
606-20-2	2,6-Dinitrotoluene	7	0	--	--	--	--	--	9.4	10	--	--
91-58-7	2-Chloronaphthalene	7	0	--	--	--	--	--	9.4	10	--	--
95-57-8	2-Chlorophenol	7	0	--	--	--	--	--	9.4	10	--	--
91-57-6	2-Methylnaphthalene	7	0	--	--	--	--	--	9.4	10	--	--
95-48-7	2-Methylphenol	7	0	--	--	--	--	--	9.4	10	--	--
88-74-4	2-Nitroaniline	7	0	--	--	--	--	--	47	50	--	--
88-75-5	2-Nitrophenol	7	0	--	--	--	--	--	9.4	10	--	--
106-44-5	3 & 4 Methylphenol	7	1	4.7	11	23-Feb-2007	WFF1-MW20	3-13	9.4	10	180	0
91-94-1	3,3'-Dichlorobenzidine	7	0	--	--	--	--	--	19	20	--	--
99-09-2	3-Nitroaniline	7	0	--	--	--	--	--	47	50	--	--
534-52-1	4,6-Dinitro-2-methylphenol	7	0	--	--	--	--	--	47	50	--	--
101-55-3	4-Bromophenyl phenyl ether	7	0	--	--	--	--	--	9.4	10	--	--
59-50-7	4-Chloro-3-methylphenol	7	0	--	--	--	--	--	9.4	10	--	--
106-47-8	4-Chloroaniline	7	0	--	--	--	--	--	19	20	--	--
7005-72-3	4-Chlorophenyl phenyl ether	7	0	--	--	--	--	--	9.4	10	--	--
100-01-6	4-Nitroaniline	7	0	--	--	--	--	--	47	50	--	--
100-02-7	4-Nitrophenol	7	0	--	--	--	--	--	47	50	--	--

Table 5-8
Summary of Chemical Constituents in Groundwater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Screen Depth of (feet bgs)	Minimum Detection Limit	Maximum Detection Limit	Groundwater Screening Level[2]	No. Samples Exceeding Screening Level
83-32-9	Acenaphthene	7	0	--	--	--	--	--	9.4	10	--	--
208-96-8	Acenaphthylene	7	0	--	--	--	--	--	9.4	10	--	--
120-12-7	Anthracene	7	0	--	--	--	--	--	9.4	10	--	--
56-55-3	Benzo[a]anthracene	7	0	--	--	--	--	--	9.4	10	--	--
50-32-8	Benzo[a]pyrene	7	0	--	--	--	--	--	9.4	10	--	--
205-99-2	Benzo[b]fluoranthene	7	0	--	--	--	--	--	9.4	10	--	--
191-24-2	Benzo[g,h,i]perylene	7	0	--	--	--	--	--	9.4	10	--	--
207-08-9	Benzo[k]fluoranthene	7	0	--	--	--	--	--	9.4	10	--	--
111-91-1	Bis(2-chloroethoxy)methane	7	0	--	--	--	--	--	9.4	10	--	--
111-44-4	Bis(2-chloroethyl)ether	7	0	--	--	--	--	--	9.4	10	--	--
117-81-7	Bis(2-ethylhexyl) phthalate	7	2	1.1	1.5	23-Feb-2007	WFF1-MW1	16-26	9.4	10	4.8	0
108-60-1	bis(chloroisopropyl) ether	7	0	--	--	--	--	--	9.4	10	--	--
85-68-7	Butyl benzyl phthalate	7	0	--	--	--	--	--	9.4	10	--	--
86-74-8	Carbazole	7	0	--	--	--	--	--	9.4	10	--	--
218-01-9	Chrysene	7	0	--	--	--	--	--	9.4	10	--	--
53-70-3	Dibenz(a,h)anthracene	7	0	--	--	--	--	--	9.4	10	--	--
132-64-9	Dibenzofuran	7	0	--	--	--	--	--	9.4	10	--	--
84-66-2	Diethyl phthalate	7	1	0.73	0.73	22-Feb-2007	WFF1-MW7	2-12	9.4	10	29000	0
131-11-3	Dimethyl phthalate	7	0	--	--	--	--	--	9.4	10	--	--
84-74-2	Di-n-butyl phthalate	7	0	--	--	--	--	--	9.4	10	--	--
117-84-0	Di-n-octyl phthalate	7	0	--	--	--	--	--	9.4	10	--	--
206-44-0	Fluoranthene	7	0	--	--	--	--	--	9.4	10	--	--
86-73-7	Fluorene	7	0	--	--	--	--	--	9.4	10	--	--
118-74-1	Hexachlorobenzene	7	0	--	--	--	--	--	9.4	10	--	--
87-68-3	Hexachlorobutadiene	7	0	--	--	--	--	--	9.4	10	--	--
77-47-4	Hexachlorocyclopentadiene	7	0	--	--	--	--	--	9.4	10	--	--
67-72-1	Hexachloroethane	7	0	--	--	--	--	--	9.4	10	--	--
193-39-5	Indeno[1,2,3-cd]pyrene	7	0	--	--	--	--	--	9.4	10	--	--
78-59-1	Isophorone	7	0	--	--	--	--	--	9.4	10	--	--
91-20-3	Naphthalene	7	0	--	--	--	--	--	9.4	10	--	--
98-95-3	Nitrobenzene	7	0	--	--	--	--	--	9.4	10	--	--
621-64-7	N-Nitrosodi-n-propylamine	7	0	--	--	--	--	--	9.4	10	--	--
86-30-6	N-Nitrosodiphenylamine	7	0	--	--	--	--	--	9.4	10	--	--
87-86-5	Pentachlorophenol	7	0	--	--	--	--	--	47	50	--	--
85-01-8	Phenanthrene	7	0	--	--	--	--	--	9.4	10	--	--
108-95-2	Phenol	7	1	7.8	12	23-Feb-2007	WFF1-MW20	3-13	9.4	10	11000	0
129-00-0	Pyrene	7	0	--	--	--	--	--	9.4	10	--	--
	VOCs (UG/L)											
71-55-6	1,1,1-Trichloroethane	7	0	--	--	--	--	--	1	1	--	--
79-34-5	1,1,2,2-Tetrachloroethane	7	0	--	--	--	--	--	1	1	--	--
79-00-5	1,1,2-Trichloroethane	7	0	--	--	--	--	--	1	1	--	--

Table 5-8
Summary of Chemical Constituents in Groundwater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Location of Maximum	Screen Depth of (feet bgs)	Minimum Detection Limit	Maximum Detection Limit	Groundwater Screening Level[2]	No. Samples Exceeding Screening Level
75-34-3	1,1-Dichloroethane	7	0	--	--	--	--	--	1	1	--	--
75-35-4	1,1-Dichloroethene	7	0	--	--	--	--	--	1	1	--	--
107-06-2	1,2-Dichloroethane	7	0	--	--	--	--	--	1	1	--	--
78-87-5	1,2-Dichloropropane	7	0	--	--	--	--	--	1	1	--	--
591-78-6	2-Hexanone	7	0	--	--	--	--	--	10	10	--	--
67-64-1	Acetone	7	1	47	52	23-Feb-2007	WFF1-MW3	3-13	25	25	22000	0
71-43-2	Benzene	7	0	--	--	--	--	--	1	1	--	--
75-25-2	Bromoform	7	0	--	--	--	--	--	1	1	--	--
74-83-9	Bromomethane	7	0	--	--	--	--	--	1	1	--	--
75-15-0	Carbon disulfide	7	0	--	--	--	--	--	2	2	--	--
56-23-5	Carbon tetrachloride	7	0	--	--	--	--	--	1	1	--	--
108-90-7	Chlorobenzene	7	0	--	--	--	--	--	1	1	--	--
124-48-1	Chlorodibromomethane	7	0	--	--	--	--	--	1	1	--	--
75-00-3	Chloroethane	7	0	--	--	--	--	--	1	1	--	--
67-66-3	Chloroform	7	0	--	--	--	--	--	1	1	--	--
74-87-3	Chloromethane	7	0	--	--	--	--	--	1	1	--	--
156-59-2	cis-1,2-Dichloroethene	7	0	--	--	--	--	--	1	1	--	--
10061-01-5	cis-1,3-Dichloropropene	7	0	--	--	--	--	--	1	1	--	--
75-27-4	Dichlorobromomethane	7	0	--	--	--	--	--	1	1	--	--
100-41-4	Ethylbenzene	7	0	--	--	--	--	--	1	1	--	--
78-93-3	Methyl Ethyl Ketone	7	1	15	17	23-Feb-2007	WFF1-MW3	3-13	10	10	7100	0
108-10-1	Methyl isobutyl ketone	7	0	--	--	--	--	--	10	10	--	--
75-09-2	Methylene Chloride	7	0	--	--	--	--	--	5	5	--	0
100-42-5	Styrene	7	0	--	--	--	--	--	1	1	--	--
127-18-4	Tetrachloroethene	7	1	4.4	4.4	23-Feb-2007	WFF1-MW1	16-26	1	1	0.11	1
108-88-3	Toluene	7	0	--	--	--	--	--	1	1	--	0
156-60-5	trans-1,2-Dichloroethene	7	0	--	--	--	--	--	1	1	--	--
10061-02-6	trans-1,3-Dichloropropene	7	0	--	--	--	--	--	1	1	--	--
79-01-6	Trichloroethene	7	0	--	--	--	--	--	1	1	--	--
75-01-4	Vinyl chloride	7	0	--	--	--	--	--	1	1	--	--
1330-20-7	Xylenes, Total	7	0	--	--	--	--	--	2	2	--	--

Notes:

CAS = Chemical Abstracts Service

MG/L = milligram per liter

PCBs = Polychlorinated biphenyls

UG/L = microgram per liter

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

-- = not applicable

1 = Does not includes duplicate samples. However, analytical results for duplicate samples are included in the Minimum and Maximum Detected Concentration columns.

2 = Development of screening levels presented in Table 5-4.

Table 5-9
Summary of Chemical Constituents in Sludge Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
	INORGANICS (MG/KG)														
7429-90-5	Aluminum, Total	3	3	680	6900	22-Feb-2007	WFF1-SL03	0	2	29	240	7700	0	99000	0
7440-36-0	Antimony, Total	3	2	12	20	22-Feb-2007	WFF1-SL02	0	2	2.9	24	3.1	2	41	0
7440-38-2	Arsenic, Total	3	2	2.6	3.2	22-Feb-2007	WFF1-SL03	0	2	1.4	12	0.39	2	1.6	2
7440-39-3	Barium, Total	3	3	130	270	22-Feb-2007	WFF1-SL02 / WFF1-SL03	0	2	1.4	12	1500	0	19000	0
7440-41-7	Beryllium, Total	3	2	0.36	0.46	22-Feb-2007	WFF1-SL03	0	2	0.57	4.8	16	0	200	0
7440-43-9	Cadmium, Total	3	2	2.2	3.7	22-Feb-2007	WFF1-SL03	0	2	0.72	6	7	0	80	0
7440-70-2	Calcium, Total	3	3	3900	13000	23-Feb-2007	WFF1-SL01	0	2	72	600	--	--	--	--
7440-47-3	Chromium, Total	3	2	36	65	22-Feb-2007	WFF1-SL02	0	2	1.4	12	280	0	1400	0
7440-48-4	Cobalt, Total	3	2	2	2.6	22-Feb-2007	WFF1-SL03	0	2	1.4	12	2.3	1	30	0
7440-50-8	Copper, Total	3	3	11	180	22-Feb-2007	WFF1-SL02 / WFF1-SL03	0	2	2.9	24	310	0	4100	0
57-12-5	Cyanide, Total	3	2	1.5	1.5	22-Feb-2007	WFF1-SL02 / WFF1-SL03	0	2	0.78	6.4	160	0	2000	0
7439-89-6	Iron, Total	3	3	12000	15000	23-Feb-2007	WFF1-SL01	0	2	7.2	60	5500	3	72000	0
7439-92-1	Lead, Total	3	3	130	530	22-Feb-2007	WFF1-SL02	0	2	0.72	6	400	1	800	0
7439-95-4	Magnesium, Total	3	3	730	950	22-Feb-2007	WFF1-SL03	0	2	72	600	--	--	--	--
7439-96-5	Manganese, Total	3	3	160	270	23-Feb-2007	WFF1-SL01	0	2	1.4	12	180	2	2300	0
7439-97-6	Mercury, Total	3	3	0.17	28	22-Feb-2007	WFF1-SL03	0	2	0.25	3.3	0.43	2	2.4	2
7440-02-0	Nickel, Total	3	3	4	8.9	22-Feb-2007	WFF1-SL03	0	2	5.7	48	15	0	2000	0
7440-09-7	Potassium, Total	3	3	640	1300	23-Feb-2007	WFF1-SL01	0	2	140	1200	--	--	--	--
7782-49-2	Selenium, Total	3	0	--	--	--	--	--	--	3.6	30	--	--	--	--
7440-22-4	Silver, Total	3	2	110	130	22-Feb-2007	WFF1-SL02	0	2	1.4	12	39	2	510	0
7440-23-5	Sodium, Total	3	3	130	680	23-Feb-2007	WFF1-SL01	0	2	140	1200	--	--	--	--
7440-28-0	Thallium, Total	3	0	--	--	--	--	--	--	3.6	30	--	--	--	--
7440-62-2	Vanadium, Total	3	3	7.2	18	22-Feb-2007	WFF1-SL03	0	2	1.4	12	55	0	720	0
7440-66-6	Zinc, Total	3	3	420	680	23-Feb-2007	WFF1-SL01	0	2	2.9	24	2300	0	31000	0
	PESTICIDES (UG/KG)														
72-54-8	4,4'-DDD	3	3	110	1200	22-Feb-2007	WFF1-SL03	0	2	26	440	2000	0	7200	0
72-55-9	4,4'-DDE	3	3	67	1400	22-Feb-2007	WFF1-SL02	0	2	210	440	1400	0	5100	0
50-29-3	4,4'-DDT	3	3	110	1100	22-Feb-2007	WFF1-SL03	0	2	210	440	1700	0	7000	0
309-00-2	Aldrin	3	0	--	--	--	--	--	--	11	220	--	--	--	--
319-84-6	alpha-BHC	3	0	--	--	--	--	--	--	11	220	--	--	--	--
319-85-7	beta-BHC	3	0	--	--	--	--	--	--	11	220	--	--	--	--
57-74-9	Chlordane (technical)	3	0	--	--	--	--	--	--	110	2200	--	--	--	--
319-86-8	delta-BHC	3	0	--	--	--	--	--	--	11	220	--	--	--	--
60-57-1	Dieldrin	3	2	5.6	9.9	22-Feb-2007	WFF1-SL02	0	2	21	440	30	0	110	0
959-98-8	Endosulfan I	3	0	--	--	--	--	--	--	11	220	--	--	--	--
33213-65-9	Endosulfan II	3	0	--	--	--	--	--	--	21	440	--	--	--	--
1031-07-8	Endosulfan Sulfate	3	0	--	--	--	--	--	--	21	440	--	--	--	--
72-20-8	Endrin	3	0	--	--	--	--	--	--	21	440	--	--	--	--
7421-93-4	Endrin Aldehyde	3	0	--	--	--	--	--	--	21	440	--	--	--	--
53494-70-5	Endrin Ketone	3	0	--	--	--	--	--	--	21	440	--	--	--	--
58-89-9	gamma-BHC (Lindane)	3	0	--	--	--	--	--	--	11	220	--	--	--	--

Table 5-9
Summary of Chemical Constituents in Sludge Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
76-44-8	Heptachlor	3	0	--	--	--	--	--	--	11	220	--	--	--	--
1024-57-3	Heptachlor epoxide	3	0	--	--	--	--	--	--	11	220	--	--	--	--
72-43-5	Methoxychlor	3	0	--	--	--	--	--	--	110	2200	--	--	--	--
8001-35-2	Toxaphene	3	0	--	--	--	--	--	--	1100	22000	--	--	--	--
	PCBs (UG/KG)														
12674-11-2	PCB-1016	3	0	--	--	--	--	--	--	210	4400	--	--	--	--
11104-28-2	PCB-1221	3	0	--	--	--	--	--	--	440	8900	--	--	--	--
11141-16-5	PCB-1232	3	0	--	--	--	--	--	--	210	4400	--	--	--	--
53469-21-9	PCB-1242	3	0	--	--	--	--	--	--	210	4400	--	--	--	--
12672-29-6	PCB-1248	3	0	--	--	--	--	--	--	210	4400	--	--	--	--
11097-69-1	PCB-1254	3	0	--	--	--	--	--	--	210	4400	--	--	--	--
11096-82-5	PCB-1260	3	0	--	--	--	--	--	--	210	4400	--	--	--	--
	SVOCs (UG/KG)														
120-82-1	1,2,4-Trichlorobenzene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
95-50-1	1,2-Dichlorobenzene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
541-73-1	1,3-Dichlorobenzene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
106-46-7	1,4-Dichlorobenzene	3	2	84	84	22-Feb-2007	WFF1-SL02 / WFF1-SL03	0	2	520	4400	2600	0	13000	0
95-95-4	2,4,5-Trichlorophenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
88-06-2	2,4,6-Trichlorophenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
120-83-2	2,4-Dichlorophenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
105-67-9	2,4-Dimethylphenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
51-28-5	2,4-Dinitrophenol	3	0	--	--	--	--	--	--	2700	23000	--	--	--	--
121-14-2	2,4-Dinitrotoluene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
606-20-2	2,6-Dinitrotoluene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
91-58-7	2-Chloronaphthalene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
95-57-8	2-Chlorophenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
91-57-6	2-Methylnaphthalene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
95-48-7	2-Methylphenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
88-74-4	2-Nitroaniline	3	0	--	--	--	--	--	--	2700	23000	--	--	--	--
88-75-5	2-Nitrophenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
106-44-5	3 & 4 Methylphenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
91-94-1	3,3'-Dichlorobenzidine	3	0	--	--	--	--	--	--	1000	8800	--	--	--	--
99-09-2	3-Nitroaniline	3	0	--	--	--	--	--	--	2700	23000	--	--	--	--
534-52-1	4,6-Dinitro-2-methylphenol	3	0	--	--	--	--	--	--	2700	23000	--	--	--	--
101-55-3	4-Bromophenyl phenyl ether	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
59-50-7	4-Chloro-3-methylphenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
106-47-8	4-Chloroaniline	3	0	--	--	--	--	--	--	1000	8800	--	--	--	--
7005-72-3	4-Chlorophenyl phenyl ether	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
100-01-6	4-Nitroaniline	3	0	--	--	--	--	--	--	2700	23000	--	--	--	--
100-02-7	4-Nitrophenol	3	0	--	--	--	--	--	--	2700	23000	--	--	--	--
83-32-9	Acenaphthene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
208-96-8	Acenaphthylene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
120-12-7	Anthracene	3	3	64	630	23-Feb-2007	WFF1-SL01	0	2	520	4400	1700000	0	17000000	0
56-55-3	Benzo[a]anthracene	3	3	290	2100	23-Feb-2007	WFF1-SL01	0	2	520	4400	150	3	2100	0

Table 5-9
Summary of Chemical Constituents in Sludge Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
50-32-8	Benzo[a]pyrene	3	3	290	910	23-Feb-2007	WFF1-SL01	0	2	520	4400	15	3	210	3
205-99-2	Benzo[b]fluoranthene	3	3	550	4800	23-Feb-2007	WFF1-SL01	0	2	520	4400	150	3	2100	1
191-24-2	Benzo[g,h,i]perylene	3	3	270	1200	23-Feb-2007	WFF1-SL01	0	2	520	4400	170000	0	170000	0
207-08-9	Benzo[k]fluoranthene	3	3	290	2400	23-Feb-2007	WFF1-SL01	0	2	520	4400	1500	1	21000	0
111-91-1	Bis(2-chloroethoxy)methane	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
111-44-4	Bis(2-chloroethyl)ether	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
117-81-7	Bis(2-ethylhexyl) phthalate	3	1	79	79	22-Feb-2007	WFF1-SL02	0	2	520	4400	35000	0	120000	0
108-60-1	bis(chloroisopropyl) ether	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
85-68-7	Butyl benzyl phthalate	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
86-74-8	Carbazole	3	1	53	53	22-Feb-2007	WFF1-SL02	0	2	520	4400	--	--	--	--
218-01-9	Chrysene	3	3	480	4700	23-Feb-2007	WFF1-SL01	0	2	520	4400	15000	0	210000	0
53-70-3	Dibenz(a,h)anthracene	3	1	76	76	22-Feb-2007	WFF1-SL03	0	2	520	4400	15	1	210	0
132-64-9	Dibenzofuran	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
84-66-2	Diethyl phthalate	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
131-11-3	Dimethyl phthalate	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
84-74-2	Di-n-butyl phthalate	3	2	89	110	22-Feb-2007	WFF1-SL02	0	2	520	4400	610000	0	6200000	0
117-84-0	Di-n-octyl phthalate	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
206-44-0	Fluoranthene	3	3	410	9000	23-Feb-2007	WFF1-SL01	0	2	520	4400	230000	0	2200000	0
86-73-7	Fluorene	3	1	360	360	23-Feb-2007	WFF1-SL01	0	2	520	4400	230000	0	2200000	0
118-74-1	Hexachlorobenzene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
87-68-3	Hexachlorobutadiene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
77-47-4	Hexachlorocyclopentadiene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
67-72-1	Hexachloroethane	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
193-39-5	Indeno[1,2,3-cd]pyrene	3	3	230	1400	23-Feb-2007	WFF1-SL01	0	2	520	4400	150	3	2100	0
78-59-1	Isophorone	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
91-20-3	Naphthalene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
98-95-3	Nitrobenzene	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
621-64-7	N-Nitrosodi-n-propylamine	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
86-30-6	N-Nitrosodiphenylamine	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
87-86-5	Pentachlorophenol	3	0	--	--	--	--	--	--	2700	23000	--	--	--	--
85-01-8	Phenanthrene	3	3	170	3000	23-Feb-2007	WFF1-SL01	0	2	520	4400	170000	0	170000	0
108-95-2	Phenol	3	0	--	--	--	--	--	--	520	4400	--	--	--	--
129-00-0	Pyrene	3	3	360	6300	23-Feb-2007	WFF1-SL01	0	2	520	4400	170000	0	1700000	0
	VOCs (UG/KG)														
71-55-6	1,1,1-Trichloroethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
79-34-5	1,1,2,2-Tetrachloroethane	3	1	29	29	23-Feb-2007	WFF1-SL01	0	2	9.5	71	590	0	2900	0
79-00-5	1,1,2-Trichloroethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
75-34-3	1,1-Dichloroethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
75-35-4	1,1-Dichloroethene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
107-06-2	1,2-Dichloroethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
78-87-5	1,2-Dichloropropane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
591-78-6	2-Hexanone	3	1	130	130	23-Feb-2007	WFF1-SL01	0	2	47	360	--	--	--	--
67-64-1	Acetone	3	3	55	740	22-Feb-2007	WFF1-SL02	0	2	110	710	6100000	0	61000000	0
71-43-2	Benzene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
75-25-2	Bromoform	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--

Table 5-9
Summary of Chemical Constituents in Sludge Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Minimum Detection Limit	Maximum Detection Limit	Residential Direct Contact Screening Level[2]	No. Samples Exceeding Res. Screening Level	Industrial Direct Contact Screening Level[2]	No. Samples Exceeding Ind. Screening Level
74-83-9	Bromomethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
75-15-0	Carbon disulfide	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
56-23-5	Carbon tetrachloride	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
108-90-7	Chlorobenzene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
124-48-1	Chlorodibromomethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
75-00-3	Chloroethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
67-66-3	Chloroform	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
74-87-3	Chloromethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
156-59-2	cis-1,2-Dichloroethene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
10061-01-5	cis-1,3-Dichloropropene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
75-27-4	Dichlorobromomethane	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
100-41-4	Ethylbenzene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
78-93-3	Methyl Ethyl Ketone	3	2	77	210	23-Feb-2007	WFF1-SL01	0	2	55	360	2800000	0	19000000	0
108-10-1	Methyl isobutyl ketone	3	1	91	91	23-Feb-2007	WFF1-SL01	0	2	47	360	530000	0	5200000	0
75-09-2	Methylene Chloride	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
100-42-5	Styrene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
127-18-4	Tetrachloroethene	3	1	5.1	5.1	22-Feb-2007	WFF1-SL02	0	2	11	71	570	0	2700	0
108-88-3	Toluene	3	2	6.2	1200	23-Feb-2007	WFF1-SL01	0	2	11	71	500000	0	4600000	0
156-60-5	trans-1,2-Dichloroethene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
10061-02-6	trans-1,3-Dichloropropene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
79-01-6	Trichloroethene	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
75-01-4	Vinyl chloride	3	0	--	--	--	--	--	--	9.5	71	--	--	--	--
1330-20-7	Xylenes, Total	3	0	--	--	--	--	--	--	19	140	--	--	--	--

Notes:

CAS = Chemical Abstracts Service

MG/KG = milligram per kilogram

PCBs = Polychlorinated biphenyls

UG/KG = microgram per kilogram

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

-- = not applicable

1 = Does not includes duplicate samples. However, analytical results for duplicate samples are included in the Minimum and Maximum Detected Concentration columns.

2 = Development of screening levels presented in Table 5-1.

Table 5-10
Summary of Chemical Constituents in Wastewater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
	INORGANICS (MG/L)								
7429-90-5	Aluminum, Total	1	1	0.24	21-Feb-2007	WFF1-WW01	0.2	0.087	1
7440-36-0	Antimony, Total	1	0	--	--	--	0.02	--	--
7440-38-2	Arsenic, Total	1	0	--	--	--	0.01	--	--
7440-39-3	Barium, Total	1	1	0.1	21-Feb-2007	WFF1-WW01	0.01	0.004	1
7440-41-7	Beryllium, Total	1	0	--	--	--	0.004	--	--
7440-43-9	Cadmium, Total	1	0	--	--	--	0.005	--	--
7440-70-2	Calcium, Total	1	1	27	21-Feb-2007	WFF1-WW01	0.5	116	0
7440-47-3	Chromium, Total	1	0	--	--	--	0.01	--	--
7440-48-4	Cobalt, Total	1	0	--	--	--	0.01	--	--
7440-50-8	Copper, Total	1	1	0.0044	21-Feb-2007	WFF1-WW01	0.02	0.009	0
57-12-5	Cyanide, Total	1	0	--	--	--	0.01	--	--
7439-89-6	Iron, Total	1	1	15	21-Feb-2007	WFF1-WW01	0.05	0.3	1
7439-92-1	Lead, Total	1	1	0.029	21-Feb-2007	WFF1-WW01	0.005	0.0025	1
7439-95-4	Magnesium, Total	1	1	2.8	21-Feb-2007	WFF1-WW01	0.5	82	0
7439-96-5	Manganese, Total	1	1	0.17	21-Feb-2007	WFF1-WW01	0.01	0.12	1
7439-97-6	Mercury, Total	1	0	--	--	--	0.0002	--	--
7440-02-0	Nickel, Total	1	0	--	--	--	0.04	--	--
7440-09-7	Potassium, Total	1	1	10	21-Feb-2007	WFF1-WW01	1	53	0
7782-49-2	Selenium, Total	1	0	--	--	--	0.01	--	--
7440-22-4	Silver, Total	1	0	--	--	--	0.01	--	--
7440-23-5	Sodium, Total	1	1	8.8	21-Feb-2007	WFF1-WW01	1	680	
7440-28-0	Thallium, Total	1	0	--	--	--	0.025	--	--
7440-62-2	Vanadium, Total	1	1	0.0018	21-Feb-2007	WFF1-WW01	0.01	0.02	0
7440-66-6	Zinc, Total	1	1	0.098	21-Feb-2007	WFF1-WW01	0.02	0.12	0
	PESTICIDES (UG/L)								
72-54-8	4,4'-DDD	1	0	--	--	--	0.098	--	--
72-55-9	4,4'-DDE	1	0	--	--	--	0.098	--	--
50-29-3	4,4'-DDT	1	0	--	--	--	0.098	--	--
309-00-2	Aldrin	1	0	--	--	--	0.049	--	--
319-84-6	alpha-BHC	1	0	--	--	--	0.049	--	--
319-85-7	beta-BHC	1	0	--	--	--	0.049	--	--
57-74-9	Chlordane (technical)	1	0	--	--	--	0.49	--	--
319-86-8	delta-BHC	1	0	--	--	--	0.049	--	--
60-57-1	Dieldrin	1	0	--	--	--	0.098	--	--
959-98-8	Endosulfan I	1	0	--	--	--	0.049	--	--
33213-65-9	Endosulfan II	1	0	--	--	--	0.098	--	--
1031-07-8	Endosulfan Sulfate	1	0	--	--	--	0.098	--	--
72-20-8	Endrin	1	0	--	--	--	0.098	--	--
7421-93-4	Endrin Aldehyde	1	0	--	--	--	0.098	--	--
53494-70-5	Endrin Ketone	1	0	--	--	--	0.098	--	--

Table 5-10
Summary of Chemical Constituents in Wastewater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
58-89-9	gamma-BHC (Lindane)	1	0	--	--	--	0.049	--	--
76-44-8	Heptachlor	1	0	--	--	--	0.049	--	--
1024-57-3	Heptachlor epoxide	1	0	--	--	--	0.049	--	--
72-43-5	Methoxychlor	1	0	--	--	--	0.49	--	--
8001-35-2	Toxaphene	1	0	--	--	--	4.9	--	--
	PCBs (UG/L)								
12674-11-2	PCB-1016	1	0	--	--	--	0.98	--	--
11104-28-2	PCB-1221	1	0	--	--	--	2	--	--
11141-16-5	PCB-1232	1	0	--	--	--	0.98	--	--
53469-21-9	PCB-1242	1	0	--	--	--	0.98	--	--
12672-29-6	PCB-1248	1	0	--	--	--	0.98	--	--
11097-69-1	PCB-1254	1	0	--	--	--	0.98	--	--
11096-82-5	PCB-1260	1	0	--	--	--	0.98	--	--
	SVOCs (UG/L)								
120-82-1	1,2,4-Trichlorobenzene	1	0	--	--	--	9.8	--	--
95-50-1	1,2-Dichlorobenzene	1	0	--	--	--	9.8	--	--
541-73-1	1,3-Dichlorobenzene	1	0	--	--	--	9.8	--	--
106-46-7	1,4-Dichlorobenzene	1	0	--	--	--	9.8	--	--
95-95-4	2,4,5-Trichlorophenol	1	0	--	--	--	9.8	--	--
88-06-2	2,4,6-Trichlorophenol	1	0	--	--	--	9.8	--	--
120-83-2	2,4-Dichlorophenol	1	0	--	--	--	9.8	--	--
105-67-9	2,4-Dimethylphenol	1	0	--	--	--	9.8	--	--
51-28-5	2,4-Dinitrophenol	1	0	--	--	--	49	--	--
121-14-2	2,4-Dinitrotoluene	1	0	--	--	--	9.8	--	--
606-20-2	2,6-Dinitrotoluene	1	0	--	--	--	9.8	--	--
91-58-7	2-Chloronaphthalene	1	0	--	--	--	9.8	--	--
95-57-8	2-Chlorophenol	1	0	--	--	--	9.8	--	--
91-57-6	2-Methylnaphthalene	1	0	--	--	--	9.8	--	--
95-48-7	2-Methylphenol	1	0	--	--	--	9.8	--	--
88-74-4	2-Nitroaniline	1	0	--	--	--	49	--	--
88-75-5	2-Nitrophenol	1	0	--	--	--	9.8	--	--
106-44-5	3 & 4 Methylphenol	1	0	--	--	--	9.8	--	--
91-94-1	3,3'-Dichlorobenzidine	1	0	--	--	--	20	--	--
99-09-2	3-Nitroaniline	1	0	--	--	--	49	--	--
534-52-1	4,6-Dinitro-2-methylphenol	1	0	--	--	--	49	--	--
101-55-3	4-Bromophenyl phenyl ether	1	0	--	--	--	9.8	--	--
59-50-7	4-Chloro-3-methylphenol	1	0	--	--	--	9.8	--	--
106-47-8	4-Chloroaniline	1	0	--	--	--	20	--	--
7005-72-3	4-Chlorophenyl phenyl ether	1	0	--	--	--	9.8	--	--
100-01-6	4-Nitroaniline	1	0	--	--	--	49	--	--
100-02-7	4-Nitrophenol	1	0	--	--	--	49	--	--

Table 5-10
Summary of Chemical Constituents in Wastewater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
83-32-9	Acenaphthene	1	0	--	--	--	9.8	--	--
208-96-8	Acenaphthylene	1	0	--	--	--	9.8	--	--
120-12-7	Anthracene	1	0	--	--	--	9.8	--	--
56-55-3	Benzo[a]anthracene	1	0	--	--	--	9.8	--	--
50-32-8	Benzo[a]pyrene	1	0	--	--	--	9.8	--	--
205-99-2	Benzo[b]fluoranthene	1	0	--	--	--	9.8	--	--
191-24-2	Benzo[g,h,i]perylene	1	0	--	--	--	9.8	--	--
207-08-9	Benzo[k]fluoranthene	1	0	--	--	--	9.8	--	--
111-91-1	Bis(2-chloroethoxy)methane	1	0	--	--	--	9.8	--	--
111-44-4	Bis(2-chloroethyl)ether	1	0	--	--	--	9.8	--	--
117-81-7	Bis(2-ethylhexyl) phthalate	1	0	--	--	--	9.8	--	--
108-60-1	bis(chloroisopropyl) ether	1	0	--	--	--	9.8	--	--
85-68-7	Butyl benzyl phthalate	1	0	--	--	--	9.8	--	--
86-74-8	Carbazole	1	0	--	--	--	9.8	--	--
218-01-9	Chrysene	1	0	--	--	--	9.8	--	--
53-70-3	Dibenz(a,h)anthracene	1	0	--	--	--	9.8	--	--
132-64-9	Dibenzofuran	1	0	--	--	--	9.8	--	--
84-66-2	Diethyl phthalate	1	0	--	--	--	9.8	--	--
131-11-3	Dimethyl phthalate	1	0	--	--	--	9.8	--	--
84-74-2	Di-n-butyl phthalate	1	0	--	--	--	9.8	--	--
117-84-0	Di-n-octyl phthalate	1	0	--	--	--	9.8	--	--
206-44-0	Fluoranthene	1	1	1.5	21-Feb-2007	WFF1-WW01	9.8	0.04	1
86-73-7	Fluorene	1	0	--	--	--	9.8	--	--
118-74-1	Hexachlorobenzene	1	0	--	--	--	9.8	--	--
87-68-3	Hexachlorobutadiene	1	0	--	--	--	9.8	--	--
77-47-4	Hexachlorocyclopentadiene	1	0	--	--	--	9.8	--	--
67-72-1	Hexachloroethane	1	0	--	--	--	9.8	--	--
193-39-5	Indeno[1,2,3-cd]pyrene	1	0	--	--	--	9.8	--	--
78-59-1	Isophorone	1	0	--	--	--	9.8	--	--
91-20-3	Naphthalene	1	0	--	--	--	9.8	--	--
98-95-3	Nitrobenzene	1	0	--	--	--	9.8	--	--
621-64-7	N-Nitrosodi-n-propylamine	1	0	--	--	--	9.8	--	--
86-30-6	N-Nitrosodiphenylamine	1	0	--	--	--	9.8	--	--
87-86-5	Pentachlorophenol	1	0	--	--	--	49	--	--
85-01-8	Phenanthrene	1	1	0.91	21-Feb-2007	WFF1-WW01	9.8	0.4	1
108-95-2	Phenol	1	0	--	--	--	9.8	--	--
129-00-0	Pyrene	1	1	1.2	21-Feb-2007	WFF1-WW01	9.8	0.025	1
	VOCs (UG/L)								
71-55-6	1,1,1-Trichloroethane	1	0	--	--	--	1	--	--
79-34-5	1,1,2,2-Tetrachloroethane	1	0	--	--	--	1	--	--
79-00-5	1,1,2-Trichloroethane	1	0	--	--	--	1	--	--

Table 5-10
Summary of Chemical Constituents in Wastewater Samples
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Detected Concentration	Sample Date of Maximum	Sample ID of Maximum	Detection Limit	Surface Water Screening Level[2]	No. Samples Exceeding Screening Level
75-34-3	1,1-Dichloroethane	1	0	--	--	--	1	--	--
75-35-4	1,1-Dichloroethene	1	0	--	--	--	1	--	--
107-06-2	1,2-Dichloroethane	1	0	--	--	--	1	--	--
78-87-5	1,2-Dichloropropane	1	0	--	--	--	1	--	--
591-78-6	2-Hexanone	1	0	--	--	--	10	--	--
67-64-1	Acetone	1	1	8.9	21-Feb-2007	WFF1-WW01	25	1500	0
71-43-2	Benzene	1	0	--	--	--	1	--	--
75-25-2	Bromoform	1	0	--	--	--	1	--	--
74-83-9	Bromomethane	1	0	--	--	--	1	--	--
75-15-0	Carbon disulfide	1	0	--	--	--	2	--	--
56-23-5	Carbon tetrachloride	1	0	--	--	--	1	--	--
108-90-7	Chlorobenzene	1	0	--	--	--	1	--	--
124-48-1	Chlorodibromomethane	1	0	--	--	--	1	--	--
75-00-3	Chloroethane	1	0	--	--	--	1	--	--
67-66-3	Chloroform	1	0	--	--	--	1	--	--
74-87-3	Chloromethane	1	0	--	--	--	1	--	--
156-59-2	cis-1,2-Dichloroethene	1	0	--	--	--	1	--	--
10061-01-5	cis-1,3-Dichloropropene	1	0	--	--	--	1	--	--
75-27-4	Dichlorobromomethane	1	0	--	--	--	1	--	--
100-41-4	Ethylbenzene	1	0	--	--	--	1	--	--
78-93-3	Methyl Ethyl Ketone	1	1	3.8	21-Feb-2007	WFF1-WW01	10	14000	0
108-10-1	Methyl isobutyl ketone	1	0	--	--	--	10	--	--
75-09-2	Methylene Chloride	1	0	--	--	--	5	--	--
100-42-5	Styrene	1	0	--	--	--	1	--	--
127-18-4	Tetrachloroethene	1	0	--	--	--	1	--	--
108-88-3	Toluene	1	0	--	--	--	1	--	--
156-60-5	trans-1,2-Dichloroethene	1	0	--	--	--	1	--	--
10061-02-6	trans-1,3-Dichloropropene	1	0	--	--	--	1	--	--
79-01-6	Trichloroethene	1	0	--	--	--	1	--	--
75-01-4	Vinyl chloride	1	0	--	--	--	1	--	--
1330-20-7	Xylenes, Total	1	0	--	--	--	2	--	--

Notes:

CAS = Chemical Abstracts Service

MG/L = milligram per liter

PCBs = Polychlorinated biphenyls

UG/L = microgram per liter

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

-- = not applicable

1 = Does not includes duplicate samples. However, analytical results for duplicate samples are included in the Detected Concentration column.

2 = Development of screening levels presented in Table 5-3.

SECTION 6
TABLES

Table 6-1
Physical and Chemical Properties of Contaminants of Potential Concern
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

COPC	Media	Molecular Weight (g/mol)	Henry's Law Constant		Density (g/cm^3)	Diffusivity in Air (cm^2/s)	Diffusivity in Water (cm^2/s)	Organic Carbon Partition Coefficient (K_{oc}) (L/kg)	Water Solubility (mg/L)
			H' (unitless)	HLC (atm-m^3/mol)					
METALS									
Aluminum	Soil; Wastewater; Surface Water	30.01	NA	NA	2.7	NA	NA	NA	Insoluble
Antimony	Soil; Sludge	124.78	NA	NA	6.68	NA	NA	NA	Insoluble
Arsenic	Soil; Sludge; Sediment; Groundwater	74.922	NA	NA	5.75	NA	NA	NA	Insoluble
Barium	Wastewater; Surface Water	137.33	NA	NA	3.62	NA	NA	NA	Insoluble
Cobalt	Soil; Sludge	58.93	NA	NA	8.86	NA	NA	NA	Insoluble
Iron	Soil; Sludge; Wastewater; Surface Water	55.85	NA	NA	7.87	NA	NA	NA	Insoluble
Lead	Soil; Sludge; Wastewater	207.2	NA	NA	11.3	NA	NA	NA	Insoluble
Manganese	Soil; Sludge; Wastewater; Groundwater; Surface Water	54.94	NA	NA	7.3	NA	NA	NA	Insoluble
Mercury	Sludge	200.59	4.70E-01	NA	13.5336	7.10E-02	3.00E-05	NA	6.00E-02
Silver	Sludge	107.87	NA	NA	10.5	NA	NA	NA	Insoluble
PCBs									
Aroclor-1260	Soil	395.33	1.40E-02	3.36E-04	NA	NA	NA	2.07E+05	2.84E-04
SVOCs									
Benzo(a)anthracene	Sludge	228.3	4.90E-04	1.20E-05	NA	NA	NA	2.31E+05	9.40E-03
Benzo(a)pyrene	Soil; Sludge	252.32	1.90E-05	4.57E-07	NA	NA	NA	7.87E+05	1.62E-03
Benzo(b)fluoranthene	Sludge	252.32	2.70E-05	6.57E-07	NA	NA	NA	8.03E+05	1.50E-03
Benzo(k)fluoranthene	Sludge	252.32	2.40E-05	5.84E-07	NA	NA	NA	7.87E+05	8.00E-04
Dibenzo(a,h)anthracene	Soil; Sludge	278.36	5.00E-06	1.23E-07	NA	NA	NA	2.62E+06	1.03E-03
Fluoranthene	Wastewater	202.26	3.60E-04	8.86E-06	1.252	NA	NA	7.09E+04	2.60E-01
Indeno(1,2,3-cd)pyrene	Sludge	276.34	1.40E-05	3.48E-07	NA	NA	NA	2.68E+06	1.90E-04
Phenanthrene[1]	Wastewater	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	Wastewater	202.26	4.90E-04	1.19E-05	1.271	2.80E-02	7.20E-06	6.94E+04	1.35E-01
VOCs									
Tetrachloroethene	Groundwater	165.83	7.20E-01	1.77E-02	1.623	5.00E-02	9.50E-06	1.07E+02	2.06E+02

Notes:

1 - Pyrene can be used as a surrogate chemical for properties for phenanthrene.

cm^2/s = square centimeters per second

g/cm^3 = grams per cubic centimeter

g/mol = grams per mole

L/kg = liters per kilogram

m^3/mole = cubic meters per mole

mg/L= milligram per liter

PCB = polychlorinated biphenyl

SVOC = semivolatile organic compound

VOC = volatile organic compound

SECTION 7
TABLES

Table 7-1
Risk Summary
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Exposure Scenario by Exposure Subunit	Medium	Site Health Effects			
		ILCR	Percent of Total Site Risk[a]	HI	Percent of Total Site Risk[a]
Current/Future Older Child Trespasser (See Appendix D Tables D-28 & D-34)[b]					
Ingestion	SS	4E-08	4 (22)	0.002	12 (28)
Dermal Contact	SS	1E-07	15 (78)	0.005	31 (71)
Inhalation	SS	5E-14	0.00001 (0.00003)	0.00006	0.4 (1)
Soil Subtotal		***2E-07***		***0.007***	
Ingestion	SL	7E-08	8 (10)	0.01	38 (9)
Dermal Contact	SL	6E-07	72 (90)	0.06	369 (91)
Sludge Subtotal		***7E-07***		***0.06***	
Dermal Contact	WW	---	--- ---	0.002	10 (100)
Waste Water Subtotal		---		***0.06***	
Ingestion	SD	NC	--- ---	NC	--- ---
Dermal Contact	SD	NC	--- ---	NC	--- ---
Sediment Subtotal		---		---	
Ingestion	SW	---	--- ---	0.006	38 (68)
Dermal Contact	SW	---	--- ---	0.003	18 (32)
Surface Water Subtotal		---		***0.008***	
Site Total	SS+SL+WW+SD+SW	**9E-07**		**0.02**	
Future Commercial/Industrial Worker (See Appendix D Tables D-29 & D-35)[b]					
Ingestion	SS/SB	2E-06	21 (77)	0.03	8 (80)
Dermal Contact	SS/SB	5E-07	6 (23)	0.007	2 (17)
Inhalation	SS/SB	2E-12	0.00003 (0.0001)	0.001	0.3 (3)
Soil Subtotal		***2E-06***		***0.04***	
Ingestion	SL	3E-06	42 (58)	0.1	25 (56)
Dermal Contact	SL	2E-06	30 (42)	0.08	20 (44)
Sludge Subtotal		***5E-06***		***0.2***	
Dermal Contact	WW	---	--- ---	0.001	0.2 (100)
Waste Water Subtotal		---		***0.2***	
Site Total	SS/SB+SL+WW	**8E-06**		**0.4**	
Future Construction Worker (See Appendix D Tables D-30 & D-36)[b]					
Ingestion	SS/SB	2E-07	25 (88)	0.1	10 (91)
Dermal Contact	SS/SB	3E-08	3 (12)	0.009	0.9 (8)
Inhalation	SS/SB	5E-14	0.00001 (0.00002)	0.0006	0.06 (1)
Soil Subtotal		***2E-07***		***0.1***	
Ingestion	SL	4E-07	48 (76)	0.3	32 (74)
Dermal Contact	SL	1E-07	15 (24)	0.1	11 (26)
Sludge Subtotal		***5E-07***		***0.4***	
Dermal Contact	WW	---	--- ---	0.002	0.2 (100)
Waste Water Subtotal		---		***0.4***	
Dermal Contact	GW	7E-08	--- ---	0.01	1 (100)
Groundwater Subtotal		***7E-08***		***0.01***	
Site Total	SS/SB+SL+WW+GW	**8E-07**		**1**	

Table 7-1
Risk Summary
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Exposure Scenario by Exposure Subunit	Medium	Site Health Effects			
		ILCR	Percent of Total Site Risk[a]	HI	Percent of Total Site Risk[a]
Future Age-adjusted Resident (See Appendix D Tables D-31 & D-37)[b]					
Ingestion	SS/SB	1E-05	4 (88)		
Dermal Contact	SS/SB	2E-06	0.5 (12)		
Inhalation	SS/SB	1E-11	0.000003 (0.00007)		
Soil Subtotal		***2E-05***			
Ingestion	GW	4E-04	90 (94)		
Dermal Contact	GW	2E-05	5 (6)		
Inhalation	GW	3E-07	0.07 (0.08)		
Groundwater Subtotal		***4E-04***			
Ingestion	SD	NC	--- ---		
Dermal Contact	SD	NC	--- ---		
Sediment Subtotal		---			
Ingestion	SW	---	--- ---		
Dermal Contact	SW	---	--- ---		
Surface Water Subtotal		---			
Site Total	SS/SB+GW+SD+SW	**4E-04**			
Future Adult Resident (See Appendix D Tables D-32 & D-38)[b]					
Ingestion	SS/SB	4E-06	2 (85)	0.09	3 (85)
Dermal Contact	SS/SB	8E-07	0.3 (15)	0.01	0.4 (10)
Inhalation	SS/SB	1E-08	0.004 (0.2)	0.005	0.2 (5)
Soil Subtotal		***5E-06***		***0.1***	
Ingestion	GW	2E-04	92 (94)	3	93 (97)
Dermal Contact	GW	1E-05	6 (6)	0.08	3 (3)
Inhalation	GW	2E-07	0.08 (0.08)	0.0004	0.01 (0.01)
Groundwater Subtotal		***2E-04***		***3***	
Ingestion	SD	NC	--- ---	NC	--- ---
Dermal Contact	SD	NC	--- ---	NC	--- ---
Sediment Subtotal		---		---	
Ingestion	SW	---	--- ---	0.003	0.1 (56)
Dermal Contact	SW	---	--- ---	0.003	0.09 (44)
Surface Water Subtotal		---		***0.006***	
Site Total	SS/SB+GW+SD+SW	**3E-04**		**3**	
Future Child Resident (See Appendix D Tables D-33 & D-39)[b]					
Ingestion	SS/SB			0.9	11 (92)
Dermal Contact	SS/SB			0.07	1 (8)
Inhalation	SS/SB			0.005	0.07 (1)
Soil Subtotal				***0.9***	
Ingestion	GW			6	85 (97)
Dermal Contact	GW			0.2	3 (3)
Inhalation	GW			0.0007	0.01 (0.01)
Groundwater Subtotal				***7***	
Ingestion	SD			NC	--- ---
Dermal Contact	SD			NC	--- ---
Sediment Subtotal				---	
Ingestion	SW			0.016	0.2 (72)
Dermal Contact	SW			0.006	0.08 (28)
Surface Water Subtotal				***0.02***	

Table 7-1
Risk Summary
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Exposure Scenario by Exposure Subunit	Medium	Site Health Effects			
		ILCR	Percent of Total Site Risk[a]	HI	Percent of Total Site Risk[a]
Site Total	SS/SB+GW+SD+SW			**8**	

Note: Shaded areas equal site ILCR greater than 1E-04 or HI greater than 1

[a] Numbers in parenthesis represent percent of medium risk.

[b] These tables represent the RAGS Part D format 7 and 9, respectively.

GW = Groundwater
HI = Hazard Index
ILCR = Lifetime incremental cancer risk
NC= Not calculated. In this medium and reach, there were no COPCs.
SB = Subsurface soils (0.5 to 6.0 ft)
SD = Sediment
SL = Sludge
SS = Surface soils (0 to 2.0 ft)
SW = Surface Water
WW = Waste Water

Table 7-2
Cancer Risks of Chemicals of Concern for Scenarios with Site Risks Greater than 1E-06
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Scenario	Receptor[a]	Chemicals of Concern Exceeding 1E-06			Chemical-Specific Risks by Exposure Pathway		
		Chemical	Carcinogenic Risk	Percent of Site Risk	Ingestion	Dermal Contact	Inhalation
Risks From Soil - Future Use							
Surface/Subsurface Soil	Industrial Worker (See Appendix D Table D-40)	Arsenic	2E-06	23	1E-06	3E-07	1E-12
	Age-Adjusted Resident (See Appendix D Table D-41)	Arsenic	1E-05	3	1E-05	1E-06	5E-12
	Adult Resident (See Appendix D Table D-42)	Arsenic	4E-06	2	4E-06	5E-07	4E-09
Risks From Sludge - Future Use							
Sludge	Industrial Worker (See Appendix D Table D-40)	Benzo(a)pyrene	2E-06	29	1E-06	1E-06	NE
Risks From Groundwater - Future Use							
Groundwater	Age-Adjusted Resident (See Appendix D Table D-41)	Arsenic	3E-04	82	3E-04	2E-06	Not a VOC
		Tetrachlorethene	6E-05	14	4E-05	2E-05	3E-07
	Adult Resident (See Appendix D Table D-42)	Arsenic	2E-04	84	2E-04	1E-06	Not a VOC
		Tetrachlorethene	4E-05	14	2E-05	1E-05	2E-07

[a] The tables represented in this column are the RAGS Part D format 10.
NE = This pathway was not evaluated for this scenario.

Table 7-3
Noncancer Risks of Chemicals of Concern for Scenarios with Site Hazard Indices Greater than 1
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

		Chemicals of Concern Exceeding 1.0			Chemical-Specific Risks by Exposure Pathway		
Scenario	**Receptor[a]**	**Chemical**	**Hazard Quotient**	**Percent of Site Risk**	**Ingestion**	**Dermal Contact**	**Inhalation**
Risks From Groundwater - Future Use							
Groundwater	Child Resident	Arsenic	3	43	3	0.02	Not a VOC
	(See Appendix D Table D-43)	Cobalt	2	20	2	0.01	Not a VOC

[a] The tables represented in this column are the RAGS Part D format 10.
N/A = This pathway was not analyzed for this scenario.

Table 7-4
Comparison of Site and Reference Chemical Concentrations in Soils and Groundwater
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Chemical	Site - Range of Detected Concentrations	Site - Arithmetic Mean	Background - Range of Detected Concentrations[a]	Background - Arithmetic Mean[a]	Background - 95% UTL[a]
WWTP Subsurface Soils (mg/kg) [b]					
Arsenic	0.76 - 3.5	2.08	1.10 - 5.30	3.55	7.53
WWTP Surface Soils (mg/kg) [c]					
Arsenic	1.20 - 5.4	2.80	0.78 - 14.2	4.2	30.9
Lead	2.20 - 460	36.3	4.90 - 124	30.6	NA
WWTP Groundwater (µg/L) [d]					
Arsenic	10.0 - 15.0	12.5	3.60 - 17.7	3.93	17.7
Cobalt	6.0 - 7.1	6.70	0.61 - 18.6	2.77	18.6

NOTE: Mean of all site data includes positive detections only. Raw data were not available to determine the background means.

[a] Molena Soils Data (Tables 4.24 and 4.25) and Unfiltered Groundwater Data (Table 4.6) from NASA Wallops Flight Facility Background Report for the Main Base.

[b] WWTP subsurface soil data as shown in Appendix D Table D-2.

[c] WWTP surface soil data as shown in Appendix D Table D-3.

[d] WWTP groundwater data as shown in Appendix D Table D-6.

mg/kg = milligram per kilogram.

µg/L = microgram per liter.

SECTION 8
TABLES

Table 8-1
Assessment and Measurement Endpoints
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Target Receptors or Communities	Assessment Endpoints	Measurement Endpoints
Vegetation in the terrestrial areas of the Site.	Survival, germination, and growth of plants in the terrestrial areas of the Site.	Comparison of chemical concentrations in soils with phytotoxic effects thresholds found in literature for plants.
Soil fauna in the terrestrial areas of the Site.	Survival, reproduction, and growth of soil fauna in the terrestrial areas of the Site.	Comparison of chemical concentrations in soils with toxic effects thresholds found in literature for soil invertebrates and microbial processes. Comparison of chemical concentrations in earthworm tissue with toxic effects residue concentrations.
Insectivorous birds foraging in the terrestrial areas of the Site.	Survival, reproduction, and growth of birds foraging in the terrestrial areas of the Site.	Modeling of soil invertebrate chemical accumulation, and avian (American robin) dietary exposure modeling. Comparison of dietary exposure doses with reference toxicity values for birds.
Insectivorous and carnivorous mammals foraging the terrestrial areas of the Site.	Survival, reproduction, and growth of mammals foraging in the terrestrial areas of the Site.	Analysis of soil invertebrate and small mammal tissue chemical accumulation, and mammalian (short-tailed shrew and red fox) dietary exposure modeling. Comparison of dietary exposure doses with reference toxicity values for mammals.
Benthic invertebrate community in the unnamed tributary of Little Mosquito Creek.	Survival, reproduction, growth, and indigenous community composition of benthic organisms in the unnamed tributary of Little Mosquito Creek.	Comparisons of chemical concentrations in sediment and surface water with criteria and guidance values for freshwater and estuarine sediments and surface waters as appropriate.
Fish community in Little Mosquito Creek and potentially its unnamed tributary.	Survival, reproduction, growth, and indigenous community composition of fish species in Little Mosquito Creek and potentially its unnamed tributary.	Comparisons of chemical concentrations in surface water to freshwater and estuarine criteria and guidance values as appropriate. Comparison of chemical concentrations in fish tissue with toxic effects residue concentrations.
Piscivorous birds foraging in the unnamed tributary.	Survival, reproduction, and growth of piscivorous birds foraging in the unnamed tributary.	Modeling fish tissue concentrations using site-specific data. Avian (great blue heron) dietary exposure modeling. Comparison of dietary exposure doses with reference toxicity values for birds.
Piscivorous birds foraging in Little Mosquito Creek.	Survival, reproduction, and growth of piscivorous birds foraging in Little Mosquito Creek.	Analysis of site-specific benthic invertebrate, crustacean, and fish tissue concentrations and avian (kingfisher and great blue heron) dietary exposure modeling. Comparison of dietary exposure doses with reference toxicity values for birds.
Piscivorous mammal foraging in the drainage ditch or Little Mosquito Creek.	Survival, reproduction, and growth of piscivorous mammal foraging in the drainage ditch or Little Mosquito Creek.	Analysis of site-specific benthic invertebrate, crustacean, and fish tissue concentrations and mammalian (mink) dietary exposure modeling. Comparison of dietary exposure doses with reference toxicity values for mammals.

Table 8-2
Killifish Bioaccumulation Factors Calculated using Data Collected from Little Mosquito Creek
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Compound [1]	Maximum Killifish Tissue Concentration Little Mosquite Creek [2]	Maximum Sediment Concentration Little Mosquite Creek [3]	Calculated BAF
Organic Compounds (mg/kg)			
4,4-DDD	1.60E-02	1.60E-01	1.00E-01
4,4-DDE	6.40E-02	3.60E-01	1.78E-01
4,4-DDT	ND	1.30E-01	1.00E+00
Acetone	3.00E-01	9.80E-02	3.06E+00
Methyl Ethyl Ketone	ND	ND	1.00E+00
Inorganics (mg/kg)			
Aluminum	8.60E+01	2.90E+04	2.97E-03
Barium	2.80E+00	4.50E+01	6.22E-02
Beryllium	ND	1.10E+00	1.00E+00
Calcium	1.46E+04	4.10E+03	3.56E+00
Magnesium	5.29E+02	8.30E+03	6.37E-02
Mercury	ND	1.90E-01	1.00E+00
Potassium	3.37E+03	4.50E+03	7.49E-01
Sodium	1.46E+03	2.20E+04	6.64E-02
Vanadium	2.50E-01	9.30E+01	2.69E-03

Notes:

BAF = Bioaccumulation factor

ND = Not detected in samples

Note: BAFs only calculated for COPECs

(1) Chemical list includes those chemicals whose maximum concentration in WWTP sediment exceeded the ecological benchmark, chemicals for which ecological benchmarks were not available, and bioaccumulative compounds. Refer to Table 8-10.

(2) Table 7-18, Sites 14 and 15 RI (WESTON, 2007c)

(3) Table 7-12, Sites 14 and 15 RI (WESTON, 2007c)

Table 8-3
Small Mammal Bioaccumulation Factors Calculated using Data Collected from Sites 14 and 15
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Compound [1]	Maximum Surface Soil (0-0.5 ft) Concentration at Site 14 [2]	Maximum Surface Soil (0-0.5 ft) Concentration at Site 15 [3]	Max of Both Sites 14 and 15	Maximum Small Mammal Concentration at Site 14 [4]	Maximum Small Mammal Concentration at Site 15 [5]	Max of Both Sites 14 and 15	Small Mammal BAF*
Organic Compounds (mg/kg)							
4,4-DDD	8.70E-03	1.20E-01	1.20E-01	ND	ND	ND	1.00E+00
4,4-DDE	2.30E-01	1.00E+00	1.00E+00	1.10E+00	2.40E+00	2.40E+00	2.40E+00
4,4-DDT	1.40E-01	1.80E+00	1.80E+00	2.00E-01	2.70E-01	2.70E-01	1.50E-01
Dieldrin	ND	ND	ND	ND	ND	ND	1.00E+00
Aroclor-1260	ND	ND	ND	1.30E-01	2.00E-01	2.00E-01	1.00E+00
Bis(2-ethylhexyl)phthalate	ND	2.10E+00	2.10E+00	ND	ND	ND	1.00E+00
Acetone	ND	ND	ND	ND	ND	ND	1.00E+00
Methyl Ethyl Ketone	ND	ND	ND	ND	ND	ND	1.00E+00
Methyl Isobutyl Ketone	ND	ND	ND	ND	ND	ND	1.00E+00
Inorganics (mg/kg)							
Aluminum	8.99E+03	7.60E+03	8.99E+03	4.93E+01	7.59E+01	7.59E+01	8.44E-03
Antimony	9.90E-01	5.00E+00	5.00E+00	2.40E-01	2.40E-01	2.40E-01	4.80E-02
Cadmium	4.10E-01	1.50E+00	1.50E+00	8.80E-01	7.10E-01	8.80E-01	5.87E-01
Calcium	9.84E+03	5.66E+03	9.84E+03	8.98E+03	1.05E+04	1.05E+04	1.07E+00
Cyanide	ND	ND	ND	ND	ND	ND	1.00E+00
Iron	7.99E+03	9.41E+03	9.41E+03	1.42E+02	1.70E+02	1.70E+02	1.81E-02
Lead	2.95E+01	1.10E+02	1.10E+02	ND	3.50E+00	3.50E+00	3.18E-02
Manganese	2.89E+02	4.09E+02	4.09E+02	6.20E+00	3.60E+00	6.20E+00	1.52E-02
Mercury	5.00E-02	2.20E-01	2.20E-01	1.40E-01	3.20E-01	3.20E-01	1.45E+00
Potassium	5.77E+02	5.00E+02	5.77E+02	2.61E+03	2.95E+03	2.95E+03	5.11E+00
Sodium	ND	ND	ND	1.36E+03	1.37E+03	1.37E+03	1.00E+00
Vanadium	1.87E+01	2.39E+01	2.39E+01	4.00E-01	3.90E-01	4.00E-01	1.67E-02
Zinc	9.36E+01	1.55E+02	1.55E+02	3.39E+01	3.77E+01	3.77E+01	2.43E-01

Notes:

BAF = Bioaccumulation factor

ND = Not detected in soil samples

* BAFs were assumed to be 1.0 for those compounds where either the tissue or soil concentration was not detected.

(1) Chemical list includes those chemicals whose maximum concentration in WWTP soil exceeded the ecological benchmark, chemicals for which ecological benchmarks were not available, and bioaccumulative compounds. Refer to Table 8-10.

(2) Table 7-2, Sites 14 and 15 RI (WESTON, 2007c)

(3) Table 7-3, Sites 14 and 15 RI (WESTON, 2007c)

(4) Table 7-6, Sites 14 and 15 RI (WESTON, 2007c)

(5) Table 7-7, Sites 14 and 15 RI (WESTON, 2007c)

Table 8-4
Occurrence, Distribution, and Selection of Chemicals of Potential Ecological Concern
Former Wastewater Treatment Plant Soils
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration[1]	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Ecological Screening Benchmark										Final Screening Benchmark	No. Samples Exceeding Benchmark
									ECO-SSL[2]				ORNL[3,4,5]				BTAG			
									Avian	Invertebrate	Mammalian	Plant	Invertebrate	Microbe	Plant	Wildlife	Flora	Fauna		
	INORGANICS (MG/KG)																			
7429-90-5	Aluminum, Total	24	24	1400	13000	WFF1-SS5-D	0	2	NA	NA	NA	NA	NA	6.00E+02	5.00E+01	NA	1.00E+00	NA	1.00E+00	18
7440-36-0	Antimony, Total	24	6	0.54	3.2	WFF1-SS6	0	2	NA	7.80E+01	2.70E-01	NA	NA	NA	5.00E+00	NA	4.80E-01	NA	2.70E-01	6
7440-38-2	Arsenic, Total	24	23	1.2	5.4	WFF1-MW7-0-0.5	0	0.5	4.30E+01	NA	4.60E+01	1.80E+01	6.00E+01	1.00E+02	1.00E+01	9.90E+00	3.28E+02	NA	1.80E+01	0
7440-39-3	Barium, Total	24	24	7.1	100	WFF1-SS1	0	2	NA	3.30E+02	2.00E+03	NA	NA	3.00E+03	5.00E+02	2.83E+02	4.40E+02	4.40E+02	3.30E+02	0
7440-41-7	Beryllium, Total	24	22	0.087	0.44	WFF1-MW1-0-0.5	0	0.5	NA	4.00E+01	2.10E+01	NA	NA	NA	1.00E+01	NA	NA	NA	2.10E+01	0
7440-43-9	Cadmium, Total	24	5	0.29	0.37	WFF1-SS6	0	2	7.70E-01	1.40E+02	3.60E-01	3.20E+01	2.00E+01	2.00E+01	4.00E+00	4.20E+00	2.50E+00	NA	3.60E-01	1
7440-70-2	Calcium, Total	24	22	160	42000	WFF1-MW1-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7440-47-3	Chromium, Total	24	24	2	13	WFF1-SS5-D	0	2	2.60E+01	NA	3.40E+01	NA	4.00E-01	1.00E+01	1.00E+00	1.61E+01	2.00E-02	7.50E-03	2.60E+01	0
7440-48-4	Cobalt, Total	24	24	0.26	3.3	WFF1-SS5-D	0	2	1.20E+02	NA	2.30E+02	1.30E+01		1.00E+03	2.00E+01	NA	1.00E+02	2.00E+02	1.30E+01	0
7440-50-8	Copper, Total	24	23	1.4	15	WFF1-SS1-D	0	2	2.80E+01	8.00E+01	4.90E+01	7.00E+01	5.00E+01	1.00E+02	1.00E+02	3.70E+02	1.50E+01	NA	2.80E+01	0
57-12-5	Cyanide, Total	26	1	0.34	0.34	WFF1-MW6-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7439-89-6	Iron, Total	24	23	2500	10000	WFF1-SS5-D	0	2	NA	NA	NA	NA	NA	2.00E+02	NA	NA	3.26E+03	1.20E+01	1.20E+01	20
7439-92-1	Lead, Total	24	23	2.2	460	WFF1-SS1-D	0	2	1.10E+01	1.70E+03	5.60E+01	1.20E+02	5.00E+02	9.00E+02	5.00E+01	4.05E+01	2.00E+00	1.00E-02	1.10E+01	3
7439-95-4	Magnesium, Total	24	24	100	1100	WFF1-MW7-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	4.40E+03	4.40E+03	4.40E+03	0
7439-96-5	Manganese, Total	24	24	9.5	320	WFF1-MW1-0-0.5	0	0.5	4.30E+03	4.50E+02	4.00E+03	2.20E+02	NA	1.00E+02	5.00E+02	NA	3.30E+02	3.30E+02	2.20E+02	1
7439-97-6	Mercury, Total	24	24	0.0046	0.25	WFF1-SS10	0	2	NA	NA	NA	NA	1.00E-01	3.00E+01	3.00E-01	5.10E-04	5.80E-02	5.80E-02	5.10E-04	20
7440-02-0	Nickel, Total	24	19	2.3	7.7	WFF1-SS5-D	0	2	2.10E+02	2.80E+02	1.30E+02	3.80E+01	2.00E+02	9.00E+01	3.00E+01	1.21E+02	2.00E+00	NA	3.80E+01	0
7440-09-7	Potassium, Total	24	24	120	640	WFF1-SS5-D	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7440-22-4	Silver, Total	24	4	0.12	0.64	WFF1-SS10	0	2	4.20E+00	NA	1.40E+01	5.60E+02	NA	5.00E+01	2.00E+00	NA	9.80E-06	NA	4.20E+00	0
7440-23-5	Sodium, Total	24	24	57	480	WFF1-MW1-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7440-62-2	Vanadium, Total	24	24	2.4	24	WFF1-MW7-0-0.5	0	0.5	7.80E+00	NA	2.80E+02	NA	NA	2.00E+01	2.00E+00	5.50E+01	5.00E-01	5.80E+01	7.80E+00	12
7440-66-6	Zinc, Total	24	23	6.8	250	WFF1-SS1-D	0	2	4.60E+01	1.20E+02	7.90E+01	1.60E+02	1.00E+02	1.00E+02	5.00E+01	8.50E+00	1.00E+01	NA	4.60E+01	6
	PESTICIDES (UG/KG)																			
72-54-8	4,4'-DDD	24	7	0.57	12	WFF1-SS1-D	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
72-55-9	4,4'-DDE	24	16	0.41	14	WFF1-MW6-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
50-29-3	4,4'-DDT	24	8	0.79	43	WFF1-SS6	0	2	9.30E+01	NA	2.10E+01	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	2.10E+01	3
60-57-1	Dieldrin	24	2	3.9	5.7	WFF1-SS1	0	2	2.20E+01	NA	4.90E+00	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	4.90E+00	1
	PCBS (UG/KG)																			
11096-82-5	Aroclor-1260	24	3	190	290	WFF1-SS1-D	0	2	NA	NA	NA	NA	NA	NA	4.00E+04	3.71E+02	1.00E+02	NA	1.00E+02	2
	SVOCS (UG/KG)																			
50-32-8	Benzo[a]pyrene	24	1	34	34	WFF1-MW2-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
191-24-2	Benzo[g,h,i]perylene	24	4	31	63	WFF1-MW4-0.5-2	0.5	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
117-81-7	Bis(2-ethylhexyl) phthalate	24	1	59	59	WFF1-MW4-0.5-2	0.5	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
53-70-3	Dibenz(a,h)anthracene	24	3	33	50	WFF1-MW2-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
84-74-2	Di-n-butyl phthalate	24	2	36	58	WFF1-MW4-0.5-2	0.5	2	NA	NA	NA	NA	NA	NA	2.00E+05	NA	NA	NA	2.00E+05	0
193-39-5	Indeno[1,2,3-cd]pyrene	24	3	30	52	WFF1-MW2-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
	VOCS (UG/KG)																			
67-64-1	Acetone	24	20	31	370	WFF1-MW1-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
78-93-3	Methyl Ethyl Ketone	24	15	4.6	33	WFF1-MW2-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
108-10-1	Methyl isobutyl ketone	24	7	6.1	340	WFF1-MW2-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
127-18-4	Tetrachloroethene	24	1	6.7	6.7	WFF1-SS9	0	2	NA	NA	NA	NA	NA	NA	NA	NA	3.00E+02	3.00E+02	3.00E+02	0
108-88-3	Toluene	24	1	2.7	2.7	WFF1-MW1-0-0.5	0	0.5	NA	NA	NA	NA	NA	NA	2.00E+05	NA	1.00E+02	1.00E+02	1.00E+02	0

Notes:

Maximum concentrations for shaded chemicals exceed screening benchmark.

BTAG - Biological Technological Assistant Group

CAS = Chemical Abstracts Service

MG/KG = milligram per kilogram

NA = Not available

PCBs = Polychlorinated biphenyls

UG/KG = microgram per kilogram

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

[1] Maximum detected concentration used for screening.

[2] EPA Ecological Soil Screening Levels (ECO-SSL) (http://www.epa.gov/ecotox/ecossl/).

[3] Oak Ridge National Laboratory (ORNL). Efroymson, R.A., M.E. Will, and G.W. Suter II. 1997. Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process: 1997 Revision. ORNL. ES/ER/TM-126/R2. November.

[4] ORNL. Efroymson, R.A., M.E. Will, G.W. Suter II, and A.C. Wooten. 1997. Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision. ORNL. ES/ER/TM-85/R3. November.

[5] ORNL. Efroymson, R.A., G.W. Suter II, B.E. Sample, and D.S. Jones. 1997. Preliminary Remediation Goals for Ecological Endpoints. ORNL. ES/ER/TM-162/R2. August.

Table 8-5
Comparison of WWTP Soil and Sludge Data with Reference Background Concentrations
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia
(only those constituents exceeding ecological benchmarks are included in comparison)

Chemical	Site Soil - Range of Detected Concentrations	Site Soil - Arithmetic Mean	Site Sludge- Range of Detected Concentrations	Site Sludge - Arithmetic Mean	Background - Range of Detected Concentrations[a]	Background - Arithmetic Mean[a]	Background - 95%UTL[a]
INORGANICS (MG/KG)							
Aluminum, Total	1400 - 13000	7396	680 - 6900	4460	1870 - 13900	9460	21800
Antimony, Total	0.54 - 3.2	1.8	12 - 20	16	NC	NC	NC
Cadmium, Total	0.29 - 0.37	0.332	2.2 - 3.7	2.95	0.11 - 0.84	0.209	NC
Chromium, Total	NA	NA	36 - 65	50.5	1.9 - 18.4	9.57	23.3
Copper, Total	NA	NA	11 - 180	123.7	2.1 - 33	8.91	82.8
Iron, Total	2500 - 10000	5278.3	12000 - 15000	13667	1740 - 10900	7590	16300
Lead, Total	2.2 - 460	60.1	130 - 530	340	4.9 - 124	30.6	NC
Manganese, Total	9.5 - 320	90.4	160 - 270	206.7	8.4 - 781	368	1060
Mercury, Total	0.0046 - 0.25	0.055	0.17 - 28	17.39	0.025 - 0.25	0.0688	0.675
Silver, Total	NA	NA	110 - 130	120	0.15 - 0.3	0.112	NC
Vanadium, Total	2.4 - 24	12.9	7.2 - 18	13.7	3.5 - 28.5	16.9	39.6
Zinc, Total	6.8 - 250	57.1	420 - 680	513.3	4.5 - 104	29.4	247
PESTICIDES (UG/KG)							
4,4'-DDD	NA	NA	110 - 1200	803.3	NC	NC	NC
4,4'-DDE	NA	NA	67 - 1400	922.3	5.7 - 5000	539	NC
4,4'-DDT	0.79 - 43	15.7	110 - 1100	700	4.2 - 15000	1560	NC
Dieldrin	3.9 - 5.7	4.8	5.6 - 9.9	7.75	NC	NC	NC
PCBS (UG/KG)							
Aroclor-1260	190 - 290	256.7	NA	NA	NC	NC	NC
SVOCs (UG/KG)							
Anthracene	NA	NA	64 - 630	256	NC	NC	NC
Benzo[a]anthracene	NA	NA	290 - 2100	0.93	550 - 550	237	NC
Benzo[a]pyrene	NA	NA	290 - 910	0.563	46 - 410	206	NC
Benzo[b]fluoranthene	NA	NA	550 - 4800	2.073	76 - 640	232	NC
Benzo[g,h,i]perylene	NA	NA	270 - 1200	620	NC	NC	NC
Benzo[k]fluoranthene	NA	NA	290 - 2400	1.093	290 - 290	211	NC
Chrysene	NA	NA	480 - 4700	1916.7	67 - 630	230	NC
Fluoranthene	NA	NA	410 - 9000	3303	87 - 1000	269	NC
Fluorene	NA	NA	360 - 360	360	NC	NC	NC
Indeno[1,2,3-cd]pyrene	NA	NA	230 - 1400	0.653	NC	NC	NC
Phenanthrene	NA	NA	170 - 3000	1123.3	790 - 790	261	NC
Pyrene	NA	NA	360 - 6300	2360	120 - 890	261	NC
VOCs (UG/KG)							
Toluene	NA	NA	6.2 - 1200	603.1	NC	NC	NC

Notes:

Detected concentrations exceed the background range.

Background concentrations not available for this chemical. Note that PCBs were not included in the background evaluation.

MG/KG = milligram per kilogram

NA = Not applicable, chemical did not exceed benchmark for this media.

NC = Not calculated

UG/KG = microgram per kilogram

[5] Molena Soils Data (Table 4.24) from NASA Wallops Flight Facility Background Report for the Main Base.

Table 8-6
Occurrence, Distribution, and Selection of Chemicals of Potential Ecological Concern
Former Wastewater Treatment Plant Sludge
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration [1]	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Ecological Screening Benchmark										Final Screening Benchmark	No. Samples Exceeding Benchmark
									ECO-SSL[2]				ORNL[3,4,5]				BTAG			
									Avian	Invertebrate	Mammalian	Plant	Invertebrate	Microbe	Plant	Wildlife	Flora	Fauna		
	INORGANICS (MG/KG)																			
7429-90-5	Aluminum, Total	3	3	680	6900	WFF1-SL03	0	2	NA	NA	NA	NA	NA	6.00E+02	5.00E+01	NA	1.00E+00	NA	1.00E+00	3
7440-36-0	Antimony, Total	3	2	12	20	WFF1-SL02	0	2	NA	7.80E+01	2.70E-01	NA	NA	NA	5.00E+00	NA	4.80E-01	NA	2.70E-01	2
7440-38-2	Arsenic, Total	3	2	2.6	3.2	WFF1-SL03	0	2	4.30E+01	NA	4.60E+01	1.80E+01	6.00E+01	1.00E+02	1.00E+01	9.90E+00	3.28E+02	NA	1.80E+01	0
7440-39-3	Barium, Total	3	3	130	270	WFF1-SL03	0	2	NA	3.30E+02	2.00E+03	NA	NA	3.00E+03	5.00E+02	2.83E+02	4.40E+02	4.40E+02	3.30E+02	0
7440-41-7	Beryllium, Total	3	2	0.36	0.46	WFF1-SL03	0	2	NA	4.00E+01	2.10E+01	NA	NA	NA	1.00E+01	NA	2.00E-02	NA	2.10E+01	0
7440-43-9	Cadmium, Total	3	2	2.2	3.7	WFF1-SL03	0	2	7.70E-01	1.40E+02	3.60E-01	3.20E+01	2.00E+01	2.00E+01	4.00E+00	4.20E+00	2.50E+00	NA	3.60E-01	2
7440-70-2	Calcium, Total	3	3	3900	13000	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7440-47-3	Chromium, Total	3	2	36	65	WFF1-SL02	0	2	2.60E+01	NA	3.40E+01	NA	4.00E-01	1.00E+01	1.00E+00	1.61E+01	2.00E-02	7.50E-03	2.60E+01	2
7440-48-4	Cobalt, Total	3	2	2	2.6	WFF1-SL03	0	2	1.20E+02	NA	2.30E+02	1.30E+01	NA	1.00E+03	2.00E+01	NA	1.00E+02	2.00E+02	1.30E+01	0
7440-50-8	Copper, Total	3	3	11	180	WFF1-SL03	0	2	2.80E+01	8.00E+01	4.90E+01	7.00E+01	5.00E+01	1.00E+02	1.00E+02	3.70E+02	1.50E+01	NA	2.80E+01	1
57-12-5	Cyanide, Total	3	2	1.5	1.5	WFF1-SL03	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7439-89-6	Iron, Total	3	3	12000	15000	WFF1-SL01	0	2	NA	NA	NA	NA	NA	2.00E+02	NA	NA	3.26E+03	1.20E+01	1.20E+01	3
7439-92-1	Lead, Total	3	3	130	530	WFF1-SL02	0	2	1.10E+01	1.70E+03	5.60E+01	1.20E+02	5.00E+02	9.00E+02	5.00E+01	4.05E+01	2.00E+00	1.00E-02	1.10E+01	3
7439-95-4	Magnesium, Total	3	3	730	950	WFF1-SL03	0	2	NA	NA	NA	NA	NA	NA	NA	NA	4.40E+03	4.40E+03	4.40E+03	0
7439-96-5	Manganese, Total	3	3	160	270	WFF1-SL01	0	2	4.30E+03	4.50E+02	4.00E+03	2.20E+02	NA	1.00E+02	5.00E+02	NA	3.30E+02	3.30E+02	2.20E+02	1
7439-97-6	Mercury, Total	3	3	0.17	28	WFF1-SL03	0	2	NA	NA	NA	NA	1.00E-01	3.00E+01	3.00E-01	5.10E-04	5.80E-02	5.80E-02	5.10E-04	3
7440-02-0	Nickel, Total	3	3	4	8.9	WFF1-SL03	0	2	2.10E+02	2.80E+02	1.30E+02	3.80E+01	2.00E+02	9.00E+01	3.00E+01	1.21E+02	2.00E+00	NA	3.80E+01	0
7440-09-7	Potassium, Total	3	3	640	1300	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7782-49-2	Selenium, Total	3	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7440-22-4	Silver, Total	3	2	110	130	WFF1-SL02	0	2	4.20E+00	NA	1.40E+01	5.60E+02	NA	5.00E+01	2.00E+00	NA	9.80E-06	NA	4.20E+00	2
7440-23-5	Sodium, Total	3	3	130	680	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
7440-28-0	Thallium, Total	3	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7440-62-2	Vanadium, Total	3	3	7.2	18	WFF1-SL03	0	2	7.80E+00	NA	2.80E+02	NA	NA	2.00E+01	2.00E+00	5.50E+01	5.00E-01	5.80E+01	7.80E+00	2
7440-66-6	Zinc, Total	3	3	420	680	WFF1-SL01	0	2	4.60E+01	1.20E+02	7.90E+01	1.60E+02	1.00E+02	1.00E+02	5.00E+01	8.50E+00	1.00E+01	NA	4.60E+01	3
	PESTICIDES (UG/KG)																			
72-54-8	4,4'-DDD	3	3	110	1200	WFF1-SL03	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
72-55-9	4,4'-DDE	3	3	67	1400	WFF1-SL02	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	2
50-29-3	4,4'-DDT	3	3	110	1100	WFF1-SL03	0	2	9.30E+01	NA	2.10E+01	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	2.10E+01	3
60-57-1	Dieldrin	3	2	5.6	9.9	WFF1-SL02	0	2	2.20E+01	NA	4.90E+00	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	4.90E+00	2
	PCBS (UG/KG)																			
	Not Detected																			
	SVOCS (UG/KG)																			
106-46-7	1,4-Dichlorobenzene	3	2	84	84	WFF1-SL03	0	2	NA	NA	NA	NA	2.00E+04	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
120-12-7	Anthracene	3	3	64	630	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	1
56-55-3	Benzo[a]anthracene	3	3	290	2100	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
50-32-8	Benzo[a]pyrene	3	3	290	910	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
205-99-2	Benzo[b]fluoranthene	3	3	550	4800	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
191-24-2	Benzo[g,h,i]perylene	3	3	270	1200	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
207-08-9	Benzo[k]fluoranthene	3	3	290	2400	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
117-81-7	Bis(2-ethylhexyl) phthalate	3	1	79	79	WFF1-SL02	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
86-74-8	Carbazole	3	1	53	53	WFF1-SL02	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
218-01-9	Chrysene	3	3	480	4700	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
53-70-3	Dibenz(a,h)anthracene	3	1	76	76	WFF1-SL03	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	0
84-74-2	Di-n-butyl phthalate	3	2	89	110	WFF1-SL02	0	2	NA	NA	NA	NA	NA	NA	2.00E+05	NA	NA	NA	2.00E+05	0
206-44-0	Fluoranthene	3	3	410	9000	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
86-73-7	Fluorene	3	1	360	360	WFF1-SL01	0	2	NA	NA	NA	NA	3.00E+04	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	1
193-39-5	Indeno[1,2,3-cd]pyrene	3	3	230	1400	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
85-01-8	Phenanthrene	3	3	170	3000	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3
129-00-0	Pyrene	3	3	360	6300	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+02	1.00E+02	1.00E+02	3

Table 8-6
Occurrence, Distribution, and Selection of Chemicals of Potential Ecological Concern
Former Wastewater Treatment Plant Sludge
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration [1]	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Ecological Screening Benchmark										Final Screening Benchmark	No. Samples Exceeding Benchmark
									ECO-SSL[2]				ORNL[3,4,5]				BTAG			
									Avian	Invertebrate	Mammalian	Plant	Invertebrate	Microbe	Plant	Wildlife	Flora	Fauna		
	VOCS (UG/KG)																			
79-34-5	1,1,2,2-Tetrachloroethane	3	1	29	29	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
591-78-6	2-Hexanone	3	1	130	130	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
67-64-1	Acetone	3	3	55	740	WFF1-SL02	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
78-93-3	Methyl Ethyl Ketone	3	2	77	210	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
108-10-1	Methyl isobutyl ketone	3	1	91	91	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
127-18-4	Tetrachloroethene	3	1	5.1	5.1	WFF1-SL02	0	2	NA	NA	NA	NA	NA	NA	NA	NA	3.00E+02	3.00E+02	3.00E+02	0
108-88-3	Toluene	3	2	6.2	1200	WFF1-SL01	0	2	NA	NA	NA	NA	NA	NA	2.00E+05	NA	1.00E+02	1.00E+02	1.00E+02	1

Notes:

Maximum concentrations for shaded chemicals exceed screening benchmark.

BTAG - Biological Technological Assistant Group

CAS = Chemical Abstracts Service

MG/KG = milligram per kilogram

NA = Not available

PCBs = Polychlorinated biphenyls

UG/KG = microgram per kilogram

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

[1] Maximum detected concentration used for screening.

[2] EPA Ecological Soil Screening Levels (ECO-SSL) (http://www.epa.gov/ecotox/ecossl/).

[3] Oak Ridge National Laboratory (ORNL). Efroymson, R.A., M.E. Will, and G.W. Suter II. 1997. Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process: 1997 Revision. ORNL. ES/ER/TM-126/R2. November.

[4] ORNL. Efroymson, R.A., M.E. Will, G.W. Suter II, and A.C. Wooten. 1997. Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision. ORNL. ES/ER/TM-85/R3. November.

[5] ORNL. Efroymson, R.A., G.W. Suter II, B.E. Sample, and D.S. Jones. 1997. Preliminary Remediation Goals for Ecological Endpoints. ORNL. ES/ER/TM-162/R2. August.

Table 8-7
Occurrence, Distribution, and Selection of Chemicals of Potential Ecological Concern
Former Wastewater Treatment Plant Groundwater
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration [1]	Location of Maximum	BTAG Freshwater[2]	No. Samples Exceeding Benchmark
	INORGANICS (MG/L)							
7429-90-5	Aluminum, Total	3	3	1.6	2.2	WFF1-MW6	0.087	3
7440-39-3	Barium, Total	3	3	0.024	0.057	WFF1-MW6	0.004	3
7440-70-2	Calcium, Total	3	3	10	45	WFF1-MW6	116	0
7440-48-4	Cobalt, Total	3	2	0.0039	0.0071	WFF1-MW6	0.023	0
7439-89-6	Iron, Total	3	3	0.57	5	WFF1-MW6	0.3	3
7439-95-4	Magnesium, Total	3	3	1.8	4.5	WFF1-MW7	82	0
7439-96-5	Manganese, Total	3	3	0.022	1.5	WFF1-MW6	0.12	1
7440-09-7	Potassium, Total	3	3	1.9	3	WFF1-MW6	53	0
7440-23-5	Sodium, Total	3	3	6.9	16	WFF1-MW6	680	0
7440-62-2	Vanadium, Total	3	2	0.0016	0.0019	WFF1-MW6	0.02	0
	PESTICIDES (UG/L)							
	Not Detected							
	PCBS (UG/L)							
	Not Detected							
	SVOCS (UG/L)							
117-81-7	Bis(2-ethylhexyl) phthalate	3	1	1.1	1.1	WFF1-MW6	16	0
84-66-2	Diethyl phthalate	3	1	0.73	0.73	WFF1-MW7	210	0
	VOCS (UG/L)							
	Not Detected							

Notes:

Maximum concentrations for shaded chemicals exceed screening benchmarks.

CAS = Chemical Abstracts Service

MG/L = milligram per liter

PCBs = Polychlorinated biphenyls

UG/L = microgram per liter

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

[1] Maximum detected concentration used for screening from groundwater samples collected in February 2007 from monitoring wells MW4, MW6, and MW7.

[2] United States Environmental Protection Agency (USEPA) Region III Biological Technical Assistance Group (BTAG) Freshwater Screening Benchmarks, July 2006.

Table 8-8
Comparison of WWTP Groundwater and Surface Water Data with Reference Background Concentrations
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

CAS Number	Analyte	BTAG Freshwater[1]	WWTP Groundwater - Range of Detected Concentrations[2]	WWTP Surface Water - Range of Detected Concentrations[3]	Little Mosquito Creek Surface Water - Range of Detected Concentrations[4]	Background Groundwater - Range of Detected Concentrations[5]	Background Groundwater - 95%UTL[5]
	INORGANICS (MG/L)						
7429-90-5	Aluminum, Total	0.087	1.6 - 2.2	2.5 - 2.5	0.034 - 0.0932	0.0563 - 59.2	758
7440-39-3	Barium, Total	0.004	0.024 - 0.057	0.031 - 0.031	0.0107 - 0.0207	0.008 - 0.221	0.348
7439-89-6	Iron, Total	0.3	0.57 - 3.0	7.2 - 7.2	0.872 - 1.08	0.452 - 50	2250
7439-96-5	Manganese, Total	0.12	0.022 - 1.5	0.46 - 0.46	0.0718 - 0.0718	0.0045 - 3.11	5.79

Notes:

Detected concentrations exceed the background range.

CAS = Chemical Abstracts Service

MG/L = milligram per liter

[1] United States Environmental Protection Agency (USEPA) Region III Biological Technical Assistance Group (BTAG) Freshwater Screening Benchmarks, July 2006.

[2] WWTP groundwater data collected in February 2007 from monitoring wells MW4, MW6, and MW7.

[3] Surface water data from location SW01 collected downstream of WWTP.

[4] Filtered surface water data from locations 1WFF-MB-132-WS and 1WFF-MW-133-WS collected in April 1996 upstream within Little Mosquito Creek at locations unimpacted by the intermittent stream (Versar, 1999).

[5] Unfiltered Groundwater Data (Table 4.6) from NASA Wallops Flight Facility Background Report for the Main Base.

Table 8-9
Occurrence, Distribution, and Selection of Chemicals of Potential Ecological Concern
Former Wastewater Treatment Plant Surface Water
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Maximum Detected Concentration [1]	Location of Maximum	Ecological Screening Benchmark			Final Screening Benchmark	No. Samples Exceeding Benchmark
						BTAG Freshwater[2]	VDEQ[3] Freshwater Aquatic Life			
							Acute	Chronic		
	INORGANICS (MG/L)									
7429-90-5	Aluminum, Total	1	1	2.5	WFF1-SW1	8.70E-02	NA	NA	8.70E-02	1
7440-39-3	Barium, Total	1	1	0.031	WFF1-SW1	4.00E-03	NA	NA	4.00E-03	1
7440-70-2	Calcium, Total	1	1	8.8	WFF1-SW1	1.16E+02	NA	NA	1.16E+02	0
7440-48-4	Cobalt, Total	1	1	0.0035	WFF1-SW1	2.30E-02	NA	NA	2.30E-02	0
7439-89-6	Iron, Total	1	1	7.2	WFF1-SW1	3.00E-01	NA	NA	3.00E-01	1
7439-95-4	Magnesium, Total	1	1	1.2	WFF1-SW1	8.20E+01	NA	NA	8.20E+01	0
7439-96-5	Manganese, Total	1	1	0.46	WFF1-SW1	1.20E-01	NA	NA	1.20E-01	1
7440-09-7	Potassium, Total	1	1	1.6	WFF1-SW1	5.30E+01	NA	NA	5.30E+01	0
7440-23-5	Sodium, Total	1	1	6.3	WFF1-SW1	6.80E+02	NA	NA	6.80E+02	0
7440-62-2	Vanadium, Total	1	1	0.0035	WFF1-SW1	2.00E-02	NA	NA	2.00E-02	0
	PESTICIDES (UG/L)									
	Non Detect									
	PCBS (UG/L)									
	Non Detect									
	SVOCS (UG/L)									
	Non Detect									
	VOCS (UG/L)									
74-87-3	Chloromethane	1	1	0.53	WFF1-SW1	NA	NA	NA	NA	--

Notes:

Maximum concentrations for shaded chemicals exceed screening benchmarks.

CAS = Chemical Abstracts Service

MG/L = milligram per liter

NA = Not available

PCBs = Polychlorinated biphenyls

UG/L = microgram per liter

SVOCs = Semivolatile organic compounds

VOCS = Volatile organic compounds

-- = not applicable

[1] Maximum detected concentration used for screening.

[2] United States Environmental Protection Agency (USEPA) Region III Biological Technical Assistance Group (BTAG) Freshwater Screening Benchmarks, July 2006.

[3] Virginia Department of Environmental Quality (VDEQ) Water Quality for Freshwater Acute and Chronic Aquatic Life Standards, October 2008.

Table 8-10
Occurrence, Distribution, and Selection of Chemicals of Potential Ecological Concern
Former Wastewater Treatment Plant Sediment
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration [1]	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Ecological Screening Benchmark			Final Screening Benchmark	No. Samples Exceeding Benchmark
									BTAG Freshwater[2]	ISQG[3]	PEL[4]		
	INORGANICS (MG/KG)												
7429-90-5	Aluminum, Total	2	2	3400	5500	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
7440-38-2	Arsenic, Total	2	2	1.4	2.7	WFF1-SD2	0	0.25	9.80E+00	5.90E+00	1.70E+01	9.80E+00	0
7440-39-3	Barium, Total	2	2	16	23	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
7440-41-7	Beryllium, Total	2	2	0.11	0.18	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
7440-70-2	Calcium, Total	2	2	200	650	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
7440-47-3	Chromium, Total	2	2	4.2	6.8	WFF1-SD2	0	0.25	4.34E+01	3.73E+01	9.00E+01	4.34E+01	0
7440-48-4	Cobalt, Total	2	2	0.74	1.9	WFF1-SD2	0	0.25	5.00E+01	NA	NA	5.00E+01	0
7440-50-8	Copper, Total	2	2	1.3	2.9	WFF1-SD2	0	0.25	3.16E+01	3.57E+01	1.97E+02	3.16E+01	0
7439-89-6	Iron, Total	2	2	2600	4100	WFF1-SD2	0	0.25	2.00E+04	NA	NA	2.00E+04	0
7439-92-1	Lead, Total	2	2	4	7.9	WFF1-SD2	0	0.25	3.58E+01	3.50E+01	9.13E+01	3.58E+01	0
7439-95-4	Magnesium, Total	2	2	260	440	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
7439-96-5	Manganese, Total	2	2	44	95	WFF1-SD2	0	0.25	4.60E+02	NA	NA	4.60E+02	0
7439-97-6	Mercury, Total	2	2	0.0093	0.044	WFF1-SD2	0	0.25	1.80E-01	NA	NA	1.80E-01	0
7440-02-0	Nickel, Total	2	2	1.8	3.1	WFF1-SD2	0	0.25	2.27E+01	NA	NA	2.27E+01	0
7440-09-7	Potassium, Total	2	2	220	320	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
7440-23-5	Sodium, Total	2	2	60	71	WFF1-SD1	0	0.25	NA	NA	NA	NA	--
7440-62-2	Vanadium, Total	2	2	5.9	8.8	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
7440-66-6	Zinc, Total	2	2	9.6	20	WFF1-SD2	0	0.25	1.21E+02	1.23E+02	3.15E+02	1.21E+02	0
	PESTICIDES (UG/KG)												
72-54-8	4,4'-DDD	2	1	2.7	2.7	WFF1-SD2	0	0.25	4.88E+00	3.54E+00	8.51E+00	4.88E+00	0
72-55-9	4,4'-DDE	2	2	1.8	2.6	WFF1-SD2	0	0.25	3.16E+00	1.42E+00	6.75E+00	3.16E+00	0
50-29-3	4,4'-DDT	2	2	0.77	1.6	WFF1-SD2	0	0.25	4.16E+00	1.19E+00	4.77E+00	4.16E+00	0
	PCBS (UG/KG)												
	Not Detected												
	SVOCS (UG/KG)												
	Not Detected												
	VOCS (UG/KG)												
67-64-1	Acetone	2	2	45	270	WFF1-SD2	0	0.25	NA	NA	NA	NA	--
78-93-3	Methyl Ethyl Ketone	2	1	18	18	WFF1-SD2	0	0.25	NA	NA	NA	NA	--

Notes:

Maximum concentrations for shaded chemicals exceed screening benchmark.

CAS = Chemical Abstracts Service

MG/KG = milligram per kilogram

NA = Not available

PCBs = Polychlorinated biphenyls

UG/KG = microgram per kilogram

SVOCs = Semivolatile organic compounds

Table 8-10
Occurrence, Distribution, and Selection of Chemicals of Potential Ecological Concern
Former Wastewater Treatment Plant Sediment
Wallops Flight Facility, Virginia

CAS Number	Analyte	Number of Samples Analyzed[1]	Number of Detected Samples	Minimum Detected Concentration	Maximum Detected Concentration [1]	Location of Maximum	Upper Depth of Maximum (feet)	Lower Depth of Maximum (feet)	Ecological Screening Benchmark			Final Screening Benchmark	No. Samples Exceeding Benchmark
									BTAG Freshwater[2]	ISQG[3]	PEL[4]		

VOCS = Volatile organic compounds

-- = not applicable

[1] Maximum detected concentration used for screening.

[2] USEPA Region III Biological Technical Assistance Group (BTAG) Freshwater Sediment Screening Benchmarks, August 2006.

[3] Interim sediment quality guideline (ISQG). Canadian Sediment Quality Guidelines for the Protection of Aquatic Life Summary Tables. In: Canadian Environmental Quality Guidelines, 2002, Canadian Council of Ministers of Environment, Winnipeg.

[4] Probably Effect Level (PEL). Canadian Sediment Quality Guidelines for the Protection of Aquatic Life Summary Tables. In: Canadian Environmental Quality Guidelines, 2002, Canadian Council of Ministers of Environment, Winnipeg.

Table 8-11
Predicted Maximum Killifish Tissue Concentrations in Compared to Literature Values
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Compound	Maximum Killifish Tissue Concentration [1]	Tissue Residue [2] (mg/kg)	Effect	Test Species	Tissue	Reference
Organic Compounds (mg/kg)						
4,4-DDD	0.00027	0.008	Survival - No Effect	Brook Trout	Whole Body	476
4,4-DDE	0.00046	0.042	Survival - No Effect	Brook Trout	Whole Body	476
4,4-DDT	0.0016	40	Survival - No Effect	Fathead minnow	Whole Body	218/219
Acetone	0.83	--	--	--	--	--
Methyl Ethyl Ketone	0.018	--	--	--	--	--
Inorganics (mg/kg)						
Aluminum	16.31	36.8	Survival - Reduced - Death	Atlantic Salmon (newly hatched)	Whole Body	360
Barium	1.43	--	--	--	--	--
Beryllium	0.18	--	--	--	--	--
Mercury	0.04	0.8	Growth - No Effect	Fathead minnow	Whole Body	412
Vanadium	0.02	0.57	Growth - No Effect	Flagfish (2nd generation larvae)	Whole Body	208/209

Notes:

(1) Maximum killifish tissue concentration was calculated by multiplying the maximum sediment concentration within the unnamed tributary in WWTP by the calculated killifish biaccumulation factor (Table 8-2).

(2) Jarvinen, A.W. and G.T. Ankley. 1999. Linkage of effects to tissue residues: development of a comprehensive database for aquatic organisms exposed to inorganic and organic chemicals. SETAC Technical Publication Series. SETAC Press. Society of Environmental Toxicology and Chemistry, Pensacola, FL.

-- No information available in Jarvinen and Ankley, 1999

Table 8-12
Hazard Quotient Summary for Terrestrial Receptors
Soil
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Red Fox LOAEL HQ	Red Fox NOAEL HQ	Red-tail Hawk LOAEL HQ	Red-tail Hawk NOAEL HQ	American Robin LOAEL HQ	American Robin NOAEL HQ	Short-tailed Shrew LOAEL HQ	Short-tailed Shrew NOAEL HQ
Organic Compounds								
4,4-DDD	1.3E-07	6.4E-07	7.7E-05	7.2E-04	4.3E-01	4.0E+00	2.2E-04	1.1E-03
4,4-DDE	5.2E-07	2.6E-06	3.2E-04	3.0E-03	7.3E-01	6.8E+00	3.7E-04	1.9E-03
4,4-DDT	1.1E-07	5.8E-07	6.9E-05	6.4E-04	2.5E+00	2.4E+01	1.3E-03	6.5E-03
Dieldrin	4.0E-06	3.8E-05	4.4E-05	4.4E-05	2.4E-01	2.4E-01	6.8E-03	6.8E-02
Aroclor-1260	4.5E-05	2.2E-04	9.6E-05	9.6E-04	5.3E-01	5.3E+00	2.3E-01	2.3E+00
Bis(2-ethylhexyl)phthalate	8.4E-08	8.4E-07	3.2E-05	3.2E-05	1.8E-01	1.8E-01	1.4E-04	1.4E-03
Acetone	4.1E-07	2.0E-06	NC	NC	NC	NC	7.0E-04	3.5E-03
Methyl Ethyl Ketone	5.0E-10	1.3E-09	NC	NC	NC	NC	8.5E-07	2.2E-06
Methyl Isobutyl Ketone	NC	NC	NC	NC	NC	NC	NC	NC
Inorganics								
Aluminum	9.6E-04	9.6E-03	9.6E-04	3.9E-04	6.2E+02	6.2E+02	1.9E+02	1.9E+03
Antimony	2.0E-05	2.0E-04	NC	NC	NC	NC	7.1E-01	7.0E+00
Cadmium	3.1E-06	3.1E-05	6.3E-06	8.6E-05	5.9E-02	8.1E-01	8.9E-03	8.9E-02
Cyanide	7.4E-08	7.4E-07	5.0E-03	5.0E-02	NC	NC	1.3E-04	1.3E-03
Iron	NC	NC	NC	NC	NC	NC	NC	NC
Lead	1.9E-05	1.9E-04	5.7E-04	5.7E-03	9.9E+01	9.9E+02	1.0E+00	1.0E+01
Manganese	9.1E-07	2.0E-04	1.1E-06	1.1E-06	4.0E-01	4.0E-01	1.0E-01	3.3E-01
Mercury	5.6E-04	9.5E-04	1.2E-03	1.3E-02	4.5E+00	4.8E+01	1.3E-01	6.6E-01
Vanadium	1.8E-05	1.8E-04	1.3E-05	1.3E-05	4.3E-01	4.3E+00	1.8E+00	1.8E+01
Zinc	1.1E-05	3.3E-05	1.7E-04	1.5E-03	3.9E+00	3.5E+01	1.2E-01	2.3E-01

Notes:

Shaded area indicates an exceedance of an HQ of 1.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL or NOAEL).

NC = Not Calculated

N = Nutrient

Table 8-12a
Hazard Quotient Summary for Terrestrial Receptors
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Red Fox LOAEL HQ	Red Fox NOAEL HQ	Red-tail Hawk LOAEL HQ	Red-tail Hawk NOAEL HQ	American Robin LOAEL HQ	American Robin NOAEL HQ	Short-tailed Shrew LOAEL HQ	Short-tailed Shrew NOAEL HQ
Organic Compounds								
4,4-DDD	6.9E-08	3.5E-07	4.2E-05	3.9E-04	2.3E-01	2.1E+00	1.2E-04	5.9E-04
4,4-DDE	6.7E-07	3.3E-06	4.0E-04	3.8E-03	9.2E-01	8.6E+00	4.7E-04	2.4E-03
4,4-DDT	1.4E-08	6.9E-08	8.2E-06	7.7E-05	3.0E-01	2.8E+00	1.6E-04	7.8E-04
Inorganics								
Aluminum	9.6E-04	9.6E-03	9.5E-04	3.9E-04	6.2E+02	6.2E+02	1.9E+02	1.9E+03
Antimony	7.2E-06	7.1E-05	NC	NC	4.7E-01	NC	2.6E-01	2.5E+00
Lead	4.1E-07	4.1E-06	1.2E-05	1.2E-04	2.1E+00	2.1E+01	2.2E-02	2.2E-01
Mercury	4.1E-04	7.0E-04	8.8E-04	9.4E-03	3.3E+00	3.6E+01	9.8E-02	4.9E-01
Vanadium	1.7E-05	1.7E-04	1.3E-05	1.3E-05	4.1E-01	4.1E+00	1.8E+00	1.8E+01
Zinc	6.6E-06	1.3E-05	6.8E-05	6.1E-04	1.5E+00	1.4E+01	4.6E-02	9.2E-02

Notes:

Shaded area indicates an exceedance of an HQ of 1.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL or NOAEL).

NC = Not Calculated

N = Nutrient

Table 8-13
Hazard Quotient Calculations for the Red Fox (LOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.432	1727.26	0.8	0.00046	2.7	2.71E-07	2.11	1.3E-07
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	2.40E+00	1.49E-02	0.432	1727.26	0.8	0.00046	2.7	1.11E-06	2.11	5.2E-07
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.50E-01	3.26E-03	0.432	1727.26	0.8	0.00046	2.7	2.42E-07	2.11	1.1E-07
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.432	1727.26	0.8	0.00046	2.7	4.22E-07	0.106	4.0E-06
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.432	1727.26	0.8	0.00046	2.7	2.15E-05	0.474	4.5E-05
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.432	1727.26	0.8	0.00046	2.7	4.37E-06	52	8.4E-08
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.432	1727.26	0.8	0.00046	2.7	1.08E-05	26.4	4.1E-07
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.432	1727.26	0.8	0.00046	2.7	1.20E-06	2414	5.0E-10
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.432	1727.26	0.8	0.00046	2.7	4.20E-06	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	8.44E-03	7.16E+01	0.432	1727.26	0.8	0.00046	2.7	5.31E-03	5.515	9.6E-04
Antimony	3.20E+00	1.99E+00	1.99E+00	4.80E-02	9.55E-02	0.432	1727.26	0.8	0.00046	2.7	7.08E-06	0.357	2.0E-05
Cadmium	3.70E-01	3.59E-01	3.59E-01	5.87E-01	2.11E-01	0.432	1727.26	0.8	0.00046	2.7	1.56E-05	5.094	3.1E-06
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.432	1727.26	0.8	0.00046	2.7	2.52E-05	341	7.4E-08
Iron	1.00E+04	8.98E+03	8.98E+03	1.81E-02	1.62E+02	0.432	1727.26	0.8	0.00046	2.7	1.20E-02	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	3.18E-02	1.09E+01	0.432	1727.26	0.8	0.00046	2.7	8.09E-04	42.25	1.9E-05
Manganese	3.20E+02	1.21E+02	1.21E+02	1.52E-02	1.83E+00	0.432	1727.26	0.8	0.00046	2.7	1.36E-04	150	9.1E-07
Mercury	2.50E-01	8.83E-02	8.83E-02	1.45E+00	1.28E-01	0.432	1727.26	0.8	0.00046	2.7	9.52E-06	0.017	5.6E-04
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.67E-02	2.51E-01	0.432	1727.26	0.8	0.00046	2.7	1.86E-05	1.03	1.8E-05
Zinc	2.50E+02	1.55E+02	1.55E+02	2.43E-01	3.77E+01	0.432	1727.26	0.8	0.00046	2.7	2.79E-03	250	1.1E-05

Notes:

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red fox range from 0.069 g/g BW/day for a nonbreeding adult, to 0.16 g/g BW/day for a juvenile (U.S. EPA 1993).

To express this value in units of g/day, the highest reported food ingestion rate of 0.16 g/g BW/day was multiplied by

the lowest reported body weight of 2.7 kg (2,700 g) to yield a food ingestion rate of 432 g/day.

(c) HR = Home Range, the average recorded mean home range of 699 hectacres (USEPA, 1993; Sargeant, 1972) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult red fox weigh from 2.7 to 7 kg (Barbour and Davis 1974; Jones and Birney 1988).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-13a
Hazard Quotient Calculations for the Red Fox (LOAEL)
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.432	1727.26	0.8	0.00046	2.7	1.45E-07	2.11	6.9E-08
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	2.40E+00	1.90E-02	0.432	1727.26	0.8	0.00046	2.7	1.40E-06	2.11	6.7E-07
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.50E-01	3.89E-04	0.432	1727.26	0.8	0.00046	2.7	2.88E-08	2.11	1.4E-08
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	8.44E-03	7.15E+01	0.432	1727.26	0.8	0.00046	2.7	5.29E-03	5.515	9.6E-04
Antimony	7.20E-01	7.20E-01	7.20E-01	4.80E-02	3.46E-02	0.432	1727.26	0.8	0.00046	2.7	2.56E-06	0.357	7.2E-06
Lead	2.00E+01	7.36E+00	7.36E+00	3.18E-02	2.34E-01	0.432	1727.26	0.8	0.00046	2.7	1.74E-05	42.25	4.1E-07
Mercury	2.50E-01	6.54E-02	6.54E-02	1.45E+00	9.51E-02	0.432	1727.26	0.8	0.00046	2.7	7.05E-06	0.017	4.1E-04
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.67E-02	2.41E-01	0.432	1727.26	0.8	0.00046	2.7	1.78E-05	1.03	1.7E-05
Zinc	1.60E+02	6.14E+01	6.14E+01	2.43E-01	1.49E+01	0.432	1727.26	0.8	0.00046	2.7	1.11E-03	169	6.6E-06

Notes:

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red fox range from 0.069 g/g BW/day for a nonbreeding adult, to 0.16 g/g BW/day for a juvenile (U.S. EPA 1993).

To express this value in units of g/day, the highest reported food ingestion rate of 0.16 g/g BW/day was multiplied by

the lowest reported body weight of 2.7 kg (2,700 g) to yield a food ingestion rate of 432 g/day.

(c) HR = Home Range, the average recorded mean home range of 699 hectacres (USEPA, 1993; Sargeant, 1972) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult red fox weigh from 2.7 to 7 kg (Barbour and Davis 1974; Jones and Birney 1988).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-14
Hazard Quotient Calculations for the Red Fox (NOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.432	1727.26	0.8	0.00046	2.7	2.71E-07	0.42	6.4E-07
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	2.40E+00	1.49E-02	0.432	1727.26	0.8	0.00046	2.7	1.11E-06	0.42	2.6E-06
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.50E-01	3.26E-03	0.432	1727.26	0.8	0.00046	2.7	2.42E-07	0.42	5.8E-07
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.432	1727.26	0.8	0.00046	2.7	4.22E-07	0.011	3.8E-05
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.432	1727.26	0.8	0.00046	2.7	2.15E-05	0.096	2.2E-04
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.432	1727.26	0.8	0.00046	2.7	4.37E-06	5.2	8.4E-07
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.432	1727.26	0.8	0.00046	2.7	1.08E-05	5.3	2.0E-06
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.432	1727.26	0.8	0.00046	2.7	1.20E-06	935	1.3E-09
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.432	1727.26	0.8	0.00046	2.7	4.20E-06	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	8.44E-03	7.16E+01	0.432	1727.26	0.8	0.00046	2.7	5.31E-03	0.551	9.6E-03
Antimony	3.20E+00	1.99E+00	1.99E+00	4.80E-02	9.55E-02	0.432	1727.26	0.8	0.00046	2.7	7.08E-06	0.036	2.0E-04
Cadmium	3.70E-01	3.59E-01	3.59E-01	5.87E-01	2.11E-01	0.432	1727.26	0.8	0.00046	2.7	1.56E-05	0.509	3.1E-05
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.432	1727.26	0.8	0.00046	2.7	2.52E-05	34.1	7.4E-07
Iron	1.00E+04	8.98E+03	8.98E+03	1.81E-02	1.62E+02	0.432	1727.26	0.8	0.00046	2.7	1.20E-02	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	3.18E-02	1.09E+01	0.432	1727.26	0.8	0.00046	2.7	8.09E-04	4.22	1.9E-04
Manganese	3.20E+02	1.21E+02	1.21E+02	1.52E-02	1.83E+00	0.432	1727.26	0.8	0.00046	2.7	1.36E-04	0.69	2.0E-04
Mercury	2.50E-01	8.83E-02	8.83E-02	1.45E+00	1.28E-01	0.432	1727.26	0.8	0.00046	2.7	9.52E-06	0.01	9.5E-04
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.67E-02	2.51E-01	0.432	1727.26	0.8	0.00046	2.7	1.86E-05	0.103	1.8E-04
Zinc	2.50E+02	1.55E+02	1.55E+02	2.43E-01	3.77E+01	0.432	1727.26	0.8	0.00046	2.7	2.79E-03	84.5	3.3E-05

Notes:

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red fox range from 0.069 g/g BW/day for a nonbreeding adult, to 0.16 g/g BW/day for a juvenile (U.S. EPA 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.16 g/g BW/day was multiplied by
the lowest reported body weight of 2.7 kg (2,700 g) to yield a food ingestion rate of 432 g/day.

(c) HR = Home Range, the average recorded mean home range of 699 hectacres (USEPA, 1993; Sargeant, 1972) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult red fox weigh from 2.7 to 7 kg (Barbour and Davis 1974; Jones and Birney 1988).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-14a
Hazard Quotient Calculations for the Red Fox (NOAEL)
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.432	1727.26	0.8	0.00046	2.7	1.45E-07	0.42	3.5E-07
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	2.40E+00	1.90E-02	0.432	1727.26	0.8	0.00046	2.7	1.40E-06	0.42	3.3E-06
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.50E-01	3.89E-04	0.432	1727.26	0.8	0.00046	2.7	2.88E-08	0.42	6.9E-08
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	8.44E-03	7.15E+01	0.432	1727.26	0.8	0.00046	2.7	5.29E-03	0.551	9.6E-03
Antimony	7.20E-01	7.20E-01	7.20E-01	4.80E-02	3.46E-02	0.432	1727.26	0.8	0.00046	2.7	2.56E-06	0.036	7.1E-05
Lead	2.00E+01	7.36E+00	7.36E+00	3.18E-02	2.34E-01	0.432	1727.26	0.8	0.00046	2.7	1.74E-05	4.22	4.1E-06
Mercury	2.50E-01	6.54E-02	6.54E-02	1.45E+00	9.51E-02	0.432	1727.26	0.8	0.00046	2.7	7.05E-06	0.01	7.0E-04
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.67E-02	2.41E-01	0.432	1727.26	0.8	0.00046	2.7	1.78E-05	0.103	1.7E-04
Zinc	1.60E+02	6.14E+01	6.14E+01	2.43E-01	1.49E+01	0.432	1727.26	0.8	0.00046	2.7	1.11E-03	84.5	1.3E-05

Notes:

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red fox range from 0.069 g/g BW/day for a nonbreeding adult, to 0.16 g/g BW/day for a juvenile (U.S. EPA 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.16 g/g BW/day was multiplied by
the lowest reported body weight of 2.7 kg (2,700 g) to yield a food ingestion rate of 432 g/day.

(c) HR = Home Range, the average recorded mean home range of 699 hectacres (USEPA, 1993; Sargeant, 1972) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult red fox weigh from 2.7 to 7 kg (Barbour and Davis 1974; Jones and Birney 1988).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-15
Hazard Quotient Calculations for the Red-tailed Hawk (LOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.113	148.3	0.8	0.005395926	1.028	2.17E-06	0.028	7.7E-05
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	2.40E+00	1.49E-02	0.113	148.3	0.8	0.005395926	1.028	8.85E-06	0.028	3.2E-04
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.50E-01	3.26E-03	0.113	148.3	0.8	0.005395926	1.028	1.93E-06	0.028	6.9E-05
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.113	148.3	0.8	0.005395926	1.028	3.38E-06	0.077	4.4E-05
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.113	148.3	0.8	0.005395926	1.028	1.72E-04	1.8	9.6E-05
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.113	148.3	0.8	0.005395926	1.028	3.50E-05	1.1	3.2E-05
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.113	148.3	0.8	0.005395926	1.028	8.65E-05	NA	NC
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.113	148.3	0.8	0.005395926	1.028	9.62E-06	NA	NC
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.113	148.3	0.8	0.005395926	1.028	3.36E-05	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	8.44E-03	7.16E+01	0.113	148.3	0.8	0.005395926	1.028	4.25E-02	44.5	9.6E-04
Antimony	3.20E+00	1.99E+00	1.99E+00	4.80E-02	9.55E-02	0.113	148.3	0.8	0.005395926	1.028	5.67E-05	NA	NC
Cadmium	3.70E-01	3.59E-01	3.59E-01	5.87E-01	2.11E-01	0.113	148.3	0.8	0.005395926	1.028	1.25E-04	20	6.3E-06
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.113	148.3	0.8	0.005395926	1.028	2.02E-04	0.04	5.0E-03
Iron	1.00E+04	8.98E+03	8.98E+03	1.81E-02	1.62E+02	0.113	148.3	0.8	0.005395926	1.028	9.62E-02	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	3.18E-02	1.09E+01	0.113	148.3	0.8	0.005395926	1.028	6.48E-03	11.3	5.7E-04
Manganese	3.20E+02	1.21E+02	1.21E+02	1.52E-02	1.83E+00	0.113	148.3	0.8	0.005395926	1.028	1.09E-03	997	1.1E-06
Mercury	2.50E-01	8.83E-02	8.83E-02	1.45E+00	1.28E-01	0.113	148.3	0.8	0.005395926	1.028	7.62E-05	0.064	1.2E-03
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.67E-02	2.51E-01	0.113	148.3	0.8	0.005395926	1.028	1.49E-04	11.4	1.3E-05
Zinc	2.50E+02	1.55E+02	1.55E+02	2.43E-01	3.77E+01	0.113	148.3	0.8	0.005395926	1.028	2.24E-02	131	1.7E-04

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red-tailed hawk range from 0.086 g/g BW/day for an adult male in summer, to 0.11 g/g BW/day for an adult female in winter (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.11 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 1.028 kg to yield a food ingestion rate of 0.113 kg/day.

(c) HR = Home Ranges vary from 148.26 to 395.36 acres (Kirkwood, 1980); the smallest home range of 148.36 acres was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult male red-tailed hawks from the midwest weigh an average of 1.028 kg (Craighead and Craighead, 1956).

Dose = [(Concentration in mice) x (FIR)/Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-15a
Hazard Quotient Calculations for the Red-tailed Hawk (LOAEL)
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.113	148.3	0.8	0.005395926	1.028	1.17E-06	0.028	4.2E-05
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	2.40E+00	1.90E-02	0.113	148.3	0.8	0.005395926	1.028	1.13E-05	0.028	4.0E-04
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.50E-01	3.89E-04	0.113	148.3	0.8	0.005395926	1.028	2.31E-07	0.028	8.2E-06
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	8.44E-03	7.15E+01	0.113	148.3	0.8	0.005395926	1.028	4.24E-02	44.5	9.5E-04
Antimony	7.20E-01	7.20E-01	7.20E-01	4.80E-02	3.46E-02	0.113	148.3	0.8	0.005395926	1.028	2.05E-05	NA	NC
Lead	2.00E+01	7.36E+00	7.36E+00	3.18E-02	2.34E-01	0.113	148.3	0.8	0.005395926	1.028	1.39E-04	11.3	1.2E-05
Mercury	2.50E-01	6.54E-02	6.54E-02	1.45E+00	9.51E-02	0.113	148.3	0.8	0.005395926	1.028	5.65E-05	0.064	8.8E-04
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.67E-02	2.41E-01	0.113	148.3	0.8	0.005395926	1.028	1.43E-04	11.4	1.3E-05
Zinc	1.60E+02	6.14E+01	6.14E+01	2.43E-01	1.49E+01	0.113	148.3	0.8	0.005395926	1.028	8.87E-03	131	6.8E-05

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red-tailed hawk range from 0.086 g/g BW/day for an adult male in summer, to 0.11 g/g BW/day for an adult female in winter (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.11 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 1.028 kg to yield a food ingestion rate of 0.113 kg/day.

(c) HR = Home Ranges vary from 148.26 to 395.36 acres (Kirkwood, 1980); the smallest home range of 148.36 acres was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult male red-tailed hawks from the midwest weigh an average of 1.028 kg (Craighead and Craighead, 1956).

Dose = [(Concentration in mice) x (FIR)/Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-16
Hazard Quotient Calculations for the Red-tailed Hawk (NOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.113	148.3	0.8	0.005395926	1.028	2.17E-06	0.003	7.2E-04
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	2.40E+00	1.49E-02	0.113	148.3	0.8	0.005395926	1.028	8.85E-06	0.003	3.0E-03
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.50E-01	3.26E-03	0.113	148.3	0.8	0.005395926	1.028	1.93E-06	0.003	6.4E-04
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.113	148.3	0.8	0.005395926	1.028	3.38E-06	0.077	4.4E-05
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.113	148.3	0.8	0.005395926	1.028	1.72E-04	0.18	9.6E-04
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.113	148.3	0.8	0.005395926	1.028	3.50E-05	1.1	3.2E-05
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.113	148.3	0.8	0.005395926	1.028	8.65E-05	NA	NC
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.113	148.3	0.8	0.005395926	1.028	9.62E-06	NA	NC
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.113	148.3	0.8	0.005395926	1.028	3.36E-05	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	8.44E-03	7.16E+01	0.113	148.3	0.8	0.005395926	1.028	4.25E-02	109.7	3.9E-04
Antimony	3.20E+00	1.99E+00	1.99E+00	4.80E-02	9.55E-02	0.113	148.3	0.8	0.005395926	1.028	5.67E-05	NA	NC
Cadmium	3.70E-01	3.59E-01	3.59E-01	5.87E-01	2.11E-01	0.113	148.3	0.8	0.005395926	1.028	1.25E-04	1.45	8.6E-05
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.113	148.3	0.8	0.005395926	1.028	2.02E-04	0.004	5.0E-02
Iron	1.00E+04	8.98E+03	8.98E+03	1.81E-02	1.62E+02	0.113	148.3	0.8	0.005395926	1.028	9.62E-02	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	3.18E-02	1.09E+01	0.113	148.3	0.8	0.005395926	1.028	6.48E-03	1.13	5.7E-03
Manganese	3.20E+02	1.21E+02	1.21E+02	1.52E-02	1.83E+00	0.113	148.3	0.8	0.005395926	1.028	1.09E-03	997	1.1E-06
Mercury	2.50E-01	8.83E-02	8.83E-02	1.45E+00	1.28E-01	0.113	148.3	0.8	0.005395926	1.028	7.62E-05	0.006	1.3E-02
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.67E-02	2.51E-01	0.113	148.3	0.8	0.005395926	1.028	1.49E-04	11.4	1.3E-05
Zinc	2.50E+02	1.55E+02	1.55E+02	2.43E-01	3.77E+01	0.113	148.3	0.8	0.005395926	1.028	2.24E-02	14.5	1.5E-03

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red-tailed hawk range from 0.086 g/g BW/day for an adult male in summer, to 0.11 g/g BW/day for an adult female in winter (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.11 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 1.028 kg to yield a food ingestion rate of 0.113 kg/day.

(c) HR = Home Ranges vary from 148.26 to 395.36 acres (Kirkwood, 1980); the smallest home range of 148.36 acres was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult male red-tailed hawks from the midwest weigh an average of 1.028 kg (Craighead and Craighead, 1956).

Dose = [(Concentration in mice) x (FIR)/Body Weight] x (AUF).

BW = Body Weight.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-16a
Hazard Quotient Calculations for the Red-tailed Hawk (NOAEL)
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.113	148.3	0.8	0.005395926	1.028	1.17E-06	0.003	3.9E-04
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	2.40E+00	1.90E-02	0.113	148.3	0.8	0.005395926	1.028	1.13E-05	0.003	3.8E-03
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.50E-01	3.89E-04	0.113	148.3	0.8	0.005395926	1.028	2.31E-07	0.003	7.7E-05
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	8.44E-03	7.15E+01	0.113	148.3	0.8	0.005395926	1.028	4.24E-02	109.7	3.9E-04
Antimony	7.20E-01	7.20E-01	7.20E-01	4.80E-02	3.46E-02	0.113	148.3	0.8	0.005395926	1.028	2.05E-05	NA	NC
Lead	2.00E+01	7.36E+00	7.36E+00	3.18E-02	2.34E-01	0.113	148.3	0.8	0.005395926	1.028	1.39E-04	1.13	1.2E-04
Mercury	2.50E-01	6.54E-02	6.54E-02	1.45E+00	9.51E-02	0.113	148.3	0.8	0.005395926	1.028	5.65E-05	0.006	9.4E-03
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.67E-02	2.41E-01	0.113	148.3	0.8	0.005395926	1.028	1.43E-04	11.4	1.3E-05
Zinc	1.60E+02	6.14E+01	6.14E+01	2.43E-01	1.49E+01	0.113	148.3	0.8	0.005395926	1.028	8.87E-03	14.5	6.1E-04

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the red-tailed hawk range from 0.086 g/g BW/day for an adult male in summer, to 0.11 g/g BW/day for an adult female in winter (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.11 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 1.028 kg to yield a food ingestion rate of 0.113 kg/day.

(c) HR = Home Ranges vary from 148.26 to 395.36 acres (Kirkwood, 1980); the smallest home range of 148.36 acres was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult male red-tailed hawks from the midwest weigh an average of 1.028 kg (Craighead and Craighead, 1956).

Dose = [(Concentration in mice) x (FIR)/Body Weight] x (AUF).

BW = Body Weight.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-17
Hazard Quotient Calculations for the American Robin (LOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.117	0.37	0.8	2.16216	0.077	1.19E-02	0.028	4.3E-01
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	1.00E+00	6.21E-03	0.117	0.37	0.8	2.16216	0.077	2.03E-02	0.028	7.3E-01
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.00E+00	2.17E-02	0.117	0.37	0.8	2.16216	0.077	7.11E-02	0.028	2.5E+00
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.117	0.37	0.8	2.16216	0.077	1.87E-02	0.077	2.4E-01
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.117	0.37	0.8	2.16216	0.077	9.49E-01	1.8	5.3E-01
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.117	0.37	0.8	2.16216	0.077	1.93E-01	1.1	1.8E-01
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.117	0.37	0.8	2.16216	0.077	4.77E-01	NA	NC
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.117	0.37	0.8	2.16216	0.077	5.30E-02	NA	NC
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.117	0.37	0.8	2.16216	0.077	1.85E-01	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	1.00E+00	8.49E+03	0.117	0.37	0.8	2.16216	0.077	2.78E+04	44.5	6.2E+02
Antimony	3.20E+00	1.99E+00	1.99E+00	1.00E+00	1.99E+00	0.117	0.37	0.8	2.16216	0.077	6.51E+00	NA	NC
Cadmium	3.70E-01	3.59E-01	3.59E-01	1.00E+00	3.59E-01	0.117	0.37	0.8	2.16216	0.077	1.17E+00	20	5.9E-02
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.117	0.37	0.8	2.16216	0.077	1.11E+00	NA	NC
Iron	1.00E+04	8.98E+03	8.98E+03	1.00E+00	8.98E+03	0.117	0.37	0.8	2.16216	0.077	2.94E+04	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	1.00E+00	3.43E+02	0.117	0.37	0.8	2.16216	0.077	1.12E+03	11.3	9.9E+01
Manganese	3.20E+02	1.21E+02	1.21E+02	1.00E+00	1.21E+02	0.117	0.37	0.8	2.16216	0.077	3.96E+02	997	4.0E-01
Mercury	2.50E-01	8.83E-02	8.83E-02	1.00E+00	8.83E-02	0.117	0.37	0.8	2.16216	0.077	2.89E-01	0.064	4.5E+00
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.00E+00	1.50E+01	0.117	0.37	0.8	2.16216	0.077	4.91E+01	114	4.3E-01
Zinc	2.50E+02	1.55E+02	1.55E+02	1.00E+00	1.55E+02	0.117	0.37	0.8	2.16216	0.077	5.07E+02	131	3.9E+00

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the American robin range from 0.89 g/g BW/day for a breeding juvenile in the west, to 1.52 g/g BW/day for breeding juvenile in the Midwest (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 1.52 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 0.0773 kg to yield a food ingestion rate of 0.117 kg/day.

(c) HR = Home Range, the low end median recorded home range of 0.15 hectares (USEPA, 1993; Weatherhead & McRae, 1990) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) All season adult American Robins from the east weigh an average of 0.0773 kg (Clench & Leberman, 1978).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-17a
Hazard Quotient Calculations for the American Robin (LOAEL)
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.117	0.37	0.8	2.16216	0.077	6.42E-03	0.028	2.3E-01
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	1.00E+00	7.90E-03	0.117	0.37	0.8	2.16216	0.077	2.59E-02	0.028	9.2E-01
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.00E+00	2.59E-03	0.117	0.37	0.8	2.16216	0.077	8.48E-03	0.028	3.0E-01
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	1.00E+00	8.46E+03	0.117	0.37	0.8	2.16216	0.077	2.77E+04	44.5	6.2E+02
Antimony	7.20E-01	7.20E-01	7.20E-01	1.00E+00	7.20E-01	0.117	0.37	0.8	2.16216	0.077	2.36E+00	5	4.7E-01
Lead	2.00E+01	7.36E+00	7.36E+00	1.00E+00	7.36E+00	0.117	0.37	0.8	2.16216	0.077	2.41E+01	11.3	2.1E+00
Mercury	2.50E-01	6.54E-02	6.54E-02	1.00E+00	6.54E-02	0.117	0.37	0.8	2.16216	0.077	2.14E-01	0.064	3.3E+00
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.00E+00	1.44E+01	0.117	0.37	0.8	2.16216	0.077	4.71E+01	114	4.1E-01
Zinc	1.60E+02	6.14E+01	6.14E+01	1.00E+00	6.14E+01	0.117	0.37	0.8	2.16216	0.077	2.01E+02	131	1.5E+00

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the American robin range from 0.89 g/g BW/day for a breeding juvenile in the west, to 1.52 g/g BW/day for breeding juvenile in the Midwest (USEPA, 1993).

To express this value in units of g/day, the highest reported food ingestion rate of 1.52 g/g BW/day was multiplied by

the lowest reported body weight from the same study of 0.0773 kg to yield a food ingestion rate of 0.117 kg/day.

(c) HR = Home Range, the low end median recorded home range of 0.15 hectares (USEPA, 1993; Weatherhead & McRae, 1990) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) All season adult American Robins from the east weigh an average of 0.0773 kg (Clench & Leberman, 1978).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-18
Hazard Quotient Calculations for the American Robin (NOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.117	0.37	0.8	2.16216	0.077	1.19E-02	0.003	4.0E+00
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	1.00E+00	6.21E-03	0.117	0.37	0.8	2.16216	0.077	2.03E-02	0.003	6.8E+00
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.00E+00	2.17E-02	0.117	0.37	0.8	2.16216	0.077	7.11E-02	0.003	2.4E+01
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.117	0.37	0.8	2.16216	0.077	1.87E-02	0.077	2.4E-01
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.117	0.37	0.8	2.16216	0.077	9.49E-01	0.18	5.3E+00
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.117	0.37	0.8	2.16216	0.077	1.93E-01	1.1	1.8E-01
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.117	0.37	0.8	2.16216	0.077	4.77E-01	NA	NC
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.117	0.37	0.8	2.16216	0.077	5.30E-02	NA	NC
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.117	0.37	0.8	2.16216	0.077	1.85E-01	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	1.00E+00	8.49E+03	0.117	0.37	0.8	2.16216	0.077	2.78E+04	44.5	6.2E+02
Antimony	3.20E+00	1.99E+00	1.99E+00	1.00E+00	1.99E+00	0.117	0.37	0.8	2.16216	0.077	6.51E+00	NA	NC
Cadmium	3.70E-01	3.59E-01	3.59E-01	1.00E+00	3.59E-01	0.117	0.37	0.8	2.16216	0.077	1.17E+00	1.45	8.1E-01
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.117	0.37	0.8	2.16216	0.077	1.11E+00	NA	NC
Iron	1.00E+04	8.98E+03	8.98E+03	1.00E+00	8.98E+03	0.117	0.37	0.8	2.16216	0.077	2.94E+04	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	1.00E+00	3.43E+02	0.117	0.37	0.8	2.16216	0.077	1.12E+03	1.13	9.9E+02
Manganese	3.20E+02	1.21E+02	1.21E+02	1.00E+00	1.21E+02	0.117	0.37	0.8	2.16216	0.077	3.96E+02	997	4.0E-01
Mercury	2.50E-01	8.83E-02	8.83E-02	1.00E+00	8.83E-02	0.117	0.37	0.8	2.16216	0.077	2.89E-01	0.006	4.8E+01
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.00E+00	1.50E+01	0.117	0.37	0.8	2.16216	0.077	4.91E+01	11.4	4.3E+00
Zinc	2.50E+02	1.55E+02	1.55E+02	1.00E+00	1.55E+02	0.117	0.37	0.8	2.16216	0.077	5.07E+02	14.5	3.5E+01

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the American robin range from 0.89 g/g BW/day for a breeding juvenile in the west, to 1.52 g/g BW/day for breeding juvenile in the Midwest (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 1.52 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 0.0773 kg to yield a food ingestion rate of 0.117 kg/day.

(c) HR = Home Range, the low end median recorded home range of 0.15 hectares (USEPA, 1993; Weatherhead & McRae, 1990) was used in the AUF calculation.
AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) All season adult American Robins from the east weigh an average of 0.0773 kg (Clench & Leberman, 1978).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

Table 8-18a
Hazard Quotient Calculations for the American Robin (NOAEL)
Excluding Sample Location SS1, Soil,
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.117	0.37	0.8	2.16216	0.077	6.42E-03	0.003	2.1E+00
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	1.00E+00	7.90E-03	0.117	0.37	0.8	2.16216	0.077	2.59E-02	0.003	8.6E+00
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.00E+00	2.59E-03	0.117	0.37	0.8	2.16216	0.077	8.48E-03	0.003	2.8E+00
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	1.00E+00	8.46E+03	0.117	0.37	0.8	2.16216	0.077	2.77E+04	44.5	6.2E+02
Antimony	7.20E-01	7.20E-01	7.20E-01	1.00E+00	7.20E-01	0.117	0.37	0.8	2.16216	0.077	2.36E+00	NA	NC
Lead	2.00E+01	7.36E+00	7.36E+00	1.00E+00	7.36E+00	0.117	0.37	0.8	2.16216	0.077	2.41E+01	1.13	2.1E+01
Mercury	2.50E-01	6.54E-02	6.54E-02	1.00E+00	6.54E-02	0.117	0.37	0.8	2.16216	0.077	2.14E-01	0.006	3.6E+01
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.00E+00	1.44E+01	0.117	0.37	0.8	2.16216	0.077	4.71E+01	11.4	4.1E+00
Zinc	1.60E+02	6.14E+01	6.14E+01	1.00E+00	6.14E+01	0.117	0.37	0.8	2.16216	0.077	2.01E+02	14.5	1.4E+01

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rates of the American robin range from 0.89 g/g BW/day for a breeding juvenile in the west, to 1.52 g/g BW/day for breeding juvenile in the Midwest (USEPA, 1993).

To express this value in units of g/day, the highest reported food ingestion rate of 1.52 g/g BW/day was multiplied by

the lowest reported body weight from the same study of 0.0773 kg to yield a food ingestion rate of 0.117 kg/day.

(c) HR = Home Range, the low end median recorded home range of 0.15 hectares (USEPA, 1993; Weatherhead & McRae, 1990) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) All season adult American Robins from the east weigh an average of 0.0773 kg (Clench & Leberman, 1978).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

Table 8-19
Hazard Quotient Calculations for the Short-tailed Shrew (LOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.011	0.96	0.8	0.83333	0.017	1.92E-03	8.79	2.2E-04
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	1.00E+00	6.21E-03	0.011	0.96	0.8	0.83333	0.017	3.27E-03	8.79	3.7E-04
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.00E+00	2.17E-02	0.011	0.96	0.8	0.83333	0.017	1.14E-02	8.79	1.3E-03
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.011	0.96	0.8	0.83333	0.017	3.00E-03	0.44	6.8E-03
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.011	0.96	0.8	0.83333	0.017	1.53E-01	0.668	2.3E-01
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.011	0.96	0.8	0.83333	0.017	3.11E-02	218	1.4E-04
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.011	0.96	0.8	0.83333	0.017	7.68E-02	109.9	7.0E-04
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.011	0.96	0.8	0.83333	0.017	8.54E-03	10046	8.5E-07
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.011	0.96	0.8	0.83333	0.017	2.98E-02	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	1.00E+00	8.49E+03	0.011	0.96	0.8	0.83333	0.017	4.47E+03	22.952	1.9E+02
Antimony	3.20E+00	1.99E+00	1.99E+00	1.00E+00	1.99E+00	0.011	0.96	0.8	0.83333	0.017	1.05E+00	1.487	7.1E-01
Cadmium	3.70E-01	3.59E-01	3.59E-01	1.00E+00	3.59E-01	0.011	0.96	0.8	0.83333	0.017	1.89E-01	21.2	8.9E-03
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.011	0.96	0.8	0.83333	0.017	1.79E-01	1419	1.3E-04
Iron	1.00E+04	8.98E+03	8.98E+03	1.00E+00	8.98E+03	0.117	0.37	0.8	2.16216	0.077	2.94E+04	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	1.00E+00	3.43E+02	0.011	0.96	0.8	0.83333	0.017	1.81E+02	175.83	1.0E+00
Manganese	3.20E+02	1.21E+02	1.21E+02	1.00E+00	1.21E+02	0.011	0.96	0.8	0.83333	0.017	6.37E+01	624	1.0E-01
Mercury	2.50E-01	8.83E-02	8.83E-02	1.00E+00	8.83E-02	0.011	0.96	0.8	0.83333	0.017	4.65E-02	0.352	1.3E-01
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.00E+00	1.50E+01	0.011	0.96	0.8	0.83333	0.017	7.90E+00	4.285	1.8E+00
Zinc	2.50E+02	1.55E+02	1.55E+02	1.00E+00	1.55E+02	0.011	0.96	0.8	0.83333	0.017	8.17E+01	703.3	1.2E-01

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The highest food ingestion rates of the short-tailed shrew range documented are 0.62 g/g BW/day (USEPA, 1993).

To express this value in units of g/day, the highest reported food ingestion rate of 0.62 g/g BW/day was multiplied by

the lowest reported body weight from the same study of 0.017 kg to yield a food ingestion rate of 0.011 kg/day.

(c) HR = Home Range, median recorded home range of 0.39 hectares (0.96 acres) (USEPA, 1993) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Mean summer female short-tailed shrew weight is 17.40 g (0.0174 kg) (USEPA, 1993).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor (equals 1.0 in this case)

NA = Not Available

NC = Not Calculated

Table 8-19a
Hazard Quotient Calculations for the Short-tailed Shrew (LOAEL)
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.011	0.96	0.8	0.83333	0.017	1.03E-03	8.79	1.2E-04
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	1.00E+00	7.90E-03	0.011	0.96	0.8	0.83333	0.017	4.16E-03	8.79	4.7E-04
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.00E+00	2.59E-03	0.011	0.96	0.8	0.83333	0.017	1.36E-03	8.79	1.6E-04
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	1.00E+00	8.46E+03	0.011	0.96	0.8	0.83333	0.017	4.46E+03	22.952	1.9E+02
Antimony	7.20E-01	7.20E-01	7.20E-01	1.00E+00	7.20E-01	0.011	0.96	0.8	0.83333	0.017	3.79E-01	1.487	2.6E-01
Lead	2.00E+01	7.36E+00	7.36E+00	1.00E+00	7.36E+00	0.011	0.96	0.8	0.83333	0.017	3.88E+00	175.83	2.2E-02
Mercury	2.50E-01	6.54E-02	6.54E-02	1.00E+00	6.54E-02	0.011	0.96	0.8	0.83333	0.017	3.45E-02	0.352	9.8E-02
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.00E+00	1.44E+01	0.011	0.96	0.8	0.83333	0.017	7.58E+00	4.285	1.8E+00
Zinc	1.60E+02	6.14E+01	6.14E+01	1.00E+00	6.14E+01	0.011	0.96	0.8	0.83333	0.017	3.24E+01	703.3	4.6E-02

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The highest food ingestion rates of the short-tailed shrew range documented are 0.62 g/g BW/day (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.62 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 0.017 kg to yield a food ingestion rate of 0.011 kg/day.

(c) HR = Home Range, median recorded home range of 0.39 hectares (0.96 acres) (USEPA, 1993) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Mean summer female short-tailed shrew weight is 17.40 g (0.0174 kg) (USEPA, 1993).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor (equals 1.0 in this case)

NA = Not Available

NC = Not Calculated

Table 8-20
Hazard Quotient Calculations for the Short-tailed Shrew (NOAEL)
Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	1.20E-02	3.65E-03	3.65E-03	1.00E+00	3.65E-03	0.011	0.96	0.8	0.83333	0.017	1.92E-03	1.76	1.1E-03
4,4-DDE	1.40E-02	6.21E-03	6.21E-03	1.00E+00	6.21E-03	0.011	0.96	0.8	0.83333	0.017	3.27E-03	1.76	1.9E-03
4,4-DDT	4.30E-02	2.17E-02	2.17E-02	1.00E+00	2.17E-02	0.011	0.96	0.8	0.83333	0.017	1.14E-02	1.76	6.5E-03
Dieldrin	5.70E-03	5.70E-03	5.70E-03	1.00E+00	5.70E-03	0.011	0.96	0.8	0.83333	0.017	3.00E-03	0.044	6.8E-02
Aroclor-1260	2.90E-01	2.90E-01	2.90E-01	1.00E+00	2.90E-01	0.011	0.96	0.8	0.83333	0.017	1.53E-01	0.067	2.3E+00
Bis(2-ethylhexyl)phthalate	5.90E-02	5.90E-02	5.90E-02	1.00E+00	5.90E-02	0.011	0.96	0.8	0.83333	0.017	3.11E-02	21.8	1.4E-03
Acetone	3.70E-01	1.46E-01	1.46E-01	1.00E+00	1.46E-01	0.011	0.96	0.8	0.83333	0.017	7.68E-02	22	3.5E-03
Methyl Ethyl Ketone	3.30E-02	1.62E-02	1.62E-02	1.00E+00	1.62E-02	0.011	0.96	0.8	0.83333	0.017	8.54E-03	3892	2.2E-06
Methyl Isobutyl Ketone	3.40E-01	5.67E-02	5.67E-02	1.00E+00	5.67E-02	0.011	0.96	0.8	0.83333	0.017	2.98E-02	NA	NC
Inorganics													
Aluminum	1.30E+04	8.49E+03	8.49E+03	1.00E+00	8.49E+03	0.011	0.96	0.8	0.83333	0.017	4.47E+03	2.295	1.9E+03
Antimony	3.20E+00	1.99E+00	1.99E+00	1.00E+00	1.99E+00	0.011	0.96	0.8	0.83333	0.017	1.05E+00	0.149	7.0E+00
Cadmium	3.70E-01	3.59E-01	3.59E-01	1.00E+00	3.59E-01	0.011	0.96	0.8	0.83333	0.017	1.89E-01	2.12	8.9E-02
Cyanide	3.40E-01	3.40E-01	3.40E-01	1.00E+00	3.40E-01	0.011	0.96	0.8	0.83333	0.017	1.79E-01	141.9	1.3E-03
Iron	1.00E+04	8.98E+03	8.98E+03	1.00E+00	8.98E+03	0.117	0.37	0.8	2.16216	0.077	2.94E+04	NA	NC
Lead	4.60E+02	3.43E+02	3.43E+02	1.00E+00	3.43E+02	0.011	0.96	0.8	0.83333	0.017	1.81E+02	17.58	1.0E+01
Manganese	3.20E+02	1.21E+02	1.21E+02	1.00E+00	1.21E+02	0.011	0.96	0.8	0.83333	0.017	6.37E+01	193	3.3E-01
Mercury	2.50E-01	8.83E-02	8.83E-02	1.00E+00	8.83E-02	0.011	0.96	0.8	0.83333	0.017	4.65E-02	0.07	6.6E-01
Vanadium	2.40E+01	1.50E+01	1.50E+01	1.00E+00	1.50E+01	0.011	0.96	0.8	0.83333	0.017	7.90E+00	0.428	1.8E+01
Zinc	2.50E+02	1.55E+02	1.55E+02	1.00E+00	1.55E+02	0.011	0.96	0.8	0.83333	0.017	8.17E+01	351.7	2.3E-01

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The highest food ingestion rates of the short-tailed shrew range documented are 0.62 g/g BW/day (USEPA, 1993).

To express this value in units of g/day, the highest reported food ingestion rate of 0.62 g/g BW/day was multiplied by

the lowest reported body weight from the same study of 0.017 kg to yield a food ingestion rate of 0.011 kg/day.

(c) HR = Home Range, median recorded home range of 0.39 hectares (0.96 acres) (USEPA, 1993) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Mean summer female short-tailed shrew weight is 17.40 g (0.0174 kg) (USEPA, 1993).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor (equals 1.0 in this case)

NA = Not Available

NC = Not Calculated

Table 8-20a
Hazard Quotient Calculations for the Short-tailed Shrew (NOAEL)
Excluding Sample Location SS1, Soils
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Maximum Detected Concentration (mg/kg)	95% UCL (Distribution) (mg/kg)	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Small Mammal Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds													
4,4-DDD	3.80E-03	1.96E-03	1.96E-03	1.00E+00	1.96E-03	0.011	0.96	0.8	0.83333	0.017	1.03E-03	1.76	5.9E-04
4,4-DDE	1.40E-02	7.90E-03	7.90E-03	1.00E+00	7.90E-03	0.011	0.96	0.8	0.83333	0.017	4.16E-03	1.76	2.4E-03
4,4-DDT	8.00E-03	2.59E-03	2.59E-03	1.00E+00	2.59E-03	0.011	0.96	0.8	0.83333	0.017	1.36E-03	1.76	7.8E-04
Inorganics													
Aluminum	1.30E+04	8.46E+03	8.46E+03	1.00E+00	8.46E+03	0.011	0.96	0.8	0.83333	0.017	4.46E+03	2.295	1.9E+03
Antimony	7.20E-01	7.20E-01	7.20E-01	1.00E+00	7.20E-01	0.011	0.96	0.8	0.83333	0.017	3.79E-01	0.149	2.5E+00
Lead	2.00E+01	7.36E+00	7.36E+00	1.00E+00	7.36E+00	0.011	0.96	0.8	0.83333	0.017	3.88E+00	17.58	2.2E-01
Mercury	2.50E-01	6.54E-02	6.54E-02	1.00E+00	6.54E-02	0.011	0.96	0.8	0.83333	0.017	3.45E-02	0.07	4.9E-01
Vanadium	2.40E+01	1.44E+01	1.44E+01	1.00E+00	1.44E+01	0.011	0.96	0.8	0.83333	0.017	7.58E+00	0.428	1.8E+01
Zinc	1.60E+02	6.14E+01	6.14E+01	1.00E+00	6.14E+01	0.011	0.96	0.8	0.83333	0.017	3.24E+01	351.7	9.2E-02

Notes:

Shaded area indicates an exceedance of an HQ of 1.

AOC = Area of Concern

(1) Exposure Point Concentration = the lower of the 95% UCL and the maximum detected concentration.

(a) = Predicted small mammal concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The highest food ingestion rates of the short-tailed shrew range documented are 0.62 g/g BW/day (USEPA, 1993).
To express this value in units of g/day, the highest reported food ingestion rate of 0.62 g/g BW/day was multiplied by
the lowest reported body weight from the same study of 0.017 kg to yield a food ingestion rate of 0.011 kg/day.

(c) HR = Home Range, median recorded home range of 0.39 hectares (0.96 acres) (USEPA, 1993) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Mean summer female short-tailed shrew weight is 17.40 g (0.0174 kg) (USEPA, 1993).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor (equals 1.0 in this case)

NA = Not Available

NC = Not Calculated

Table 8-21
Hazard Quotient Summary
Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Mink LOAEL HQ	Mink NOAEL HQ	Raccoon LOAEL HQ	Raccoon NOAEL HQ	Great-blue Heron LOAEL HQ	Great-blue Heron NOAEL HQ
Organic Compounds						
4,4-DDD	3.8E-08	1.9E-07	2.2E-08	1.1E-07	7.0E-04	6.6E-03
4,4-DDE	6.5E-08	3.2E-07	3.8E-08	1.9E-07	1.2E-03	1.1E-02
4,4-DDT	2.3E-07	1.1E-06	1.3E-07	6.6E-07	4.2E-03	3.9E-02
Acetone	9.4E-06	4.7E-05	NC	NC	NC	NC
Methyl Ethyl Ketone	2.2E-09	5.8E-09	NC	NC	NC	NC
Inorganics						
Aluminum	8.8E-04	8.8E-03	6.7E-04	6.7E-03	2.7E-02	1.1E-02
Barium	4.1E-05	1.5E-04	3.1E-05	1.2E-04	2.5E-03	5.0E-03
Beryllium	NC	NC	NC	NC	NC	NC
Mercury	7.7E-04	1.3E-03	5.8E-04	9.7E-04	5.0E-02	5.3E-01
Vanadium	6.9E-06	6.9E-05	5.2E-06	5.2E-05	1.5E-05	1.5E-04

Notes:

Shaded area indicates an exceedance of an HQ of 1.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL or NOAEL).

NC = Not Calculated

Table 8-22
Hazard Quotient Calculations for the Mink (LOAEL)
Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Fish Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds											
4,4-DDD	2.70E-03	1.00E-01	2.70E-04	0.117	303	0.6	0.002	0.533	1.18E-07	3.08	3.8E-08
4,4-DDE	2.60E-03	1.78E-01	4.62E-04	0.117	303	0.6	0.002	0.533	2.01E-07	3.08	6.5E-08
4,4-DDT	1.60E-03	1.00E+00	1.60E-03	0.117	303	0.6	0.002	0.533	6.97E-07	3.08	2.3E-07
Acetone	2.70E-01	3.06E+00	8.27E-01	0.117	303	0.6	0.002	0.533	3.60E-04	38.5	9.4E-06
Methyl Ethyl Ketone	1.80E-02	1.00E+00	1.80E-02	0.117	303	0.6	0.002	0.533	7.84E-06	3516	2.2E-09
Inorganics											
Aluminum	5.50E+03	2.97E-03	1.63E+01	0.117	303	0.6	0.002	0.533	7.11E-03	8.032	8.8E-04
Barium	2.30E+01	6.22E-02	1.43E+00	0.117	303	0.6	0.002	0.533	6.23E-04	15.2	4.1E-05
Beryllium	1.80E-01	1.00E+00	1.80E-01	0.117	303	0.6	0.002	0.533	7.84E-05	NA	NC
Mercury	4.40E-02	1.00E+00	4.40E-02	0.117	303	0.6	0.002	0.533	1.92E-05	0.025	7.7E-04
Vanadium	8.80E+00	2.69E-03	2.37E-02	0.117	303	0.6	0.002	0.533	1.03E-05	1.5	6.9E-06

Notes:

AOC = Area of Concern

(1) Exposure Point Concentration = maximum detected concentration due to small sample size

(a) = Predicted fish concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. A year-round food ingestion rate of 0.22 g/g BW/day has been estimated for male mink (USEPA, 1993).

To express this value in units of g/day, the food ingestion rate was multiplied by the lowest reported body weight (533 g) to yield a food ingestion rate of 117.26 g/day.

(c) HR = Home Range. The lowest reported HR of 303 acres (USEPA, 1993) was used in these calculations.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Mean reported weights for adult mink range from 533 to 1,734 g (Merritt, 1987; USEPA, 1993).

Dose = [(Predicted concentration in fish) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-23
Hazard Quotient Calculations for the Mink (NOAEL)
Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Fish Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds											
4,4-DDD	2.70E-03	1.00E-01	2.70E-04	0.117	303	0.6	0.002	0.533	1.18E-07	0.62	1.9E-07
4,4-DDE	2.60E-03	1.78E-01	4.62E-04	0.117	303	0.6	0.002	0.533	2.01E-07	0.62	3.2E-07
4,4-DDT	1.60E-03	1.00E+00	1.60E-03	0.117	303	0.6	0.002	0.533	6.97E-07	0.62	1.1E-06
Acetone	2.70E-01	3.06E+00	8.27E-01	0.117	303	0.6	0.002	0.533	3.60E-04	7.7	4.7E-05
Methyl Ethyl Ketone	1.80E-02	1.00E+00	1.80E-02	0.117	303	0.6	0.002	0.533	7.84E-06	1362	5.8E-09
Inorganics											
Aluminum	5.50E+03	2.97E-03	1.63E+01	0.117	303	0.6	0.002	0.533	7.11E-03	0.803	8.8E-03
Barium	2.30E+01	6.22E-02	1.43E+00	0.117	303	0.6	0.002	0.533	6.23E-04	4.1	1.5E-04
Beryllium	1.80E-01	1.00E+00	1.80E-01	0.117	303	0.6	0.002	0.533	7.84E-05	NA	NC
Mercury	4.40E-02	1.00E+00	4.40E-02	0.117	303	0.6	0.002	0.533	1.92E-05	0.015	1.3E-03
Vanadium	8.80E+00	2.69E-03	2.37E-02	0.117	303	0.6	0.002	0.533	1.03E-05	0.15	6.9E-05

Notes:

AOC = Area of Concern

(1) Exposure Point Concentration = maximum detected concentration due to small sample size

(a) = Predicted fish concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. A year-round food ingestion rate of 0.22 g/g BW/day has been estimated for male mink (USEPA, 1993).

To express this value in units of g/day, the food ingestion rate was multiplied by the lowest reported body weight (533 g) to yield a food ingestion rate of 117.26 g/day.

(c) HR = Home Range. The lowest reported HR of 303 acres (USEPA, 1993) was used in these calculations.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Mean reported weights for adult mink range from 533 to 1,734 g (Merritt, 1987; USEPA, 1993).

Dose = [(Predicted concentration in fish) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-24
Hazard Quotient Calculations for the Raccoon (LOAEL)
Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Fish Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds											
4,4-DDD	2.70E-03	1.00E-01	2.70E-04	0.228	96.37	0.6	0.006	4.31	8.90E-08	4	2.2E-08
4,4-DDE	2.60E-03	1.78E-01	4.62E-04	0.228	96.37	0.6	0.006	4.31	1.52E-07	4	3.8E-08
4,4-DDT	1.60E-03	1.00E+00	1.60E-03	0.228	96.37	0.6	0.006	4.31	5.27E-07	4	1.3E-07
Acetone	2.70E-01	3.06E+00	8.27E-01	0.228	96.37	0.6	0.006	4.31	2.72E-04	NA	NC
Methyl Ethyl Ketone	1.80E-02	1.00E+00	1.80E-02	0.228	96.37	0.6	0.006	4.31	5.93E-06	NA	NC
Inorganics											
Aluminum	5.50E+03	2.97E-03	1.63E+01	0.228	96.37	0.6	0.006	4.31	5.38E-03	8.032	6.7E-04
Barium	2.30E+01	6.22E-02	1.43E+00	0.228	96.37	0.6	0.006	4.31	4.72E-04	15.2	3.1E-05
Beryllium	1.80E-01	1.00E+00	1.80E-01	0.228	96.37	0.6	0.006	4.31	5.93E-05	NA	NC
Mercury	4.40E-02	1.00E+00	4.40E-02	0.228	96.37	0.6	0.006	4.31	1.45E-05	0.025	5.8E-04
Vanadium	8.80E+00	2.69E-03	2.37E-02	0.228	96.37	0.6	0.006	4.31	7.80E-06	1.5	5.2E-06

Notes:
AOC = Area of Concern
(1) Exposure Point Concentration = maximum detected concentration due to small sample size
(a) = Predicted fish concentration (EPC x BAF)
(b) FIR = Food Ingestion Rate. The food ingestion rate of the raccoon was calculated from free-living metabolic rate for mammals FIR (kg/day) = 0.0687Wt^0.822 (USEPA, 1993 - Section 3.1.2).
To express this value in units of g/day, the highest reported food ingestion rate of 0.16 g/g BW/day was multiplied by
the lowest reported body weight of 2.7 kg (2,700 g) to yield a food ingestion rate of 432 g/day.
(c) HR = Home Range, the lowest recorded home range of 96.37 acres (Lotze, 1979) was used in the AUF calculation.
AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.
(d) Adult male raccoon weigh from 3.67 to 7.6 kg (Johnson, 1970; Sanderson, 1984).
Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).
BW = Body Weight.
LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).
HQ = Hazard Quotient (Dose/LOAEL).
mg/kg = milligrams per kilogram
BAF = Bioaccumulation factor
NA = Not Available
NC = Not Calculated
N = Nutrient

Table 8-25
Hazard Quotient Calculations for the Raccoon (NOAEL)
Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Fish Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds											
4,4-DDD	2.70E-03	1.00E-01	2.70E-04	0.228	96.37	0.6	0.006	4.31	8.90E-08	0.8	1.1E-07
4,4-DDE	2.60E-03	1.78E-01	4.62E-04	0.228	96.37	0.6	0.006	4.31	1.52E-07	0.8	1.9E-07
4,4-DDT	1.60E-03	1.00E+00	1.60E-03	0.228	96.37	0.6	0.006	4.31	5.27E-07	0.8	6.6E-07
Acetone	2.70E-01	3.06E+00	8.27E-01	0.228	96.37	0.6	0.006	4.31	2.72E-04	NA	NC
Methyl Ethyl Ketone	1.80E-02	1.00E+00	1.80E-02	0.228	96.37	0.6	0.006	4.31	5.93E-06	NA	NC
Inorganics											
Aluminum	5.50E+03	2.97E-03	1.63E+01	0.228	96.37	0.6	0.006	4.31	5.38E-03	0.803	6.7E-03
Barium	2.30E+01	6.22E-02	1.43E+00	0.228	96.37	0.6	0.006	4.31	4.72E-04	4.1	1.2E-04
Beryllium	1.80E-01	1.00E+00	1.80E-01	0.228	96.37	0.6	0.006	4.31	5.93E-05	NA	NC
Mercury	4.40E-02	1.00E+00	4.40E-02	0.228	96.37	0.6	0.006	4.31	1.45E-05	0.015	9.7E-04
Vanadium	8.80E+00	2.69E-03	2.37E-02	0.228	96.37	0.6	0.006	4.31	7.80E-06	0.15	5.2E-05

Notes:

AOC = Area of Concern

(1) Exposure Point Concentration = maximum detected concentration due to small sample size

(a) = Predicted fish concentration (EPC x BAF)

(b) FIR = Food Ingestion Rate. The food ingestion rate of the raccoon was calculated from free-living metabolic rate for mammals FIR (kg/day) = 0.0687Wt^0.822 (USEPA, 1993 - Section 3.1.2).
To express this value in units of g/day, the highest reported food ingestion rate of 0.16 g/g BW/day was multiplied by
the lowest reported body weight of 2.7 kg (2,700 g) to yield a food ingestion rate of 432 g/day.

(c) HR = Home Range, the lowest recorded home range of 96.37 acres (Lotze, 1979) was used in the AUF calculation.

AUF = Area Use Factor (AOC area/Home Range), all areas are given in acres.

(d) Adult male raccoon weigh from 3.67 to 7.6 kg (Johnson, 1970; Sanderson, 1984).

Dose = [(Predicted concentration in mice) x (FIR) /Body Weight] x (AUF).

BW = Body Weight.

NOAEL = No Observed Adverse Effect Level (Sample, 1996).

HQ = Hazard Quotient (Dose/LOAEL).

mg/kg = milligrams per kilogram

BAF = Bioaccumulation factor

NA = Not Available

NC = Not Calculated

N = Nutrient

Table 8-26
Hazard Quotient Calculations for the Great-blue Heron (LOAEL)
Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Fish Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	LOAEL (mg/kg BW/day)	HQ
Organic Compounds											
4,4-DDD	2.70E-03	1.00E-01	2.70E-04	0.401	1.48	0.6	0.405	2.23	1.97E-05	0.028	7.0E-04
4,4-DDE	2.60E-03	1.78E-01	4.62E-04	0.401	1.48	0.6	0.405	2.23	3.37E-05	0.028	1.2E-03
4,4-DDT	1.60E-03	1.00E+00	1.60E-03	0.401	1.48	0.6	0.405	2.23	1.17E-04	0.028	4.2E-03
Acetone	2.70E-01	3.06E+00	8.27E-01	0.401	1.48	0.6	0.405	2.23	6.02E-02	NA	NC
Methyl Ethyl Ketone	1.80E-02	1.00E+00	1.80E-02	0.401	1.48	0.6	0.405	2.23	1.31E-03	NA	NC
Inorganics											
Aluminum	5.50E+03	2.97E-03	1.63E+01	0.401	1.48	0.6	0.405	2.23	1.19E+00	44.5	2.7E-02
Barium	2.30E+01	6.22E-02	1.43E+00	0.401	1.48	0.6	0.405	2.23	1.04E-01	41.7	2.5E-03
Beryllium	1.80E-01	1.00E+00	1.80E-01	0.401	1.48	0.6	0.405	2.23	1.31E-02	NA	NC
Mercury	4.40E-02	1.00E+00	4.40E-02	0.401	1.48	0.6	0.405	2.23	3.21E-03	0.064	5.0E-02
Vanadium	8.80E+00	2.69E-03	2.37E-02	0.401	1.48	0.6	0.405	2.23	1.72E-03	114	1.5E-05

Notes:
Shaded area indicates an exceedance of an HQ of 1.
AOC = Area of Concern
(1) Exposure Point Concentration = maximum detected concentration due to small sample size
(a) = Predicted fish concentration (EPC x BAF)
(b) FIR = Food Ingestion Rate. The food ingestion rate of the great blue heron is 0.18 (g/g-day) (Kushlan, 1978).
To express this value in units of kg/day, the highest reported food ingestion rate of 0.18 g/g BW/day was multiplied by
the eastern North American mean body weight of 2.229 kg (2,700 g) to yield a food ingestion rate of 0.40 kg/day.
(c) HR = Home Range, the lowest recorded home range of 1.48 acres (Bayer, 1978) was used in the AUF calculation.
AUF = Area Use Factor (area/Home Range), all areas are given in acres.
(d) Average adult great blue heron weigh 2.229 kg (Quinney, 1982).
Dose = [(Concentration in mice) x (FIR)/Body Weight] x (AUF).
BW = Body Weight.
LOAEL = Lowest Observed Adverse Effect Level (Sample, 1996).
HQ = Hazard Quotient (Dose/LOAEL).
mg/kg = milligrams per kilogram
BAF = Bioaccumulation factor
NA = Not Available
NC = Not Calculated
N = Nutrient

Table 8-27
Hazard Quotient Calculations for the Great-blue Heron (NOAEL)
Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility, Virginia

Contaminant	Exposure Point Concentration [1] (mg/kg)	BAF	Predicted Fish Concentration [(a)] (mg/kg)	FIR [(b)] (kg/day)	HR [(c)] (acres)	AOC (acres)	AUF	Body Weight [(d)] (kg)	Dose (mg/kg BW/day)	NOAEL (mg/kg BW/day)	HQ
Organic Compounds											
4,4-DDD	2.70E-03	1.00E-01	2.70E-04	0.401	1.48	0.6	0.405	2.23	1.97E-05	0.003	6.6E-03
4,4-DDE	2.60E-03	1.78E-01	4.62E-04	0.401	1.48	0.6	0.405	2.23	3.37E-05	0.003	1.1E-02
4,4-DDT	1.60E-03	1.00E+00	1.60E-03	0.401	1.48	0.6	0.405	2.23	1.17E-04	0.003	3.9E-02
Acetone	2.70E-01	3.06E+00	8.27E-01	0.401	1.48	0.6	0.405	2.23	6.02E-02	NA	NC
Methyl Ethyl Ketone	1.80E-02	1.00E+00	1.80E-02	0.401	1.48	0.6	0.405	2.23	1.31E-03	NA	NC
Inorganics											
Aluminum	5.50E+03	2.97E-03	1.63E+01	0.401	1.48	0.6	0.405	2.23	1.19E+00	109.7	1.1E-02
Barium	2.30E+01	6.22E-02	1.43E+00	0.401	1.48	0.6	0.405	2.23	1.04E-01	20.8	5.0E-03
Beryllium	1.80E-01	1.00E+00	1.80E-01	0.401	1.48	0.6	0.405	2.23	1.31E-02	NA	NC
Mercury	4.40E-02	1.00E+00	4.40E-02	0.401	1.48	0.6	0.405	2.23	3.21E-03	0.006	5.3E-01
Vanadium	8.80E+00	2.69E-03	2.37E-02	0.401	1.48	0.6	0.405	2.23	1.72E-03	11.4	1.5E-04

Notes:
Shaded area indicates an exceedance of an HQ of 1.
AOC = Area of Concern
(1) Exposure Point Concentration = maximum detected concentration due to small sample size
(a) = Predicted fish concentration (EPC x BAF)
(b) FIR = Food Ingestion Rate. The food ingestion rate of the great blue heron is 0.18 (g/g-day) (Kushlan, 1978).
To express this value in units of kg/day, the highest reported food ingestion rate of 0.18 g/g BW/day was multiplied by
the eastern North American mean body weight of 2.229 kg (2,700 g) to yield a food ingestion rate of 0.40 kg/day.
(c) HR = Home Range, the lowest recorded home range of 1.48 acres (Bayer, 1978) was used in the AUF calculation.
AUF = Area Use Factor (area/Home Range), all areas are given in acres.
(d) Average adult great blue heron weigh 2.229 kg (Quinney, 1982).
Dose = [(Concentration in mice) x (FIR)/Body Weight] x (AUF).
BW = Body Weight.
NOAEL = No Observed Adverse Effect Level (Sample, 1996).
HQ = Hazard Quotient (Dose/LOAEL).
mg/kg = milligrams per kilogram
BAF = Bioaccumulation factor
NA = Not Available
NC = Not Calculated
N = Nutrient

FIGURES

SECTION 2
FIGURES

0 0.5 1 Miles

N

Topographic contour interval = 2 meters

Imagery Source: USGS, 19961219, Chincoteague - 100k DRG: USGS, Reston, VA.

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Figure 2-1

WFF Vicinity Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

\\fsral\Project\US ACE_20187\001.001 Sites 9 & WWTP RI-FS\Site WWTP\
Site WWTP - RI Report\Figures\Fig 2-1_WFF Vicinity_1.mxd, 11 January 2010, schrotp

Legend

Site Area

0 500 1,000 Feet

N

Imagery Source: 2007 NASA Color Orthophoto

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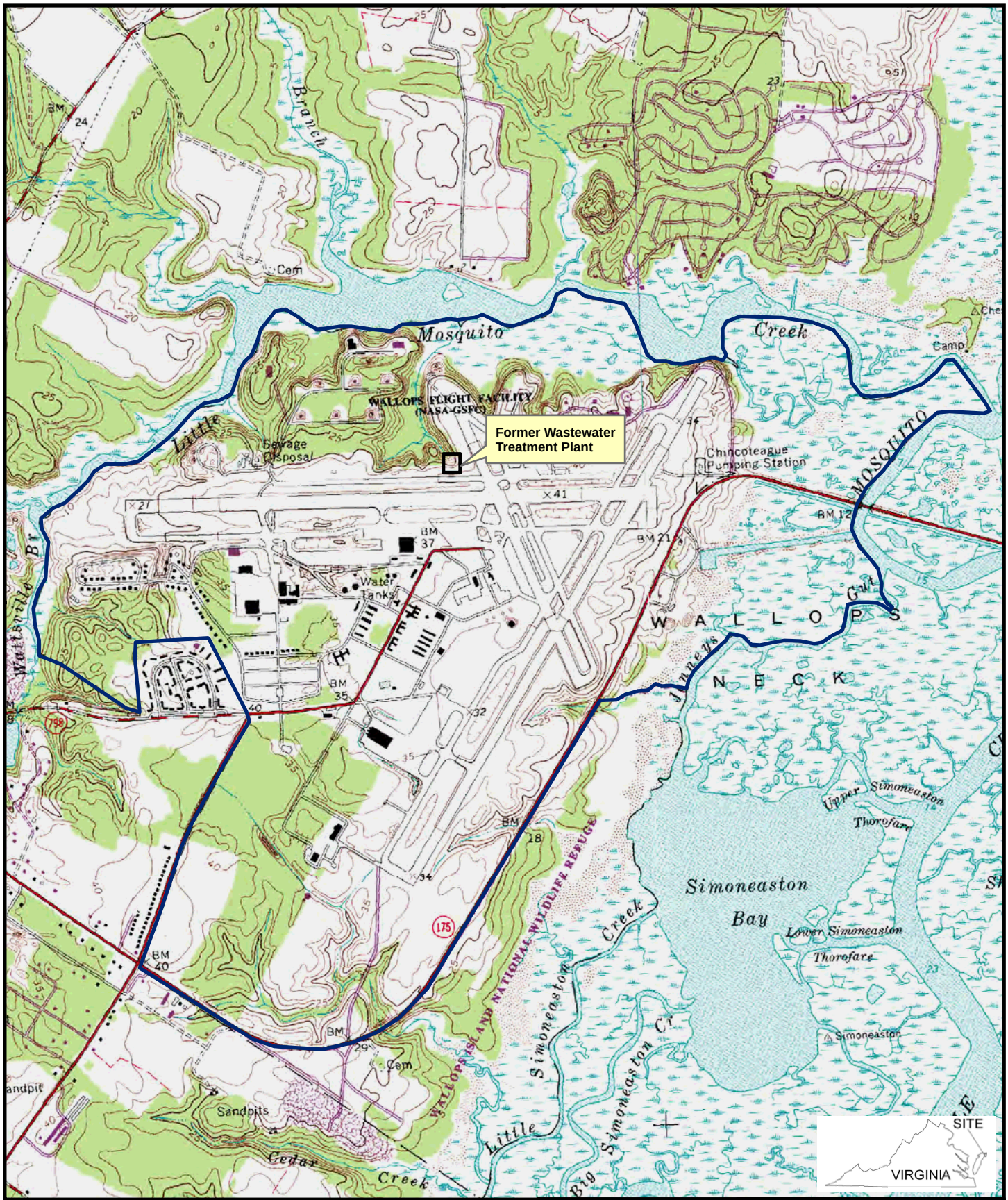
Figure 2-2

Study Area Location Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

\\fsral\Project\US ACE_20187\001.001 Sites 9 & WWTP RI-FS\Site WWTP\
Site WWTP - RI Report\Figures\Fig 2-2_Study Area Location_1.mxd, 11 January 2010, schrotp



Legend

0 500 1,000 Feet

N

WWTP Site Area

Main Base boundary

Topographic contour interval = 5 feet.

Imagery Source: USGS, 19961219, Chincoteague West - 24k DRG: USGS, Reston, VA

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Figure 2-3

Site Location Map

Former Wastewater Treatment Plant

Wallops Flight Facility

Accomack County, Virginia

\\fsral\Project\US ACE_20187\001.001 Sites 9 & WWTP RI-FS\Site WWTP\
Site WWTP - RI Report\Figures\Fig 2-3_Site Location_1.mxd, 11 January 2010, schrotp

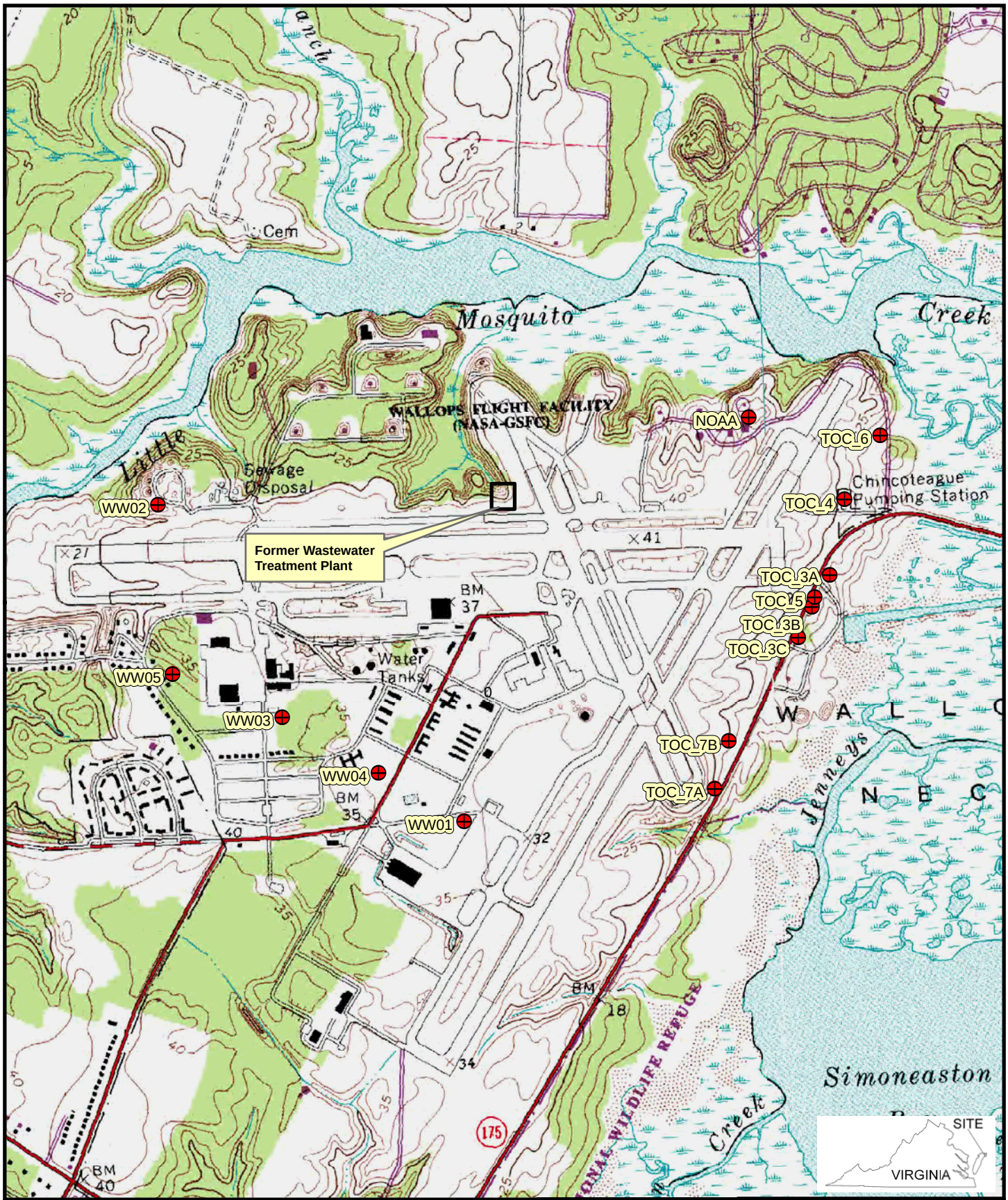

Figure 2-4

Main Base Water Supply Wells Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

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Site WWTP - RI Report\Figures\Fig 2-4_Water Supply Wells_1.mxd, 11 January 2010, schrotp

SECTION 3
FIGURES

0 50 100 150 Feet

N

Topographic contour interval = 1 foot.

Imagery Source: 2007 NASA Color Orthophoto

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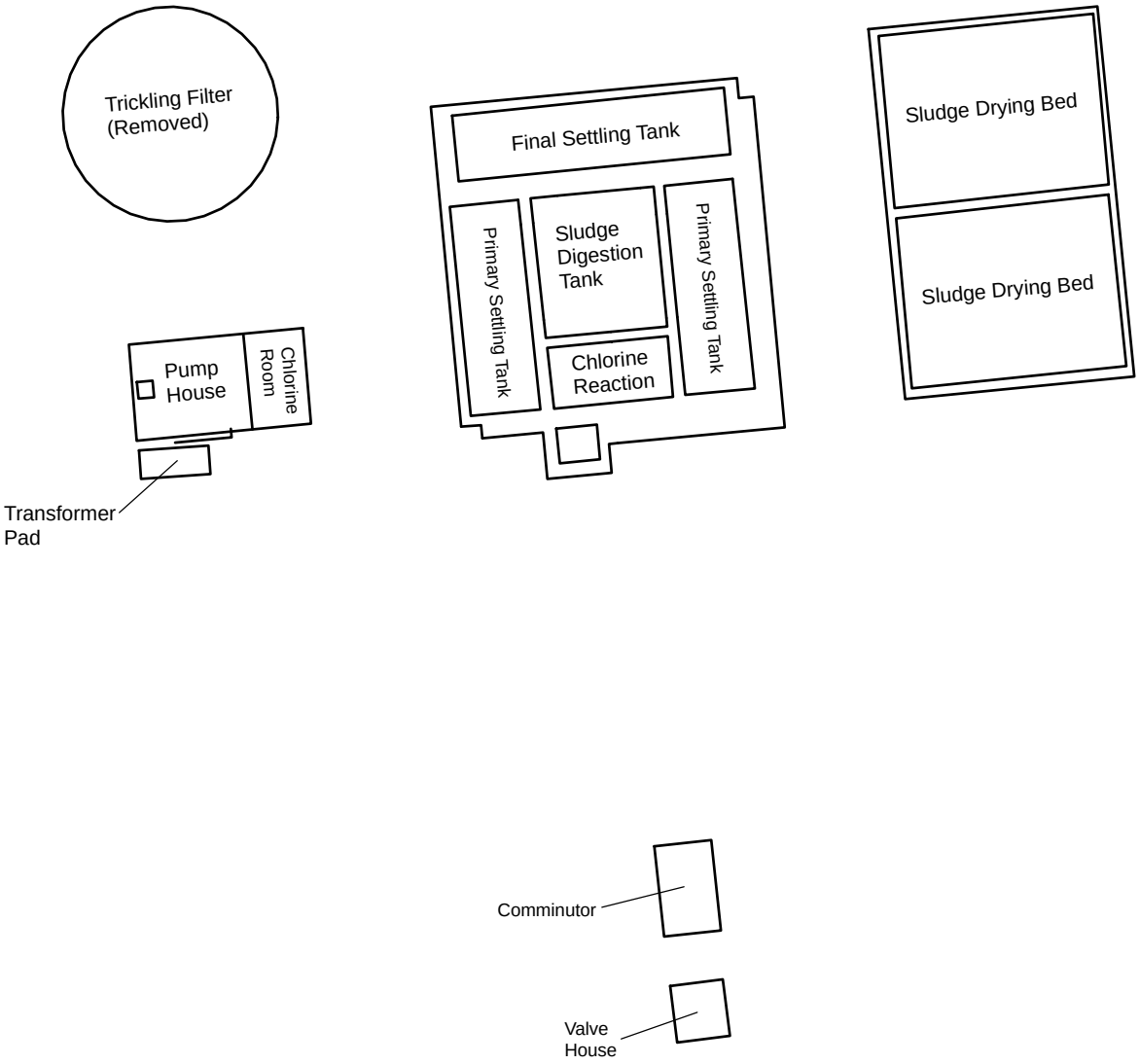
Figure 3-1

Site Layout Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

\\fsral\Project\US ACE_20187\001.001 Sites 9 & WWTP RI-FS\Site WWTP\
Site WWTP - RI Report\Figures\Fig 3-1_Site Layout_1.mxd, 11 January 2010, schrotp



Legend

Structure

0 5 10 15 20 25 Feet

N

Imagery Source: NASA

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Figure 3-2

WWTP Components Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

\\fsral\Project\US ACE_20187\001.001 Sites 9 & WWTP RI-FS\Site WWTP\
Site WWTP - RI Report\Figures\Fig 3-2_WWTP Components_1.mxd, 11 January 2010, schrotp

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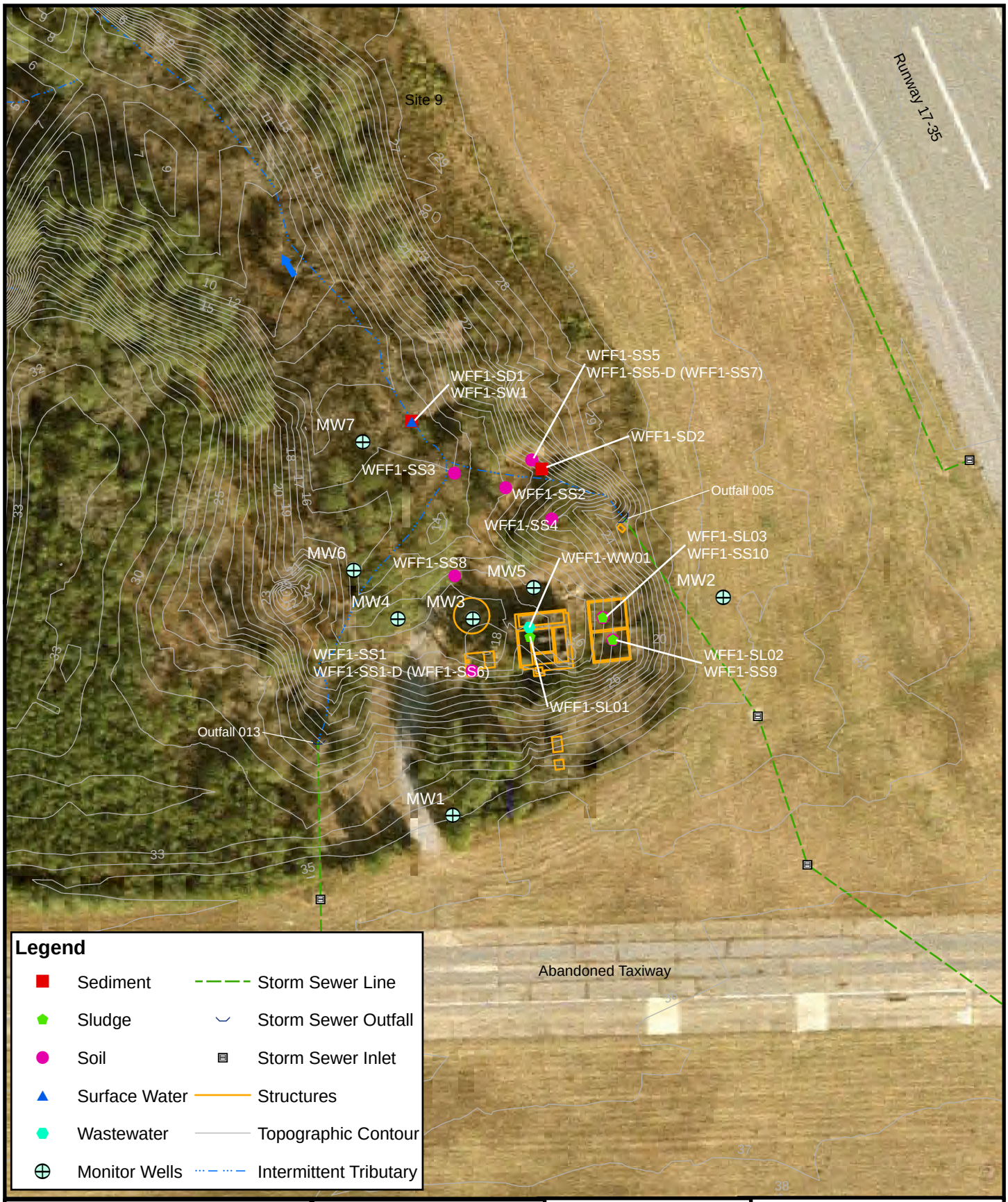
Figure 3-3

Study Area Drainage Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

\\fsral\Project\US ACE_20187\001.001 Sites 9 & WWTP RI-FS\Site WWTP\Site WWTP - RI Report\Figures\Fig 3-3_Study Area Drainage.pdf, 10 January 2010, schrotp

SECTION 4
FIGURES



0 25 50 75 100 Feet

N

Topographic contour interval = 1 foot.

Imagery Source: 2007 NASA Color Orthophoto

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Figure 4-1

Sample Location Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

Legend

- Previously Collected Soil Sample Location
- Soil Sample Location August/September 2012
- Existing Structure
- Former Structure
- Topographic Contour (1-foot Interval)

Note(s):
1. All results in milligrams per kilogram (mg/kg).
2. All sample depths are in feet (ft).
3. Toppgraphic contours are in feet above mean sea level (amsl).

Base imagery and features source: NASA

0 200 400 600 800
Feet

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Figure 4-2
Additional Soil Sample
Total Lead Results

Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

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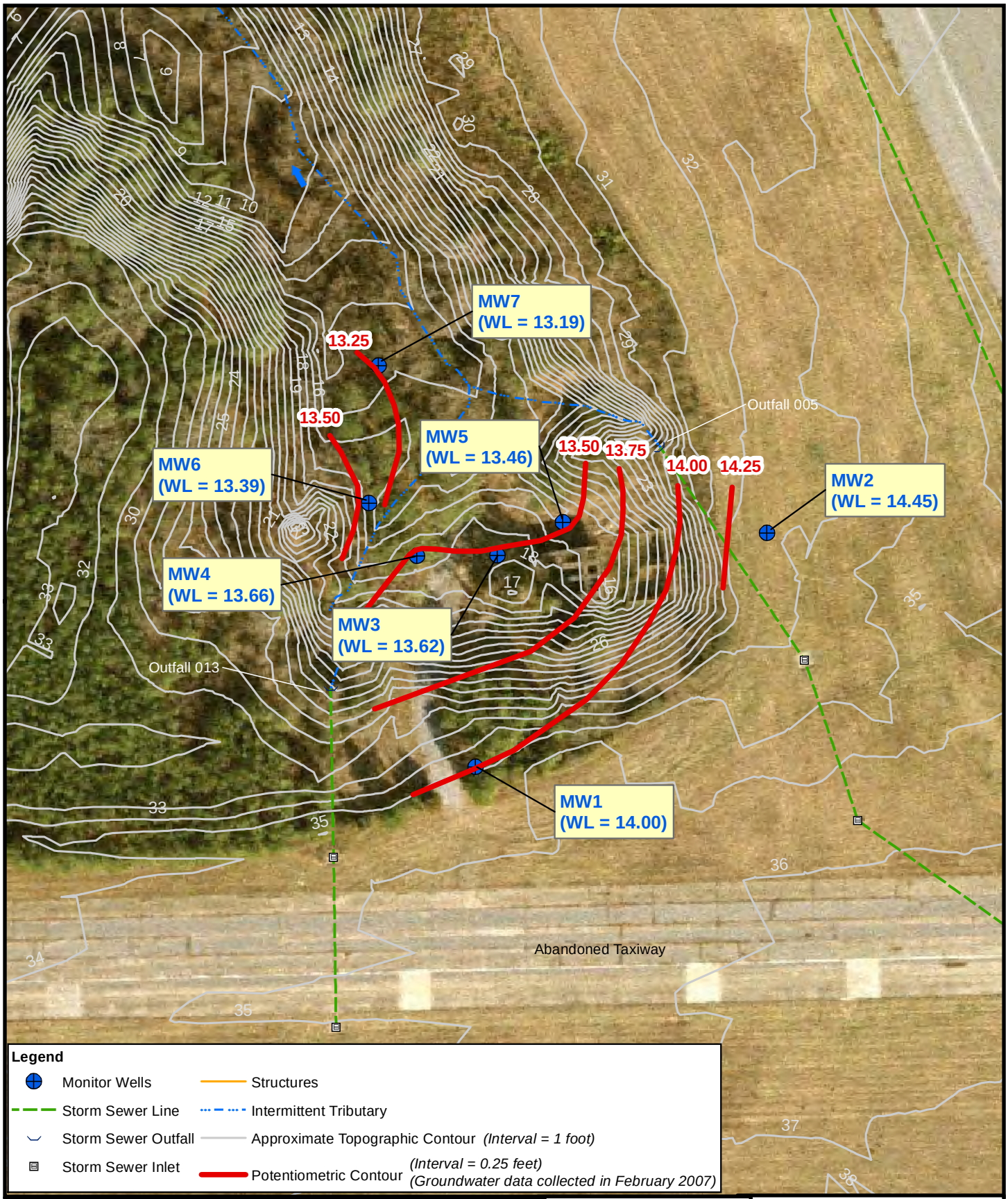

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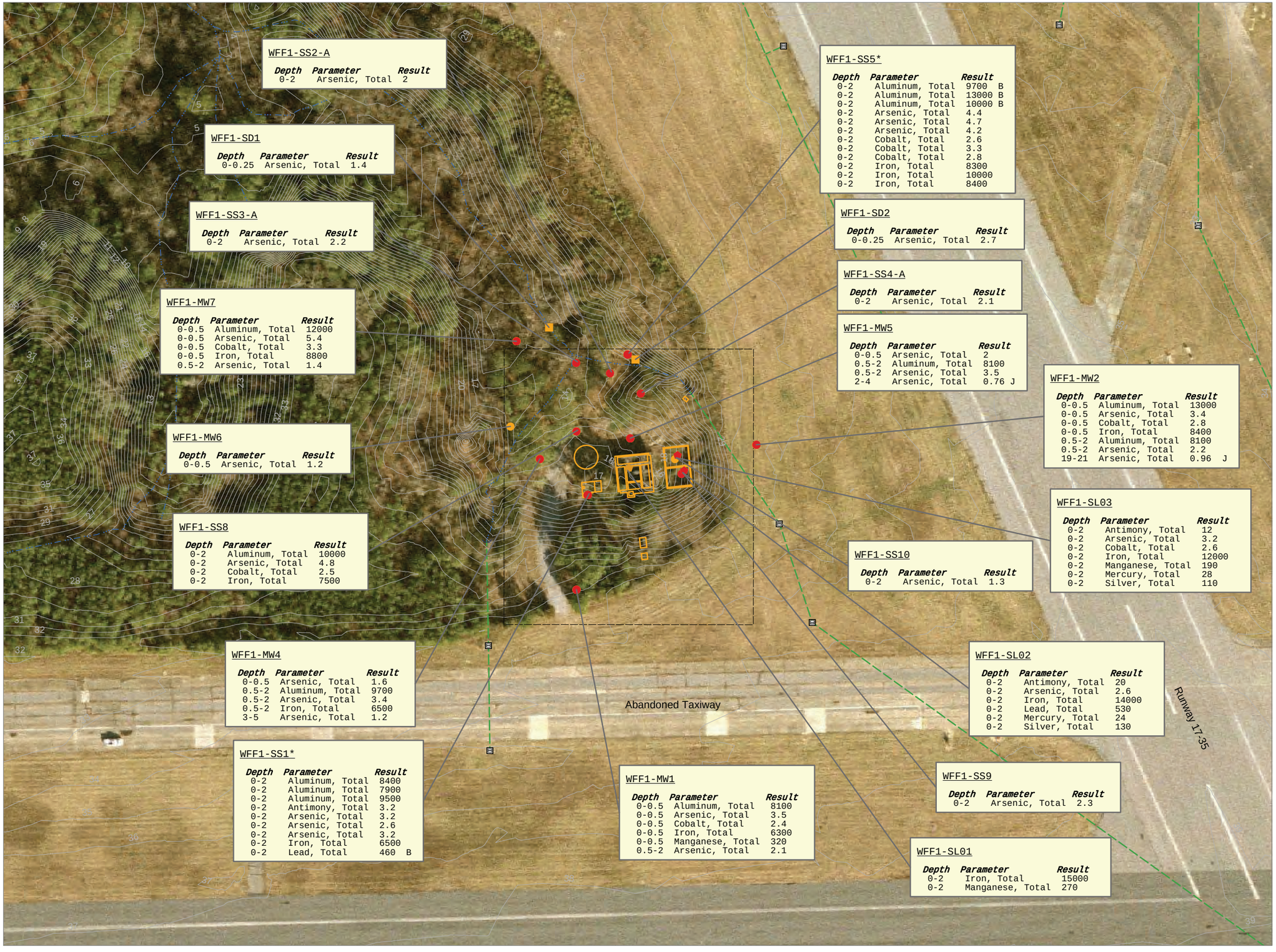
Figure 4-3

Groundwater Elevations and Potentiometric Surface Map
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

File: X:\CENAB\Wallops Flight Facility\001.001_Sites9&WWTP_RI-FS\SiteWWTP\MXDs\Fig 4-2_GW Elevations_Potentiometric_2.mxd, never never, ricksc

SECTION 5
FIGURES



Soil

- At Least One Parameter Exceeds Residential Screening Level
- At Least One Parameter Exceeds Industrial Screening Level

Sludge

- At Least One Parameter Exceeds Residential Screening Level
- At Least One Parameter Exceeds Industrial Screening Level

Sediment

- At Least One Parameter Exceeds Residential Screening Level

- Site WWTP Approximate Bundary
- Structures
- Intermittent Tributary
- Topographic Contour (1-foot Interval)
- Storm Sewer Line
- Storm Sewer Inlet
- Storm Sewer Outfall

Note(s):
1. Screening levels for soil and sludge are presented in Table 5-1; screening levels for sediment are presented in Table 5-2.
2. All results in milligrams per kilogram (mg/kg).
3. All sample depths are in feet (ft).

*Analytical results for one or more QC samples (i.e., duplicates) included.

Base imagery and features source: NASA

N W E S

25 0 25 50 75 100 125 Feet

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Figure 5-1

Metals Exceeding Screening Levels
Soil, Sludge, and Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

WFF1-MW6

Depth	Parameter	Result
0-0.5	Dibenz(a,h)anthracene	33 J H

WFF1-MW4

Depth	Parameter	Result
0.5-2	Dibenz(a,h)anthracene	46 J H

WFF1-SS1*

Depth	Parameter	Result
0-2	Aroclor-1260	290
0-2	Aroclor-1260	290

WFF1-SL03

Depth	Parameter	Result
0-2	Benzo[a]anthracene	290 J
0-2	Benzo[a]pyrene	290 J
0-2	Benzo[b]fluoranthene	550 M
0-2	Dibenz(a,h)anthracene	76 J
0-2	Indeno[1,2,3-cd]pyrene	230 J

WFF1-SL02

Depth	Parameter	Result
0-2	Benzo[a]anthracene	400 J
0-2	Benzo[a]pyrene	490 J
0-2	Benzo[b]fluoranthene	870 M
0-2	Indeno[1,2,3-cd]pyrene	330 J

WFF1-MW2

Depth	Parameter	Result
0-0.5	Benzo[a]pyrene	34 J H
0-0.5	Dibenz(a,h)anthracene	50 J H
19-21	Benzo[a]pyrene	30 J H
19-21	Dibenz(a,h)anthracene	44 J H

WFF1-SL01

Depth	Parameter	Result
0-2	Benzo[a]anthracene	2100 J
0-2	Benzo[a]pyrene	910 J
0-2	Benzo[b]fluoranthene	4800 M
0-2	Benzo[k]fluoranthene	2400 J M
0-2	Indeno[1,2,3-cd]pyrene	1400 J

Abandoned Taxiway

Runway 17-35

Soil
- At Least One Parameter Exceeds Residential Screening Levels
- No Parameters Exceed Screening Levels

Sludge
- At Least One Parameter Exceeds Industrial Screening Levels

Sediment
- No Parameters Exceed Screening Levels

- Site WWTP Approximate Bundary
- Structures
- Intermittent Tributary
- Topographic Contour (1-foot Interval)
- Storm Sewer Line
- Storm Sewer Inlet
- Storm Sewer Outfall

Note(s):
1. Screening levels for soil and sludge are presented in Table 5-1; screening levels for sediment are presented in Table 5-2.
2. All results in micrograms per kilogram (ug/kg).
3. All sample depths are in feet (ft).

*Analytical results for one or more QC samples (i.e., duplicates) included.

Base imagery and features source: NASA

N W E S

0 25 50 75 100 125 Feet

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Figure 5-2

Organics Exceeding Screening Levels
Soil, Sludge, and Sediment
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

Groundwater

- No Parameters Exceed Screening Levels
- At Least One Parameter Exceeds Screening Levels

Surface Water

- At Least One Parameter Exceeds Screening Levels

Wastewater

- At Least One Parameter Exceeds Screening Levels
- Site WWTP Approximate Bundary
- Structures
- Intermittent Tributary
- Topographic Contour (1-foot Interval)
- Storm Sewer Line
- Storm Sewer Inlet
- Storm Sewer Outfall

Note(s):
1. Screening levels for surface water and wastewater are presented in Table 5-3; screening levels for groundwater are presented in Table 5-4.
2. Results for inorganic analytes are in milligrams per liter (mg/L). Results for organic analytes are\ in micrograms per liter (ug/L).

*Analytical results for one or more QC samples (i.e., duplicates) included.

Base imagery and features source: NASA

N W E S

0 25 50 75 100 125 Feet

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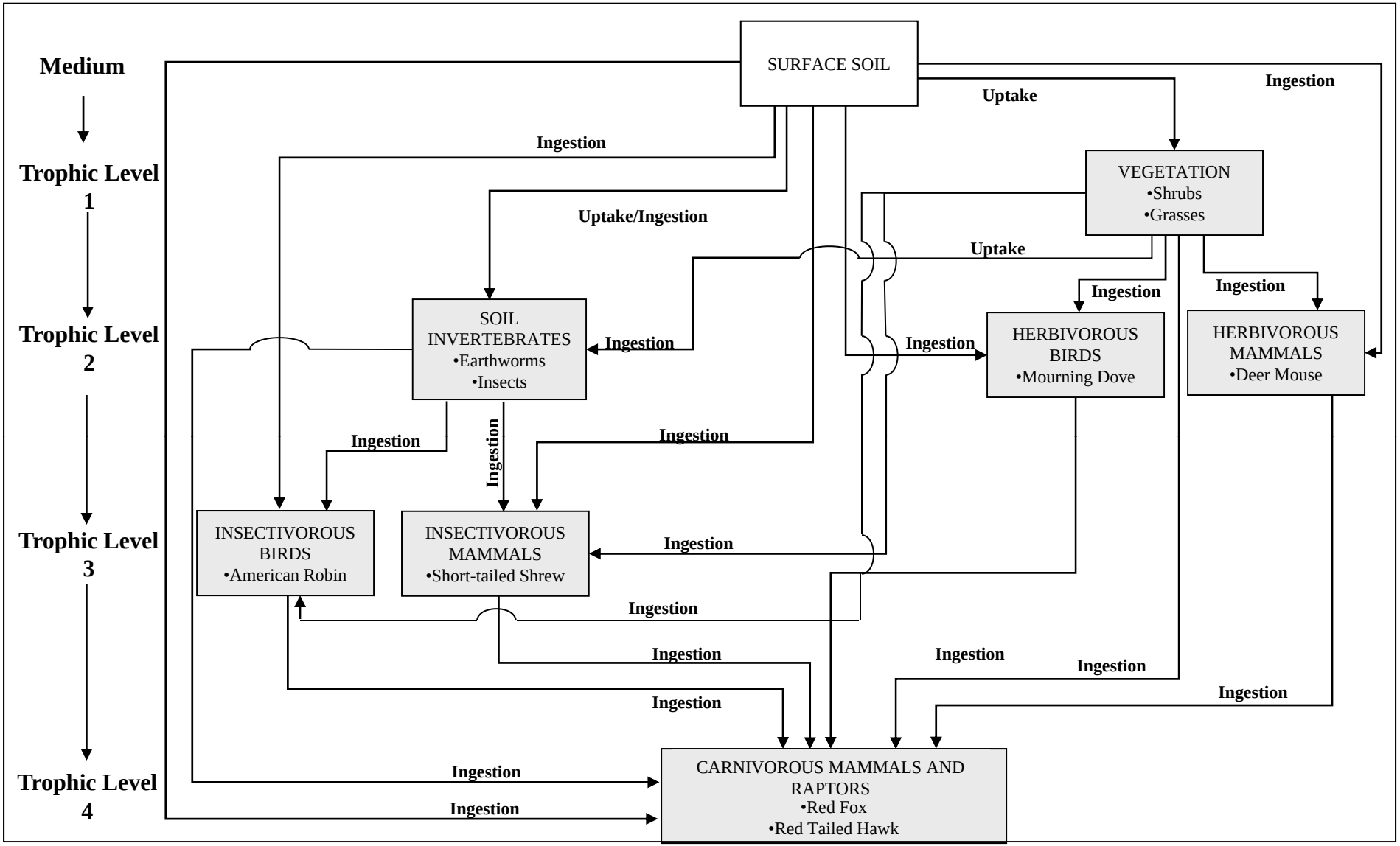
Suite 100
Chesapeake, VA 23320

Contract No.: W91236-08-D-0050
Delivery Order No.: 0001

Figure 5-3

Chemicals Exceeding Screening Levels Groundwater, Surface Water, and Wastewater
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

SECTION 8
FIGURES

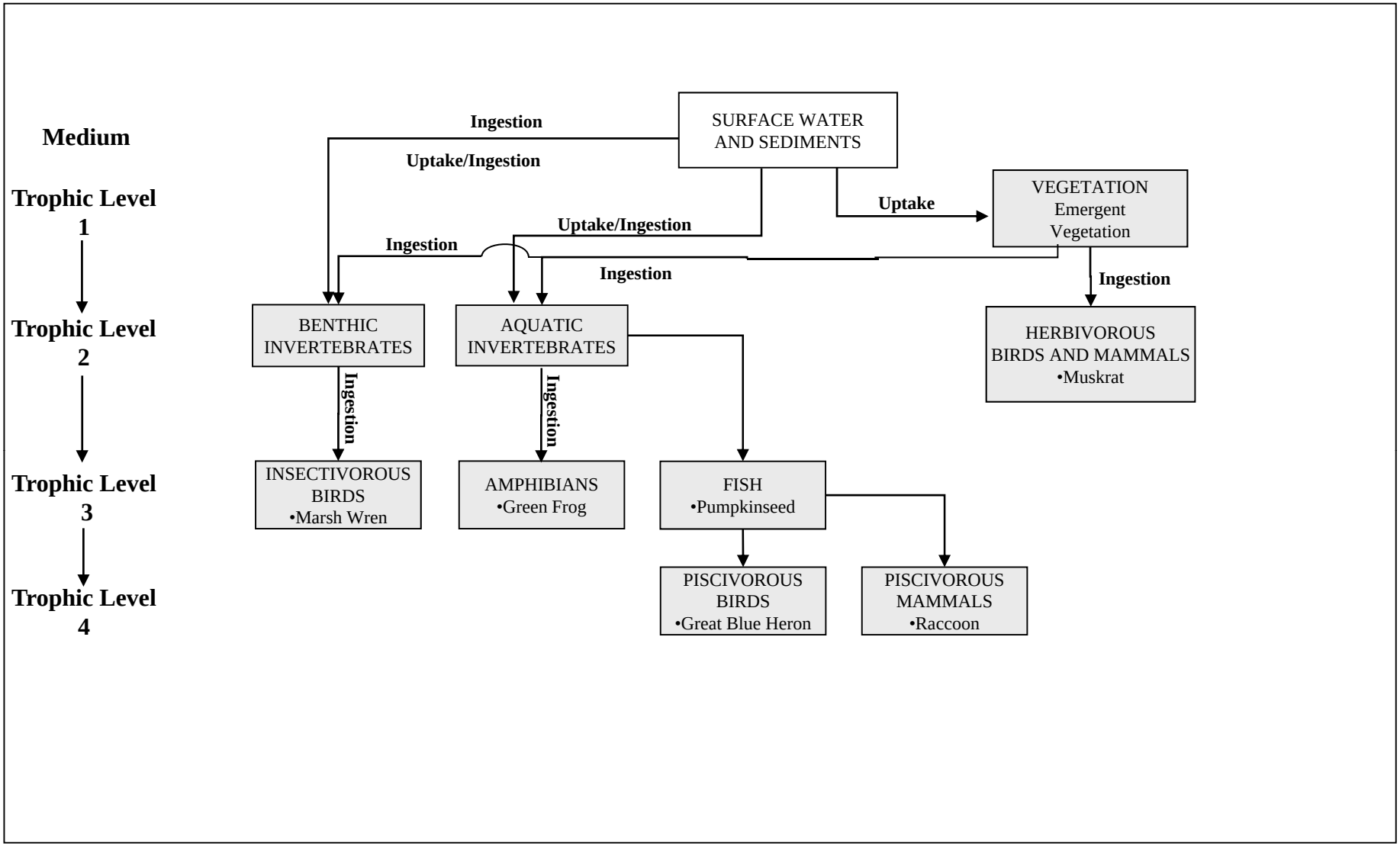


LEGEND

- • Representative species
- → Pathway evaluated for at least one species in feeding guild
- ▭ Feeding guild to be evaluated

Figure 8-1

Site Conceptual Model for the Terrestrial Ecosystem
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia

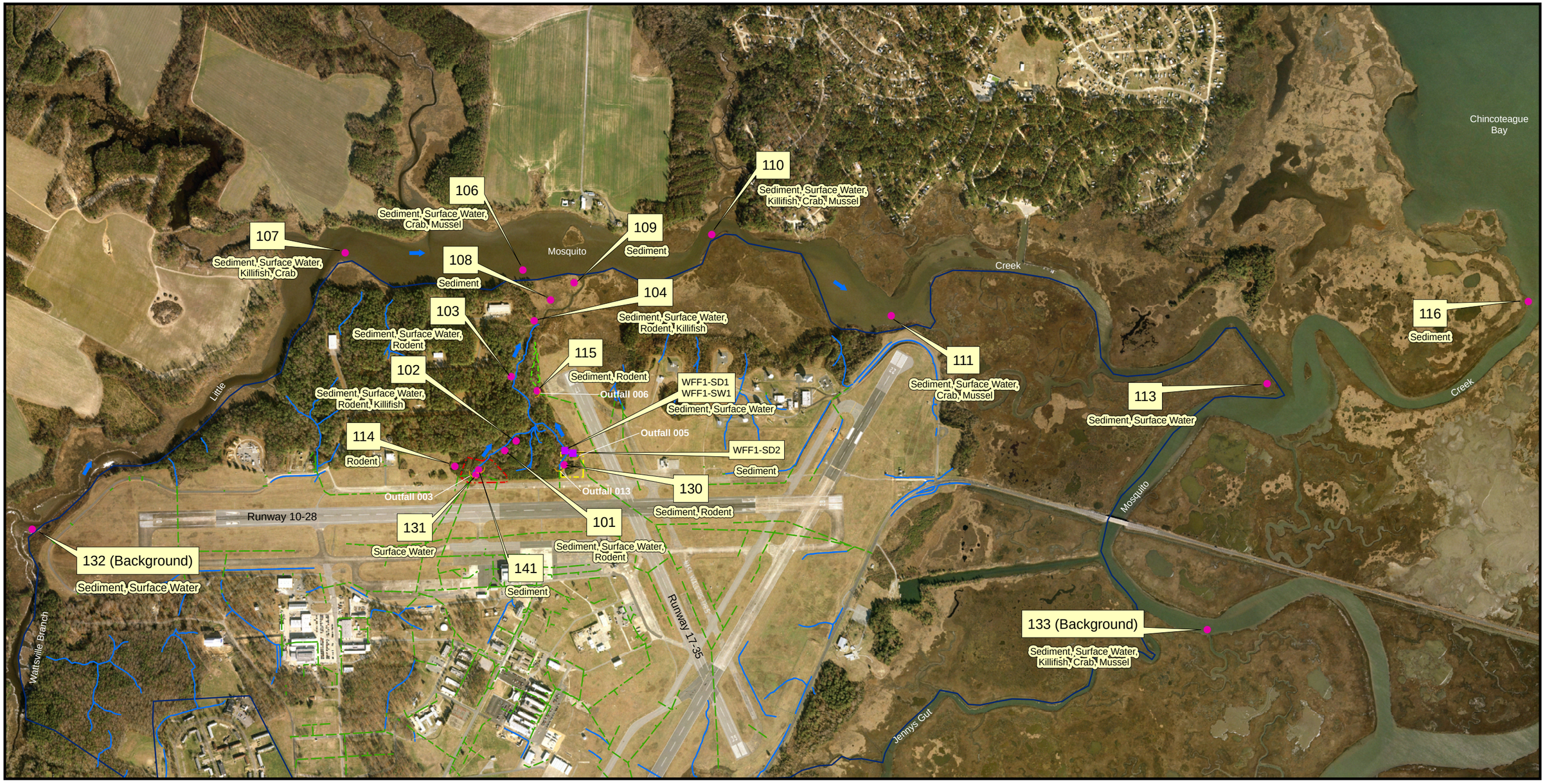


LEGEND

- • Representative species
- → Pathway evaluated for at least one species in feeding guild
- ▭ Feeding guild to be evaluated

Figure 8-2

Site Conceptual Model for the Aquatic Ecosystem
Former Wastewater Treatment Plant
Wallops Flight Facility
Accomack County, Virginia



Main Base Sampling Stations - Sites 14/15 RI

Sediment/Surface Water Locations - Site WWTP RI

Site 14 Boundary

Site 15 Boundary

Site WWTP Boundary

Stormwater Outfall

Streams/Drainage

Main Base Boundary

Note(s):
1. Main base sampling stations 101, 102, 114, 130, 131, and 141 are approximate.

Base imagery and features source: NASA

250 0 250 500 750 1,000 1,250 1,500 Feet

0.1 0 0.1 0.2 0.3 Miles

N W E S

Prepared For:

Baltimore District **Norfolk District**

Prepared By:

WESTON SOLUTIONS

501 Independence Parkway
Suite 100
Chesapeake, VA 23320

Contract No.: W91236-08-D-0050
Delivery Order No.: 0001

Figure 8-3

Main Base Sampling Stations for Sites 14/15 RI and Sediment/ Surface Water Stations for WWTP RI
Wallops Flight Facility
Accomack County, Virginia

\\fsral\Drawings\ArcGIS\Project_Site_Name\USACE_20187\001.001_Sites9&WWTP_RI-FS\SiteWWTP\MXDs\Fig 8-3_MBStations_SEDSWStations.mxd, 07 January 2010, schrotp

APPENDIX A
FIELD NOTES, DEVELOPMENT FORMS, PURGE FORMS, CHAINS OF CUSTODY, PHOTOGRAPHS

WWTP #1 SI
Wallops Flight Facility

"Rite in the Rain"®

ALL - WEATHER

Environmental

FIELD BOOK

No. 550

"Rite in the Rain®"
ALL-WEATHER WRITING PAPER

ALL-WEATHER

ENVIRONMENTAL FIELD BOOK

Name Weston Solutions

Address 4917 Waters Edge Dr STE 235

Phone 919.424.2200

Project Wallops Flight Facility, WWTP #1 SI

This book is printed on "Rite in the Rain" A' er Writing Paper - A unique paper created to shed water and enhanc. .en image. It is widely used throughout the world for recording critical field data in all kinds of weather. For best results, use a pencil or an all-weather pen.

Specifications for this book

Page Pattern		Cover Options	
Left Page	Right Page	Polydura Cover	Fabrikoid Cover
Columnar	1/4" Grid	Item No. 550	Item No. 550F

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CONTENTS

PAGE	REFERENCE	DATE

Reference Page Index

147 Error codes, Hazardous classifications, Container types
148 Sampling guidelines (Liquids)
149 Sampling guidelines (Solids)
150 Approximate Volume of Water in Casing or Hole, Ground Water Monitoring Well
151 PVC Pipe casing tables
152 Soil Classification
153 Soil Classification
154 Conversions (Length, Weight, Volume, Temp, etc...)
155 Conversions (Concentrations, Volume/Flow or Time, Velocity, Acceleration)
156 Maximum Concentration of Contaminants for the Toxicity Characteristic

Location WFF WWTP #1 Date 2/19/07

Project / Client ST - USACE 20°F clear, windy

0800 Westan Solutions Inc (WSI) arrives at Wallops Flight Facility (WFF) and gets security passes for Ed Mackey (EM) and Kevin Johnson (KJ).

0830 EM + KJ get IMS drillers security passes.

0850 Team proceeds to T.J Meyer (NASA) office to get radio + check in.

0915 Team proceeds to site to offload equipment. TJ + EM walk site, TJ indicates MW-2 location was dug to 6' last week so good to go will start there.

0940 Crew is getting water for decon, KJ setting lab bottles EM organizing equipment. Greg Ford (GF), in Raleigh, NC texting sampling equipment, tax for soil, titration.

1630 Drillers building decon pad, Rob Krall USACE arrives on site.

1130 Augers decon'd, HASP briefing conducted, HASPs signed, mobbing

Location WWTP #1 Date 2/19/07

Project / Client ST - USACE 20°s F clear + windy

to MW-2. Boring logs + sampling information on seperate sheets form.

1150 Begin at MW-2.

1210 Collect soil sample WFF1-MW2-0.0.5

1220 Collect soil sample WFF1-MW2-C.S-2

1400 At MW-2 at 20', sand saturated. Collected sample WFF1-MW2-19-21 will drill to 27' + set well

1510 Drillers having trouble w/ heaving sands, have to pull augers, clean + re drill prior to building well.

1540 Tagged water level at 19' BGS, so will set well depth at 26'.

1630 MW-2 grouted + built

1710 Drillers decon augers + prep for tuesday.

1745 Team off site for day.

end of day 2/19/07

SJM

Location WWTP #1 Date 2/20/07

Project / Client WFF pt Cloudy 40°s F

0600 Weston team (Ed Mackey, Greg Ford, Kevin Johnson) on site getting badges

0625 Team at WWTP #1 with IMS three person drill team. ———

0730 Team set to drill at MW-6 after morning tt+s briefing. ———

0745 Team samples MW-6-0-0.5 for VOC SVOC, pest/PCB, inorganics, & cyanide

0755 Team samples WFF1-MW6-0.5-2 for VOC SVOC, pest/PCB, inorganics & cyanide

0810 Groundwater encountered at 3' BGS

0815 Sample collected WFF1-MW6-2-4 for suite

0820 Begin building well per attached sheet

0825 Rob Reali on site, agrees w/ MW-6 build

0845 EM calls Theresa Offner (fm) to inform on well spec

0920 MW-6 built except for grout, team mobs to MW-7. GF + KS work w/ Rob Reali measuring locations of sludge piles. ———

0950 Collect sample WFF1-MW7-0-0.5 for suite

1000 Collect sample WFF1-M7-0.5-2 for suite. GW intercepted at 2' BGS. Rob Reali + EM decide to build MW-7 the same as MW-6 so, top of screen may not be above water table. This was done to ensure

EJM

Location WWTP #1 Date 2/26/07

Project / Client WFF pt cloudy 40°s F

a good bentonite + grout seal to prevent surface water infiltration

1030 IMS building well. Note that a 3rd sample not collected at MW-7. Reali requests use this sample at sludge drying beds in sand beneath beds (rock).

1045 Mob to MW-5, no metallic objects in drill zone, as was the case for MW-7. ———

1055 Collect sample WFF1-MW5-0-0.5 for suite

1105 Collect sample WFF1-MW5-0.5-2 for suite

1115 Groundwater at 3' BGS. ———

1125 Collect sample at WFF1-MW5-2-4 for suite

1140 Drilling to 12.5' BGS to set well.

1230 MW-5 wellset, mob to MW-4. No metallic reading, using last decon cutter head + decon'd augers. ———

1045 Collect sample WFF1-MW4-0-0.5

1300 Collect sample WFF1-MW4-0.5-2

1320 Groundwater at 5', will set well to 13'

1330 Collect sample WFF1-MW4-3-5

1345 Building MW-4. ———

1410 STL calls, courier is minutes from gate

EJM

Location WWTP #1 Date 2/20/07

Project / Client WFF

1450 Team sends collected soil to gate for STL courier.

1500 Drillers begin drilling at MW-3 Will not collect soil samples from 0-0.5 and 0.5-2 as drilling though former trickling filter and soils to 4' are fill sand.

1520 Groundwater at 5' BGS for MW-3

1525 Collected soil sample WFF1-MW3-4-6 for suite

1535 Building well MW3, TD = 13.5' BGS

1600 MW-3 built. Drillers decanning + general housekeeping.

1630 EM off-site to purchase ladder for process area entry.

Late notes by Greg Ford

G. Ford writing: Team - G. Ford & K. Johnson

0700 G. Ford leads Safety Meeting: Topics: Hard Hat Around Drill Rig, Hearing Protection, Extreme Trip Hazard With Cut Down Vegetation - Step Carefully.

0850 G. Ford, K. Johnson and R. Reali Scott Locations of Possible Sludge Piles. Appear To Be A Contiguous Band of Sm

Location Old WWTP #1 Date 2/20/07

Project / Client WFF - Main Base / USACE

G. Ford

Mounding Rather Than Discrete Piles. Locations Sited, GF & KJ Begin Sample Collection.

0845 Collect WFF1-SS2 For Suite.

Decon Procedure For Augers, Bowls And Spoons:

1) DI Rinse To Remove Gross Dirt
2) Liquinox Solution With Brush.
3) DI Water Rinse
4) HNO3 Spray
5) DI Water Rinse
6) Methanol Spray
7) Air Dry On Poly Sheet.

1045 Collect WFF1-SS3 For Suite.

1250 Clear Vegetation From Transformer Pad Area.

1345 Collect Composite Samples WFF1-SS1, WFF1-SS1-D, & WFF1-SS6 (Blind Dup.)

1415 Prep Samples For STL Courier.

1445 GF Takes Samples To Main Gate For Driver.

1510 Collect WFF1-SS4 For Suite.

1620 Collect ~~Rinsate~~ - Drillers Split Spoon.

Location WFF WWTP #1 Date 2/21/07

Project / Client USACE

0810 Team on-site, exchanging radio
0900 K Johnson leads safety brief for day
0910 Collect sample WFF1-MW1-0-0.5 for suite
0920 Collect sample WFF1-MW1-0.5-2 for suite
0940 Drilling at MW-1.
1130 Saturation at 19' BGS at MW-1
1130 Collect soil sample WFF1-MW-1-18-20
1140 Drilling to 26.5' BGS
1245 well set.
1445 Prep to develop MW-6.
1545 MW is developed @ about 75-80 gal
1605 Prep to develop MW-7.
1710 MW-7 developed at 118 gal.

Late notes by Greg Ford

G. Ford Writing: Team - G. Ford & K. Johnson

1040 Locate WFF1-SW-1 & WFF1-SD1 At Confluence Of Intermittent Streams Downstream Of Outfall.
1100 Collect WFF1-SW1
1135 Collect WFF1-SD1
1155 Collect WFF1-SD2: No Surface Water At This Location. P. Pearl Chose Location Because It Is The Location Closest To The 1st Stormwater Outfall That Can Be Sampled.

Location QD WWTP #1 Date 2/21/07

Project / Client WFF-MAIN BASE / USACE

G. FORD

1420 Collect WFF1-WW01 From ~~East~~ (GLF) West Primary Settling Tank. Coring Tube Collection Method For Sludge Sample WFF1-SL01 Not Working. Will Order Ponar And Collect Sample Later.
1500 Due To A Miscommunication With R. Pearl We Will Re-Sample Possible Sludge Piles For SVOC, Pest/PCB, Cyanide & Metals As Composite Samples - Grab VOCs Will Be Kept.
1550 Collect WFF1-SS2-A
1605 Collect WFF1-SS3-A
1635 Collect Rinsate 2 (Hand Auger Rinsate Blank).

Location WWTP #1 Date 2/22/07

Project / Client SI - USACE

0735 Team on site for day w/IMS
0810 H+S briefing
0845 EM, RR, +IMS develop MW-2 + build well head.
0950 MW-2 developed.
1035 Team begins develop at MW-5
1040 Team begins develop at MW-3
1210 MW-3 developed at 110 gallons
1235 MW-5 developed at 215 gallons
1320 Begin development at MW-1
1355 Development complete MW-1 @ 80 gal
1435 Begin purge for sampling @ MW-6
1504 Purge complete at MW-6
1515 Sampled MW-6 for VOC, SVOC, pest/PCB, metals cyanide
1550 Rain storm passing through
1610 Purge begins at MW-7.
1652 Purge complete at MW-7 @ 5.5 gal
1700 Sample MW-7 for suite.

Late notes by Greg Ford

G. Ford Writing: Team - G. Ford & R. Johnson

1000 GF & RJ Prepare To Collect Soil Cuttings Sample For TCLP Analysis.
55 Gal Drums Are Previously Labeled By Well #. All Drums Are Opened And 2 Scoops

SM

Location WFF - Main Base Date 2/22/07

Project / Client SI - Old WWTP #1 / USACE

G. Ford

Are Taken From Each Drum. Material Is Composited In Large Stainless Bowl.
1035 Collect "Soil Cuttings" Sample For TCLP.
1150 R. Read Locates Poisible Terra Cotta Overflow Pipe. GF & RJ Will Try To Locate End Of Pipe And Collect Discretionary Sample WFF1-SS8.
1250 Located Suspected End Of Pipe.
1300 Collect WFF1-SS8.
1325 PZed Samples For STL Courier Pick Up.
1335 GF Takes Sample To Front Gate Of Base.
1410 GF & RJ Prepare To Collect Samples From Sludge Drying Beds
1520 Collect SPT Composite Sludge Sample WFF1-SL02
1530 Collect WFF1-SL03.
WFF1-SS09 & SS10 Will Be Collected From Below Center Point Of The SPT Composite Location For SL02 & SL03
1640 Collect WFF1-SS09 } Discretionary Samples,
1645 Collect WFF1-SS10 } Not In Work Plan
1730 GF & RJ Collect Rinsate 3' - Stainless Steel Bowl Rinsate Blank.

GC

12

Location WWTP #1 Date 3/23/07

Project / Client SI

0740 EM + KJ on-site, GF getting ice + decon water.

0750 Surveyor on site, setting up. Today EM will be gw sampling, GF + KJ will collect samples in cistern + settling tank, SS-4 SS-5 (QA/QC), + GPS.

0930 EM purges + samples MW-3 for suite, plus QA/QC MW-30 + blind MW-20 (1010)

1150 EM purges + samples MW-5 for suite

1300 EM purges + samples MW-4 for suite

1430 EM purges + samples MW-2 for suite

1525 EM purges + samples MW-1 for suite

Late notes by Greg Ford

0725 GF Will Depart Site To Buy Supplies And Battery For F250.

0905 GF Back On Site.

1020 Collect WFF1-SS4-A For Suite, This Is MS/MSD Sample.

1115 Collect WFF1-SS5, SS5-D, & SS7 (Blind Dup) Collection Time For WFF1-SS7 is 1130

1205 Prepare To Collect WFF1-SL01.

GF

SJR

13

Location WFF - Main Base Date 3/23/07

Project / Client SI - OLD WWTP #1

1235 GF & KS Using Ponar To Collect Sludge Sample From West Primary Settling Tank. Same Location As WFF1-WW01. Having Difficulty Finding A Flat Spot In Primary Settling Tank. Walls Are Sloped Below Water Line - Ponar Is Sliding Down Slope. Material Coming Up Appears To Be Almost Exclusively Plant Material.

1545 Collect WFF1-SL1

1600 Prepare To Collect Purge Water For Waste Characterization. Collect Volume From Each Drum Through Bung Hole Using Bailer - Composite In Container.

1615 Collect "Purge Water"

1740 Collect "Rinsate 4" - Rinsate Blank From Bladder Pump.

1800 Pred Site For Departure.

Location WWTP #1 Date 2/24/07

Project / Client STL

0800 Em + KJ on way to meet STL

1000 Samples picked up by STL in Norfolk

end of log

2/24/07

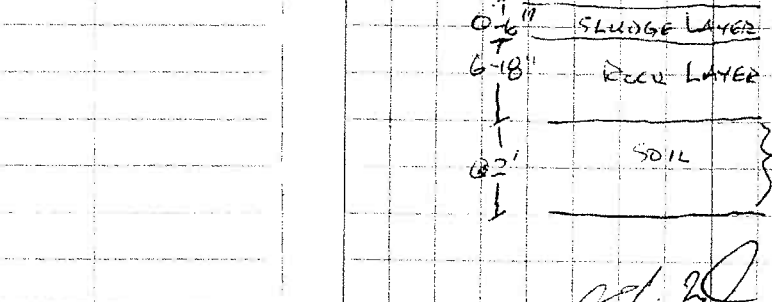
Location WFF - MAIN BASE Date 3/16/07

Project / Client USACE

SUMMARY OF DEVIATIONS FROM WORK PLAN

THE FOLLOWING LIST OF DEVIATIONS FROM THE WORK PLAN WERE BASED ON THE DISCRETION OF R. REAL, (USACE).

1) THE LOCATION OF POSSIBLE SLUDGE PILE SAMPLE WFF-SSS WAS MOVED EAST TO THE BANK OF THE RISE GOING UP TO THE RUNWAY ON THE HOT PAD SIDE.
2) THERE WAS NO SLUDGE OR SEDIMENT PRESENT IN THE WET WELL OF THE PUMP HOUSE - WFF1-SL04 WAS OMITTED.
3) WFF1-SS8 WAS A DISCRETIONARY SAMPLE BASED ON THE SUSPECTED LOCATION OF THE OVERFLOW END OF PIPE.
4) A SOIL SAMPLE WAS COLLECTED FROM EACH OF THE SLUDGE DRYING BEDS. A LAYER OF ROCK WAS REMOVED TO REACH SOIL.



GEOLIS Well Development Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE/AREA: WFF

LOCATION ID: MW-1
DATE: 2/22/07
MEASURED BY: SAM
SIGNATURE:

ONE WELL VOLUME: start 1300 gallons WELL TD: ft TOC

Well Volume (gallons/foot): 2-inch = 0.16, 4-inch = 0.65, 6-inch = 1.47, 8-inch = 2.61

TIME	ACTIVITY CODE	DEPTH TO WATER (ft)	PURGE RATE (gpm)	PURGE VOLUME (gal)	FIELD MEASUREMENTS				TURBIDITY	COMMENTS
					Tem	Con	DO	pH		ORP
1320	DOB		2	20	15.78	.102	2.86	6.06	6.8	-154.2
45			2	50	15.81	.102	3.05	6.06	186	-177.1
				70	15.76	.104	3.25	6.06	311	-179.7
1355				80	16.43	.101	2.79	6.01	5.18	-175.0
	FINAL									

FINAL WELL YIELD: GPM PUMP RATE - ESTIMATED CORRESPONDING DRAWDOWN: FT

DEVELOPMENT ACTIVITY CODES

DBB - Begin Bailing
DOB - Begin Overpumping
DRB - Begin Rawhiding
DCB - Begin Recirculation
DHB - Begin Hydraulic Jetting
DAB - Begin Air Surging
DSB - Begin Surge Blocking
DXB - Begin Other
Specify other method:
FMT - Field Measurements (select from codes at right)

DBE - End Bailing
DOE - End Overpumping
DRE - End Rawhiding
DCE - End Recirculation
DHE - End Hydraulic Jetting
DAE - End Air Surging
DSE - End Surge Blocking
DXE - End Other

FIELD MEASUREMENT CODES

MTP - Temperature
MSC - Specific Conductance
MPD - Photolonizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MDO - Dissolved Oxygen
MPH - pH
MEH - Eh
MMC - Imhoff Cone
MO1 - Other:
MO2 - Other:

TURBIDITY

Enter Turbidity Meter Reading (Final should be < 5 NTU)
OR
Enter Qualitative Observations
H - High: Opaque/Muddy/Silty
M - Medium: Translucent/Cloudy
L - Low: Transparent/Some Silt
N - None: Clear/No Visible Silt

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22.59

GEOLIS® Well Purging Form

COMPANY: WSI
CLIENT: USACE
PROJECT: 51
SITE / AREA: WFF
LOCATION ID: MW-1
DATE: 2/23/07
SAMPLER:
SIGNATURE:

WELL OBSERVATIONS

CASING & LID: OK - DAMAGED - HEAVED - NO LID LOCKED: YES - NO KEY NO: _____ STICKUP: _____ FT-M
WELL DIAMETER: 2" - 4" - 6" - 8" - OTH: _____ BOREHOLE DIAMETER: 6 1/4 IN-CM MEASURING POINT: TIC - TOC - GRS
VAPOR READINGS: PID - FID - OTHER: _____ BACKGROUND: _____ INSIDE WELL: _____
CHECKED FOR NAPL LAYER: YES - NO OBSERVED: NON - FLT - SNK THICKNESS: _____ IN-CM SHEEN: YES - NO

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM:	26	FT-M BMP
(B) DEPTH TO WATER:	20.22	FT-M BMP
(C) SAND PACK LENGTH		FT-M
(D) WATER COLUMN HEIGHT (A - B):	5.78	FT-M
(E) CASING VOLUME FACTOR:		GPF-LPM
(F) SAND PACK VOLUME FACTOR:		GPF-LPM
(G) CASING VOLUME (D x E):		GAL-L
(H) SAND PACK VOLUME (C x F):		GAL-L

Casing Factor (GPF for inches) = 0.041(Well Diameter)²
2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF

Sand Pack Factor (GPF for inches)
= [0.041(Hole Diameter)² - 0.041(Well Diameter)²] 0.45

(I) TOTAL WELL VOLUME (G + H): 0.92 GAL-L
(J) VOLUMES TO BE PURGED: 3
(K) TOTAL PURGE VOLUME (I x J): 2.77 GAL-L

PURGING INFORMATION

PURGE ENDPOINT: VOLUME - TIME - PARAMETER STABILIZATION - TURBIDITY CRITERIA: _____
PURGING METHOD: BAILER - SUB. PUMP - CENT. PUMP - PACKER & PUMP - OTHER: _____
DEVICE DESCRIPTION: Bladder DEVICE No.: _____
PUMP/BAILER INTAKE: SCREEN TOP - SCREEN/WELL BOTTOM - MID SCREEN/WELL - WATER LEVEL - MOVED UP/DOWN
PURGE WATER: DISCHARGED - TREATED - STORED ONSITE STORED IN: TANKS - DRUMS NO.: _____
FIELD MEASURMENTS IN: FLOW THRU CHAMBER - OPEN JAR CASCADING WATER: YES - NO DEPTH: _____ FT-M BMP
WELL PURGING INTERVAL: _____ TO _____ FT-M BMP PURGE DEPTH TO WATER (MAX): _____ FT-M BMP

TIME	DEPTH TO WATER (FT-M BMP)	PURGE RATE or VOLUME (GPM-GAL)	TURBID -ITY (NTU)	FIELD MEASUREMENTS AND UNITS MTP °C.	Cond	DO	pH	ORP		COMMENTS
1455		.1	84.7	13.64	.106	2.82	6.03	-142.3		Pre Purge Readings
1512			79.9	14.93	.107	2.86	5.86	-142.4		
1515		1.5	52.6	15.33	.106	2.96	5.90	-147.7		
1518		2	28.2	15.36	.102	2.89	5.86	-148.8		
1521		2.5	19.6	15.33	.103	2.98	5.89	-147.8		
1503		2.8	6.29	15.33	.103	3.01	5.86	-148.2		
										Post Purge Readings

TOTAL PURGE TIME: _____ HRS TOTAL PURGE VOLUME: _____ GAL - L RECOVERY: FAST - SLOW - V.SLOW

FIELD MEASUREMENT CODES

MTP - Temperature (°C.)
MSC - Specific Conductance (mS/cm)
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MCL - Color
MPH - pH
MEH - Eh
MAL - Alkalinity
MDO - Dissolved Oxygen (mg/L)
MO1 - Other: _____
MO2 - Other: _____
MO3 - Other: _____
MD1 - DTW in Well _____
MD2 - DTW in Well _____
MD3 - DTW in Well _____
MD4 - DTW in Well _____

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sampled @ 1525

GEOLIS Well Development Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE/AREA: WFF1

LOCATION ID: MW-2
DATE: 2/22/07
MEASURED BY: SJM
SIGNATURE:

ONE WELL VOLUME: _____ gallons WELL TD: _____ ft TOC

Well Volume (gallons/foot): 2-inch = 0.16 4-inch = 0.65 6-inch = 1.47 8-inch = 2.61

TIME	ACTIVITY CODE	DEPTH TO WATER (ft)	PURGE RATE (gpm)	PURGE VOLUME (gal)	FIELD MEASUREMENTS pH	cond (mS/cm)	DO (mg/L)	ORP	TURBIDITY	COMMENTS Temp °C
0850	DOB	19.22	2	20	6.18	.108	6.00	-176.8	1048	15.08
				30	6.06	.107	6.16	-172.9	168	15.86
				40	6.06	.116	5.27	-135.7	418	15.58
				55	6.07	.115	5.81	-142.4	183	15.05
				65	6.08	.120	5.25	-142.5	822	15.72
0956				75	6.07	.120	5.33	-145.0	5.94	15.57
	FINAL									

Developed SJM

FINAL WELL YIELD: _____ GPM PUMP RATE - ESTIMATED CORRESPONDING DRAWDOWN: _____ FT

DEVELOPMENT ACTIVITY CODES

DBB - Begin Bailing
DOB - Begin Overpumping
DRB - Begin Rawhiding
DCB - Begin Recirculation
DHB - Begin Hydraulic Jetting
DAB - Begin Air Surging
DSB - Begin Surge Blocking
DXB - Begin Other
DBE - End Bailing
DOE - End Overpumping
DRE - End Rawhiding
DCE - End Recirculation
DHE - End Hydraulic Jetting
DAE - End Air Surging
DSE - End Surge Blocking
DXE - End Other
Specify other method: _____
FMT - Field Measurements (select from codes at right)

FIELD MEASUREMENT CODES

MTP - Temperature
MSC - Specific Conductance
MPD - Photolonizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MDO - Dissolved Oxygen
MPH - pH
MEH - Eh
MMC - Imhoff Cone
MO1 - Other: _____
MO2 - Other: _____

TURBIDITY

Enter Turbidity Meter Reading (Final should be < 5 NTU)
OR
Enter Qualitative Observations
H - High: Opaque/Muddy/Silty
M - Medium: Translucent/Cloudy
L - Low: Transparent/Some Silt
N - None: Clear/No Visible Silt

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21.20

GEOLIS® Well Purging Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE / AREA: WEF
LOCATION ID: MW-2
DATE: 2/23/07
SAMPLER:
SIGNATURE:

WELL OBSERVATIONS

CASING & LID: OK - DAMAGED - HEAVED - NO LID LOCKED: YES - NO KEY NO: _____ STICKUP: _____ FT-M
WELL DIAMETER: 2" - 4" - 6" - 8" - OTH: _____ BOREHOLE DIAMETER: 6 1/2 IN-CM MEASURING POINT: TIC - TOC - GRS
VAPOR READINGS: PID - FID - OTHER: _____ BACKGROUND: _____ INSIDE WELL: _____
CHECKED FOR NAPL LAYER: YES - NO OBSERVED: NON - FLT - SNK THICKNESS: _____ IN-CM SHEEN: YES - NO

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 26 FT-M BMP
(B) DEPTH TO WATER: 19.51 FT-M BMP
(C) SAND PACK LENGTH _____ FT-M
(D) WATER COLUMN HEIGHT (A - B): 6.49 FT-M
(E) CASING VOLUME FACTOR: _____ GPF-LPM
(F) SAND PACK VOLUME FACTOR: _____ GPF-LPM
(G) CASING VOLUME (D x E): _____ GAL-L
(H) SAND PACK VOLUME (C x F): _____ GAL-L

Casing Factor (GPF for inches) = 0.041(Well Diameter)²
2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF

Sand Pack Factor (GPF for inches)
= [0.041(Hole Diameter)² - 0.041(Well Diameter)²] 0.45

(I) TOTAL WELL VOLUME (G + H): 1.04 GAL-L
(J) VOLUMES TO BE PURGED: 3
(K) TOTAL PURGE VOLUME (I x J): 3.12 GAL-L

PURGING INFORMATION

PURGE ENDPOINT: VOLUME - TIME - PARAMETER STABILIZATION - TURBIDITY CRITERIA: _____
PURGING METHOD: BAILER - SUB. PUMP - CENT. PUMP - PACKER & PUMP - OTHER: _____
DEVICE DESCRIPTION: Bladder geotech DEVICE No.: _____
PUMP/BAILER INTAKE: SCREEN TOP - SCREEN/WELL BOTTOM - MID SCREEN/WELL - WATER LEVEL - MOVED UP/DOWN
PURGE WATER: DISCHARGED - TREATED - STORED ONSITE STORED IN: TANKS - DRUMS NO.: _____
FIELD MEASURMENTS IN: FLOW THRU CHAMBER - OPEN JAR CASCADING WATER: YES - NO DEPTH: _____ FT-M BMP
WELL PURGING INTERVAL: _____ TO _____ FT-M BMP PURGE DEPTH TO WATER (MAX): _____ FT-M BMP

TIME	DEPTH TO WATER (FT-M BMP)	PURGE RATE or VOLUME (GPM-GAL)	TURBID -ITY (NTU)	FIELD MEASUREMENTS AND UNITS MTP °C.	con	DO	pH	ORP		COMMENTS
1349		0.1	342	13.42	.130	2.79	6.22	-155.7		Pre Purge Readings
1359		1	157	14.39	.121	2.51	6.19	-154.9		
1404		2	81.4	14.95	.117	2.56	6.13	-157.8		
1414		2.5	33.4	14.88	.113	2.51	6.15	-14.8		
1417		2.8	13.4	14.84	.110	2.47	6.11	-157.2		
1424		3.5	8.17	14.83	.108	2.52	6.10	-160.7		
										Post Purge Readings

TOTAL PURGE TIME: _____ HRS TOTAL PURGE VOLUME: _____ GAL - L RECOVERY: FAST - SLOW - V.SLOW

FIELD MEASUREMENT CODES

MTP - Temperature (°C.)
MSC - Specific Conductance (mS/cm)
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MCL - Color
MPH - pH
MEH - Eh
MAL - Alkalinity
MDO - Dissolved Oxygen (mg/L)
MO1 - Other: _____
MO2 - Other: _____
MO3 - Other: _____
MD1 - DTW in Well _____
MD2 - DTW in Well _____
MD3 - DTW in Well _____
MD4 - DTW in Well _____

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Sampled at 1430

GEOLIS Well Development Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE/AREA: WEFI

LOCATION ID: MW-3
DATE: 2/22/07
MEASURED BY: EJM
SIGNATURE:

ONE WELL VOLUME: _____ gallons WELL TD: _____ ft TOC

Well Volume (gallons/foot): 2-inch = 0.16 4-inch = 0.65 6-inch = 1.47 8-inch = 2.61

TIME	ACTIVITY CODE	DEPTH TO WATER (ft)	PURGE RATE (gpm)	PURGE VOLUME (gal)	FIELD MEASUREMENTS Temp	Cond	DO	pH	TURBIDITY	COMMENTS ORP
1040		5.48	2	20	11.17	.357	1.76	6.80	High	-214.9
				30	11.39	.335	1.22	6.80	433	-214.7
				45	11.37	.330	0.78	6.80	25.6	-223.0
				65	11.44	.316	0.46	6.77	123	-227.2
				75	11.42	.317	0.48	6.76	23.3	-229.1
				80	11.44	.318	0.58	6.75	13.3	-230.9
				100	11.51	.312	0.64	6.76	51.2	-235.8
				105	11.48	.319	.44	6.75	16.5	-227.7
1210				110	11.46	.318	.29	6.75	9.6	-227.9
	FINAL									

Developed 2/22/07 EJM

FINAL WELL YIELD: _____ GPM PUMP RATE - ESTIMATED CORRESPONDING DRAWDOWN: _____ FT

DEVELOPMENT ACTIVITY CODES

DBB - Begin Bailing
DOB - Begin Overpumping
DRB - Begin Rawhiding
DCB - Begin Recirculation
DHB - Begin Hydraulic Jetting
DAB - Begin Air Surging
DSB - Begin Surge Blocking
DXB - Begin Other
DBE - End Bailing
DOE - End Overpumping
DRE - End Rawhiding
DCE - End Recirculation
DHE - End Hydraulic Jetting
DAE - End Air Surging
DSE - End Surge Blocking
DXE - End Other
Specify other method: _____
FMT - Field Measurements (select from codes at right)

FIELD MEASUREMENT CODES

MTP - Temperature
MSC - Specific Conductance
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MDO - Dissolved Oxygen
MPH - pH
MEH - Eh
MMC - Imhoff Cone
MO1 - Other: _____
MO2 - Other: _____

TURBIDITY

Enter Turbidity Meter Reading (Final should be < 5 NTU)
OR
Enter Qualitative Observations
H - High: Opaque/Muddy/Silty
M - Medium: Translucent/Cloudy
L - Low: Transparent/Some Silt
N - None: Clear/No Visible Silt

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Casing 2.41 A

GEOLIS® Well Purging Form

COMPANY: WSI
CLIENT: USACE
PROJECT: S1
SITE / AREA: WFT

LOCATION ID: MW-3
DATE: 2/23/02
SAMPLER:
SIGNATURE: S1M

WELL OBSERVATIONS

CASING & LID: OK - DAMAGED - HEAVED - NO LID LOCKED: YES - NO KEY NO: _____ STICKUP: 2.41 FT-M
WELL DIAMETER: 2" - 4" - 6" - 8" - OTH: _____ BOREHOLE DIAMETER: 6 1/2 IN-CM MEASURING POINT: TIC - TOC - GRS
VAPOR READINGS: PID - FID - OTHER: _____ BACKGROUND: _____ INSIDE WELL: _____
CHECKED FOR NAPL LAYER: YES - NO OBSERVED: NON - FLT - SNK THICKNESS: _____ IN-CM SHEEN: YES - NO

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 13 FT-M BMP
(B) DEPTH TO WATER: 5.96 8.37 S1M FT-M BMP
(C) SAND PACK LENGTH _____ FT-M
(D) WATER COLUMN HEIGHT (A - B): _____ FT-M
(E) CASING VOLUME FACTOR: _____ GPF-LPM
(F) SAND PACK VOLUME FACTOR: _____ GPF-LPM
(G) CASING VOLUME (D x E): _____ GAL-L
(H) SAND PACK VOLUME (C x F): 1.13 GAL-L

Casing Factor (GPF for inches) = 0.041(Well Diameter)²
2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF

Sand Pack Factor (GPF for inches)
= [0.041(Hole Diameter)² - 0.041(Well Diameter)²] 0.45

(I) TOTAL WELL VOLUME (G + H): 1.13 GAL-L
(J) VOLUMES TO BE PURGED: 3
(K) TOTAL PURGE VOLUME (I x J): 3.38 GAL-L

PURGING INFORMATION

PURGE ENDPOINT: VOLUME - TIME - PARAMETER STABILIZATION - TURBIDITY CRITERIA: _____
PURGING METHOD: BAILER - SUB. PUMP - CENT. PUMP - PACKER & PUMP - OTHER: _____
DEVICE DESCRIPTION: _____ DEVICE No.: _____
PUMP/BAILER INTAKE: SCREEN TOP - SCREEN/WELL BOTTOM - MID SCREEN/WELL - WATER LEVEL - MOVED UP/DOWN
PURGE WATER: DISCHARGED - TREATED - STORED ONSITE STORED IN: TANKS - DRUMS NO.: _____
FIELD MEASURMENTS IN: FLOW THRU CHAMBER - OPEN JAR CASCADING WATER: YES - NO DEPTH: _____ FT-M BMP
WELL PURGING INTERVAL: _____ TO _____ FT-M BMP PURGE DEPTH TO WATER (MAX): _____ FT-M BMP

TIME	DEPTH TO WATER (FT-M BMP)	PURGE RATE or VOLUME (GPM-GAL)	TURBID-ITY (NTU)	FIELD MEASUREMENTS AND UNITS MTP °C.	COND	DO	PH	ORP		COMMENTS
0840		0.5	111	9.29	.385	2.15	7.49	-224.9		Pre Purge Readings begin purge
0850		1.	87	9.95	.355	0.78	7.49	-223.9		
0857		1.6	51.3	9.96	.341	.77	7.33	-212.2		
0902		2.5	31.8	9.96	.338	.54	7.24	-207.2		
0910		4	17.2	10.01	.335	.52	7.28	-214.3		
0912		4.25	9.08	9.96	.336	.51	7.24	-210.9		
										Post Purge Readings

TOTAL PURGE TIME: _____ HRS TOTAL PURGE VOLUME: _____ GAL - L RECOVERY: FAST - SLOW - V.SLOW

FIELD MEASUREMENT CODES

MTP - Temperature (°C.)
MSC - Specific Conductance (mS/cm)
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MCL - Color
MPH - pH
MEH - Eh
MAL - Alkalinity
MDO - Dissolved Oxygen (mg/L)
MO1 - Other: _____
MO2 - Other: _____
MO3 - Other: _____
MD1 - DTW in Well _____
MD2 - DTW in Well _____
MD3 - DTW in Well _____
MD4 - DTW in Well _____

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0930 prime + MSMSD 0945 - dup

GEOLIS Well Development Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE/AREA: WFF

LOCATION ID: MW-4
DATE: 2/22/07
MEASURED BY: EJM
SIGNATURE:

ONE WELL VOLUME: _____ gallons WELL TD: _____ ft TOC

Well Volume (gallons/foot): 2-inch = 0.16 4-inch = 0.65 6-inch = 1.47 8-inch = 2.61

TIME	ACTIVITY CODE	DEPTH TO WATER (ft)	PURGE RATE (gpm)	PURGE VOLUME (gal)	FIELD MEASUREMENTS				TURBIDITY	COMMENTS
					Tem	Cnd	DO	pH		ORP
1155	DOB	5'	2	20	12.09	.167	1.43	6.31	H,	-222.3
				30	12.20	.173	1.40	6.34	185	-221.1
1220				50	12.26	.175	1.35	6.23	381	-225.7
				80	12.14	.171	1.38	6.41	946	-225.1
				140	12.23	.173	1.33	6.25	194	-221.7
				150	12.16	.172	1.39	6.33	28.3	-222.1
				160	12.14	.172	1.51	6.31	11.7	-221.1
1315				165	12.20	.172	1.55	6.11	8.5	-220.3
	FINAL									

Developed
EJM

FINAL WELL YIELD: _____ GPM PUMP RATE - ESTIMATED CORRESPONDING DRAWDOWN: _____ FT

DEVELOPMENT ACTIVITY CODES

DBB - Begin Bailing
DOB - Begin Overpumping
DRB - Begin Rawhiding
DCB - Begin Recirculation
DHB - Begin Hydraulic Jetting
DAB - Begin Air Surging
DSB - Begin Surge Blocking
DXB - Begin Other
DBE - End Bailing
DOE - End Overpumping
DRE - End Rawhiding
DCE - End Recirculation
DHE - End Hydraulic Jetting
DAE - End Air Surging
DSE - End Surge Blocking
DXE - End Other
Specify other method: _____
FMT - Field Measurements (select from codes at right)

FIELD MEASUREMENT CODES

MTP - Temperature
MSC - Specific Conductance
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MDO - Dissolved Oxygen
MPH - pH
MEH - Eh
MMC - Imhoff Cone
MO1 - Other: _____
MO2 - Other: _____

TURBIDITY

Enter Turbidity Meter Reading (Final should be < 5 NTU)
OR
Enter Qualitative Observations
H - High: Opaque/Muddy/Silty
M - Medium: Translucent/Cloudy
L - Low: Transparent/Some Silt
N - None: Clear/No Visible Silt

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TOC 7.94

GEOLIS® Well Purging Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE / AREA: INFF
LOCATION ID: MW-4
DATE: 2/23/07
SAMPLER:
SIGNATURE:

WELL OBSERVATIONS

CASING & LID: OK - DAMAGED - HEAVED - NO LID LOCKED: YES - NO KEY NO: _____ STICKUP: _____ FT-M
WELL DIAMETER: 2" - 4" - 6" - 8" - OTH: _____ BOREHOLE DIAMETER: _____ IN-CM MEASURING POINT: TIC - TOC - GRS
VAPOR READINGS: PID - FID - OTHER: _____ BACKGROUND: _____ INSIDE WELL: _____
CHECKED FOR NAPL LAYER: YES - NO OBSERVED: NON - FLT - SNK THICKNESS: _____ IN-CM SHEEN: YES - NO

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 13 FT-M BMP
(B) DEPTH TO WATER: 4.83 FT-M BMP
(C) SAND PACK LENGTH 8 FT-M
(D) WATER COLUMN HEIGHT (A - B): 8.17 FT-M
(E) CASING VOLUME FACTOR: _____ GPF-LPM
(F) SAND PACK VOLUME FACTOR: _____ GPF-LPM
(G) CASING VOLUME (D x E): _____ GAL-L
(H) SAND PACK VOLUME (C x F): _____ GAL-L

Casing Factor (GPF for inches) = 0.041(Well Diameter)²
2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF

Sand Pack Factor (GPF for inches)
= [0.041(Hole Diameter)² - 0.041(Well Diameter)²] 0.45

(I) TOTAL WELL VOLUME (G + H): 1.30 GAL-L
(J) VOLUMES TO BE PURGED: 3
(K) TOTAL PURGE VOLUME (I x J): 3.89 GAL-L

PURGING INFORMATION

PURGE ENDPOINT: VOLUME - TIME - PARAMETER STABILIZATION - TURBIDITY CRITERIA: _____
PURGING METHOD: BAILER - SUB. PUMP - CENT. PUMP - PACKER & PUMP - OTHER: _____
DEVICE DESCRIPTION: bladder DEVICE No.: _____
PUMP/BAILER INTAKE: SCREEN TOP - SCREEN/WELL BOTTOM - MID SCREEN/WELL - WATER LEVEL - MOVED UP/DOWN
PURGE WATER: DISCHARGED - TREATED - STORED ONSITE STORED IN: TANKS - DRUMS NO.: _____
FIELD MEASURMENTS IN: FLOW THRU CHAMBER - OPEN JAR CASCADING WATER: YES - NO DEPTH: _____ FT-M BMP
WELL PURGING INTERVAL: _____ TO _____ FT-M BMP PURGE DEPTH TO WATER (MAX): _____ FT-M BMP

TIME	DEPTH TO WATER (FT-M BMP)	PURGE RATE or VOLUME (GPM-GAL)	TURBIDITY (NTU)	FIELD MEASUREMENTS AND UNITS						COMMENTS
				MTP °C.	Con	DO	PH	ORP		
1222		.2	252	10.64	.166	1.60	5.98	-175.4		Pre Purge Readings
1231		1.2	146	11.19	.162	1.63	5.78	-181.4		
1238		2	74.7	11.25	.161	1.59	5.71	-181.6		
1244		2.9	43.6	11.28	.161	1.68	5.66	-186.3		
1251		3.9	20.7	11.22	.162	1.66	5.68	-185.4		
1255		4.5	8.38	11.24	.163	1.71	5.70	-183.1		
										Post Purge Readings

TOTAL PURGE TIME: _____ HRS TOTAL PURGE VOLUME: _____ GAL - L RECOVERY: FAST - SLOW - V.SLOW

FIELD MEASUREMENT CODES

MTP - Temperature (°C.)
MSC - Specific Conductance (mS/cm)
MPD - Photolonizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MCL - Color
MPH - pH
MEH - Eh
MAL - Alkalinity
MDO - Dissolved Oxygen (mg/L)
MO1 - Other: _____
MO2 - Other: _____
MO3 - Other: _____
MD1 - DTW in Well _____
MD2 - DTW in Well _____
MD3 - DTW in Well _____
MD4 - DTW in Well _____

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Sampled 1300

GEOLIS Well Development Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE/AREA: WFF
LOCATION ID: MW-5
DATE: 2/22/07
MEASURED BY: SAR
SIGNATURE:

ONE WELL VOLUME: 1028 start gallons WELL TD: ft TOC

Well Volume (gallons/foot) 2-inch = 0.16 4-inch = 0.65 6-inch = 1.47 8-inch = 2.61

TIME	ACTIVITY CODE	DEPTH TO WATER (ft)	PURGE RATE (gpm)	PURGE VOLUME (gal)	FIELD MEASUREMENTS				TURBIDITY	COMMENTS
					Tem	con	DO	pH		ORP
1035	DOB	2.47	2	20	11.81	.255	1.72	6.69	5338	-208.1
				35	11.91	.261	1.48	6.86	692	-213.8
				50	11.92	.261	0.77	6.88	906	-220.1
				70	11.96	.260	0.80	6.87	200	-221.0
				85	11.25	.265	1.04	6.89	2067	-233.8
				125	11.97	.257	0.66	6.85	319	-226.6
				140	12.03	.269	.45	6.85	157	-229.6
				165	12.11	.240	0.56	6.66	72.1	-228.4
1215				185	12.10	.255	0.63	6.69	165	-228.9
				195	12.21	.253	0.60	6.56	108.5	
				205	12.09	.252	.48	6.71	14.3	-233.1
				210	12.11	.252	.67	6.74	10.16	-228.2
1235				215	12.14	.252	.71	6.77	7.67	-227.9
					developed					
	FINAL									

FINAL WELL YIELD: GPM PUMP RATE - ESTIMATED CORRESPONDING DRAWDOWN: FT

DEVELOPMENT ACTIVITY CODES

DBB - Begin Bailing
DOB - Begin Overpumping
DRB - Begin Rawhiding
DCB - Begin Recirculation
DHB - Begin Hydraulic Jetting
DAB - Begin Air Surging
DSB - Begin Surge Blocking
DXB - Begin Other
Specify other method:
FMT - Field Measurements (select from codes at right)

DBE - End Bailing
DOE - End Overpumping
DRE - End Rawhiding
DCE - End Recirculation
DHE - End Hydraulic Jetting
DAE - End Air Surging
DSE - End Surge Blocking
DXE - End Other

FIELD MEASUREMENT CODES

MTP - Temperature
MSC - Specific Conductance
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MDO - Dissolved Oxygen
MPH - pH
MEH - Eh
MMC - Imhoff Cone
MO1 - Other:
MO2 - Other:

TURBIDITY

Enter Turbidity Meter Reading (Final should be < 5 NTU)
OR
Enter Qualitative Observations
H - High: Opaque/Muddy/Silty
M - Medium: Translucent/Cloudy
L - Low: Transparent/Some Silt
N - None: Clear/No Visible Silt

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GEOLIS® Well Purging Form

DTW TOC 5.88

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE / AREA: WFT

LOCATION ID: MW-5
DATE: 2/23/07
SAMPLER:
SIGNATURE:

WELL OBSERVATIONS

CASING & LID: (OK) - DAMAGED - HEAVED - NO LID LOCKED: YES - NO KEY NO: _____ STICKUP: _____ FT-M

WELL DIAMETER: (2") - 4" - 6" - 8" - OTH: _____ BOREHOLE DIAMETER: _____ IN-CM MEASURING POINT: TIC - TOC - GRS

VAPOR READINGS: PID - FID - OTHER: _____ BACKGROUND: _____ INSIDE WELL: _____

CHECKED FOR NAPL LAYER: YES - NO OBSERVED: NON - FLT - SNK THICKNESS: _____ IN-CM SHEEN: YES - NO

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 12 FT-M BMP
(B) DEPTH TO WATER: 2.84 FT-M BMP
(C) SAND PACK LENGTH _____ FT-M
(D) WATER COLUMN HEIGHT (A - B): 9.16 FT-M
(E) CASING VOLUME FACTOR: _____ GPF-LPM
(F) SAND PACK VOLUME FACTOR: _____ GPF-LPM
(G) CASING VOLUME (D x E): _____ GAL-L
(H) SAND PACK VOLUME (C x F): _____ GAL-L

Casing Factor (GPF for inches) = 0.041(Well Diameter)²
2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF

Sand Pack Factor (GPF for inches)
= [0.041(Hole Diameter)² - 0.041(Well Diameter)²] 0.45

(I) TOTAL WELL VOLUME (G + H): 1.47 GAL-L
(J) VOLUMES TO BE PURGED: 3
(K) TOTAL PURGE VOLUME (I x J): 4.40 GAL-L

PURGING INFORMATION

PURGE ENDPOINT: VOLUME - TIME - PARAMETER STABILIZATION - TURBIDITY CRITERIA: _____

PURGING METHOD: BAILER - SUB. PUMP - CENT. PUMP - PACKER & PUMP - OTHER: _____

DEVICE DESCRIPTION: Bladder DEVICE No.: _____

PUMP/BAILER INTAKE: SCREEN TOP - SCREEN/WELL BOTTOM - MID SCREEN/WELL - WATER LEVEL - MOVED UP/DOWN

PURGE WATER: DISCHARGED - TREATED - STORED ONSITE STORED IN: TANKS - DRUMS NO.: _____

FIELD MEASURMENTS IN: FLOW THRU CHAMBER - OPEN JAR CASCADING WATER: YES - NO DEPTH: _____ FT-M BMP

WELL PURGING INTERVAL: _____ TO _____ FT-M BMP PURGE DEPTH TO WATER (MAX): _____ FT-M BMP

TIME	DEPTH TO WATER (FT-M BMP)	PURGE RATE or VOLUME (GPM-GAL)	TURBIDITY (NTU)	FIELD MEASUREMENTS AND UNITS: MTP °C.	COND	DO	PH	ORP		COMMENTS
1120		0.2	218	9.82	.256	1.18	7.14	-162.6		Pre Purge Readings
1130		1	84.9	10.91	.257	.51	7.08	-210.5		
1135		1.8	61.0	11.11	.250	.41	7.08	-213.1		
1139		2.5	27.1	11.19	.250	.44	7.07	-219.7		
1142		3.8	7.99	11.19	.252	.43	7.06	-221.9		
										Post Purge Readings

TOTAL PURGE TIME: _____ HRS TOTAL PURGE VOLUME: _____ GAL - L RECOVERY: FAST - SLOW - V.SLOW

FIELD MEASUREMENT CODES

MTP - Temperature (°C)
MSC - Specific Conductance (mS/cm)
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MCL - Color
MPH - pH
MEH - Eh
MAL - Alkalinity
MDO - Dissolved Oxygen (mg/L)
MO1 - Other: _____
MO2 - Other: _____
MO3 - Other: _____
MD1 - DTW in Well _____
MD2 - DTW in Well _____
MD3 - DTW in Well _____
MD4 - DTW in Well _____

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Sampled 1150

GEOLIS Well Development Form

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE/AREA: WFF

LOCATION ID: MW-6
DATE: 2/21/07
MEASURED BY: SJM
SIGNATURE:

ONE WELL VOLUME: _____ gallons WELL TD: _____ ft TOC

Well Volume (gallons/foot) 2-inch = 0.16 4-inch = 0.65 6-inch = 1.47 6-inch = 2.61

TIME	ACTIVITY CODE	DEPTH TO WATER (ft)	PURGE RATE (gpm)	PURGE VOLUME (gal)	FIELD MEASUREMENTS pH	Cond mS/cm	DO mg/L	ORP	TURBIDITY NTU	COMMENTS Temp °C
1455	DOB	2.0	2gpm	3	6.44	0.24	10.48	-197.6	7675	11.21
1511			2gpm	20	6.48	0.264	11.47	-202	65.2	11.77
1516				30	6.37	0.263	4.19	-190.2	3115	11.89
1525				50	6.25	.261	3.18	-208.4	1283	11.60
1530				55	6.27	.269	2.72	-204.7	67.5	11.92
1535				60	6.30	.265	2.72	-197.4	21.3	11.89
1538				65	6.28	.265	2.76	-201.6	14.9	11.83
1542				75	6.32	.266	2.77	-199.5	6.63	11.82
			Purged							
	FINAL									

FINAL WELL YIELD: _____ GPM PUMP RATE - ESTIMATED CORRESPONDING DRAWDOWN: _____ FT

DEVELOPMENT ACTIVITY CODES

DBB - Begin Bailing
DOB - Begin Overpumping
DRB - Begin Rawhiding
DCB - Begin Recirculation
DHB - Begin Hydraulic Jetting
DAB - Begin Air Surging
DSB - Begin Surge Blocking
DXB - Begin Other
DBE - End Bailing
DOE - End Overpumping
DRE - End Rawhiding
DCE - End Recirculation
DHE - End Hydraulic Jetting
DAE - End Air Surging
DSE - End Surge Blocking
DXE - End Other
Specify other method: _____
FMT - Field Measurements (select from codes at right)

FIELD MEASUREMENT CODES

MTP - Temperature
MSC - Specific Conductance
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MDO - Dissolved Oxygen
MPH - pH
MEH - Eh
MMC - Imhoff Cone
MO1 - Other: _____
MO2 - Other: _____

TURBIDITY

Enter Turbidity Meter Reading (Final should be < 5 NTU)
OR
Enter Qualitative Observations
H - High: Opaque/Muddy/Silty
M - Medium: Translucent/Cloudy
L - Low: Transparent/Some Silt
N - None: Clear/No Visible Silt

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note DTW @ TOC = 4.9c

GEOLIS® Well Purging Form

COMPANY: _____ LOCATION ID: MW-6
CLIENT: _____ DATE: _____
PROJECT: _____ SAMPLER: _____
SITE / AREA: _____ SIGNATURE: _____

WELL OBSERVATIONS

CASING & LID: (OK) - DAMAGED - HEAVED - NO LID LOCKED: (YES) - NO KEY NO: _____ STICKUP: _____ FT-M
WELL DIAMETER: 2" - (4") - 6" - 8" - OTH: _____ BOREHOLE DIAMETER: 6 1/2 IN-CM MEASURING POINT: TIC - TOC - GRS
VAPOR READINGS: PID - FID - OTHER: _____ BACKGROUND: _____ INSIDE WELL: _____
CHECKED FOR NAPL LAYER: (YES) - NO OBSERVED: (NON) FLT - SNK THICKNESS: _____ IN-CM SHEEN: YES - NO

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 12.5 FT-M BMP
(B) DEPTH TO WATER: 1.10 FT-M BMP
(C) SAND PACK LENGTH _____ FT-M
(D) WATER COLUMN HEIGHT (A - B): 11.4 FT-M
(E) CASING VOLUME FACTOR: 0.16 GPF-LPM
(F) SAND PACK VOLUME FACTOR: _____ GPF-LPM
(G) CASING VOLUME (D x E): _____ GAL-L
(H) SAND PACK VOLUME (C x F): _____ GAL-L

Casing Factor (GPF for inches) = 0.041(Well Diameter)²
2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF

Sand Pack Factor (GPF for inches)
= [0.041(Hole Diameter)² - 0.041(Well Diameter)²] 0.45

(I) TOTAL WELL VOLUME (G + H): 1.82 GAL-L
(J) VOLUMES TO BE PURGED: 3
(K) TOTAL PURGE VOLUME (I x J): 5.47 GAL-L

PURGING INFORMATION

PURGE ENDPOINT: VOLUME - TIME - PARAMETER STABILIZATION - TURBIDITY CRITERIA: _____
PURGING METHOD: BAILER - (SUB. PUMP) - CENT. PUMP - PACKER & PUMP - OTHER: Low Flow 0.5 L/min
DEVICE DESCRIPTION: bladder DEVICE No.: _____
PUMP/BAILER INTAKE: SCREEN TOP - (SCREEN/WELL BOTTOM) - MID SCREEN/WELL - WATER LEVEL - MOVED UP/DOWN
PURGE WATER: DISCHARGED - TREATED - (STORED ONSITE) STORED IN: TANKS - (DRUMS) NO.: _____
FIELD MEASURMENTS IN: FLOW THRU CHAMBER - (OPEN JAR) CASCADING WATER: YES - (NO) DEPTH: _____ FT-M BMP
WELL PURGING INTERVAL: _____ TO _____ FT-M BMP PURGE DEPTH TO WATER (MAX): _____ FT-M BMP

TIME	DEPTH TO WATER (FT-M BMP)	PURGE RATE or VOLUME (GPM-GAL)	TURBIDITY (NTU)	FIELD MEASUREMENTS AND UNITS: MTP °C.	COND mS/cm³	DO mg/L	PH	ORP	Turb	COMMENTS
1425				13m 12.17						Pre Purge Readings begin purge
1431		1 gal	65.4	12.17	.308	1.75	6.08	-204.8		
1436		2.5	65.4	11.85	.299	1.84	6.06	-207.5		
1439		3	46.4	11.90	.297	1.58	6.03	-212.7		
1443		3.6	29.5	11.84	.296	1.73	6.04	-213.0		
1445		4.1	19.2	11.85	.291	1.69	6.08	-208.3		5 min break
1455		5	12.9	11.88	.295	1.72	6.10	-210.3		Post Purge Readings
1458		5.5	21.9	11.78	.298	1.81	6.15	-209.4		

TOTAL PURGE TIME: _____ HRS TOTAL PURGE VOLUME: _____ GAL - L RECOVERY: FAST - SLOW - V.SLOW

FIELD MEASUREMENT CODES

MTP - Temperature (°C.)
MSC - Specific Conductance (mS/cm)
MPD - Photolonizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MCL - Color
MPH - pH
MEH - Eh
MAL - Alkalinity
MDO - Dissolved Oxygen (mg/L)
MO1 - Other: _____
MO2 - Other: _____
MO3 - Other: _____
MD1 - DTW in Well _____
MD2 - DTW in Well _____
MD3 - DTW in Well _____
MD4 - DTW in Well _____

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1500 6.0 12.6 11.79 .296 1.76 6.13 -204.6
1504 6.2 9.15 11.78 .292 1.77 6.12 -209.3

sampled @ 1515

GEOLIS Well Development Form

COMPANY: WSI
CLIENT: USACE
PROJECT: S1
SITE/AREA: WEF

LOCATION ID: MW-7
DATE: 2/21/07
MEASURED BY:
SIGNATURE:

ONE WELL VOLUME: _____ gallons WELL TD: _____ ft TOC

Well Volume (gallons/foot): 2-inch = 0.16 4-inch = 0.65 6-inch = 1.47 8-inch = 2.61

TIME	ACTIVITY CODE	DEPTH TO WATER (ft)	PURGE RATE (gpm)	PURGE VOLUME (gal)	FIELD MEASUREMENTS pH	Cond	DO	ORP	TURBIDITY	COMMENTS
										TEMP
1607	DOB	0.9	2	12	6.19	.123	2.76	-184.6	1033	12.44
1615				22	6.02	.111	3.10	-184.7	293	12.95
1620				32	5.99	.109	3.35	-183.6	209	13.05
										1637 restart
1642				48	5.95	.115	3.76	-191.8	157	12.85
1652				78	4.69	.113	4.71	-196.0	30.7	12.88
1655				84	5.56	.112	4.66	-202.7	23.3	13.03
1700				94	5.96	.115	4.76	-200.4	19.4	13.00
1704				110	5.96	.113	4.70	-203.6	11.2	13.21
1706				118	6.06	.113	5.19	-199.9	9.8	12.82
					developed					
	FINAL									

FINAL WELL YIELD: _____ GPM PUMP RATE - ESTIMATED CORRESPONDING DRAWDOWN: _____ FT

DEVELOPMENT ACTIVITY CODES

DBB - Begin Bailing
DOB - Begin Overpumping
DRB - Begin Rawhiding
DCB - Begin Recirculation
DHB - Begin Hydraulic Jetting
DAB - Begin Air Surging
DSB - Begin Surge Blocking
DXB - Begin Other
DBE - End Bailing
DOE - End Overpumping
DRE - End Rawhiding
DCE - End Recirculation
DHE - End Hydraulic Jetting
DAE - End Air Surging
DSE - End Surge Blocking
DXE - End Other
Specify other method: _____
FMT - Field Measurements (select from codes at right)

FIELD MEASUREMENT CODES

MTP - Temperature
MSC - Specific Conductance
MPD - Photoionizer (e.g., HNu)
MFD - Flame Ionizer (e.g., OVA)
MDO - Dissolved Oxygen
MPH - pH
MEH - Eh
MMC - Imhoff Cone
MO1 - Other: _____
MO2 - Other: _____

TURBIDITY

Enter Turbidity Meter Reading (Final should be < 5 NTU)
OR
Enter Qualitative Observations
H - High: Opaque/Muddy/Silty
M - Medium: Translucent/Cloudy
L - Low: Transparent/Some Silt
N - None: Clear/No Visible Silt

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TOC DTW = 3.46'

GEOLIS® Well Purging Form

1610 begin purge

COMPANY: WSI
CLIENT: USACE
PROJECT: SI
SITE / AREA: WFF

LOCATION ID: MW-7
DATE: 2/22/07
SAMPLER:
SIGNATURE: EJM

WELL OBSERVATIONS

CASING & LID: (OK) - DAMAGED - HEAVED - NO LID LOCKED: (YES) - NO KEY NO: _____ STICKUP: _____ FT-M

WELL DIAMETER: (2") - 4" - 6" - 8" - OTH: _____ BOREHOLE DIAMETER: 6 1/2 IN-CM MEASURING POINT: TIC - (TOC) - GRS

VAPOR READINGS: PID - FID - OTHER: _____ BACKGROUND: _____ INSIDE WELL: _____

CHECKED FOR NAPL LAYER: (YES) - NO OBSERVED: (NON) - FLT - SNK THICKNESS: _____ IN-CM SHEEN: YES - (NO)

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM:	12	FT-M BMP	Casing Factor (GPF for inches) = 0.041(Well Diameter)² 2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF
(B) DEPTH TO WATER:	0.90	FT-M BMP	
(C) SAND PACK LENGTH		FT-M	Sand Pack Factor (GPF for inches) = [0.041(Hole Diameter)² - 0.041(Well Diameter)²] 0.45
(D) WATER COLUMN HEIGHT (A - B):	8.90	FT-M	
(E) CASING VOLUME FACTOR:	0.16	GPF-LPM	(I) TOTAL WELL VOLUME (G + H): 1.78 GAL-L
(F) SAND PACK VOLUME FACTOR:		GPF-LPM	(J) VOLUMES TO BE PURGED: 3
(G) CASING VOLUME (D x E):		GAL-L	
(H) SAND PACK VOLUME (C x F):	11.1	GAL-L	(K) TOTAL PURGE VOLUME (I x J): 5.33 GAL-L

PURGING INFORMATION

PURGE ENDPOINT: VOLUME - TIME - (PARAMETER STABILIZATION) - TURBIDITY CRITERIA: _____

PURGING METHOD: BAILER - SUB. PUMP - CENT. PUMP - PACKER & PUMP - OTHER: _____

DEVICE DESCRIPTION: bladder DEVICE No.: _____

PUMP/BAILER INTAKE: SCREEN TOP - (SCREEN/WELL BOTTOM) - MID SCREEN/WELL - WATER LEVEL - MOVED UP/DOWN

PURGE WATER: DISCHARGED - TREATED - (STORED ONSITE) STORED IN: TANKS - (DRUMS) NO.: _____

FIELD MEASURMENTS IN: FLOW THRU CHAMBER - (OPEN JAR) CASCADING WATER: YES - (NO) DEPTH: _____ FT-M BMP

WELL PURGING INTERVAL: _____ TO _____ FT-M BMP PURGE DEPTH TO WATER (MAX): _____ FT-M BMP

TIME	DEPTH TO WATER (FT-M BMP)	PURGE RATE or VOLUME (GPM-GAL)	TURBIDITY (NTU)	FIELD MEASUREMENTS AND UNITS MTP °C.	COND	DO	pH	ORP		COMMENTS
1610	0.9	0.5 L/m	240	11.58	.111	1.88	6.56	-183.1		Pre Purge Readings
1617		1 gal	117	12.51	.108	1.66	6.06	-174.3		
1623		1.8	72.8	12.50	.111	1.77	6.02	-165.5		
1633		3.6	44.6	12.52	.108	1.81	5.95	-172.4		
1638		4.2	22.9	12.55	.112	1.77	5.91	-174.8		
1645		5	12.4	12.51	.108	1.87	5.96	-173.7		
1652		5.5	8.87	12.55	.108	1.88	5.99	-171.8		Post Purge Readings

TOTAL PURGE TIME: _____ HRS TOTAL PURGE VOLUME: _____ GAL - L RECOVERY: FAST - SLOW - V.SLOW

FIELD MEASUREMENT CODES

MTP - Temperature (°C.)	MCL - Color	MDO - Dissolved Oxygen (mg/L)	MD1 - DTW in Well
MSC - Specific Conductance (mS/cm)	MPH - pH	MO1 - Other:	MD2 - DTW in Well
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other:	MD3 - DTW in Well
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other:	MD4 - DTW in Well

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Sampled @ 1700

Serial Number 94413

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

⊗ **STL Savannah**
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

○ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WOF - WOTP-#1		VA
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
[illegible]	[illegible]7557	
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Theresa Offner	770-325-7961	
CLIENT NAME	CLIENT E-MAIL	
Weston Solutions	Theresa.Offner@weston	
CLIENT ADDRESS		
5120 Mavis Rd Quality Network LA 70052		
COMPANY CONTRACTING THIS WORK (if applicable)		

MATRIX TYPE (COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT,...))

REQUIRED ANALYSIS: VOC's; SVOC, PAH's, PCB's; Cyanide; Metals (Inorganics)

PAGE 1 OF

STANDARD REPORT DELIVERY ⊗
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

PRESERVATIVE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2/19/07	1210	WFF1-MW2-0-0.5	X X X X	
	1220	WFF1-MW2-0.5-2	X X X X	
	1400	WFF1-MW2-19-21	X X X X	
2/20/07	0745	WFF1-MW1-0-0.5	X X X X	
	0755	WFF1-MW1-0.5-2	X X X X	
	0815	WFF1-MW1-2-4	X X X X	
	1550	WFF1-MW7-0-0.5	X X X X	
	1600	WFF1-MW7-0.5-2	X X X X	
	1035	WFF1-MW5-0-0.5	X X X X	
	1045	WFF1-MW5-0.5-2	X X X X	
	1125	WFF1-MW5-2-4	X X X X	
	1345	WFF1-MW4-0-0.5	X X X X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/20/07	1440						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Loretta Kennedy	2/20/07	1440						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS

Serial Number 94414

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

(X) **STL Savannah**
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

( ) Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
		VA
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
	57557	
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
	757 235 7561	
CLIENT NAME	CLIENT E-MAIL	
CLIENT ADDRESS		
GA 30052		
COMPANY CONTRACTING THIS WORK (if applicable)		

MATRIX TYPE — COMPOSITE (C) OR GRAB (G) INDICATE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
4/10/12	1300	MW-1-MW4-0.5-2		X			4	
	1320	MW-1-MW4-3-5		X			4	
	0940	SB-1-S-2		X			4	
	1045	SB-1-S-3		X			4	
	1345	SB-1-S-4		X			4	
	1345	SB-1-S-5		X			4	FIELD DUPLICATE
	1345	SB-1-S-6		X			4	
	—	TB-1	X				1	
		TB-2						

REQUIRED ANALYSIS — PAGE 2 OF

- VOC
- Cyanide
- Metals/Mercury

STANDARD REPORT DELIVERY (X)
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	4/10/12	1440						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Cornelius Kennedy	4/10/12	1440						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ( ) NO ( )	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS

Serial Number 94411

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

(X) **STL Savannah**
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE / OF
WWF-WWTP #1		VA			
STL (LAB) PROJECT MANAGER: Angie Paine	P.O. NUMBER: 0047507	CONTRACT NO.			
CLIENT (SITE) PM: Theresa Grange	CLIENT PHONE: 770-322-7461	CLIENT FAX			
CLIENT NAME: Weston Solutions	CLIENT E-MAIL: theresa.grange@westonsolutions.com				
CLIENT ADDRESS: 2301 Mobile Hwy (Rt 90) Norcross, GA 30092					
COMPANY CONTRACTING THIS WORK (if applicable)					

STANDARD REPORT DELIVERY (X)
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	VOC	SVOC, PEST PCB	CYANIDE	METALS/HARDNESS	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2/20/07	1510	WFF1-SS4			X			X	X	X	X		M/MD
	1525	WWF-WW-4-5			X			X	X	X	X		
2/20/07	0900	WWF-WW1-0-0.5			X			X	X	X	X		
	0920	WWF-WW1-0.5-2			X			X	X	X	X		
	1105	WWF-EQ1		X				X	X	X	X		
	1130	WWF-WW1-10-20			X			X	X	X	X		
	1135	WWF-SD1			X			X	X	X	X		
	1155	WWF-SD2			X			X	X	X	X		
	1420	WWF-WW3		X				X	X	X	X		
	1530	WWF-SS-11			X			X	X	X	X		
	1605	WWF-SS3-0			X			X	X	X	X		
	1625	EB-WWF-2		X				X	X	X	X		TRIPBLANK FOR PLANT

PRESERVATION

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/21/07	1340						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
	2/22/07	1240						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ( ) NO ( )	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS

Serial Number 93811

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

○ **STL Savannah**
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

○ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
CLIENT NAME	CLIENT E-MAIL	
CLIENT ADDRESS		
COMPANY CONTRACTING THIS WORK (if applicable)		

MATRIX TYPE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)
2/2/07	1035	SOIL CUTTING			X		
1	1300	WFEL-5-B			X		
	—	TR-3		X			

REQUIRED ANALYSIS

TCLP: VOC, SVOC, PEST/HERB, METALS	TCLP VOH	TCLP: VOC, SVOC, PEST/HERB, METALS, CYANIDE, REACTIVE SULFIDE	VOC	SVOC, PEST/HERB	CYANIDE	HCSPIN / HCLC			
			X	X	X	X			
			X						

PRESERVATIVE

NUMBER OF CONTAINERS SUBMITTED

X	X	X									
			X	X	X	X					
			X								

PAGE ____ OF ____

STANDARD REPORT DELIVERY ○

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REMARKS

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/2/07	1540						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
	2/2/07	1340						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS

STL8240-680 (12/02)

Serial Number 93812

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

(○) **STL Savannah**
5102 LaRoche Avenue
Savannah, GA 31404
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(○) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
CLIENT NAME	CLIENT E-MAIL	
CLIENT ADDRESS		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 3

STANDARD REPORT DELIVERY (○)
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) (○)
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC PCP/PAH	CYANIDE	TARGET/HIGHER	PRESERVATIVE	NUMBER OF CONTAINERS SUBMITTED	REMARKS
				X				X	X	X	X			
					X			X	X	X	X			
					X			X	X	X	X			
					X			X	X	X	X			
					X			X	X	X	X			
				X				X	X	X	X			
				X				X	X	X	X			
2-3/07	0930	WEF1-MW3		X				X	X	X	X			MS/MSD
	0940	WEF1-MW3-D		X				X	X	X	X			
	1010	WEF1-MW20		X				X	X	X	X			
	1020	WEF1-SW-A			X			X	X	X	X			
	115	WEF1-SS5			X			X	X	X	X			

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/3/07	1000						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES (○) NO (○)	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS

Serial Number 33561

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE	OF
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.			STANDARD REPORT DELIVERY (X)	
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX			DATE DUE	
CLIENT NAME	CLIENT E-MAIL				EXPEDITED REPORT DELIVERY (SURCHARGE) ( )	
CLIENT ADDRESS					DATE DUE	
COMPANY CONTRACTING THIS WORK (if applicable)				PRESERVATIVE	NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2/26/07	1120	MW1-SS7		X					
	1525	MW1-SS1		X					
	1615	MW1-MW1		X					
	1240	MW1-MW4		X					
2/23/07	1515	MW1-MW6		X					
	1700	MW1-MW7		X					
2/23/07	1420	MW1-MW3		X					
	0915	MW1-MW3-D		X					
	1010	MW1-MW10		X					
	1150	MW1-MW5		X					
	1300	MW1-MW4		X					
	1430	MW1-MW2		X					

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
SJ Mathey	2/24/07	1000						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ( ) NO ( )	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS

Serial Number 94410

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

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( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
CLIENT NAME	CLIENT E-MAIL	
CLIENT ADDRESS		
COMPANY CONTRACTING THIS WORK (if applicable)		

MATRIX TYPE — COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT,...)

REQUIRED ANALYSIS

PAGE 1 OF 2

STANDARD REPORT DELIVERY ( )
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	C	AQ	SOL	AIR	NAQ	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2/23/07	1535	WELL-MW1		X				X	
		TB-4		X				X	

RELINQUISHED BY: (SIGNATURE) — DATE 2/24/07 — TIME 1000
RECEIVED BY: (SIGNATURE) — DATE — TIME

RELINQUISHED BY: (SIGNATURE) — DATE — TIME
RECEIVED BY: (SIGNATURE) — DATE — TIME

RELINQUISHED BY: (SIGNATURE) — DATE — TIME
RECEIVED BY: (SIGNATURE) — DATE — TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ( ) NO ( )	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS

Gravel road leading to WWTP and control/pump house, viewed from northwest.

View of process tanks from former trickling filter tank area.

Process tanks viewed from above.

Primary settling tank viewed from above.

Control/Pump House viewed from process tanks.

Sludge drying beds, viewed from process tanks.

Intermittent stream.

Possible sludge pile.

APPENDIX B
BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

BOREHOLE LOG

GROUNDWATER MONITOR WELL NUMBER: MW-1

PAGE NUMBER: 1 OF 1

PROJECT NAME: WWTP #1
W.O.#: 03886.183.010.0400
LOCATION: WALLOPS FLIGHT FACILITY, VIRGINIA
DRILLING COMPANY: IMS
RIG TYPE: B47 MOBILE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: SPLIT SPOONS WHERE INDICATED
LOGGED BY: E. MACKEY WEATHER:
DATE BEGUN: 02/21/07 DATE COMPLETED: 02/21/07

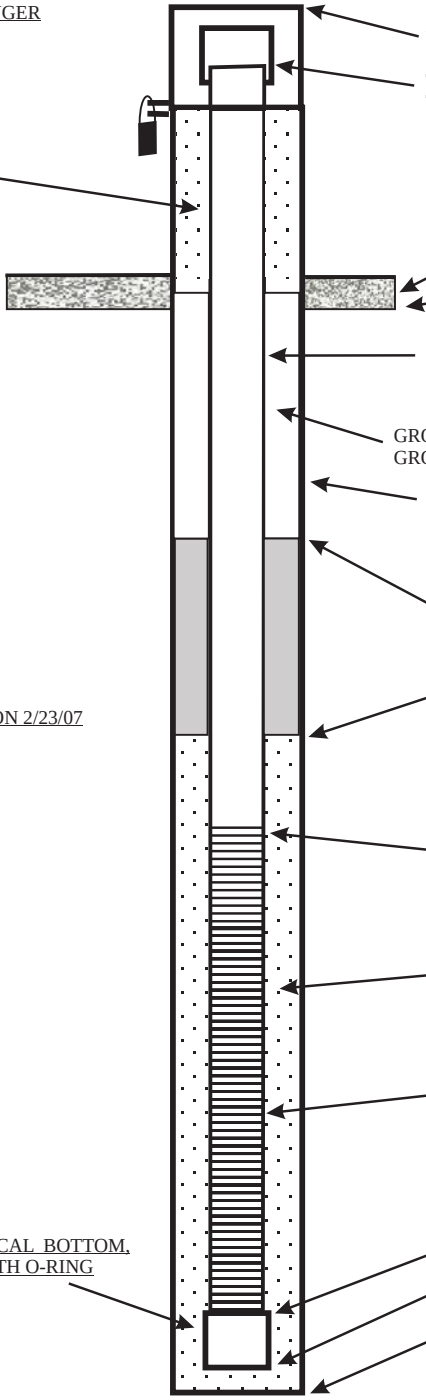
TOTAL DEPTH: 26.5 FT BGS
NORTHING: 3881302.3080
EASTING: 12357100.2520
SURFACE ELEV.: 34.0
INITIAL WATER LEVEL: 20 FT BGS
AIR MONITORING INSTRUMENT: Photo-Ionizer (PID)
BOREHOLE DIAMETER: 6.5 INCH
P.G. SIGNATURE:

DEPTH FT BGS	BLOW COUNT	SAMPLE ID	RECOVERY	LITHOLOGIC DESCRIPTION	MUNSELL SOIL COLOR CODE	PID READING (PPM)	COMMENT
0							*land surface*
	4-11-21-20	WFF1-MW1-0-0.5; 0.5-2	1.6	4" ORGANIC ZONE; YELLOWISH BROWN SILTY SAND	10YR 5/6	2.4	
	6-6-5-7		1.9	YELLOWISH BROWN SILTY SAND	10YR 5/6	22.2	
5	4-6-9-12		1.1	YELLOWISH BROWN CLAYEY SILTY SAND	10YR 5/8	13.5	
	11-13-12-1		1.5	YELLOW SILTY SAND, LITTLE CLAY	10YR 7/6	12.6	
	7-10-11-12		1.6	YELLOW SILTY SAND	10YR 8/6	3.8	SOME BANDING NOTED
10	7-10-11-12		1.0	YELLOW SILTY SAND	10YR 8/6	2.4	
	7-11-13-11		1.2	YELLOW SILTY SAND	10YR 8/6	2.6	
15	6-6-7-11		1.2	YELLOW SILTY SAND	10YR 8/6	0.5	OXIDATION BANDING MORE PREVALENT
	7-10-16-21		1.2	BROWNISH YELLOW SILTY SAND	10YR 6/6	1.8	
	6-9-12-13	WFF1-MW1-18-20	1.3	YELLOW SILTY SAND	10YR 8/6	2.4	SATURATION AT 19 FT BGS
20							
25				BORING TERMINATED AT 26.5 FT BGS			
30							
35							

MW-1

STATE PLANE COORDINATES:
NORTHING: 3881302.3080
EASTING: 12357100.2520

DRILLING METHOD: HOLLOW-STEM AUGER
DRILLING COMPANY: IMS
DATE OF CONSTRUCTION: 02/21/07



PROBE COVER: LOCKING METAL STANDPIPE

TYPE OF WELL CAP: 2 INCH EXPANSION CAP
TOP OF PVC CASING ELEVATION: 36.59 FEET MSL

PROTECTIVE CASING SAND

TYPE OF SURFACE SEAL: CEMENT PAD

GROUND SURFACE ELEVATION: 34.0 FEET MSL

RISER PIPE ID: 2 IN
TYPE: SCHEDULE 40 PVC
LENGTH OF RISER: 10.0 FT

GROUT/CEMENT SEAL: 0 TO 12 FT BGS
GROUT/CEMENT PLACEMENT METHOD: GRAVITY

BOREHOLE DIAMETER: 6.5 INCH

WELL DEVELOPMENT DETAILS

DEVELOPMENT METHOD: PUMP
DATE/TIME START: 2/22/07 13:00
DATE/TIME FINISH: 2/22/07 13:55
TOTAL TIME PURGED: 55 MINUTES
VOLUME PURGED: 80 GALLONS
INITIAL WATER LEVEL: APPROX. 20 FT BGS ON 2/23/07

DEPTH TO TOP OF SEAL: 12 FT BGS
TYPE OF SEAL: 3/8" INCH BENTONITE
SEAL PLACEMENT METHOD: GRAVITY
HYDRATED FOLLOWING PLACEMENT

DEPTH TO TOP OF SAND: 14.0 FT BGS

DEPTH TO TOP OF SCREEN: 16.0 FT BGS
RISER AND SCREEN JOINT TYPE: FLUSH THREADED WITH O-RING

FILTER PACK MATERIAL/SIZE: MORIE #2 SAND
FILTER PACK PLACEMENT METHOD: GRAVITY

SCREEN ID: 2 INCH
TYPE OF SCREEN: SLOTTED SCHEDULE 40 PVC
SCREEN SLOT SIZE: 0.010 INCH
LENGTH OF SCREEN: 10.0 FT

TYPE OF END CAP SUMP: PVC CYLINDRICAL BOTTOM, THREADED WITH O-RING
LENGTH OF END CAP SUMP: 0.5 FEET

DEPTH TO BOTTOM OF SCREEN: 26.0 FT BGS

DEPTH TO BOTTOM OF WELL: 26.5 FT BGS

DEPTH TO BOTTOM OF BOREHOLE: 26.5 BGS

DEPTH TO WATER: ~20 FEET BGS

FIGURE IS NOT DRAWN TO SCALE

WASTEWATER TREATMENT PLANT #1
WALLOPS FLIGHT FACILITY
ACCOMACK COUNTY, VIRGINIA

GROUNDWATER MONITOR WELL MW-1

CONSTRUCTION DIAGRAM

DRAWN	DATE	WORK ORDER NO.	FILE NAME
TSR	03/21/07	03886.183.010.0400	WWTP_MW1.cdr

BOREHOLE LOG

GROUNDWATER MONITOR WELL NUMBER: MW-2

PAGE NUMBER: 1 OF 1

PROJECT NAME: WWTP #1
W.O.#: 03886.183.010.0400
LOCATION: WALLOPS FLIGHT FACILITY, VIRGINIA
DRILLING COMPANY: IMS
RIG TYPE: B47 MOBILE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: SPLIT SPOONS WHERE INDICATED
LOGGED BY: E. MACKEY WEATHER:
DATE BEGUN: 02/19/07 DATE COMPLETED: 02/19/07

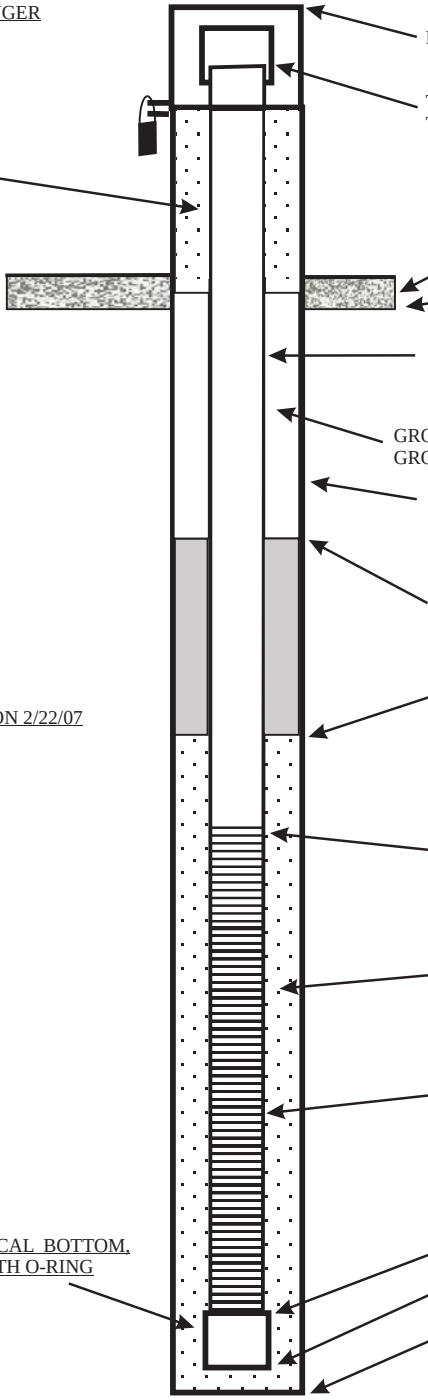
TOTAL DEPTH: 27.5 FT BGS
NORTHING: 3881448.9110
EASTING: 12357282.5320
SURFACE ELEV.: 32.8
INITIAL WATER LEVEL: 19 FT BGS
AIR MONITORING INSTRUMENT: Photo-Ionizer (PID)
BOREHOLE DIAMETER: 6.5 INCH
P.G. SIGNATURE:

DEPTH FT BGS	BLOW COUNT	SAMPLE ID	RECOVERY	LITHOLOGIC DESCRIPTION	MUNSELL SOIL COLOR CODE	PID READING (PPM)	COMMENT
0							*land surface*
	2-6-10-15	WFF1-MW2-0-0.5; 0.5-2	1.5	ORGANIC; STRONG BROWN SANDY SILT	7.5YR 5/8	0.0	
	0-0-1-1		0.5	YELLOWISH BROWN SILTY SAND	10YR 5/8	0.0	
5	3-4-4-3		1.0	YELLOWISH BROWN SILTY SAND	10YR 5/8	0.0	
	3-4-4-3		1.0	DARK BROWN	10YR 3/3	---	
	---		0.0	NO RECOVERY; CEDAR TREE ROOT	---	---	
10	5-3-3-4		0.3	DARK YELLOWISH BROWN SILTY SAND	10YR 3/6	0.0	
	7-5-6-9		0.0	NO RECOVERY	---	---	
15	14-16-16-19		0.0	NO RECOVERY; CEDAR TREE ROOT	---	---	
	8-10-14-16		1.2	YELLOW SILTY SAND	10YR 7/6	2.1	
	5-7-8-10		1.3	YELLOW SILTY SAND	10YR 7/6	2.4	GW AT 19 FT BGS
20	4-5-7-8	WFF1-MW2-19-21	---	---	---	---	
25				BORING TERMINATED AT 27.5 FT BGS			
30							
35							

MW-2

STATE PLANE COORDINATES:
NORTHING: 3881448.9110
EASTING: 12357282.5320

DRILLING METHOD: HOLLOW-STEM AUGER
DRILLING COMPANY: IMS
DATE OF CONSTRUCTION: 02/19/07



PROBE COVER: LOCKING METAL STANDPIPE

TYPE OF WELL CAP: 2 INCH EXPANSION CAP
TOP OF PVC CASING ELEVATION: 35.65 FEET MSL

PROTECTIVE CASING SAND

TYPE OF SURFACE SEAL:
CEMENT PAD

GROUND SURFACE ELEVATION:
32.8 FEET MSL

RISER PIPE ID: 2 IN
TYPE: SCHEDULE 40 PVC
LENGTH OF RISER: 10.0 FT

GROUT/CEMENT SEAL: 0 TO 12 FT BGS
GROUT/CEMENT PLACEMENT METHOD: GRAVITY

BOREHOLE DIAMETER: 6.5 INCH

WELL DEVELOPMENT DETAILS

DEVELOPMENT METHOD: PUMP
DATE/TIME START: 2/22/07 08:50
DATE/TIME FINISH: 2/22/07 09:56
TOTAL TIME PURGED: 66 MIN
VOLUME PURGED: 75 GALLONS
INITIAL WATER LEVEL: APPROX. 19 FT BGS ON 2/22/07

DEPTH TO TOP OF SEAL: 12 FT BGS
TYPE OF SEAL: 3/8" INCH BENTONITE
SEAL PLACEMENT METHOD: GRAVITY
HYDRATED FOLLOWING PLACEMENT

DEPTH TO TOP OF SAND: 14.0 FT BGS

DEPTH TO TOP OF SCREEN: 16.0 FT BGS
RISER AND SCREEN JOINT TYPE: FLUSH THREADED WITH O-RING

FILTER PACK MATERIAL/SIZE: MORIE #2 SAND
FILTER PACK PLACEMENT METHOD: GRAVITY

SCREEN ID: 2 INCH
TYPE OF SCREEN: SLOTTED SCHEDULE 40 PVC
SCREEN SLOT SIZE: 0.010 INCH
LENGTH OF SCREEN: 10.0 FT

TYPE OF END CAP SUMP: PVC CYLINDRICAL BOTTOM, THREADED WITH O-RING
LENGTH OF END CAP SUMP: 0.5 FEET

DEPTH TO BOTTOM OF SCREEN: 26.0 FT BGS

DEPTH TO BOTTOM OF WELL: 26.5 FT BGS

DEPTH TO BOTTOM OF BOREHOLE: 27.5 BGS

DEPTH TO WATER: ~19 FEET BGS

FIGURE IS NOT DRAWN TO SCALE

WASTEWATER TREATMENT PLANT #1
WALLOPS FLIGHT FACILITY
ACCOMACK COUNTY, VIRGINIA

GROUNDWATER MONITOR WELL
MW-2

CONSTRUCTION DIAGRAM

WESTON SOLUTIONS

DRAWN	DATE	WORK ORDER NO.	FILE NAME
TSR	03/21/07	03886.183.010.0400	WWTP_MW2.cdr

BOREHOLE LOG

GROUNDWATER MONITOR WELL NUMBER: MW-3

PROJECT NAME: WWTP #1
W.O.#: 03886.183.010.0400
LOCATION: WALLOPS FLIGHT FACILITY, VIRGINIA
DRILLING COMPANY: IMS
RIG TYPE: B47 MOBILE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: SPLIT SPOONS WHERE INDICATED
LOGGED BY: E. MACKEY WEATHER:
DATE BEGUN: 02/20/07 DATE COMPLETED: 02/20/07

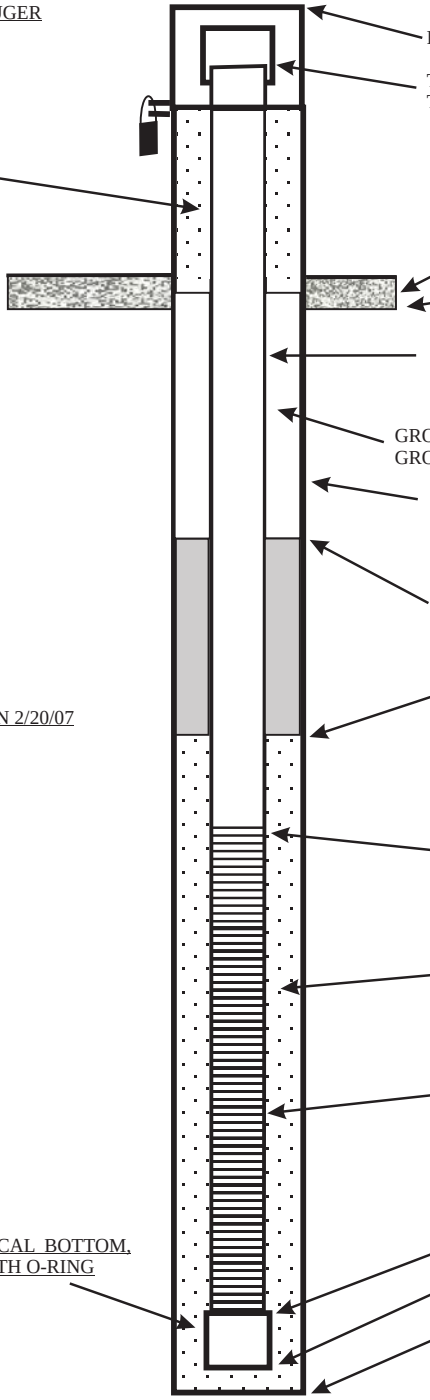
TOTAL DEPTH: 13.5 FT BGS
NORTHING: 3881434.6540
EASTING: 12357113.8090
SURFACE ELEV.: 19.3
INITIAL WATER LEVEL: 6 FT BGS
AIR MONITORING INSTRUMENT: Photo-Ionizer (PID)
BOREHOLE DIAMETER: 6.5 INCH
P.G. SIGNATURE:

DEPTH FT BGS	BLOW COUNT	SAMPLE ID	RECOVERY	LITHOLOGIC DESCRIPTION	MUNSELL SOIL COLOR CODE	PID READING (PPM)	COMMENT
0							*land surface*
	---	WFF1-MW3-2-4	---	FILL SAND FROM TRICKLING FILTER REMOVAL	---	---	
5	5-7-8-10		1.0	STRONG BROWN SILTY SAND; SOME GRAVEL	7.5YR 5/6	0.4	SATURATED AT 5 FT BGS
	7-5-6-9		---	STRONG BROWN SILTY SAND; SOME GRAVEL	7.5YR 5/6	---	GW AT 6 FT BGS
10							
				BORING TERMINATED AT 13.5 FT BGS			
15							
20							
25							
30							
35							

MW-3

STATE PLANE COORDINATES:
NORTHING: 3881434.6540
EASTING: 12357113.8090

DRILLING METHOD: HOLLOW-STEM AUGER
DRILLING COMPANY: IMS
DATE OF CONSTRUCTION: 02/20/07



PROBE COVER: LOCKING METAL STANDPIPE

TYPE OF WELL CAP: 2 INCH EXPANSION CAP
TOP OF PVC CASING ELEVATION: 21.99 FEET MSL

PROTECTIVE CASING SAND

TYPE OF SURFACE SEAL:
CEMENT PAD

GROUND SURFACE ELEVATION:
19.3 FEET MSL

RISER PIPE ID: 2 IN
TYPE: SCHEDULE 40 PVC
LENGTH OF RISER: 10.0 FT

GROUT/CEMENT SEAL: 0 TO 1 FT BGS
GROUT/CEMENT PLACEMENT METHOD: GRAVITY

BOREHOLE DIAMETER: 6.5 INCH

WELL DEVELOPMENT DETAILS

DEVELOPMENT METHOD: PUMP
DATE/TIME START: 2/22/07 10:40
DATE/TIME FINISH: 2/22/07 12:20
TOTAL TIME PURGED: 100 MIN
VOLUME PURGED: 110 GALLONS
INITIAL WATER LEVEL: APPROX. 6 FT BGS ON 2/20/07

DEPTH TO TOP OF SEAL: 1 FT BGS
TYPE OF SEAL: 3/8" INCH BENTONITE
SEAL PLACEMENT METHOD: GRAVITY
HYDRATED FOLLOWING PLACEMENT

DEPTH TO TOP OF SAND: 2.0 FT BGS

DEPTH TO TOP OF SCREEN: 3.0 FT BGS
RISER AND SCREEN JOINT TYPE: FLUSH THREADED WITH O-RING

FILTER PACK MATERIAL/SIZE: MORIE #2 SAND
FILTER PACK PLACEMENT METHOD: GRAVITY

SCREEN ID: 2 INCH
TYPE OF SCREEN: SLOTTED SCHEDULE 40 PVC
SCREEN SLOT SIZE: 0.010 INCH
LENGTH OF SCREEN: 10.0 FT

TYPE OF END CAP SUMP: PVC CYLINDRICAL BOTTOM, THREADED WITH O-RING
LENGTH OF END CAP SUMP: 0.5 FEET

DEPTH TO BOTTOM OF SCREEN: 13.0 FT BGS

DEPTH TO BOTTOM OF WELL: 13.5 FT BGS

DEPTH TO BOTTOM OF BOREHOLE: 13.5 BGS

DEPTH TO WATER: ~6 FEET BGS

FIGURE IS NOT DRAWN TO SCALE

WASTEWATER TREATMENT PLANT #1
WALLOPS FLIGHT FACILITY
ACCOMACK COUNTY, VIRGINIA

GROUNDWATER MONITOR WELL
MW-3

CONSTRUCTION DIAGRAM

WESTON SOLUTIONS

DRAWN	DATE	WORK ORDER NO.	FILE NAME
TSR	03/21/07	03886.183.010.0400	WWTP_MW3.cdr

BOREHOLE LOG

GROUNDWATER MONITOR WELL NUMBER: MW-4

PROJECT NAME: WWTP #1
W.O.#: 03886.183.010.0400
LOCATION: WALLOPS FLIGHT FACILITY, VIRGINIA
DRILLING COMPANY: IMS
RIG TYPE: B47 MOBILE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: SPLIT SPOONS WHERE INDICATED
LOGGED BY: E. MACKEY WEATHER:
DATE BEGUN: 02/20/07 DATE COMPLETED: 02/20/07

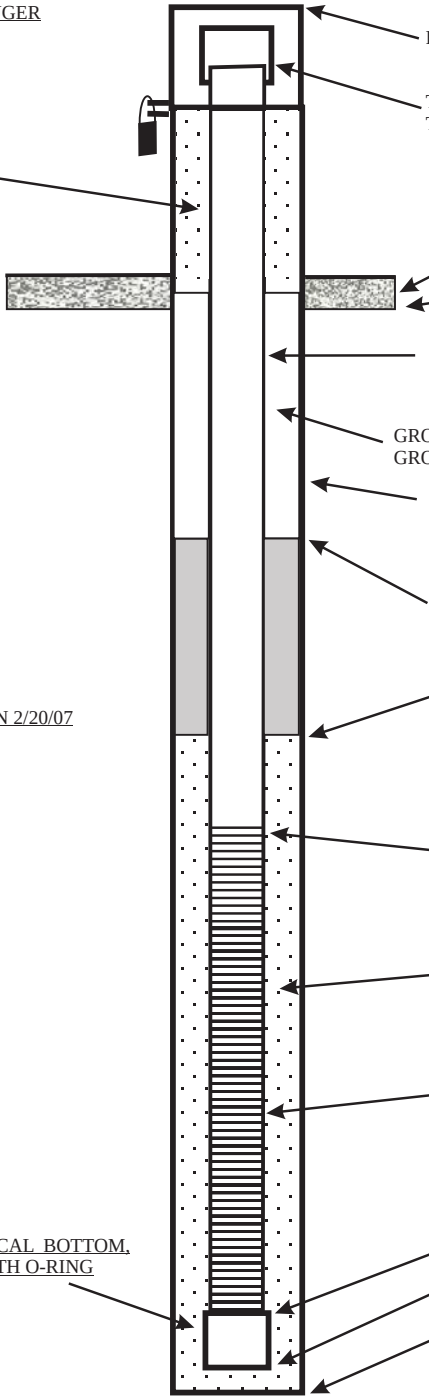
TOTAL DEPTH: 13.5 FT BGS
NORTHING: 3881434.5370
EASTING: 12357063.2990
SURFACE ELEV.: 18.4
INITIAL WATER LEVEL: 5 FT BGS
AIR MONITORING INSTRUMENT: Photo-Ionizer (PID)
BOREHOLE DIAMETER: 6.5 INCH
P.G. SIGNATURE:

DEPTH FT BGS	BLOW COUNT	SAMPLE ID	RECOVERY	LITHOLOGIC DESCRIPTION	MUNSELL SOIL COLOR CODE	PID READING (PPM)	COMMENT
0							*land surface*
	2-2-4-6	WFF1-MW4-0-0.5; 0.5-2	1.7	3" ORGANIC LAYER; YELLOWISH RED SILTY FINE SAND	5YR 4/6	36.8	
	5-8-9-6		1.6	YELLOW COARSER SILTY SAND	10YR 7/6	0.2	
5	2-3-1-1	WFF1-MW4-3-5	1.0	---	---	---	GW AT 5 FT BGS
10							
				BORING TERMINATED AT 13.5 FT BGS			
15							
20							
25							
30							
35							

MW-4

STATE PLANE COORDINATES:
NORTHING: 3881434.5370
EASTING: 12357063.2990

DRILLING METHOD: HOLLOW-STEM AUGER
DRILLING COMPANY: IMS
DATE OF CONSTRUCTION: 02/20/07



PROBE COVER: LOCKING METAL STANDPIPE

TYPE OF WELL CAP: 2 INCH EXPANSION CAP
TOP OF PVC CASING ELEVATION: 21.60FEET MSL

PROTECTIVE CASING SAND

TYPE OF SURFACE SEAL:
CEMENT PAD

GROUND SURFACE ELEVATION:
18.4 FEET MSL

RISER PIPE ID: 2 IN
TYPE: SCHEDULE 40 PVC
LENGTH OF RISER: 10.0 FT

GROUT/CEMENT SEAL: 0 TO 1 FT BGS
GROUT/CEMENT PLACEMENT METHOD: GRAVITY

BOREHOLE DIAMETER: 6.5 INCH

WELL DEVELOPMENT DETAILS

DEVELOPMENT METHOD: PUMP
DATE/TIME START: 2/22/07 11:55
DATE/TIME FINISH: 2/22/07 13:15
TOTAL TIME PURGED: 80 MIN
VOLUME PURGED: 165 GALLONS
INITIAL WATER LEVEL: APPROX. 5 FT BGS ON 2/20/07

DEPTH TO TOP OF SEAL: 1 FT BGS
TYPE OF SEAL: 3/8" INCH BENTONITE
SEAL PLACEMENT METHOD: GRAVITY
HYDRATED FOLLOWING PLACEMENT

DEPTH TO TOP OF SAND: 2.0 FT BGS

DEPTH TO TOP OF SCREEN: 3.0 FT BGS
RISER AND SCREEN JOINT TYPE: FLUSH THREADED WITH O-RING

FILTER PACK MATERIAL/SIZE: MORIE #2 SAND
FILTER PACK PLACEMENT METHOD: GRAVITY

SCREEN ID: 2 INCH
TYPE OF SCREEN: SLOTTED SCHEDULE 40 PVC
SCREEN SLOT SIZE: 0.010 INCH
LENGTH OF SCREEN: 10.0 FT

TYPE OF END CAP SUMP: PVC CYLINDRICAL BOTTOM, THREADED WITH O-RING
LENGTH OF END CAP SUMP: 0.5 FEET

DEPTH TO BOTTOM OF SCREEN: 13.0 FT BGS

DEPTH TO BOTTOM OF WELL: 13.5 FT BGS

DEPTH TO BOTTOM OF BOREHOLE: 13.5 BGS

DEPTH TO WATER: ~5 FEET BGS

FIGURE IS NOT DRAWN TO SCALE

WASTEWATER TREATMENT PLANT #1
WALLOPS FLIGHT FACILITY
ACCOMACK COUNTY, VIRGINIA

GROUNDWATER MONITOR WELL
MW-4

CONSTRUCTION DIAGRAM

WESTON SOLUTIONS

DRAWN	DATE	WORK ORDER NO.	FILE NAME
TSR	03/21/07	03886.183.010.0400	WWTP_MW4.cdr

BOREHOLE LOG

GROUNDWATER MONITOR WELL NUMBER: MW-5

PROJECT NAME: WWTP #1
W.O.#: 03886.183.010.0400
LOCATION: WALLOPS FLIGHT FACILITY, VIRGINIA
DRILLING COMPANY: IMS
RIG TYPE: B47 MOBILE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: SPLIT SPOONS WHERE INDICATED
LOGGED BY: E. MACKEY WEATHER:
DATE BEGUN: 02/20/07 DATE COMPLETED: 02/20/07

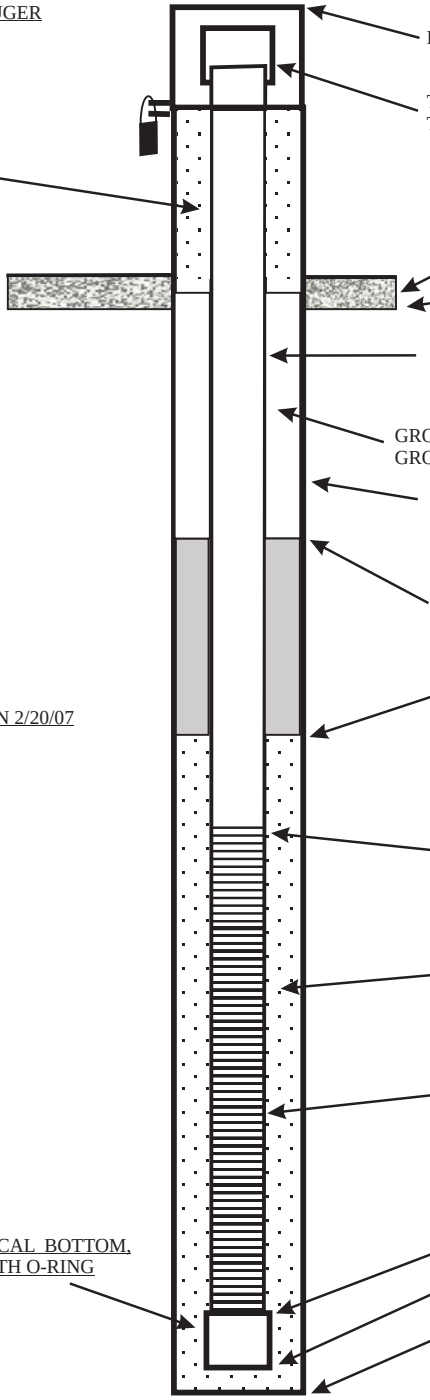
TOTAL DEPTH: 12.5 FT BGS
NORTHING: 3881455.4560
EASTING: 12357154.8020
SURFACE ELEV.: 16.1
INITIAL WATER LEVEL: 3 FT BGS
AIR MONITORING INSTRUMENT: Photo-Ionizer (PID)
BOREHOLE DIAMETER: 6.5 INCH
P.G. SIGNATURE:

DEPTH FT BGS	BLOW COUNT	SAMPLE ID	RECOVERY	LITHOLOGIC DESCRIPTION	MUNSELL SOIL COLOR CODE	PID READING (PPM)	COMMENT
0							*land surface*
	2-2-3-3	WFF1-MW5-0-0.5; 0.5-2	2.0	3" ORGANIC LAYER; BROWNISH YELLOW SILTY SAND	10YR 6/6	0.5	
	4-3-3-4	WFF1-MW5-2-4	1.5	YELLOWISH BROWN SILTY SAND	10YR 5/4	1.5	GW AT 3 FT BGS
5	3-1-2-1	---		YELLOWISH BROWN SILTY SAND	10YR 5/4	---	
10				BORING TERMINATED AT 12.5 FT BGS			
15							
20							
25							
30							
35							

MW-5

STATE PLANE COORDINATES:
NORTHING: 3881455.4560
EASTING: 12357154.8020

DRILLING METHOD: HOLLOW-STEM AUGER
DRILLING COMPANY: IMS
DATE OF CONSTRUCTION: 02/20/07



PROBE COVER: LOCKING METAL STANDPIPE

TYPE OF WELL CAP: 2 INCH EXPANSION CAP
TOP OF PVC CASING ELEVATION: 19.34 FEET MSL

PROTECTIVE CASING SAND

TYPE OF SURFACE SEAL:
CEMENT PAD

GROUND SURFACE ELEVATION:
16.1 FEET MSL

RISER PIPE ID: 2 IN
TYPE: SCHEDULE 40 PVC
LENGTH OF RISER: 10.0 FT

GROUT/CEMENT SEAL: 0 TO 1 FT BGS
GROUT/CEMENT PLACEMENT METHOD: GRAVITY

BOREHOLE DIAMETER: 6.5 INCH

WELL DEVELOPMENT DETAILS

DEVELOPMENT METHOD: PUMP
DATE/TIME START: 2/22/07 10:28
DATE/TIME FINISH: 2/22/07 12:35
TOTAL TIME PURGED: 127 MIN
VOLUME PURGED: 215 GALLONS
INITIAL WATER LEVEL: APPROX. 3 FT BGS ON 2/20/07

DEPTH TO TOP OF SEAL: 1 FT BGS
TYPE OF SEAL: 3/8" INCH BENTONITE
SEAL PLACEMENT METHOD: GRAVITY
HYDRATED FOLLOWING PLACEMENT

DEPTH TO TOP OF SAND: 1.5 FT BGS

DEPTH TO TOP OF SCREEN: 2.0 FT BGS
RISER AND SCREEN JOINT TYPE: FLUSH THREADED WITH O-RING

FILTER PACK MATERIAL/SIZE: MORIE #2 SAND
FILTER PACK PLACEMENT METHOD: GRAVITY

SCREEN ID: 2 INCH
TYPE OF SCREEN: SLOTTED SCHEDULE 40 PVC
SCREEN SLOT SIZE: 0.010 INCH
LENGTH OF SCREEN: 10.0 FT

TYPE OF END CAP SUMP: PVC CYLINDRICAL BOTTOM, THREADED WITH O-RING
LENGTH OF END CAP SUMP: 0.5 FEET

DEPTH TO BOTTOM OF SCREEN: 12.0 FT BGS

DEPTH TO BOTTOM OF WELL: 12.5 FT BGS

DEPTH TO BOTTOM OF BOREHOLE: 12.5 BGS

DEPTH TO WATER: ~3 FEET BGS

FIGURE IS NOT DRAWN TO SCALE

WASTEWATER TREATMENT PLANT #1
WALLOPS FLIGHT FACILITY
ACCOMACK COUNTY, VIRGINIA

GROUNDWATER MONITOR WELL
MW-5

CONSTRUCTION DIAGRAM

WESTON SOLUTIONS

DRAWN	DATE	WORK ORDER NO.	FILE NAME
TSR	03/21/07	03886.183.010.0400	WWTP_MW5.cdr

BOREHOLE LOG

GROUNDWATER MONITOR WELL NUMBER: MW-6

PAGE NUMBER: 1 OF 1

PROJECT NAME: WWTP #1
W.O.#: 03886.183.010.0400
LOCATION: WALLOPS FLIGHT FACILITY, VIRGINIA
DRILLING COMPANY: IMS
RIG TYPE: B47 MOBILE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: SPLIT SPOONS WHERE INDICATED
LOGGED BY: E. MACKEY WEATHER:
DATE BEGUN: 02/20/07 DATE COMPLETED: 02/20/07

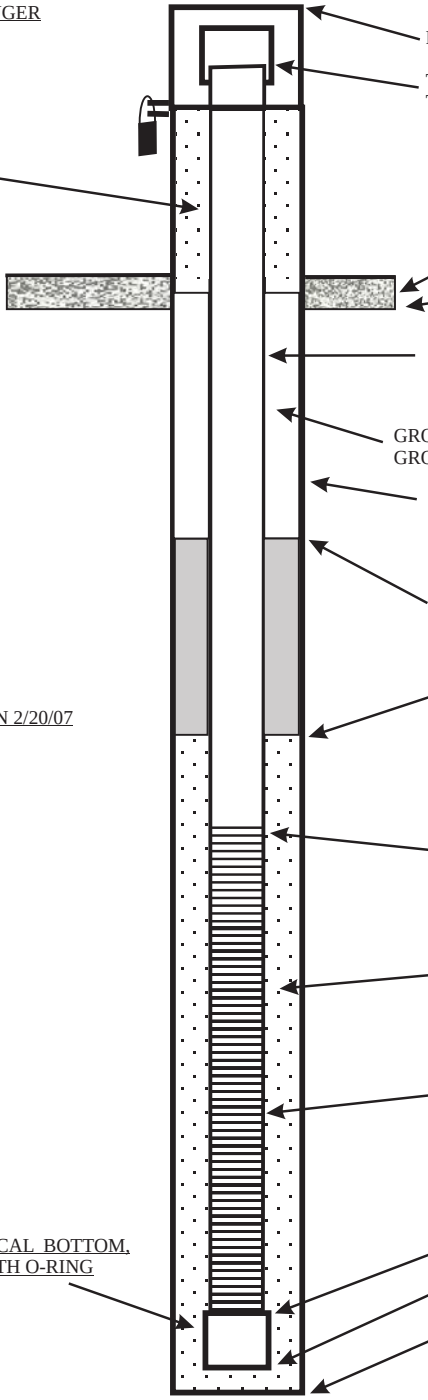
TOTAL DEPTH: 12.5 FT BGS
NORTHING: 3881467.3410
EASTING: 12357033.4200
SURFACE ELEV.: 15.7
INITIAL WATER LEVEL: 3 FT BGS
AIR MONITORING INSTRUMENT: Photo-Ionizer (PID)
BOREHOLE DIAMETER: 6.5 INCH
P.G. SIGNATURE:

DEPTH FT BGS	BLOW COUNT	SAMPLE ID	RECOVERY	LITHOLOGIC DESCRIPTION	MUNSELL SOIL COLOR CODE	PID READING (PPM)	COMMENT
0							*land surface*
	4-4-4-3	WFF1-MW6-0-0.5; 0.5-2	1.2	2" ORGANIC LAYER; REDDISH YELLOW SILTY SAND	7.5YR 6/6	0.0	
	3-3-3-3	WFF1-MW6-2-4	1.5	YELLOW SILTY SAND	10YR 7/8	0.0	GW AT 3 FT BGS
5	1-1-2-1	---	---	YELLOW SILTY SAND	10YR 7/8	---	
10				BORING TERMINATED AT 12.5 FT BGS			
15							
20							
25							
30							
35							

MW-6

STATE PLANE COORDINATES:
NORTHING: 3881467.3410
EASTING: 12357033.4200

DRILLING METHOD: HOLLOW-STEM AUGER
DRILLING COMPANY: IMS
DATE OF CONSTRUCTION: 02/20/07



PROBE COVER: LOCKING METAL STANDPIPE

TYPE OF WELL CAP: 2 INCH EXPANSION CAP
TOP OF PVC CASING ELEVATION: 18.35 FEET MSL

PROTECTIVE CASING SAND

TYPE OF SURFACE SEAL:
CEMENT PAD

GROUND SURFACE ELEVATION:
15.7 FEET MSL

RISER PIPE ID: 2 IN
TYPE: SCHEDULE 40 PVC
LENGTH OF RISER: 10.0 FT

GROUT/CEMENT SEAL: 0 TO 1 FT BGS
GROUT/CEMENT PLACEMENT METHOD: GRAVITY

BOREHOLE DIAMETER: 6.5 INCH

WELL DEVELOPMENT DETAILS

DEVELOPMENT METHOD: PUMP
DATE/TIME START: 2/21/07 14:55
DATE/TIME FINISH: 2/21/07 15:42
TOTAL TIME PURGED: 53 MIN
VOLUME PURGED: 75 GALLONS
INITIAL WATER LEVEL: APPROX. 3 FT BGS ON 2/20/07

DEPTH TO TOP OF SEAL: 1 FT BGS
TYPE OF SEAL: 3/8" INCH BENTONITE
SEAL PLACEMENT METHOD: GRAVITY
HYDRATED FOLLOWING PLACEMENT

DEPTH TO TOP OF SAND: 1.5 FT BGS

DEPTH TO TOP OF SCREEN: 2.0 FT BGS
RISER AND SCREEN JOINT TYPE: FLUSH THREADED WITH O-RING

FILTER PACK MATERIAL/SIZE: MORIE #2 SAND
FILTER PACK PLACEMENT METHOD: GRAVITY

SCREEN ID: 2 INCH
TYPE OF SCREEN: SLOTTED SCHEDULE 40 PVC
SCREEN SLOT SIZE: 0.010 INCH
LENGTH OF SCREEN: 10.0 FT

TYPE OF END CAP SUMP: PVC CYLINDRICAL BOTTOM, THREADED WITH O-RING
LENGTH OF END CAP SUMP: 0.5 FEET

DEPTH TO BOTTOM OF SCREEN: 12.0 FT BGS

DEPTH TO BOTTOM OF WELL: 12.5 FT BGS

DEPTH TO BOTTOM OF BOREHOLE: 12.5 BGS

DEPTH TO WATER: ~3 FEET BGS

FIGURE IS NOT DRAWN TO SCALE

WASTEWATER TREATMENT PLANT #1
WALLOPS FLIGHT FACILITY
ACCOMACK COUNTY, VIRGINIA

GROUNDWATER MONITOR WELL
MW-6

CONSTRUCTION DIAGRAM

WESTON SOLUTIONS

DRAWN	DATE	WORK ORDER NO.	FILE NAME
TSR	03/21/07	03886.183.010.0400	WWTP_MW6.cdr

BOREHOLE LOG

GROUNDWATER MONITOR WELL NUMBER: MW-7

PROJECT NAME: WWTP #1
W.O.#: 03886.183.010.0400
LOCATION: WALLOPS FLIGHT FACILITY, VIRGINIA
DRILLING COMPANY: IMS
RIG TYPE: B47 MOBILE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: SPLIT SPOONS WHERE INDICATED
LOGGED BY: E. MACKEY WEATHER:
DATE BEGUN: 02/20/07 DATE COMPLETED: 02/20/07

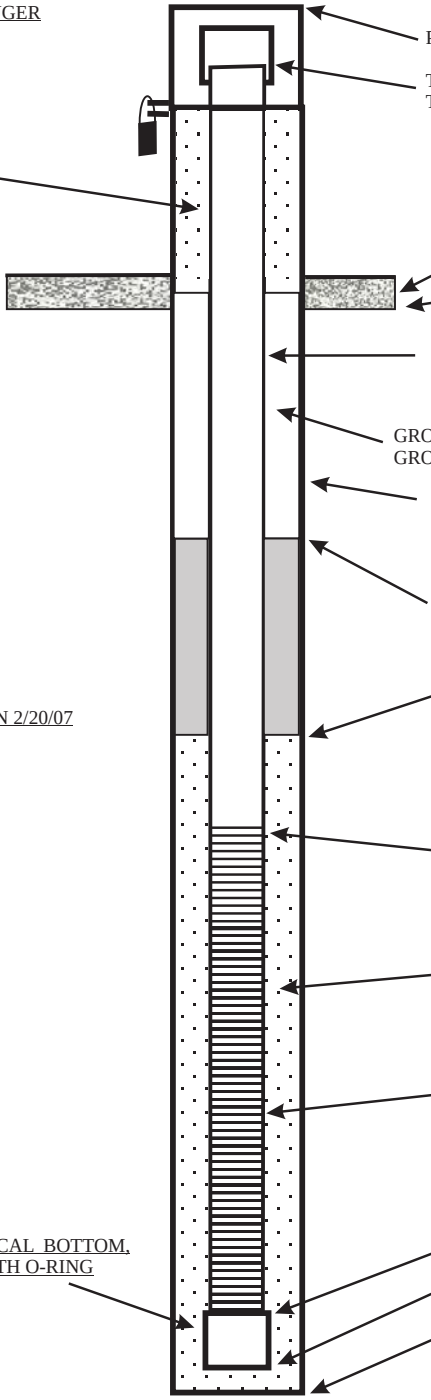
TOTAL DEPTH: 12.5 FT BGS
NORTHING: 3881553.5110
EASTING: 12357039.5570
SURFACE ELEV.: 13.3
INITIAL WATER LEVEL: 2 FT BGS
AIR MONITORING INSTRUMENT: Photo-Ionizer (PID)
BOREHOLE DIAMETER: 6.5 INCH
P.G. SIGNATURE:

DEPTH FT BGS	BLOW COUNT	SAMPLE ID	RECOVERY	LITHOLOGIC DESCRIPTION	MUNSELL SOIL COLOR CODE	PID READING (PPM)	COMMENT
0							*land surface*
	1-1-2-2	WFF1-MW7-0-0.5; 0.5-2	1.8	2" ORGANIC LAYER; REDDISH YELLOW SILTY SAND	7.5YR 6/6	0.0	GW AT 2 FT BGS
5							
10				BORING TERMINATED AT 12.5 FT BGS			
15							
20							
25							
30							
35							

MW-7

STATE PLANE COORDINATES:
NORTHING: 3881553.5110
EASTING: 12357039.5570

DRILLING METHOD: HOLLOW-STEM AUGER
DRILLING COMPANY: IMS
DATE OF CONSTRUCTION: 02/20/07



PROBE COVER: LOCKING METAL STANDPIPE

TYPE OF WELL CAP: 2 INCH EXPANSION CAP
TOP OF PVC CASING ELEVATION: 16.65FEET MSL

PROTECTIVE CASING SAND

TYPE OF SURFACE SEAL:
CEMENT PAD

GROUND SURFACE ELEVATION:
13.3 FEET MSL

RISER PIPE ID: 2 IN
TYPE: SCHEDULE 40 PVC
LENGTH OF RISER: 10.0 FT

GROUT/CEMENT SEAL: 0 TO 1 FT BGS
GROUT/CEMENT PLACEMENT METHOD: GRAVITY

BOREHOLE DIAMETER: 6.5 INCH

WELL DEVELOPMENT DETAILS

DEVELOPMENT METHOD: PUMP
DATE/TIME START: 2/21/07 16:07
DATE/TIME FINISH: 2/21/07 17:06
TOTAL TIME PURGED: 59 MIN
VOLUME PURGED: 118 GALLONS
INITIAL WATER LEVEL: APPROX. 2 FT BGS ON 2/20/07

DEPTH TO TOP OF SEAL: 1 FT BGS
TYPE OF SEAL: 3/8" INCH BENTONITE
SEAL PLACEMENT METHOD: GRAVITY
HYDRATED FOLLOWING PLACEMENT

DEPTH TO TOP OF SAND: 1.5 FT BGS

DEPTH TO TOP OF SCREEN: 2.0 FT BGS
RISER AND SCREEN JOINT TYPE: FLUSH THREADED WITH O-RING

FILTER PACK MATERIAL/SIZE: MORIE #2 SAND
FILTER PACK PLACEMENT METHOD: GRAVITY

SCREEN ID: 2 INCH
TYPE OF SCREEN: SLOTTED SCHEDULE 40 PVC
SCREEN SLOT SIZE: 0.010 INCH
LENGTH OF SCREEN: 10.0 FT

TYPE OF END CAP SUMP: PVC CYLINDRICAL BOTTOM, THREADED WITH O-RING
LENGTH OF END CAP SUMP: 0.5 FEET

DEPTH TO BOTTOM OF SCREEN: 12.0 FT BGS

DEPTH TO BOTTOM OF WELL: 12.5 FT BGS

DEPTH TO BOTTOM OF BOREHOLE: 12.5 BGS

DEPTH TO WATER: ~2 FEET BGS

FIGURE IS NOT DRAWN TO SCALE

WASTEWATER TREATMENT PLANT #1
WALLOPS FLIGHT FACILITY
ACCOMACK COUNTY, VIRGINIA

GROUNDWATER MONITOR WELL
MW-7

CONSTRUCTION DIAGRAM

WESTON SOLUTIONS

DRAWN	DATE	WORK ORDER NO.	FILE NAME
TSR	03/21/07	03886.183.010.0400	WWTP_MW7.cdr

APPENDIX C
ANALYTICAL DATA REPORTS AND VALIDATION REPORTS

TABLE 1
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5	WFFI-MW4-0.5-2
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0	90.9
CRQL	**Analyte**					
20	Aluminum	**13000**	**8100**	**2600**	**4600**	**9700**
6.0	Antimony	2.2 U	2.0 U	2.2 U	**0.72 K**	2.0 U
1.0	Arsenic	**3.4**	**2.2**	**0.96 K**	**1.6 K**	**3.4**
20	Barium	**43**	**25**	**11**	**18**	**38**
0.5	Beryllium	**0.33 J**	**0.21 J**	**0.084 J**	**0.13 B**	**0.29 J**
0.5	Cadmium	0.55 U	0.50 U	0.55 U	0.56 U	0.51 U
500	Calcium	**970**	**490**	**140**	**530**	**420**
1.0	Chromium	**13**	**8.2**	**3.7**	**5.6**	**9.3**
5.0	Cobalt	**2.8**	**1.4**	**0.39 J**	**0.98 J**	**2.0**
2.5	Copper	**3.6**	**2.6**	**0.85 J**	**3.0**	**2.6**
10	Iron	**8400**	**4500**	**1400**	**3600**	**6500**
1.0	Lead	**5.3**	**3.0**	**1.1 B**	**6.7**	**4.8**
500	Magnesium	**790**	**410**	**140**	**430**	**720**
1.5	Manganese	**97**	**56**	**26**	**71**	**90**
0.1	Mercury	**0.027 L**	**0.023 L**	0.020 UL	**0.046 L**	**0.020 L**
4.0	Nickel	**6.2**	**3.9 J**	**1.2 J**	**4.5 J**	**4.7**
500	Potassium	**540**	**340**	**180**	**380**	**460**
3.5	Selenium	2.8 U	2.5 U	2.7 U	2.8 U	2.5 U
1.0	Silver	1.1 U	0.99 U	1.1 U	1.1 U	1.0 U
500	Sodium	**94 K**	**67 K**	**73 K**	**96 K**	**85 K**
2.5	Thallium	2.8 U	2.5 U	2.7 U	2.8 U	2.5 U
5.0	Vanadium	**18**	**9.8**	**2.9**	**22**	**14**
6.0	Zinc	**14**	**7.2**	**3.8**	**14**	**13**
2.5	Total Cyanide	0.58 U	0.54 U	0.58 U	0.59 U	0.54 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 2
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-3-5	WFFI-MW5-0-0.5	WFFI-MW5-0.5-2	WFFI-MW5-2-4	WFFI-MW6-0-0.5
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	87.2	89.4	89.9	86.9	86.4
CRQL	**Analyte**					
20	Aluminum	**3800**	**4400**	**8100**	**4300**	**3000**
6.0	Antimony	2.2 U	2.2 U	2.1 U	2.1 U	2.1 U
1.0	Arsenic	**1.2 K**	**2.0 K**	**3.5**	**0.76 K**	**1.2 K**
20	Barium	**14**	**15**	**27**	**21**	**13**
0.5	Beryllium	**0.13 B**	**0.15 J**	**0.23 J**	**0.16 J**	**0.087 J**
0.5	Cadmium	0.55 U	0.54 U	0.52 U	0.51 U	0.54 U
500	Calcium	**200**	**160**	**200**	**170**	**570**
1.0	Chromium	**4.7**	**5.1**	**6.7**	**4.3**	**4.6**
5.0	Cobalt	**0.69 J**	**0.84 J**	**1.4**	**1.0 J**	**0.57 J**
2.5	Copper	**1.3 J**	**1.7 J**	**2.4**	**1.2 B**	**1.5 J**
10	Iron	**2300**	**3000**	**4200**	**2600**	**2600**
1.0	Lead	**2.3**	**5.4**	**2.5**	**1.9 K**	**6.1**
500	Magnesium	**250**	**340**	**350**	**320**	**280**
1.5	Manganese	**28**	**42**	**53**	**20**	**49**
0.1	Mercury	**0.015 L**	**0.024 L**	**0.016 L**	**0.012 L**	**0.028 L**
4.0	Nickel	**1.7 B**	**2.1 B**	**2.9 B**	**2.5 B**	**2.9 B**
500	Potassium	**240**	**300**	**320**	**250**	**250**
3.5	Selenium	2.7 U	2.7 U	2.6 U	2.6 U	2.7 U
1.0	Silver	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U
500	Sodium	**66 K**	**68 K**	**62 K**	**67 K**	**83 K**
2.5	Thallium	2.7 U	2.7 U	2.6 U	2.6 U	2.7 U
5.0	Vanadium	**5.4**	**7.4**	**9.1**	**6.9**	**14**
6.0	Zinc	**5.8**	**13**	**11**	**6.4**	**13**
2.5	Total Cyanide	0.57 U	0.55 U	0.55 U	0.56 U	**0.34 J**

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 3
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW6-0.5-2	WFFI-MW6-2-4	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	87.1	82.7	74.6	80.7
CRQL	Analyte				
20	Aluminum	**1400**	**1300**	**12000**	**5100**
6.0	Antimony	2.2 U	2.2 U	**0.59 K**	2.2 U
1.0	Arsenic	1.1 U	1.1 U	**5.4**	**1.4 K**
20	Barium	**7.1**	**5.9**	**54**	**20**
0.5	Beryllium	**0.046 B**	**0.044 B**	**0.42 J**	**0.16 J**
0.5	Cadmium	0.55 U	0.56 U	0.62 U	0.56 U
500	Calcium	**79 B**	**96 B**	**1200**	**270**
1.0	Chromium	**2.0**	**1.6 B**	**13**	**5.7**
5.0	Cobalt	**0.26 J**	**0.23 J**	**3.3**	**0.92 J**
2.5	Copper	**0.41 B**	**0.31 B**	**6.7**	**2.3**
10	Iron	**940 B**	**620 B**	**8800**	**2500**
1.0	Lead	**1.7 B**	**0.85 B**	**20**	**5.0**
500	Magnesium	**100**	**85**	**1100**	**390**
1.5	Manganese	**9.5**	**5.5**	**130**	**15**
0.1	Mercury	**0.0046 L**	**0.0055 L**	**0.099 L**	**0.027 L**
4.0	Nickel	**0.76 B**	**0.65 B**	**7.7**	**3.0 B**
500	Potassium	**120**	**130**	**540**	**280**
3.5	Selenium	2.8 U	2.8 U	3.1 U	2.8 U
1.0	Silver	1.1 U	1.1 U	**0.20 J**	1.1 U
500	Sodium	**64 K**	**71 K**	**120 K**	**78 K**
2.5	Thallium	2.8 U	2.8 U	3.1 U	2.8 U
5.0	Vanadium	**2.4**	**1.8**	**24**	**7.7**
6.0	Zinc	**2.5 B**	**1.8 B**	**60**	**27**
2.5	Total Cyanide	0.56 U	0.59 U	0.65 U	0.61 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 4
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	**Analyte**					
20	Aluminum	**8400**	**7900**	NA	NA	**9500**
6.0	Antimony	**2.8 K**	**3.0 K**	NA	NA	**3.2 K**
1.0	Arsenic	**3.2**	**2.6**	NA	NA	**3.2**
20	Barium	**100**	**69**	NA	NA	**67**
0.5	Beryllium	**0.25 J**	**0.24 J**	NA	NA	**0.27 J**
0.5	Cadmium	**0.35 J**	**0.35 J**	NA	NA	**0.37 J**
500	Calcium	**2500**	**2400**	NA	NA	**2300**
1.0	Chromium	**9.3**	**9.2**	NA	NA	**11**
5.0	Cobalt	**2.0**	**2.0**	NA	NA	**2.2**
2.5	Copper	**13**	**15**	NA	NA	**12**
10	Iron	**5500**	**5300**	NA	NA	**6500**
1.0	Lead	**400**	**460**	NA	NA	**400**
500	Magnesium	**620**	**610**	NA	NA	**690**
1.5	Manganese	**120**	**130**	NA	NA	**120**
0.1	Mercury	**0.13 K**	**0.14 K**	NA	NA	**0.13 K**
4.0	Nickel	**5.8**	**5.6**	NA	NA	**6.2**
500	Potassium	**470**	**440**	NA	NA	**500**
3.5	Selenium	2.8 U	2.8 U	NA	NA	2.8 U
1.0	Silver	1.1 U	**0.12 J**	NA	NA	**0.17 J**
500	Sodium	**100 K**	**100 J**	NA	NA	**100 K**
2.5	Thallium	2.8 U	2.8 U	NA	NA	2.8 U
5.0	Vanadium	**18**	**18**	NA	NA	**19**
6.0	Zinc	**240**	**250**	NA	NA	**230**
2.5	Total Cyanide	0.60 U	0.61 U	0.54 U	0.53 U	0.59 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
NA	Not analyzed
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 1A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	**Volatile Organic Compounds**				
10	Acetone	**170**	**36 J**	**29 J**	**110**
5.0	Benzene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Bromoform	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Bromomethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Carbon disulfide	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Carbon tetrachloride	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chlorobenzene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chlorodibromomethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chloroform	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chloromethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	cis-1,2-Dichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	cis-1,3-Dichloropropene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Dichlorobromomethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1-Dichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,2-Dichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1-Dichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,2-Dichloropropane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Ethylbenzene	7.3 U	4.3 U	5.1 U	4.8 U
10	2-Hexanone	37 U	22 U	26 U	24 U
5.0	Methylene Chloride	7.3 U	4.3 U	5.1 U	4.8 U
10	Methyl Ethyl Ketone	**33 J**	**6.1 J**	26 U	24 U
10	Methyl isobutyl ketone	**340**	**140**	**150**	24 U
5.0	Styrene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1,2,2-Tetrachloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Tetrachloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Toluene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	trans-1,2-Dichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	trans-1,3-Dichloropropene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1,1-Trichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1,2-Trichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Trichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Vinyl chloride	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Xylenes, Total	15 U	8.7 U	10 U	9.6 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	WFFI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	**Volatile Organic Compounds**				
10	Acetone	**33 J**	**22 J**	**64**	**37 J**
5.0	Benzene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Bromoform	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Bromomethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Carbon disulfide	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Carbon tetrachloride	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chlorobenzene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chlorodibromomethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chloroform	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chloromethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	cis-1,2-Dichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	cis-1,3-Dichloropropene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Dichlorobromomethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1-Dichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,2-Dichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1-Dichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,2-Dichloropropane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Ethylbenzene	4.5 U	3.8 U	5.0 U	4.6 U
10	2-Hexanone	23 U	19 U	25 U	23 U
5.0	Methylene Chloride	4.5 U	3.8 U	5.0 U	4.6 U
10	Methyl Ethyl Ketone	**4.6 J**	19 U	**7.7 J**	23 U
10	Methyl isobutyl ketone	**12 J**	19 U	25 U	23 U
5.0	Styrene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1,2,2-Tetrachloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Tetrachloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Toluene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	trans-1,2-Dichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	trans-1,3-Dichloropropene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1,1-Trichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1,2-Trichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Trichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Vinyl chloride	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Xylenes, Total	9.0 U	7.5 U	10 U	9.1 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Volatile Organic Compounds**				
10	Acetone	**48**	**220**	**31 J**	**9.5 J**
5.0	Benzene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Bromoform	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Bromomethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Carbon disulfide	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Carbon tetrachloride	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chlorobenzene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chlorodibromomethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chloroform	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chloromethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	cis-1,2-Dichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	cis-1,3-Dichloropropene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Dichlorobromomethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1-Dichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,2-Dichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1-Dichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,2-Dichloropropane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Ethylbenzene	4.6 U	5.8 U	5.2 U	4.9 U
10	2-Hexanone	23 U	29 U	26 U	24 U
5.0	Methylene Chloride	4.6 U	5.8 U	5.2 U	4.9 U
10	Methyl Ethyl Ketone	**7.7 J**	**9.0 J**	26 U	24 U
10	Methyl isobutyl ketone	23 U	**7.4 J**	26 U	**280**
5.0	Styrene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1,2,2-Tetrachloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Tetrachloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Toluene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	trans-1,2-Dichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	trans-1,3-Dichloropropene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1,1-Trichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1,2-Trichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Trichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Vinyl chloride	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Xylenes, Total	9.3 U	12 U	10 U	9.7 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	**Volatile Organic Compounds**		
10	Acetone	**160**	**58**
5.0	Benzene	5.3 U	5.1 U
5.0	Bromoform	5.3 U	5.1 U
5.0	Bromomethane	5.3 U	5.1 U
5.0	Carbon disulfide	5.3 U	5.1 U
5.0	Carbon tetrachloride	5.3 U	5.1 U
5.0	Chlorobenzene	5.3 U	5.1 U
5.0	Chlorodibromomethane	5.3 U	5.1 U
5.0	Chloroethane	5.3 U	5.1 U
5.0	Chloroform	5.3 U	5.1 U
5.0	Chloromethane	5.3 U	5.1 U
5.0	cis-1,2-Dichloroethene	5.3 U	5.1 U
5.0	cis-1,3-Dichloropropene	5.3 U	5.1 U
5.0	Dichlorobromomethane	5.3 U	5.1 U
5.0	1,1-Dichloroethane	5.3 U	5.1 U
5.0	1,2-Dichloroethane	5.3 U	5.1 U
5.0	1,1-Dichloroethene	5.3 U	5.1 U
5.0	1,2-Dichloropropane	5.3 U	5.1 U
5.0	Ethylbenzene	5.3 U	5.1 U
10	2-Hexanone	27 U	25 U
5.0	Methylene Chloride	5.3 U	5.1 U
10	Methyl Ethyl Ketone	**14 J**	25 U
10	Methyl isobutyl ketone	**24 J**	25 U
5.0	Styrene	5.3 U	5.1 U
5.0	1,1,2,2-Tetrachloroethane	5.3 U	5.1 U
5.0	Tetrachloroethene	5.3 U	5.1 U
5.0	Toluene	5.3 U	5.1 U
5.0	trans-1,2-Dichloroethene	5.3 U	5.1 U
5.0	trans-1,3-Dichloropropene	5.3 U	5.1 U
5.0	1,1,1-Trichloroethane	5.3 U	5.1 U
5.0	1,1,2-Trichloroethane	5.3 U	5.1 U
5.0	Trichloroethene	5.3 U	5.1 U
5.0	Vinyl chloride	5.3 U	5.1 U
5.0	Xylenes, Total	11 U	10 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

TABLE 1E
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	**Volatile Organic Compounds**					
10	Acetone	**210**	**180**	**50**	**57**	**210**
5.0	Benzene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Bromoform	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Bromomethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Carbon disulfide	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Carbon tetrachloride	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chlorobenzene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chlorodibromomethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chloroform	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chloromethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	cis-1,2-Dichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	cis-1,3-Dichloropropene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Dichlorobromomethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1-Dichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,2-Dichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1-Dichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,2-Dichloropropane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Ethylbenzene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
10	2-Hexanone	26 U	26 U	25 U	27 U	29 U
5.0	Methylene Chloride	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
10	Methyl Ethyl Ketone	**19 J**	26 U	**7.3 J**	**7.1 J**	**23 J**
10	Methyl isobutyl ketone	26 U	26 U	25 U	27 U	**13 J**
5.0	Styrene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1,2,2-Tetrachloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Tetrachloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Toluene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	trans-1,2-Dichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	trans-1,3-Dichloropropene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1,1-Trichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1,2-Trichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Trichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Vinyl chloride	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Xylenes, Total	10 U	10 U	9.9 U	11 U	12 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER QC SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	TB-1	TB-2
	Sample Date	2/20/2007	2/20/2007
	Location	Trip Blank	Trip Blank
	Dilution Factor	1.0	1.0
CRQL	**Volatile Organic Compounds**		
25	Acetone	25 U	25 U
1.0	Benzene	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U
5.0	Methylene Chloride	**0.55 J**	**0.47 J**
10	Methyl Ethyl Ketone	10 U	10 U
10	Methyl isobutyl ketone	10 U	10 U
1.0	Styrene	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/L - Microgram per liter
Bold - Reported value is above lab method detection limit

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	**Semivolatile Organic Compounds**				
330	Acenaphthene	400 UJ	360 UJ	390 UJ	390 U
330	Acenaphthylene	400 UJ	360 UJ	390 UJ	390 U
330	Anthracene	400 UJ	360 UJ	390 UJ	390 U
330	Benzo[a]anthracene	400 UJ	360 UJ	390 UJ	390 U
330	Benzo[a]pyrene	**34 J**	360 UJ	**30 J**	390 U
330	Benzo[b]fluoranthene	400 UJ	360 UJ	390 UJ	390 U
330	Benzo[g,h,i]perylene	**52 J**	**31 J**	**46 J**	390 U
330	Benzo[k]fluoranthene	400 UJ	360 UJ	390 UJ	390 U
330	Bis(2-chloroethoxy)methane	400 UJ	360 UJ	390 UJ	390 U
330	Bis(2-chloroethyl)ether	400 UJ	360 UJ	390 UJ	390 U
330	bis(chloroisopropyl) ether	400 UJ	360 UJ	390 UJ	390 U
330	Bis(2-ethylhexyl) phthalate	400 UJ	360 UJ	390 UJ	390 U
330	4-Bromophenyl phenyl ether	400 UJ	360 UJ	390 UJ	390 U
330	Butyl benzyl phthalate	400 UJ	360 UJ	390 UJ	390 U
330	Carbazole	400 UJ	360 UJ	390 UJ	390 U
660	4-Chloroaniline	790 UJ	720 UJ	790 UJ	780 U
330	4-Chloro-3-methylphenol	400 UJ	360 UJ	390 UJ	390 U
330	2-Chloronaphthalene	400 UJ	360 UJ	390 UJ	390 U
330	2-Chlorophenol	400 UJ	360 UJ	390 UJ	390 U
330	4-Chlorophenyl phenyl ether	400 UJ	360 UJ	390 UJ	390 U
330	Chrysene	400 UJ	360 UJ	390 UJ	390 U
330	Dibenz(a,h)anthracene	**50 J**	360 UJ	**44 J**	390 U
330	Dibenzofuran	400 UJ	360 UJ	390 UJ	390 U
330	1,3-Dichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	1,4-Dichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	1,2-Dichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
660	3,3'-Dichlorobenzidine	790 UJ	720 UJ	790 UJ	780 U
330	2,4-Dichlorophenol	400 UJ	360 UJ	390 UJ	390 U
330	Diethyl phthalate	**27 B**	360 UJ	390 UJ	390 U
330	2,4-Dimethylphenol	400 UJ	360 UJ	390 UJ	390 U
330	Dimethyl phthalate	400 UJ	360 UJ	390 UJ	390 U
330	Di-n-butyl phthalate	400 UJ	360 UJ	390 UJ	390 U
1700	4,6-Dinitro-2-methylphenol	2000 UJ	1900 UJ	2000 UJ	2000 U
1700	2,4-Dinitrophenol	2000 UJ	1900 UJ	2000 UJ	2000 U
330	2,4-Dinitrotoluene	400 UJ	360 UJ	390 UJ	390 U
330	2,6-Dinitrotoluene	400 UJ	360 UJ	390 UJ	390 U
330	Di-n-octyl phthalate	400 UJ	360 UJ	390 UJ	390 U
330	Fluoranthene	400 UJ	360 UJ	390 UJ	390 U

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachlorobutadiene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachlorocyclopentadiene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachloroethane	400 UJ	360 UJ	390 UJ	390 U
330	Indeno[1,2,3-cd]pyrene	**52 J**	360 UJ	**40 J**	390 U
330	Isophorone	400 UJ	360 UJ	390 UJ	390 U
330	2-Methylnaphthalene	400 UJ	360 UJ	390 UJ	390 U
330	2-Methylphenol	400 UJ	360 UJ	390 UJ	390 U
330	3 & 4 Methylphenol	400 UJ	360 UJ	390 UJ	390 U
330	Naphthalene	400 UJ	360 UJ	390 UJ	390 U
1700	2-Nitroaniline	2000 UJ	1900 UJ	2000 UJ	2000 U
1700	3-Nitroaniline	2000 UJ	1900 UJ	2000 UJ	2000 U
1700	4-Nitroaniline	2000 UJ	1900 UJ	2000 UJ	2000 U
330	Nitrobenzene	400 UJ	360 UJ	390 UJ	390 U
330	2-Nitrophenol	400 UJ	360 UJ	390 UJ	390 U
1700	4-Nitrophenol	2000 UJ	1900 UJ	2000 UJ	2000 U
330	N-Nitrosodi-n-propylamine	400 UJ	360 UJ	390 UJ	390 U
330	N-Nitrosodiphenylamine	400 UJ	360 UJ	390 UJ	390 U
1700	Pentachlorophenol	2000 UJ	1900 UJ	2000 UJ	2000 U
330	Phenanthrene	400 UJ	360 UJ	390 UJ	390 U
330	Phenol	400 UJ	360 UJ	390 UJ	390 U
330	Pyrene	400 UJ	360 UJ	390 UJ	390 U
330	1,2,4-Trichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	2,4,6-Trichlorophenol	400 UJ	360 UJ	390 UJ	390 U
330	2,4,5-Trichlorophenol	400 UJ	360 UJ	390 UJ	390 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	FI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	**Semivolatile Organic Compounds**				
330	Acenaphthene	360 UJ	380 U	370 U	370 U
330	Acenaphthylene	360 UJ	380 U	370 U	370 U
330	Anthracene	360 UJ	380 U	370 U	370 U
330	Benzo[a]anthracene	360 UJ	380 U	370 U	370 U
330	Benzo[a]pyrene	360 UJ	380 U	370 U	370 U
330	Benzo[b]fluoranthene	360 UJ	380 U	370 U	370 U
330	Benzo[g,h,i]perylene	**63 J**	380 U	370 U	370 U
330	Benzo[k]fluoranthene	360 UJ	380 U	370 U	370 U
330	Bis(2-chloroethoxy)methane	360 UJ	380 U	370 U	370 U
330	Bis(2-chloroethyl)ether	360 UJ	380 U	370 U	370 U
330	bis(chloroisopropyl) ether	360 UJ	380 U	370 U	370 U
330	Bis(2-ethylhexyl) phthalate	**59 J**	380 U	370 U	370 U
330	4-Bromophenyl phenyl ether	360 UJ	380 U	370 U	370 U
330	Butyl benzyl phthalate	360 UJ	380 U	370 U	370 U
330	Carbazole	360 UJ	380 U	370 U	370 U
660	4-Chloroaniline	730 UJ	760 U	740 U	730 U
330	4-Chloro-3-methylphenol	360 UJ	380 U	370 U	370 U
330	2-Chloronaphthalene	360 UJ	380 U	370 U	370 U
330	2-Chlorophenol	360 UJ	380 U	370 U	370 U
330	4-Chlorophenyl phenyl ether	360 UJ	380 U	370 U	370 U
330	Chrysene	360 UJ	380 U	370 U	370 U
330	Dibenz(a,h)anthracene	**46 J**	380 U	370 U	370 U
330	Dibenzofuran	360 UJ	380 U	370 U	370 U
330	1,3-Dichlorobenzene	360 UJ	380 U	370 U	370 U
330	1,4-Dichlorobenzene	360 UJ	380 U	370 U	370 U
330	1,2-Dichlorobenzene	360 UJ	380 U	370 U	370 U
660	3,3'-Dichlorobenzidine	730 UJ	760 U	740 U	730 U
330	2,4-Dichlorophenol	360 UJ	380 U	370 U	370 U
330	Diethyl phthalate	360 UJ	380 U	370 U	370 U
330	2,4-Dimethylphenol	360 UJ	380 U	370 U	370 U
330	Dimethyl phthalate	360 UJ	380 U	370 U	370 U
330	Di-n-butyl phthalate	**58 J**	380 U	370 U	370 U
1700	4,6-Dinitro-2-methylphenol	1900 UJ	1900 U	1900 U	1900 U
1700	2,4-Dinitrophenol	1900 UJ	1900 UJ	1900 U	1900 U
330	2,4-Dinitrotoluene	360 UJ	380 U	370 U	370 U
330	2,6-Dinitrotoluene	360 UJ	380 U	370 U	370 U
330	Di-n-octyl phthalate	360 UJ	380 U	370 U	370 U
330	Fluoranthene	360 UJ	380 U	370 U	370 U

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	FI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	360 UJ	380 U	370 U	370 U
330	Hexachlorobenzene	360 UJ	380 U	370 U	370 U
330	Hexachlorobutadiene	360 UJ	380 U	370 U	370 U
330	Hexachlorocyclopentadiene	360 UJ	380 U	370 U	370 U
330	Hexachloroethane	360 UJ	380 U	370 U	370 U
330	Indeno[1,2,3-cd]pyrene	**43 J**	380 U	370 U	370 U
330	Isophorone	360 UJ	380 U	370 U	370 U
330	2-Methylnaphthalene	360 UJ	380 U	370 U	370 U
330	2-Methylphenol	360 UJ	380 U	370 U	370 U
330	3 & 4 Methylphenol	360 UJ	380 U	370 U	370 U
330	Naphthalene	360 UJ	380 U	370 U	370 U
1700	2-Nitroaniline	1900 UJ	1900 U	1900 U	1900 U
1700	3-Nitroaniline	1900 UJ	1900 U	1900 U	1900 U
1700	4-Nitroaniline	1900 UJ	1900 U	1900 U	1900 U
330	Nitrobenzene	360 UJ	380 U	370 U	370 U
330	2-Nitrophenol	360 UJ	380 U	370 U	370 U
1700	4-Nitrophenol	1900 UJ	1900 U	1900 U	1900 U
330	N-Nitrosodi-n-propylamine	360 UJ	380 U	370 U	370 U
330	N-Nitrosodiphenylamine	360 UJ	380 U	370 U	370 U
1700	Pentachlorophenol	1900 UJ	1900 U	1900 U	1900 U
330	Phenanthrene	360 UJ	380 U	370 U	370 U
330	Phenol	360 UJ	380 U	370 U	370 U
330	Pyrene	360 UJ	380 U	370 U	370 U
330	1,2,4-Trichlorobenzene	360 UJ	380 U	370 U	370 U
330	2,4,6-Trichlorophenol	360 UJ	380 U	370 U	370 U
330	2,4,5-Trichlorophenol	360 UJ	380 U	370 U	370 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Semivolatile Organic Compounds**				
330	Acenaphthene	380 U	380 UJ	380 U	400 U
330	Acenaphthylene	380 U	380 UJ	380 U	400 U
330	Anthracene	380 U	380 UJ	380 U	400 U
330	Benzo[a]anthracene	380 U	380 UJ	380 U	400 U
330	Benzo[a]pyrene	380 U	380 UJ	380 U	400 U
330	Benzo[b]fluoranthene	380 U	380 UJ	380 U	400 U
330	Benzo[g,h,i]perylene	380 U	**35 J**	380 U	400 U
330	Benzo[k]fluoranthene	380 U	380 UJ	380 U	400 U
330	Bis(2-chloroethoxy)methane	380 U	380 UJ	380 U	400 U
330	Bis(2-chloroethyl)ether	380 U	380 UJ	380 U	400 U
330	bis(chloroisopropyl) ether	380 U	380 UJ	380 U	400 U
330	Bis(2-ethylhexyl) phthalate	380 U	380 UJ	380 U	400 U
330	4-Bromophenyl phenyl ether	380 U	380 UJ	380 U	400 U
330	Butyl benzyl phthalate	380 U	380 UJ	380 U	400 U
330	Carbazole	380 U	380 UJ	380 U	400 U
660	4-Chloroaniline	760 U	760 UJ	760 U	800 U
330	4-Chloro-3-methylphenol	380 U	380 UJ	380 U	400 U
330	2-Chloronaphthalene	380 U	380 UJ	380 U	400 U
330	2-Chlorophenol	380 U	380 UJ	380 U	400 U
330	4-Chlorophenyl phenyl ether	380 U	380 UJ	380 U	400 U
330	Chrysene	380 U	380 UJ	380 U	400 U
330	Dibenz(a,h)anthracene	380 U	**33 J**	380 U	400 U
330	Dibenzofuran	380 U	380 UJ	380 U	400 U
330	1,3-Dichlorobenzene	380 U	380 UJ	380 U	400 U
330	1,4-Dichlorobenzene	380 U	380 UJ	380 U	400 U
330	1,2-Dichlorobenzene	380 U	380 UJ	380 U	400 U
660	3,3'-Dichlorobenzidine	760 U	760 UJ	760 U	800 U
330	2,4-Dichlorophenol	380 U	380 UJ	380 U	400 U
330	Diethyl phthalate	380 U	380 UJ	380 U	400 U
330	2,4-Dimethylphenol	380 U	380 UJ	380 U	400 U
330	Dimethyl phthalate	380 U	380 UJ	380 U	400 U
330	Di-n-butyl phthalate	380 U	380 UJ	380 U	400 U
1700	4,6-Dinitro-2-methylphenol	2000 U	2000 UJ	2000 U	2100 U
1700	2,4-Dinitrophenol	2000 UJ	2000 UJ	2000 U	2100 U
330	2,4-Dinitrotoluene	380 U	380 UJ	380 U	400 U
330	2,6-Dinitrotoluene	380 U	380 UJ	380 U	400 U
330	Di-n-octyl phthalate	380 U	380 UJ	380 U	400 U
330	Fluoranthene	380 U	380 UJ	380 U	400 U

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	380 U	380 UJ	380 U	400 U
330	Hexachlorobenzene	380 U	380 UJ	380 U	400 U
330	Hexachlorobutadiene	380 U	380 UJ	380 U	400 U
330	Hexachlorocyclopentadiene	380 U	380 UJ	380 U	400 U
330	Hexachloroethane	380 U	380 UJ	380 U	400 U
330	Indeno[1,2,3-cd]pyrene	380 U	**30 J**	380 U	400 U
330	Isophorone	380 U	380 UJ	380 U	400 U
330	2-Methylnaphthalene	380 U	380 UJ	380 U	400 U
330	2-Methylphenol	380 U	380 UJ	380 U	400 U
330	3 & 4 Methylphenol	380 U	380 UJ	380 U	400 U
330	Naphthalene	380 U	380 UJ	380 U	400 U
1700	2-Nitroaniline	2000 U	2000 UJ	2000 U	2100 U
1700	3-Nitroaniline	2000 U	2000 UJ	2000 U	2100 U
1700	4-Nitroaniline	2000 U	2000 UJ	2000 U	2100 U
330	Nitrobenzene	380 U	380 UJ	380 U	400 U
330	2-Nitrophenol	380 U	380 UJ	380 U	400 U
1700	4-Nitrophenol	2000 U	2000 UJ	2000 U	2100 U
330	N-Nitrosodi-n-propylamine	380 U	380 UJ	380 U	400 U
330	N-Nitrosodiphenylamine	380 U	380 UJ	380 U	400 U
1700	Pentachlorophenol	2000 U	2000 UJ	2000 U	2100 U
330	Phenanthrene	380 U	380 UJ	380 U	400 U
330	Phenol	380 U	380 UJ	380 U	400 U
330	Pyrene	380 U	380 UJ	380 U	400 U
330	1,2,4-Trichlorobenzene	380 U	380 UJ	380 U	400 U
330	2,4,6-Trichlorophenol	380 U	380 UJ	380 U	400 U
330	2,4,5-Trichlorophenol	380 U	380 UJ	380 U	400 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	**Semivolatile Organic Compounds**		
330	Acenaphthene	440 U	410 U
330	Acenaphthylene	440 U	410 U
330	Anthracene	440 U	410 U
330	Benzo[a]anthracene	440 U	410 U
330	Benzo[a]pyrene	440 U	410 U
330	Benzo[b]fluoranthene	440 U	410 U
330	Benzo[g,h,i]perylene	440 U	410 U
330	Benzo[k]fluoranthene	440 U	410 U
330	Bis(2-chloroethoxy)methane	440 U	410 U
330	Bis(2-chloroethyl)ether	440 U	410 U
330	bis(chloroisopropyl) ether	440 U	410 U
330	Bis(2-ethylhexyl) phthalate	440 U	410 U
330	4-Bromophenyl phenyl ether	440 U	410 U
330	Butyl benzyl phthalate	440 U	410 U
330	Carbazole	440 U	410 U
660	4-Chloroaniline	880 U	820 U
330	4-Chloro-3-methylphenol	440 U	410 U
330	2-Chloronaphthalene	440 U	410 U
330	2-Chlorophenol	440 U	410 U
330	4-Chlorophenyl phenyl ether	440 U	410 U
330	Chrysene	440 U	410 U
330	Dibenz(a,h)anthracene	440 U	410 U
330	Dibenzofuran	440 U	410 U
330	1,3-Dichlorobenzene	440 U	410 U
330	1,4-Dichlorobenzene	440 U	410 U
330	1,2-Dichlorobenzene	440 U	410 U
660	3,3'-Dichlorobenzidine	880 U	820 U
330	2,4-Dichlorophenol	440 U	410 U
330	Diethyl phthalate	440 U	410 U
330	2,4-Dimethylphenol	440 U	410 U
330	Dimethyl phthalate	440 U	410 U
330	Di-n-butyl phthalate	440 U	410 U
1700	4,6-Dinitro-2-methylphenol	2300 U	2100 U
1700	2,4-Dinitrophenol	2300 U	2100 U
330	2,4-Dinitrotoluene	440 U	410 U
330	2,6-Dinitrotoluene	440 U	410 U
330	Di-n-octyl phthalate	440 U	410 U

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	**Semivolatile Organic Compounds**		
330	Fluoranthene	440 U	410 U
330	Fluorene	440 U	410 U
330	Hexachlorobenzene	440 U	410 U
330	Hexachlorobutadiene	440 U	410 U
330	Hexachlorocyclopentadiene	440 U	410 U
330	Hexachloroethane	440 U	410 U
330	Indeno[1,2,3-cd]pyrene	440 U	410 U
330	Isophorone	440 U	410 U
330	2-Methylnaphthalene	440 U	410 U
330	2-Methylphenol	440 U	410 U
330	3 & 4 Methylphenol	440 U	410 U
330	Naphthalene	440 U	410 U
1700	2-Nitroaniline	2300 U	2100 U
1700	3-Nitroaniline	2300 U	2100 U
1700	4-Nitroaniline	2300 U	2100 U
330	Nitrobenzene	440 U	410 U
330	2-Nitrophenol	440 U	410 U
1700	4-Nitrophenol	2300 U	2100 U
330	N-Nitrosodi-n-propylamine	440 U	410 U
330	N-Nitrosodiphenylamine	440 U	410 U
1700	Pentachlorophenol	2300 U	2100 U
330	Phenanthrene	440 U	410 U
330	Phenol	440 U	410 U
330	Pyrene	440 U	410 U
330	1,2,4-Trichlorobenzene	440 U	410 U
330	2,4,6-Trichlorophenol	440 U	410 U
330	2,4,5-Trichlorophenol	440 U	410 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	**Semivolatile Organic Compounds**					
330	Acenaphthene	410 U	400 U	NA	NA	400 U
330	Acenaphthylene	410 U	400 U	NA	NA	400 U
330	Anthracene	410 U	400 U	NA	NA	400 U
330	Benzo[a]anthracene	410 U	400 U	NA	NA	400 U
330	Benzo[a]pyrene	410 U	400 U	NA	NA	400 U
330	Benzo[b]fluoranthene	410 U	400 U	NA	NA	400 U
330	Benzo[g,h,i]perylene	410 U	400 U	NA	NA	400 U
330	Benzo[k]fluoranthene	410 U	400 U	NA	NA	400 U
330	Bis(2-chloroethoxy)methane	410 U	400 U	NA	NA	400 U
330	Bis(2-chloroethyl)ether	410 U	400 U	NA	NA	400 U
330	bis(chloroisopropyl) ether	410 U	400 U	NA	NA	400 U
330	Bis(2-ethylhexyl) phthalate	410 U	400 U	NA	NA	400 U
330	4-Bromophenyl phenyl ether	410 U	400 U	NA	NA	400 U
330	Butyl benzyl phthalate	410 U	400 U	NA	NA	400 U
330	Carbazole	410 U	400 U	NA	NA	400 U
660	4-Chloroaniline	810 U	810 U	NA	NA	810 U
330	4-Chloro-3-methylphenol	410 U	400 U	NA	NA	400 U
330	2-Chloronaphthalene	410 U	400 U	NA	NA	400 U
330	2-Chlorophenol	410 U	400 U	NA	NA	400 U
330	4-Chlorophenyl phenyl ether	410 U	400 U	NA	NA	400 U
330	Chrysene	410 U	400 U	NA	NA	400 U
330	Dibenz(a,h)anthracene	410 U	400 U	NA	NA	400 U
330	Dibenzofuran	410 U	400 U	NA	NA	400 U
330	1,3-Dichlorobenzene	410 U	400 U	NA	NA	400 U
330	1,4-Dichlorobenzene	410 U	400 U	NA	NA	400 U
330	1,2-Dichlorobenzene	410 U	400 U	NA	NA	400 U
660	3,3'-Dichlorobenzidine	810 U	810 U	NA	NA	810 U
330	2,4-Dichlorophenol	410 U	400 U	NA	NA	400 U
330	Diethyl phthalate	410 U	400 U	NA	NA	400 U
330	2,4-Dimethylphenol	410 U	400 U	NA	NA	400 U
330	Dimethyl phthalate	410 U	400 U	NA	NA	400 U
330	Di-n-butyl phthalate	410 U	400 U	NA	NA	400 U
1700	4,6-Dinitro-2-methylphenol	2100 U	2100 U	NA	NA	2100 U
1700	2,4-Dinitrophenol	2100 U	2100 U	NA	NA	2100 U
330	2,4-Dinitrotoluene	410 U	400 U	NA	NA	400 U
330	2,6-Dinitrotoluene	410 U	400 U	NA	NA	400 U
330	Di-n-octyl phthalate	410 U	400 U	NA	NA	400 U
330	Fluoranthene	410 U	400 U	NA	NA	400 U

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	**Semivolatile Organic Compounds**					
330	Fluorene	410 U	400 U	NA	NA	400 U
330	Hexachlorobenzene	410 U	400 U	NA	NA	400 U
330	Hexachlorobutadiene	410 U	400 U	NA	NA	400 U
330	Hexachlorocyclopentadiene	410 U	400 U	NA	NA	400 U
330	Hexachloroethane	410 U	400 U	NA	NA	400 U
330	Indeno[1,2,3-cd]pyrene	410 U	400 U	NA	NA	400 U
330	Isophorone	410 U	400 U	NA	NA	400 U
330	2-Methylnaphthalene	410 U	400 U	NA	NA	400 U
330	2-Methylphenol	410 U	400 U	NA	NA	400 U
330	3 & 4 Methylphenol	410 U	400 U	NA	NA	400 U
330	Naphthalene	410 U	400 U	NA	NA	400 U
1700	2-Nitroaniline	2100 U	2100 U	NA	NA	2100 U
1700	3-Nitroaniline	2100 U	2100 U	NA	NA	2100 U
1700	4-Nitroaniline	2100 U	2100 U	NA	NA	2100 U
330	Nitrobenzene	410 U	400 U	NA	NA	400 U
330	2-Nitrophenol	410 U	400 U	NA	NA	400 U
1700	4-Nitrophenol	2100 U	2100 U	NA	NA	2100 U
330	N-Nitrosodi-n-propylamine	410 UL	400 UL	NA	NA	400 UL
330	N-Nitrosodiphenylamine	410 U	400 U	NA	NA	400 U
1700	Pentachlorophenol	2100 U	2100 U	NA	NA	2100 U
330	Phenanthrene	410 U	400 U	NA	NA	400 U
330	Phenol	410 U	400 U	NA	NA	400 U
330	Pyrene	410 U	400 U	NA	NA	400 U
330	1,2,4-Trichlorobenzene	410 UL	400 UL	NA	NA	400 UL
330	2,4,6-Trichlorophenol	410 U	400 U	NA	NA	400 U
330	2,4,5-Trichlorophenol	410 U	400 U	NA	NA	400 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	**Pesticide Compounds**				
1.7	Aldrin	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	alpha-BHC	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	beta-BHC	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	Chlordane (technical)	20 U	19 U	20 UJ	20 UJ
3.3	4,4'-DDD	4.0 U	3.6 U	3.9 UJ	**0.57 J**
3.3	4,4'-DDE	**7.2**	3.6 U	3.9 UJ	**4.2 J**
3.3	4,4'-DDT	**1.1 J**	3.6 U	3.9 UJ	**0.79 J**
1.7	delta-BHC	2.0 U	1.9 U	2.0 UJ	2.0 UJ
3.3	Dieldrin	4.0 U	3.6 U	3.9 UJ	3.9 UJ
1.7	Endosulfan I	2.0 U	1.9 U	2.0 UJ	2.0 UJ
3.3	Endosulfan II	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endosulfan sulfate	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endrin	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endrin aldehyde	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endrin ketone	4.0 U	3.6 U	3.9 UJ	3.9 UJ
1.7	gamma-BHC (Lindane)	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	Heptachlor	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	Heptachlor epoxide	2.0 U	1.9 U	2.0 UJ	2.0 UJ
17	Methoxychlor	20 U	19 U	20 UJ	20 UJ
33	PCB-1016	40 U	36 U	39 UJ	39 UJ
67	PCB-1221	80 U	73 U	80 UJ	79 UJ
33	PCB-1232	40 U	36 U	39 UJ	39 UJ
33	PCB-1242	40 U	36 U	39 UJ	39 UJ
33	PCB-1248	40 U	36 U	39 UJ	39 UJ
33	PCB-1254	40 U	36 U	39 UJ	39 UJ
33	PCB-1260	40 U	36 U	39 UJ	39 UJ
170	Toxaphene	200 U	190 U	200 UJ	200 UJ

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	WFFI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	**Pesticides Compounds**				
1.7	Aldrin	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	alpha-BHC	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	beta-BHC	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	Chlordane (technical)	19 UJ	19 UJ	19 U	19 UJ
3.3	4,4'-DDD	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	4,4'-DDE	3.6 UJ	3.8 UJ	**0.56 J**	3.7 UJ
3.3	4,4'-DDT	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
1.7	delta-BHC	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
3.3	Dieldrin	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
1.7	Endosulfan I	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
3.3	Endosulfan II	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endosulfan sulfate	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endrin	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endrin aldehyde	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endrin ketone	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
1.7	gamma-BHC (Lindane)	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	Heptachlor	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	Heptachlor epoxide	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
17	Methoxychlor	19 UJ	19 UJ	19 U	19 UJ
33	PCB-1016	36 UJ	38 UJ	37 U	37 UJ
67	PCB-1221	74 UJ	77 UJ	75 U	74 UJ
33	PCB-1232	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1242	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1248	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1254	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1260	36 UJ	38 UJ	37 U	37 UJ
170	Toxaphene	190 UJ	190 UJ	190 U	190 UJ

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3C
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Pesticides Compounds**				
1.7	Aldrin	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	alpha-BHC	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	beta-BHC	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	Chlordane (technical)	19 UJ	20 U	19 UJ	21 U
3.3	4,4'-DDD	3.8 UJ	**1.9 J**	3.8 UJ	4.0 U
3.3	4,4'-DDE	3.8 UJ	**14**	**0.48 J**	**1.5 J**
3.3	4,4'-DDT	3.8 UJ	**8.0 J**	3.8 UJ	**0.79 J**
1.7	delta-BHC	1.9 UJ	2.0 U	1.9 UJ	2.1 U
3.3	Dieldrin	3.8 UJ	3.8 U	3.8 UJ	4.0 U
1.7	Endosulfan I	1.9 UJ	2.0 U	1.9 UJ	2.1 U
3.3	Endosulfan II	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endosulfan sulfate	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endrin	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endrin aldehyde	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endrin ketone	3.8 UJ	3.8 U	3.8 UJ	4.0 U
1.7	gamma-BHC (Lindane)	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	Heptachlor	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	Heptachlor epoxide	1.9 UJ	2.0 U	1.9 UJ	2.1 U
17	Methoxychlor	19 UJ	20 U	19 UJ	21 U
33	PCB-1016	38 UJ	38 U	38 UJ	40 U
67	PCB-1221	77 UJ	77 U	77 UJ	81 U
33	PCB-1232	38 UJ	38 U	38 UJ	40 U
33	PCB-1242	38 UJ	38 U	38 UJ	40 U
33	PCB-1248	38 UJ	38 U	38 UJ	40 U
33	PCB-1254	38 UJ	38 U	38 UJ	40 U
33	PCB-1260	38 UJ	38 U	38 UJ	40 U
170	Toxaphene	190 UJ	200 U	190 UJ	210 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	**Pesticides/PCBs**		
1.7	Aldrin	2.3 U	2.1 U
1.7	alpha-BHC	2.3 U	2.1 U
1.7	beta-BHC	2.3 U	2.1 U
1.7	Chlordane (technical)	23 U	21 U
3.3	4,4'-DDD	**0.78 J**	4.1 U
3.3	4,4'-DDE	**11**	4.1 U
3.3	4,4'-DDT	**2.0 J**	4.1 U
1.7	delta-BHC	2.3 U	2.1 U
3.3	Dieldrin	4.4 U	4.1 U
1.7	Endosulfan I	2.3 U	2.1 U
3.3	Endosulfan II	4.4 U	4.1 U
3.3	Endosulfan sulfate	4.4 U	4.1 U
3.3	Endrin	4.4 U	4.1 U
3.3	Endrin aldehyde	4.4 U	4.1 U
3.3	Endrin ketone	4.4 U	4.1 U
1.7	gamma-BHC (Lindane)	2.3 U	2.1 U
1.7	Heptachlor	2.3 U	2.1 U
1.7	Heptachlor epoxide	2.3 U	2.1 U
17	Methoxychlor	23 U	21 U
33	PCB-1016	44 U	41 U
67	PCB-1221	90 U	83 U
33	PCB-1232	44 U	41 U
33	PCB-1242	44 U	41 U
33	PCB-1248	44 U	41 U
33	PCB-1254	44 U	41 U
33	PCB-1260	44 U	41 U
170	Toxaphene	230 U	210 U

Notes: B - Present in laboratory blank and/or field QC blank sample
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	2.0	2.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	**Pesticides Compounds**					
1.7	Aldrin	4.2 U	4.2 U	NA	NA	2.1 U
1.7	alpha-BHC	4.2 U	4.2 U	NA	NA	2.1 U
1.7	beta-BHC	4.2 U	4.2 U	NA	NA	2.1 U
1.7	Chlordane (technical)	42 U	42 U	NA	NA	21 U
3.3	4,4'-DDD	**12**	**12 J**	NA	NA	**6.2 J**
3.3	4,4'-DDE	**6.0 L**	**6.9 L**	NA	NA	**11 L**
3.3	4,4'-DDT	**37 L**	**30 L**	NA	NA	**43 L**
1.7	delta-BHC	4.2 U	4.2 U	NA	NA	2.1 U
3.3	Dieldrin	**5.7 J**	8.1 U	NA	NA	**3.9 J**
1.7	Endosulfan I	4.2 U	4.2 U	NA	NA	2.1 U
3.3	Endosulfan II	8.1 U	8.1 U	NA	NA	4.0 U
3.3	Endosulfan sulfate	8.1 UL	8.1 UL	NA	NA	4.0 UL
3.3	Endrin	8.1 U	8.1 U	NA	NA	4.0 U
3.3	Endrin aldehyde	8.1 U	8.1 U	NA	NA	4.0 U
3.3	Endrin ketone	8.1 U	8.1 U	NA	NA	4.0 U
1.7	gamma-BHC (Lindane)	4.2 U	4.2 U	NA	NA	2.1 U
1.7	Heptachlor	4.2 U	4.2 U	NA	NA	2.1 U
1.7	Heptachlor epoxide	4.2 U	4.2 U	NA	NA	2.1 U
17	Methoxychlor	42 U	42 U	NA	NA	21 U
33	PCB-1016	81 U	81 U	NA	NA	40 U
67	PCB-1221	170 U	160 U	NA	NA	82 U
33	PCB-1232	81 U	81 U	NA	NA	40 U
33	PCB-1242	81 U	81 U	NA	NA	40 U
33	PCB-1248	81 U	81 U	NA	NA	40 U
33	PCB-1254	81 U	81 U	NA	NA	40 U
33	PCB-1260	**290**	**290**	NA	NA	**190**
170	Toxaphene	420 U	420 U	NA	NA	210 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 1
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6	WFFI-SS2-A
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3	90.5
CRQL	**Analyte**					
20	Aluminum	**8100**	**6100**	**4300**	**5600**	**5000**
6.0	Antimony	2.1 U	2.2 U	2.1 U	2.1 U	2.0 U
1.0	Arsenic	**3.5**	**2.1**	1.0 UL	1.1 UL	**2.0**
20	Barium	**66**	**23**	**19**	**16**	**18**
0.5	Beryllium	**0.44**	**0.21 J**	**0.10 J**	**0.18 J**	**0.17 J**
0.5	Cadmium	0.52 U	0.55 U	0.52 U	0.53 U	0.50 U
500	Calcium	**42000**	**490**	**160**	**3000**	**220**
1.0	Chromium	**11**	**6.4**	**5.6**	**6.9**	**5.6**
5.0	Cobalt	**2.4**	**1.2**	**0.46 J**	**0.79 J**	**1.2**
2.5	Copper	**4.8**	**2.1 J**	**2.1**	**1.9 J**	**1.8 J**
10	Iron	**6300**	**3600**	**1800**	**2500**	**3400**
1.0	Lead	**7.3**	**3.3**	**1.2 L**	**3.1**	**2.8**
500	Magnesium	**970**	**370**	**240**	**370**	**360**
1.5	Manganese	**320**	**66**	**23**	**23**	**60**
0.1	Mercury	**0.037 L**	**0.018 L**	0.022 UL	**0.010 JL**	**0.020 L**
4.0	Nickel	**4.9**	**2.5 J**	**1.3 J**	**2.2 B**	**2.7 J**
500	Potassium	**450**	**310**	**250**	**300**	**280**
3.5	Selenium	2.6 U	2.7 U	2.6 U	2.7 U	2.5 U
1.0	Silver	1.0 U	1.1 U	1.0 U	1.1 U	1.0 U
500	Sodium	**480**	**74 J**	**66 J**	**93 J**	**58 J**
2.5	Thallium	2.6 U	2.7 U	2.6 U	2.7 U	2.5 U
5.0	Vanadium	**14**	**7.9**	**4.9**	**6.9**	**7.8**
6.0	Zinc	**22**	**16**	**4.9**	**10**	**10**
2.5	Total Cyanide	0.57 U	0.57 U	0.55 U	0.59 U	0.53 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 2
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS3-A	WFFI-SS8	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/22/2007	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.2	87.7	76.6	81.3
CRQL	**Analyte**				
20	Aluminum	**6300**	**10000**	**3400**	**5500**
6.0	Antimony	2.0 U	2.1 U	2.5 U	2.4 U
1.0	Arsenic	**2.2**	**4.8**	**1.4 L**	**2.7**
20	Barium	**25**	**50**	**16**	**23**
0.5	Beryllium	**0.21 J**	**0.37 J**	**0.11 J**	**0.18 J**
0.5	Cadmium	**0.29 J**	0.52 U	0.62 U	0.59 U
500	Calcium	**320**	**750**	**200**	**650**
1.0	Chromium	**7.1**	**12**	**4.2**	**6.8**
5.0	Cobalt	**1.3**	**2.5**	**0.74 J**	**1.9**
2.5	Copper	**3.7**	**4.2**	**1.3 J**	**2.9**
10	Iron	**3900**	**7500**	**2600**	**4100**
1.0	Lead	**7.9**	**8.9**	**4.0**	**7.9**
500	Magnesium	**420**	**860**	**260**	**440**
1.5	Manganese	**70**	**130**	**44**	**95**
0.1	Mercury	**0.024 L**	**0.071 L**	**0.0093 L**	**0.044 L**
4.0	Nickel	**3.1 J**	**6.1**	**1.8 J**	**3.1 J**
500	Potassium	**320**	**520**	**220**	**320**
3.5	Selenium	2.5 U	2.6 U	3.1 U	3.0 U
1.0	Silver	1.0 U	1.0 U	1.2 U	1.2 U
500	Sodium	**63 J**	**71 J**	**71 J**	**60 J**
2.5	Thallium	2.5 U	2.6 U	3.1 U	3.0 U
5.0	Vanadium	**9.3**	**16**	**5.9**	**8.8**
6.0	Zinc	**72**	**34**	**9.6**	**20**
2.5	Total Cyanide	0.54 U	0.56 U	0.62 U	0.60 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/kg	Milligram per kilogram
Bold	Reported value is above lab method detection limit

TABLE 3
DATA SUMMARY FORM: INORGANICS

WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	QC	QC
	Dilution Factor	1.0	1.0	1.0	1.0
CRQL	**Analyte**				
200	Aluminum	**2500**	**240**	200 U	200 U
60	Antimony	20 U	20 U	20 U	20 U
10	Arsenic	10 UL	10 UL	10 UL	10 UL
200	Barium	**31**	**100**	10 U	10 U
5.0	Beryllium	4.0 U	4.0 U	4.0 U	4.0 U
5.0	Cadmium	5.0 U	5.0 U	5.0 U	5.0 U
5000	Calcium	**8800**	**27000**	**210 J**	**130 J**
10	Chromium	**2.9 B**	**5.1 B**	**3.4 B**	10 U
50	Cobalt	**3.5 J**	10 U	10 U	10 U
25	Copper	20 U	**4.4 J**	20 U	20 U
100	Iron	**7200**	**15000**	**2100**	50 UL
10.0	Lead	5.0 UL	**29**	5.0 UL	5.0 UL
5000	Magnesium	**1200**	**2800**	**12 J**	500 U
15	Manganese	**460**	**170**	**23**	10 U
0.2	Mercury	0.20 U	**0.13 B**	0.20 U	0.20 U
40	Nickel	40 U	40 U	**5.9 J**	40 U
5000	Potassium	**1600**	**10000**	1000 U	1000 U
35	Selenium	10 U	10 U	10 U	10 U
10	Silver	10 U	10 U	10 U	10 U
5000	Sodium	**6300**	**8800**	1000 U	1000 U
25	Thallium	25 U	25 U	25 U	25 U
50	Vanadium	**3.5 J**	**1.8 J**	10 U	10 U
60	Zinc	**18 B**	**98**	**4.9 B**	**4.4 B**
10	Total Cyanide	10 U	10 U	10 U	10 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above lab method detection limit

TABLE 1A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	**Volatile Organic Compounds**				
10	Acetone	**370 J**	**190 J**	**32 J**	**170 J**
5.0	Benzene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Bromoform	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Bromomethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Carbon disulfide	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Carbon tetrachloride	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chlorobenzene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chlorodibromomethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chloroform	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chloromethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	cis-1,2-Dichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	cis-1,3-Dichloropropene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Dichlorobromomethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1-Dichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,2-Dichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1-Dichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,2-Dichloropropane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Ethylbenzene	4.9 U	4.8 U	5.1 U	4.8 U
10	2-Hexanone	24 U	24 U	25 U	24 U
5.0	Methylene Chloride	4.9 U	4.8 U	5.1 U	4.8 U
10	Methyl Ethyl Ketone	**23 J**	**14 J**	25 U	**46**
10	Methyl isobutyl ketone	**6.1 J**	24 U	**8.5 J**	24 U
5.0	Styrene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1,2,2-Tetrachloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Tetrachloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Toluene	**2.7 J**	4.8 U	5.1 U	**2.9 J**
5.0	trans-1,2-Dichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	trans-1,3-Dichloropropene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1,1-Trichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1,2-Trichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Trichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Vinyl chloride	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Xylenes, Total	9.7 U	9.7 U	10 U	**12**

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	NA	NA	91.3	87.7
CRQL	**Volatile Organic Compounds**				
10	Acetone	NA	NA	**80 J**	**140 J**
5.0	Benzene	NA	NA	5.2 UJ	5.0 U
5.0	Bromoform	NA	NA	5.2 U	5.0 U
5.0	Bromomethane	NA	NA	5.2 U	5.0 U
5.0	Carbon disulfide	NA	NA	5.2 U	5.0 U
5.0	Carbon tetrachloride	NA	NA	5.2 U	5.0 U
5.0	Chlorobenzene	NA	NA	5.2 U	5.0 U
5.0	Chlorodibromomethane	NA	NA	5.2 U	5.0 U
5.0	Chloroethane	NA	NA	5.2 U	5.0 U
5.0	Chloroform	NA	NA	5.2 U	5.0 U
5.0	Chloromethane	NA	NA	5.2 U	5.0 U
5.0	cis-1,2-Dichloroethene	NA	NA	5.2 U	5.0 U
5.0	cis-1,3-Dichloropropene	NA	NA	5.2 U	5.0 U
5.0	Dichlorobromomethane	NA	NA	5.2 U	5.0 U
5.0	1,1-Dichloroethane	NA	NA	5.2 U	5.0 U
5.0	1,2-Dichloroethane	NA	NA	5.2 U	5.0 U
5.0	1,1-Dichloroethene	NA	NA	5.2 UJ	5.0 U
5.0	1,2-Dichloropropane	NA	NA	5.2 U	5.0 U
5.0	Ethylbenzene	NA	NA	5.2 U	5.0 U
10	2-Hexanone	NA	NA	26 U	25 U
5.0	Methylene Chloride	NA	NA	5.2 U	5.0 U
10	Methyl Ethyl Ketone	NA	NA	**15 J**	**16 J**
10	Methyl isobutyl ketone	NA	NA	26 U	25 U
5.0	Styrene	NA	NA	5.2 U	5.0 U
5.0	1,1,2,2-Tetrachloroethane	NA	NA	5.2 U	5.0 U
5.0	Tetrachloroethene	NA	NA	5.2 U	5.0 U
5.0	Toluene	NA	NA	5.2 UJ	5.0 U
5.0	trans-1,2-Dichloroethene	NA	NA	5.2 U	5.0 U
5.0	trans-1,3-Dichloropropene	NA	NA	5.2 U	5.0 U
5.0	1,1,1-Trichloroethane	NA	NA	5.2 U	5.0 U
5.0	1,1,2-Trichloroethane	NA	NA	5.2 U	5.0 U
5.0	Trichloroethene	NA	NA	5.2 UJ	5.0 U
5.0	Vinyl chloride	NA	NA	5.2 U	5.0 U
5.0	Xylenes, Total	NA	NA	10 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

TABLE 1C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Volatile Organic Compounds**		
10	Acetone	**45 J**	**270 J**
5.0	Benzene	5.3 U	5.2 U
5.0	Bromoform	5.3 U	5.2 U
5.0	Bromomethane	5.3 U	5.2 U
5.0	Carbon disulfide	5.3 U	5.2 U
5.0	Carbon tetrachloride	5.3 U	5.2 U
5.0	Chlorobenzene	5.3 U	5.2 U
5.0	Chlorodibromomethane	5.3 U	5.2 U
5.0	Chloroethane	5.3 U	5.2 U
5.0	Chloroform	5.3 U	5.2 U
5.0	Chloromethane	5.3 U	5.2 U
5.0	cis-1,2-Dichloroethene	5.3 U	5.2 U
5.0	cis-1,3-Dichloropropene	5.3 U	5.2 U
5.0	Dichlorobromomethane	5.3 U	5.2 U
5.0	1,1-Dichloroethane	5.3 U	5.2 U
5.0	1,2-Dichloroethane	5.3 U	5.2 U
5.0	1,1-Dichloroethene	5.3 U	5.2 U
5.0	1,2-Dichloropropane	5.3 U	5.2 U
5.0	Ethylbenzene	5.3 U	5.2 U
10	2-Hexanone	26 U	26 U
5.0	Methylene Chloride	5.3 U	5.2 U
10	Methyl Ethyl Ketone	26 U	**18 J**
10	Methyl isobutyl ketone	26 U	26 U
5.0	Styrene	5.3 U	5.2 U
5.0	1,1,2,2-Tetrachloroethane	5.3 U	5.2 U
5.0	Tetrachloroethene	5.3 U	5.2 U
5.0	Toluene	5.3 U	5.2 U
5.0	trans-1,2-Dichloroethene	5.3 U	5.2 U
5.0	trans-1,3-Dichloropropene	5.3 U	5.2 U
5.0	1,1,1-Trichloroethane	5.3 U	5.2 U
5.0	1,1,2-Trichloroethane	5.3 U	5.2 U
5.0	Trichloroethene	5.3 U	5.2 U
5.0	Vinyl chloride	5.3 U	5.2 U
5.0	Xylenes, Total	11 U	10 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

TABLE 1D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2	TB-3
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007	2/22/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
CRQL	**Volatile Organic Compounds**					
25	Acetone	25 U	**8.9 J**	25 U	25 U	25 U
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	**0.53 J**	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	5.0 U	5.0 U	**0.45 J**
10	Methyl Ethyl Ketone	10 U	**3.8 J**	10 U	10 U	10 U
10	Methyl isobutyl ketone	10 U	10 U	10 U	**7.3 J**	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U	**5.1**	**5.0**	1.0 U
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above laboratory method detection limit

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	**Semivolatile Organic Compounds**				
330	Acenaphthene	380 U	390 U	370 U	390 U
330	Acenaphthylene	380 U	390 U	370 U	390 U
330	Anthracene	380 U	390 U	370 U	390 U
330	Benzo[a]anthracene	380 U	390 U	370 U	390 U
330	Benzo[a]pyrene	380 U	390 U	370 U	390 U
330	Benzo[b]fluoranthene	380 U	390 U	370 U	390 U
330	Benzo[g,h,i]perylene	380 U	390 U	370 U	390 U
330	Benzo[k]fluoranthene	380 U	390 U	370 U	390 U
330	Bis(2-chloroethoxy)methane	380 U	390 U	370 U	390 U
330	Bis(2-chloroethyl)ether	380 U	390 U	370 U	390 U
330	bis(chloroisopropyl) ether	380 U	390 U	370 U	390 U
330	Bis(2-ethylhexyl) phthalate	380 U	390 U	370 U	390 U
330	4-Bromophenyl phenyl ethe	380 U	390 U	370 U	390 U
330	Butyl benzyl phthalate	380 U	390 U	370 U	390 U
330	Carbazole	380 U	390 U	370 U	390 U
660	4-Chloroaniline	770 U	780 U	750 U	780 U
330	4-Chloro-3-methylphenol	380 U	390 U	370 U	390 U
330	2-Chloronaphthalene	380 U	390 U	370 U	390 U
330	2-Chlorophenol	380 U	390 U	370 U	390 U
330	4-Chlorophenyl phenyl ethe	380 U	390 U	370 U	390 U
330	Chrysene	380 U	390 U	370 U	390 U
330	Dibenz(a,h)anthracene	380 U	390 U	370 U	390 U
330	Dibenzofuran	380 U	390 U	370 U	390 U
330	1,3-Dichlorobenzene	380 U	390 U	370 U	390 U
330	1,4-Dichlorobenzene	380 U	390 U	370 U	390 U
330	1,2-Dichlorobenzene	380 U	390 U	370 U	390 U
660	3,3'-Dichlorobenzidine	770 U	780 U	750 U	780 U
330	2,4-Dichlorophenol	2000 U	390 U	370 U	390 U
330	Diethyl phthalate	380 U	390 U	370 U	390 U
330	2,4-Dimethylphenol	380 U	390 U	370 U	390 U
330	Dimethyl phthalate	380 U	390 U	370 U	390 U
330	Di-n-butyl phthalate	380 U	390 U	370 U	390 U
1700	4,6-Dinitro-2-methylphenol	2000 U	2000 U	1900 U	2000 U
1700	2,4-Dinitrophenol	2000 U	2000 U	1900 U	2000 U
330	2,4-Dinitrotoluene	380 U	390 U	370 U	390 U
330	2,6-Dinitrotoluene	380 U	390 U	370 U	390 U
330	Di-n-octyl phthalate	380 U	390 U	370 U	390 U
330	Fluoranthene	380 U	390 U	370 U	390 U

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	380 U	390 U	370 U	390 U
330	Hexachlorobenzene	380 U	390 U	370 U	390 U
330	Hexachlorobutadiene	380 U	390 U	370 U	390 U
330	Hexachlorocyclopentadiene	380 U	390 U	370 U	390 U
330	Hexachloroethane	380 U	390 U	370 U	390 U
330	Indeno[1,2,3-cd]pyrene	380 U	390 U	370 U	390 U
330	Isophorone	380 U	390 U	370 U	390 U
330	2-Methylnaphthalene	380 U	390 U	370 U	390 U
330	2-Methylphenol	380 U	390 U	370 U	390 U
330	3 & 4 Methylphenol	380 U	390 U	370 U	390 U
330	Naphthalene	380 U	390 U	370 U	390 U
1700	2-Nitroaniline	2000 U	2000 U	1900 U	2000 U
1700	3-Nitroaniline	2000 U	2000 U	1900 U	2000 U
1700	4-Nitroaniline	2000 U	2000 U	1900 U	2000 U
330	Nitrobenzene	380 U	390 U	370 U	390 U
330	2-Nitrophenol	380 U	390 U	370 U	390 U
1700	4-Nitrophenol	2000 U	2000 U	1900 U	2000 U
330	N-Nitrosodi-n-propylamine	380 U	390 U	370 U	390 U
330	N-Nitrosodiphenylamine	380 U	390 U	370 U	390 U
1700	Pentachlorophenol	2000 U	2000 U	1900 U	2000 U
330	Phenanthrene	380 U	390 U	370 U	390 U
330	Phenol	380 U	390 U	370 U	390 U
330	Pyrene	380 U	390 U	370 U	390 U
330	1,2,4-Trichlorobenzene	380 U	390 U	370 U	390 U
330	2,4,6-Trichlorophenol	380 U	390 U	370 U	390 U
330	2,4,5-Trichlorophenol	380 U	390 U	370 U	390 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.5	90.2	NA	87.7
CRQL	**Semivolatile Organic Compounds**				
330	Acenaphthene	360 U	370 U	NA	380 UL
330	Acenaphthylene	360 U	370 U	NA	380 UL
330	Anthracene	360 U	370 U	NA	380 UL
330	Benzo[a]anthracene	360 U	370 U	NA	380 UL
330	Benzo[a]pyrene	360 U	370 U	NA	380 UL
330	Benzo[b]fluoranthene	360 U	370 U	NA	380 UL
330	Benzo[g,h,i]perylene	360 U	370 U	NA	380 UL
330	Benzo[k]fluoranthene	360 U	370 U	NA	380 UL
330	Bis(2-chloroethoxy)methan	360 U	370 U	NA	380 UL
330	Bis(2-chloroethyl)ether	360 U	370 U	NA	380 UL
330	bis(chloroisopropyl) ether	360 U	370 U	NA	380 UL
330	Bis(2-ethylhexyl) phthalate	360 U	370 U	NA	380 UL
330	4-Bromophenyl phenyl eth	360 U	370 U	NA	380 UL
330	Butyl benzyl phthalate	360 U	370 U	NA	380 UL
330	Carbazole	360 U	370 U	NA	380 UL
660	4-Chloroaniline	730 U	730 U	NA	750 UL
330	4-Chloro-3-methylphenol	360 U	370 U	NA	380 UL
330	2-Chloronaphthalene	360 U	370 U	NA	380 UL
330	2-Chlorophenol	360 U	370 U	NA	380 UL
330	4-Chlorophenyl phenyl eth	360 U	370 U	NA	380 UL
330	Chrysene	360 U	370 U	NA	380 UL
330	Dibenz(a,h)anthracene	360 U	370 U	NA	380 UL
330	Dibenzofuran	360 U	370 U	NA	380 UL
330	1,3-Dichlorobenzene	360 U	370 U	NA	380 UL
330	1,4-Dichlorobenzene	360 U	370 U	NA	380 UL
330	1,2-Dichlorobenzene	360 U	370 U	NA	380 UL
660	3,3'-Dichlorobenzidine	730 U	730 U	NA	750 UL
330	2,4-Dichlorophenol	360 U	370 U	NA	380 UL
330	Diethyl phthalate	360 U	370 U	NA	380 UL
330	2,4-Dimethylphenol	360 U	370 U	NA	380 UL
330	Dimethyl phthalate	360 U	370 U	NA	380 UL
330	Di-n-butyl phthalate	360 U	370 U	NA	380 UL
1700	4,6-Dinitro-2-methylpheno	1900 U	1900 U	NA	1900 UL
1700	2,4-Dinitrophenol	1900 U	1900 U	NA	1900 UL
330	2,4-Dinitrotoluene	360 U	370 U	NA	380 UL
330	2,6-Dinitrotoluene	360 U	370 U	NA	380 UL
330	Di-n-octyl phthalate	360 U	370 U	NA	380 UL
330	Fluoranthene	360 U	370 U	NA	380 UL

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.5	90.2	NA	87.7
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	360 U	370 U	NA	380 UL
330	Hexachlorobenzene	360 U	370 U	NA	380 UL
330	Hexachlorobutadiene	360 U	370 U	NA	380 UL
330	Hexachlorocyclopentadien	360 U	370 U	NA	380 UL
330	Hexachloroethane	360 U	370 U	NA	380 UL
330	Indeno[1,2,3-cd]pyrene	360 U	370 U	NA	380 UL
330	Isophorone	360 U	370 U	NA	380 UL
330	2-Methylnaphthalene	360 U	370 U	NA	380 UL
330	2-Methylphenol	360 U	370 U	NA	380 UL
330	3 & 4 Methylphenol	360 U	370 U	NA	380 UL
330	Naphthalene	360 U	370 U	NA	380 UL
1700	2-Nitroaniline	1900 U	1900 U	NA	1900 UL
1700	3-Nitroaniline	1900 U	1900 U	NA	1900 UL
1700	4-Nitroaniline	1900 U	1900 U	NA	1900 UL
330	Nitrobenzene	360 U	370 U	NA	380 UL
330	2-Nitrophenol	360 U	370 U	NA	380 UL
1700	4-Nitrophenol	1900 U	1900 U	NA	1900 UL
330	N-Nitrosodi-n-propylamine	360 U	370 U	NA	380 UL
330	N-Nitrosodiphenylamine	360 U	370 U	NA	380 UL
1700	Pentachlorophenol	1900 U	1900 U	NA	1900 UL
330	Phenanthrene	360 U	370 U	NA	380 UL
330	Phenol	360 U	370 U	NA	380 UL
330	Pyrene	360 U	370 U	NA	380 UL
330	1,2,4-Trichlorobenzene	360 U	370 U	NA	380 UL
330	2,4,6-Trichlorophenol	360 U	370 U	NA	380 UL
330	2,4,5-Trichlorophenol	360 U	370 U	NA	380 UL

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Semivolatile Organic Compounds**		
330	Acenaphthene	430 U	410 U
330	Acenaphthylene	430 U	410 U
330	Anthracene	430 U	410 U
330	Benzo[a]anthracene	430 U	410 U
330	Benzo[a]pyrene	430 U	410 U
330	Benzo[b]fluoranthene	430 U	410 U
330	Benzo[g,h,i]perylene	430 U	410 U
330	Benzo[k]fluoranthene	430 U	410 U
330	Bis(2-chloroethoxy)methan	430 U	410 U
330	Bis(2-chloroethyl)ether	430 U	410 U
330	bis(chloroisopropyl) ether	430 U	410 U
330	Bis(2-ethylhexyl) phthalate	430 U	410 U
330	4-Bromophenyl phenyl ethe	430 U	410 U
330	Butyl benzyl phthalate	430 U	410 U
330	Carbazole	430 U	410 U
660	4-Chloroaniline	860 U	810 U
330	4-Chloro-3-methylphenol	430 U	410 U
330	2-Chloronaphthalene	430 U	410 U
330	2-Chlorophenol	430 U	410 U
330	4-Chlorophenyl phenyl ethe	430 U	410 U
330	Chrysene	430 U	410 U
330	Dibenz(a,h)anthracene	430 U	410 U
330	Dibenzofuran	430 U	410 U
330	1,3-Dichlorobenzene	430 U	410 U
330	1,4-Dichlorobenzene	430 U	410 U
330	1,2-Dichlorobenzene	430 U	410 U
660	3,3'-Dichlorobenzidine	860 U	810 U
330	2,4-Dichlorophenol	430 U	410 U
330	Diethyl phthalate	430 U	410 U
330	2,4-Dimethylphenol	430 U	410 U
330	Dimethyl phthalate	430 U	410 U
330	Di-n-butyl phthalate	430 U	410 U
1700	4,6-Dinitro-2-methylphenol	2200 U	2100 U
1700	2,4-Dinitrophenol	2200 U	2100 U
330	2,4-Dinitrotoluene	430 U	410 U
330	2,6-Dinitrotoluene	430 U	410 U
330	Di-n-octyl phthalate	430 U	410 U
330	Fluoranthene	430 U	410 U

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Semivolatile Organic Compounds**		
330	Fluorene	430 U	410 U
330	Hexachlorobenzene	430 U	410 U
330	Hexachlorobutadiene	430 U	410 U
330	Hexachlorocyclopentadien	430 U	410 U
330	Hexachloroethane	430 U	410 U
330	Indeno[1,2,3-cd]pyrene	430 U	410 U
330	Isophorone	430 U	410 U
330	2-Methylnaphthalene	430 U	410 U
330	2-Methylphenol	430 U	410 U
330	3 & 4 Methylphenol	430 U	410 U
330	Naphthalene	430 U	410 U
1700	2-Nitroaniline	2200 U	2100 U
1700	3-Nitroaniline	2200 U	2100 U
1700	4-Nitroaniline	2200 U	2100 U
330	Nitrobenzene	430 U	410 U
330	2-Nitrophenol	430 U	410 U
1700	4-Nitrophenol	2200 U	2100 U
330	N-Nitrosodi-n-propylamine	430 U	410 U
330	N-Nitrosodiphenylamine	430 U	410 U
1700	Pentachlorophenol	2200 U	2100 U
330	Phenanthrene	430 U	410 U
330	Phenol	430 U	410 U
330	Pyrene	430 U	410 U
330	1,2,4-Trichlorobenzene	430 U	410 U
330	2,4,6-Trichlorophenol	430 U	410 U
330	2,4,5-Trichlorophenol	430 U	410 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1060	1020	1060	1020
CRQL	**Semivolatile Organic Compounds**				
10	Acenaphthene	9.4 U	9.8 U	9.4 U	9.8 U
10	Acenaphthylene	9.4 U	9.8 U	9.4 U	9.8 U
10	Anthracene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[a]anthracene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[a]pyrene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[b]fluoranthene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[g,h,i]perylene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[k]fluoranthene	9.4 U	9.8 U	9.4 U	9.8 U
10	Bis(2-chloroethoxy)methane	9.4 U	9.8 U	9.4 U	9.8 U
10	Bis(2-chloroethyl)ether	9.4 U	9.8 U	9.4 U	9.8 U
10	bis(chloroisopropyl) ether	9.4 U	9.8 U	9.4 U	9.8 U
10	Bis(2-ethylhexyl) phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	4-Bromophenyl phenyl ether	9.4 U	9.8 U	9.4 U	9.8 U
10	Butyl benzyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	Carbazole	9.4 U	9.8 U	9.4 U	9.8 U
20	4-Chloroaniline	19 U	20 U	19 U	20 U
10	4-Chloro-3-methylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Chloronaphthalene	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Chlorophenol	9.4 U	9.8 U	9.4 U	9.8 U
10	4-Chlorophenyl phenyl ether	9.4 U	9.8 U	9.4 U	9.8 U
10	Chrysene	9.4 U	9.8 U	9.4 U	9.8 U
10	Dibenz(a,h)anthracene	9.4 U	9.8 U	9.4 U	9.8 U
10	Dibenzofuran	9.4 U	9.8 U	9.4 U	9.8 U
10	1,3-Dichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	1,4-Dichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	1,2-Dichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
20	3,3'-Dichlorobenzidine	19 U	20 U	19 U	20 U
10	2,4-Dichlorophenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Diethyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	2,4-Dimethylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Dimethyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	Di-n-butyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
50	4,6-Dinitro-2-methylphenol	47 U	49 U	47 U	49 U
50	2,4-Dinitrophenol	47 U	49 U	47 U	49 U
10	2,4-Dinitrotoluene	9.4 U	9.8 U	9.4 U	9.8 U
10	2,6-Dinitrotoluene	9.4 U	9.8 U	9.4 U	9.8 U
10	Di-n-octyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	Fluoranthene	9.4 U	**1.5 J**	9.4 U	9.8 U
10	Fluorene	9.4 U	9.8 U	9.4 U	9.8 U

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1060	1020	1060	1020
CRQL	**Semivolatile Organic Compounds**				
10	Hexachlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	Hexachlorobutadiene	9.4 U	9.8 U	9.4 U	9.8 U
10	Hexachlorocyclopentadiene	9.4 U	9.8 U	9.4 U	9.8 U
10	Hexachloroethane	9.4 U	9.8 U	9.4 U	9.8 U
10	Indeno[1,2,3-cd]pyrene	9.4 U	9.8 U	9.4 U	9.8 U
10	Isophorone	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Methylnaphthalene	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Methylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	3 & 4 Methylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Naphthalene	9.4 U	9.8 U	9.4 U	9.8 U
50	2-Nitroaniline	47 U	49 U	47 U	49 U
50	3-Nitroaniline	47 U	49 U	47 U	49 U
50	4-Nitroaniline	47 U	49 U	47 U	49 U
10	Nitrobenzene	9.4 U	9.8 U	9.4 U	9.8 U
50	2-Nitrophenol	9.4 U	9.8 U	9.4 U	9.8 U
50	4-Nitrophenol	47 U	49 U	47 U	49 U
10	N-Nitrosodi-n-propylamine	9.4 U	9.8 U	9.4 U	9.8 U
10	N-Nitrosodiphenylamine	9.4 U	9.8 U	9.4 U	9.8 U
50	Pentachlorophenol	47 U	49 U	47 U	49 U
10	Phenanthrene	9.4 U	**0.91 J**	9.4 U	9.8 U
10	Phenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Pyrene	9.4 U	**1.2 J**	9.4 U	9.8 U
10	1,2,4-Trichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	2,4,6-Trichlorophenol	9.4 U	9.8 U	9.4 U	9.8 U
10	2,4,5-Trichlorophenol	9.4 U	9.8 U	9.4 U	9.8 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

Sample CRQL = Non-adjusted CRQL (1000ml ÷ sample volume)

TABLE 3A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	**Pesticide Compounds**				
1.7	Aldrin	2.0 U	2.0 U	1.9 U	2.0 U
1.7	alpha-BHC	2.0 U	2.0 U	1.9 U	2.0 U
1.7	beta-BHC	2.0 U	2.0 U	1.9 U	2.0 U
1.7	Chlordane (technical)	20 U	20 U	19 U	20 U
3.3	4,4'-DDD	3.8 U	3.9 U	3.7 U	3.9 U
3.3	4,4'-DDE	**2.4 J**	3.9 U	3.7 U	3.9 U
3.3	4,4'-DDT	3.8 U	3.9 U	3.7 U	3.9 U
1.7	delta-BHC	2.0 U	2.0 U	1.9 U	2.0 U
3.3	Dieldrin	3.8 U	3.9 U	3.7 U	3.9 U
1.7	Endosulfan I	2.0 U	2.0 U	1.9 U	2.0 U
3.3	Endosulfan II	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endosulfan sulfate	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endrin	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endrin aldehyde	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endrin ketone	3.8 U	3.9 U	3.7 U	3.9 U
1.7	gamma-BHC (Lindane)	2.0 U	2.0 U	1.9 U	2.0 U
1.7	Heptachlor	2.0 U	2.0 U	1.9 U	2.0 U
1.7	Heptachlor epoxide	2.0 U	2.0 U	1.9 U	2.0 U
17	Methoxychlor	20 U	20 U	19 U	20 U
33	PCB-1016	38 U	39 U	37 U	39 U
67	PCB-1221	78 U	78 U	75 U	79 U
33	PCB-1232	38 U	39 U	37 U	39 U
33	PCB-1242	38 U	39 U	37 U	39 U
33	PCB-1248	38 U	39 U	37 U	39 U
33	PCB-1254	38 U	39 U	37 U	39 U
33	PCB-1260	38 U	39 U	37 U	39 U
170	Toxaphene	200 U	200 U	190 U	200 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.5	90.2	NA	87.7
CRQL	**Pesticides Compounds**				
1.7	Aldrin	1.9 U	1.9 U	NA	1.9 U
1.7	alpha-BHC	1.9 U	1.9 U	NA	1.9 U
1.7	beta-BHC	1.9 U	1.9 U	NA	1.9 U
1.7	Chlordane (technical)	19 U	19 U	NA	19 U
3.3	4,4'-DDD	3.6 U	3.6 U	NA	3.7 U
3.3	4,4'-DDE	3.6 U	3.6 U	NA	3.7 U
3.3	4,4'-DDT	3.6 U	3.6 U	NA	3.7 U
1.7	delta-BHC	1.9 U	1.9 U	NA	1.9 U
3.3	Dieldrin	3.6 U	3.6 U	NA	3.7 U
1.7	Endosulfan I	1.9 U	1.9 U	NA	1.9 U
3.3	Endosulfan II	3.6 U	3.6 U	NA	3.7 U
3.3	Endosulfan sulfate	3.6 U	3.6 U	NA	3.7 U
3.3	Endrin	3.6 U	3.6 U	NA	3.7 U
3.3	Endrin aldehyde	3.6 U	3.6 U	NA	3.7 U
3.3	Endrin ketone	3.6 U	3.6 U	NA	3.7 U
1.7	gamma-BHC (Lindane)	1.9 U	1.9 U	NA	1.9 U
1.7	Heptachlor	1.9 U	1.9 U	NA	1.9 U
1.7	Heptachlor epoxide	1.9 U	1.9 U	NA	1.9 U
17	Methoxychlor	19 U	19 U	NA	19 U
33	PCB-1016	36 U	36 U	NA	37 U
67	PCB-1221	74 U	74 U	NA	75 U
33	PCB-1232	36 U	36 U	NA	37 U
33	PCB-1242	36 U	36 U	NA	37 U
33	PCB-1248	36 U	36 U	NA	37 U
33	PCB-1254	36 U	36 U	NA	37 U
33	PCB-1260	36 U	36 U	NA	37 U
170	Toxaphene	190 U	190 U	NA	190 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported valaue is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Pesticides/PCBs**		
1.7	Aldrin	2.2 U	2.1 U
1.7	alpha-BHC	2.2 U	2.1 U
1.7	beta-BHC	2.2 U	2.1 U
1.7	Chlordane (technical)	22 U	21 U
3.3	4,4'-DDD	4.3 U	**2.7 J**
3.3	4,4'-DDE	**1.8 J**	**2.6 J**
3.3	4,4'-DDT	**0.77 J**	**1.6 J**
1.7	delta-BHC	2.2 U	2.1 U
3.3	Dieldrin	4.3 U	4.0 U
1.7	Endosulfan I	2.2 U	2.1 U
3.3	Endosulfan II	4.3 U	4.0 U
3.3	Endosulfan sulfate	4.3 U	4.0 U
3.3	Endrin	4.3 U	4.0 U
3.3	Endrin aldehyde	4.3 U	4.0 U
3.3	Endrin ketone	4.3 U	4.0 U
1.7	gamma-BHC (Lindane)	2.2 U	2.1 U
1.7	Heptachlor	2.2 U	2.1 U
1.7	Heptachlor epoxide	2.2 U	2.1 U
17	Methoxychlor	22 U	21 U
33	PCB-1016	43 U	40 U
67	PCB-1221	87 U	81 U
33	PCB-1232	43 U	40 U
33	PCB-1242	43 U	40 U
33	PCB-1248	43 U	40 U
33	PCB-1254	43 U	40 U
33	PCB-1260	43 U	40 U
170	Toxaphene	220 U	210 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1040	1020	1020	1060
CRQL	**Pesticides Compounds**				
0.050	Aldrin	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	alpha-BHC	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	beta-BHC	0.048 U	0.049 UJ	0.049 U	0.047 U
0.50	Chlordane (technical)	0.48 U	0.49 UJ	0.49 U	0.47 U
0.10	4,4'-DDD	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	4,4'-DDE	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	4,4'-DDT	0.096 U	0.098 UJ	0.098 U	0.094 U
0.50	delta-BHC	0.048 U	0.049 UJ	0.049 U	0.047 U
0.10	Dieldrin	0.096 U	0.098 UJ	0.098 U	0.094 U
0.050	Endosulfan I	0.048 U	0.049 UJ	0.049 U	0.047 U
0.10	Endosulfan II	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endosulfan sulfate	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endrin	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endrin aldehyde	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endrin ketone	0.096 U	0.098 UJ	0.098 U	0.094 U
0.050	gamma-BHC (Lindane)	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	Heptachlor	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	Heptachlor epoxide	0.048 U	0.049 UJ	0.049 U	0.047 U
0.50	Methoxychlor	0.48 U	0.49 UJ	0.49 U	0.47 U
1.0	PCB-1016	0.96 U	0.98 UJ	0.98 U	0.94 U
2.0	PCB-1221	1.9 U	2.0 UJ	2.0 U	1.9 U
1.0	PCB-1232	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1242	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1248	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1254	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1260	0.96 U	0.98 UJ	0.98 U	0.94 U
5.0	Toxaphene	4.8 U	4.9 UJ	4.9 U	4.7 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Micrograms per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported concentrations above laboratory detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Volume)

TABLE 1
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS4-A	WFFI-SS5	WFFI-SS5-D	WFFI-SS7	WFFI-SS9
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4	85.8	76.1
CRQL	**Analyte**					
20	Aluminum	**4700**	**9700**	**13000**	**10000**	**4600**
6.0	Antimony	2.0 U	2.2 U	2.3 U	**2.2 U**	2.5 U
1.0	Arsenic	**2.1**	**4.4**	**4.7**	**4.2**	**2.3**
20	Barium	**19**	**45**	**52**	**45**	**13**
0.5	Beryllium	**0.18 J**	**0.35 J**	**0.41 J**	**0.34 J**	**0.16 J**
0.5	Cadmium	0.49 U	0.55 U	0.56 U	0.55 U	0.62 U
500	Calcium	**190 B**	**910**	**750**	**900**	**170**
1.0	Chromium	**4.7**	**10**	**13**	**11**	**5.1**
5.0	Cobalt	**1.0**	**2.6**	**3.3**	**2.8**	**0.63 J**
2.5	Copper	**1.4 J**	**3.8**	**4.5**	**4.0**	**1.9 J**
10	Iron	**3100**	**8300**	**10000**	**8400**	**2800**
1.0	Lead	**2.6**	**7.5**	**8.1**	**8.0**	**2.2**
500	Magnesium	**320**	**810**	**1000**	**850**	**330**
1.5	Manganese	**42**	**140**	**180**	**150**	**15**
0.1	Mercury	**0.0096 J**	**0.044**	**0.047**	**0.043**	**0.040**
4.0	Nickel	**2.4 J**	**6.3**	**7.7**	**6.7**	**2.3 J**
500	Potassium	**270 K**	**510 K**	**640 K**	**560 K**	**370 K**
3.5	Selenium	2.5 U	2.8 U	2.8 U	2.7 U	3.1 U
1.0	Silver	0.98 U	1.1 U	1.1 U	1.1 U	1.2 U
500	Sodium	**57 L**	**76 JL**	**91 JL**	**75 L**	**85 L**
2.5	Thallium	2.5 U	2.8 U	2.8 U	2.7 U	3.1 U
5.0	Vanadium	**7.0**	**16**	**20**	**17**	**6.0**
6.0	Zinc	**6.8**	**20**	**23**	**20**	**37**
0.5	Total Cyanide	0.53 U	0.58 U	0.56 U	0.57 U	0.63 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 2
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS10	WFFI-SL1	WFFI-SL02	WFFI-SL03
	Sample Date	2/22/2007	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	79.3	7.5	62.9	61.3
CRQL	**Analyte**				
20	Aluminum	**4800**	**680**	**5800**	**6900**
6.0	Antimony	**0.54 J**	**24** U	**20**	**12**
1.0	Arsenic	**1.3 L**	**12 UL**	**2.6**	**3.2**
20	Barium	**20**	**130**	**270**	**270**
0.5	Beryllium	**0.17 J**	4.8 U	**0.36 J**	**0.46 J**
0.5	Cadmium	**0.30 J**	6.0 U	**2.2**	**3.7**
500	Calcium	**320**	**13000**	**3900**	**4600**
1.0	Chromium	**5.3**	**6.0 B**	**65**	**36**
5.0	Cobalt	**0.57 J**	12 U	**2.0**	**2.6**
2.5	Copper	**6.7**	**11 J**	**180**	**180**
10	Iron	**2700**	**15000**	**14000**	**12000**
1.0	Lead	**4.9**	**130**	**530**	**360**
500	Magnesium	**300**	**730**	**780**	**950**
1.5	Manganese	**15**	**270**	**160 K**	**190 K**
0.1	Mercury	**0.25**	**0.17 J**	**24 J**	**28 J**
4.0	Nickel	**2.8 J**	**4.0 J**	**7.2**	**8.9**
500	Potassium	**300 K**	**1300**	**640 K**	**680 K**
3.5	Selenium	**2.9 U**	30 U	3.6 U	3.7 U
1.0	Silver	**0.64 J**	12 U	**130**	**110**
500	Sodium	**71 L**	**680 L**	**130 L**	**130 L**
2.5	Thallium	**2.9 U**	30 U	3.6 U	3.7 U
5.0	Vanadium	**6.2**	**7.2** J	**16**	**18**
6.0	Zinc	**160**	**680**	**440**	**420**
2.5	Total Cyanide	0.61 U	6.4 U	**1.5**	**1.5**

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 3
DATA SUMMARY FORM: INORGANICS

WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1	WFFI-MW2	WFFI-MW3	WFFI-MW3-D	WFFI-MW4	WFFI-MW5
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0
CRQL	**Analyte**						
200	Aluminum	**1300**	**620**	**750**	**780**	**2100 L**	**1700**
20	Antimony	20 U	20 U	20 U	20 U	20 UL	20 U
10	Arsenic	10 U	10 U	**13 K**	**11 K**	10 UL	**10 K**
10	Barium	**24**	**23**	**53**	**54**	**46 L**	**38**
4.0	Beryllium	**0.16 B**	4.0 U	4.0 U	**0.14 B**	**0.2 B**	**0.19 B**
5.0	Cadmium	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UL	5.0 U
500	Calcium	**11000**	**12000**	**62000**	**63000**	**22000 L**	**45000**
10	Chromium	**1.6 B**	**17**	10 U	10 U	**1.8 B**	**2.0 B**
10	Cobalt	10 U	10.0 U	**6.0 J**	**6.8 B**	**3.9 B**	10 U
20	Copper	20 U	20 U	20 U	20 U	20 UL	20 U
50	Iron	**310**	**170 L**	**10000**	**10000**	**920 L**	**7900**
5.0	Lead	5.0 UL	5.0 UL	5.0 UL	5.0 UL	5.0 UL	5.0 UL
500	Magnesium	**4100**	**3300**	**3300**	**3300**	**1800 L**	**3600**
10	Manganese	**34**	**41**	**690**	**700**	**120 L**	**530**
0.2	Mercury	0.20 U	0.20 U	0.20 U	**0.13 B**	0.20 UL	0.20 U
40	Nickel	**2.3 B**	40 U	**2.7 B**	**2.1 B**	40 UL	40 U
1000	Potassium	**1400**	**3400**	**2000**	**2100**	**2700 L**	**3400**
10	Selenium	10 U	10 U	10 U	10 U	10 UL	10 U
10	Silver	10 U	10 U	10 U	10 U	10 UL	10 U
1000	Sodium	**5600**	**5400**	**13000**	**13000**	**12000 L**	**7500**
25	Thallium	25 UL	25 UL	25 UL	25 UL	25 UL	25 UL
10	Vanadium	10 U	10 U	10 U	10 U	**2.5 B**	**1.8 B**
20	Zinc	**9 B**	**6.3 B**	**11 B**	**6.2 B**	**5.5 B**	**5.8 B**
10	Total Cyanide	10 U	10 U	10 U	10 U	10 UL	10 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Cor Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above the lab method detection limit

TABLE 4
DATA SUMMARY FORM: INORGANICS

WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW6	WFFI-MW7	WFFI-MW20	RINSATE-3	RINSATE-4
	Sample Date	2/22/2007	2/22/2007	2/23/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
CRQL	**Analyte**					
200	Aluminum	**2200**	**1600**	**730**	**89 B**	**99 B**
20	Antimony	20 U	20 U	20 U	20 U	20 U
10	Arsenic	10 U	10 U	**15 K**	10 U	10 U
10	Barium	**57**	**24**	**55**	10 U	10 U
4.0	Beryllium	**0.19 B**	**0.18 B**	**0.14 B**	4.0 U	4.0 U
5.0	Cadmium	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
500	Calcium	**45000**	**10000**	**64000**	**100 J**	**610**
10	Chromium	**2.2 B**	**4.1 B**	10 U	10 U	10 U
10	Cobalt	**7.1 J**	10 U	**6.6 J**	10 U	10 U
20	Copper	20 U	20 U	20 U	20 U	20 U
50	Iron	**5000**	**570**	**11000**	50 UL	50 UL
5.0	Lead	5.0 UL	5.0 UL	5.0 UL	5.0 UL	5.0 UL
500	Magnesium	**4300**	**4500**	**3400**	500 U	**14 J**
10	Manganese	**1500**	**22**	**720**	10 U	10 U
0.2	Mercury	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
40	Nickel	**3.4 B**	40 U	**2.9 B**	40 U	40 U
1000	Potassium	**3000**	**1900**	2100 U	1000 U	**23 J**
10	Selenium	10 UL	10 U	10 U	10 U	10 U
10	Silver	10 UL	10 U	10 U	10 U	10 U
1000	Sodium	**16000**	**6900**	**14000**	1000 U	1000 U
25	Thallium	25 UL	25 UL	25 UL	25 UL	25 UL
10	Vanadium	**1.9**	**1.6 J**	10 U	10 U	10 U
20	Zinc	**7.8 B**	**8.6 B**	**8.3 B**	**14 B**	**9.5 B**
10	Total Cyanide	10 U	10 U	10 U	10 U	10 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above the lab method detection limit

TABLE 1A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Volatile Organic Compounds**			
10	Acetone	58 U	50 U	47 U
5.0	Benzene	5.8 U	5.0 U	4.7 U
5.0	Bromoform	5.8 U	5.0 U	4.7 U
5.0	Bromomethane	5.8 U	5.0 U	4.7 U
5.0	Carbon disulfide	5.8 U	5.0 U	4.7 U
5.0	Carbon tetrachloride	5.8 U	5.0 U	4.7 U
5.0	Chlorobenzene	5.8 U	5.0 U	4.7 U
5.0	Chlorodibromomethane	5.8 U	5.0 U	4.7 U
5.0	Chloroethane	5.8 U	5.0 U	4.7 U
5.0	Chloroform	5.8 U	5.0 U	4.7 U
5.0	Chloromethane	5.8 U	5.0 U	4.7 U
5.0	cis-1,2-Dichloroethene	5.8 U	5.0 U	4.7 U
5.0	cis-1,3-Dichloropropene	5.8 U	5.0 U	4.7 U
5.0	Dichlorobromomethane	5.8 U	5.0 U	4.7 U
5.0	1,1-Dichloroethane	5.8 U	5.0 U	4.7 U
5.0	1,2-Dichloroethane	5.8 U	5.0 U	4.7 U
5.0	1,1-Dichloroethene	5.8 U	5.0 U	4.7 U
5.0	1,2-Dichloropropane	5.8 U	5.0 U	4.7 U
5.0	Ethylbenzene	5.8 U	5.0 U	4.7 U
10	2-Hexanone	29 U	25 U	24 U
5.0	Methylene Chloride	5.8 U	5.0 U	4.7 U
10	Methyl Ethyl Ketone	29 U	25 U	24 U
10	Methyl isobutyl ketone	29 U	25 U	24 U
5.0	Styrene	5.8 U	5.0 U	4.7 U
5.0	1,1,2,2-Tetrachloroethane	5.8 U	5.0 U	4.7 U
5.0	Tetrachloroethene	5.8 U	5.0 U	4.7 U
5.0	Toluene	5.8 U	5.0 U	4.7 U
5.0	trans-1,2-Dichloroethene	5.8 U	5.0 U	4.7 U
5.0	trans-1,3-Dichloropropene	5.8 U	5.0 U	4.7 U
5.0	1,1,1-Trichloroethane	5.8 U	5.0 U	4.7 U
5.0	1,1,2-Trichloroethane	5.8 U	5.0 U	4.7 U
5.0	Trichloroethene	5.8 U	5.0 U	4.7 U
5.0	Vinyl chloride	5.8 U	5.0 U	4.7 U
5.0	Xylenes, Total	12 U	10 U	9.4 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 1B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Volatile Organic Compounds**			
10	Acetone	**84 J**	49 U	52 U
5.0	Benzene	4.2 U	4.9 U	5.2 U
5.0	Bromoform	4.2 U	4.9 U	5.2 U
5.0	Bromomethane	4.2 U	4.9 U	5.2 U
5.0	Carbon disulfide	4.2 U	4.9 U	5.2 U
5.0	Carbon tetrachloride	4.2 U	4.9 U	5.2 U
5.0	Chlorobenzene	4.2 U	4.9 U	5.2 U
5.0	Chlorodibromomethane	4.2 U	4.9 U	5.2 U
5.0	Chloroethane	4.2 U	4.9 U	5.2 U
5.0	Chloroform	4.2 U	4.9 U	5.2 U
5.0	Chloromethane	4.2 U	4.9 U	5.2 U
5.0	cis-1,2-Dichloroethene	4.2 U	4.9 U	5.2 U
5.0	cis-1,3-Dichloropropene	4.2 U	4.9 U	5.2 U
5.0	Dichlorobromomethane	4.2 U	4.9 U	5.2 U
5.0	1,1-Dichloroethane	4.2 U	4.9 U	5.2 U
5.0	1,2-Dichloroethane	4.2 U	4.9 U	5.2 U
5.0	1,1-Dichloroethene	4.2 U	4.9 U	5.2 U
5.0	1,2-Dichloropropane	4.2 U	4.9 U	5.2 U
5.0	Ethylbenzene	4.2 U	4.9 U	5.2 U
10	2-Hexanone	21 U	25 U	26 U
5.0	Methylene Chloride	4.2 U	4.9 U	5.2 U
10	Methyl Ethyl Ketone	**8.3 J**	25 U	26 U
10	Methyl isobutyl ketone	21 U	25 U	26 U
5.0	Styrene	4.2 U	4.9 U	5.2 U
5.0	1,1,2,2-Tetrachloroethane	4.2 U	4.9 U	5.2 U
5.0	Tetrachloroethene	4.2 U	**6.7**	5.2 U
5.0	Toluene	4.2 U	4.9 U	5.2 U
5.0	trans-1,2-Dichloroethene	4.2 U	4.9 U	5.2 U
5.0	trans-1,3-Dichloropropene	4.2 U	4.9 U	5.2 U
5.0	1,1,1-Trichloroethane	4.2 U	4.9 U	5.2 U
5.0	1,1,2-Trichloroethane	4.2 U	4.9 U	5.2 U
5.0	Trichloroethene	4.2 U	4.9 U	5.2 U
5.0	Vinyl chloride	4.2 U	4.9 U	5.2 U
5.0	Xylenes, Total	8.3 U	9.8 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 1C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	7.5	62.9	61.3
CRQL	**Volatile Organic Compounds**			
10	Acetone	**630 J**	**740**	**55 J**
5.0	Benzene	71 UJ	9.5 U	11 U
5.0	Bromoform	71 UJ	9.5 U	11 U
5.0	Bromomethane	71 UJ	9.5 U	11 U
5.0	Carbon disulfide	71 UJ	9.5 U	11 U
5.0	Carbon tetrachloride	71 UJ	9.5 U	11 U
5.0	Chlorobenzene	71 UJ	9.5 U	11 U
5.0	Chlorodibromomethane	71 UJ	9.5 U	11 U
5.0	Chloroethane	71 UJ	9.5 U	11 U
5.0	Chloroform	71 UJ	9.5 U	11 U
5.0	Chloromethane	71 UJ	9.5 U	11 U
5.0	cis-1,2-Dichloroethene	71 UJ	9.5 U	11 U
5.0	cis-1,3-Dichloropropene	71 UJ	9.5 U	11 U
5.0	Dichlorobromomethane	71 UJ	9.5 U	11 U
5.0	1,1-Dichloroethane	71 UJ	9.5 U	11 U
5.0	1,2-Dichloroethane	71 UJ	9.5 U	11 U
5.0	1,1-Dichloroethene	71 UJ	9.5 U	11 U
5.0	1,2-Dichloropropane	71 UJ	9.5 U	11 U
5.0	Ethylbenzene	71 UJ	9.5 U	11 U
10	2-Hexanone	**130 J**	47 U	55 U
5.0	Methylene Chloride	71 UJ	9.5 U	11 U
10	Methyl Ethyl Ketone	**210 J**	**77**	55 U
10	Methyl isobutyl ketone	**91 J**	47 U	55 U
5.0	Styrene	71 UJ	9.5 U	11 U
5.0	1,1,2,2-Tetrachloroethane	**29 J**	9.5 U	11 U
5.0	Tetrachloroethene	71 UJ	**5.1 J**	11 U
5.0	Toluene	**1200 J**	**6.2 J**	11 U
5.0	trans-1,2-Dichloroethene	71 UJ	9.5 U	11 U
5.0	trans-1,3-Dichloropropene	71 UJ	9.5 U	11 U
5.0	1,1,1-Trichloroethane	71 UJ	9.5 U	11 U
5.0	1,1,2-Trichloroethane	71 UJ	9.5 U	11 U
5.0	Trichloroethene	71 UJ	9.5 U	11 U
5.0	Vinyl chloride	71 UJ	9.5 U	11 U
5.0	Xylenes, Total	140 UJ	19 U	22 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported concentrations above laboratory detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 1D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
CRQL	**Volatile Organic Compounds**				
25	Acetone	25 U	25 U	**52 J**	**50 J**
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	**0.65 B**	**0.57 B**
10	Methyl Ethyl Ketone	10 U	10 U	**17**	**16 J**
10	Methyl isobutyl ketone	10 U	10 U	10 U	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	**4.4**	1.0 U	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U	**0.77 B**	**0.66 B**
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
NA	Not analyzed
Bold	Reported concentrations above laboratory detection limit

TABLE 1E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
CRQL	**Volatile Organic Compounds**					
25	Acetone	25 U	25 U	25 U	25 U	**47 J**
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	5.0 U	5.0 U	**0.58 B**
10	Methyl Ethyl Ketone	10 U	10 U	10 U	10 U	**15 J**
10	Methyl isobutyl ketone	10 U	10 U	10 U	10 U	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U	1.0 U	1.0 U	**0.64 B**
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above laboratory method detection limit

TABLE 1F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4	TB-4	TB-5
	Sample Date	2/22/2007	2/23/2007	2/24/2007	2/24/2007
	Location	Field QC	Field QC	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
CRQL	**Volatile Organic Compounds**				
25	Acetone	25 U	25 U	25 U	25 U
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	**0.57 J**	5.0 U
10	Methyl Ethyl Ketone	10 U	10 U	10 U	10 U
10	Methyl isobutyl ketone	10 U	10 U	10 U	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Toluene	**4.6**	**3.9**	1.0 U	1.0 U
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Semivolatile Organic Compounds**			
330	Acenaphthene	360 UJ	390 UJ	390 UJ
330	Acenaphthylene	360 U	390 U	390 U
330	Anthracene	360 U	390 U	390 U
330	Benzo[a]anthracene	360 U	390 U	390 U
330	Benzo[a]pyrene	360 U	390 U	390 U
330	Benzo[b]fluoranthene	360 U	390 U	390 U
330	Benzo[g,h,i]perylene	360 U	390 U	390 U
330	Benzo[k]fluoranthene	360 U	390 U	390 U
330	Bis(2-chloroethoxy)methane	360 U	390 U	390 U
330	Bis(2-chloroethyl)ether	360 U	390 U	390 U
330	bis(chloroisopropyl) ether	360 U	390 U	390 U
330	Bis(2-ethylhexyl) phthalate	360 U	390 U	390 U
330	4-Bromophenyl phenyl ether	360 U	390 U	390 U
330	Butyl benzyl phthalate	360 U	390 U	390 U
330	Carbazole	360 U	390 U	390 U
660	4-Chloroaniline	720 U	780 U	770 U
330	4-Chloro-3-methylphenol	360 U	390 U	390 U
330	2-Chloronaphthalene	360 U	390 U	390 U
330	2-Chlorophenol	360 U	390 U	390 U
330	4-Chlorophenyl phenyl ether	360 U	390 U	390 U
330	Chrysene	360 U	390 U	390 U
330	Dibenz(a,h)anthracene	360 U	390 U	390 U
330	Dibenzofuran	360 U	390 U	390 U
330	1,3-Dichlorobenzene	360 U	390 U	390 U
330	1,4-Dichlorobenzene	360 U	390 U	390 U
330	1,2-Dichlorobenzene	360 U	390 U	390 U
660	3,3'-Dichlorobenzidine	720 U	780 U	770 U
330	2,4-Dichlorophenol	360 U	390 U	390 U
330	Diethyl phthalate	360 U	390 U	390 U
330	2,4-Dimethylphenol	360 U	390 U	390 U
330	Dimethyl phthalate	360 U	390 U	390 U
330	Di-n-butyl phthalate	360 U	390 U	390 U
1700	4,6-Dinitro-2-methylphenol	1900 U	2000 U	2000 U
1700	2,4-Dinitrophenol	1900 UJ	2000 UJ	2000 UJ
330	2,4-Dinitrotoluene	360 U	390 U	390 U
330	2,6-Dinitrotoluene	360 U	390 U	390 U
330	Di-n-octyl phthalate	360 U	390 U	390 U
330	Fluoranthene	360 U	390 U	390 U

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Semivolatile Organic Compounds**			
330	Fluorene	360 U	390 U	390 U
330	Hexachlorobenzene	360 U	390 U	390 U
330	Hexachlorobutadiene	360 U	390 U	390 U
330	Hexachlorocyclopentadiene	360 U	390 U	390 U
330	Hexachloroethane	360 U	390 U	390 U
330	Indeno[1,2,3-cd]pyrene	360 U	390 U	390 U
330	Isophorone	360 U	390 U	390 U
330	2-Methylnaphthalene	360 U	390 U	390 U
330	2-Methylphenol	360 U	390 U	390 U
330	3 & 4 Methylphenol	360 U	390 U	390 U
330	Naphthalene	360 U	390 U	390 U
1700	2-Nitroaniline	1900 U	2000 U	2000 U
1700	3-Nitroaniline	1900 U	2000 U	2000 U
1700	4-Nitroaniline	1900 U	2000 U	2000 U
330	Nitrobenzene	360 U	390 U	390 U
330	2-Nitrophenol	360 U	390 U	390 U
1700	4-Nitrophenol	1900 U	2000 U	2000 U
330	N-Nitrosodi-n-propylamine	360 UL	390 UL	390 UL
330	N-Nitrosodiphenylamine	360 U	390 U	390 U
1700	Pentachlorophenol	1900 U	2000 U	2000 U
330	Phenanthrene	360 U	390 U	390 U
330	Phenol	360 U	390 U	390 U
330	Pyrene	360 UJ	390 UJ	390 UJ
330	1,2,4-Trichlorobenzene	360 UL	390 UL	390 UL
330	2,4,6-Trichlorophenol	360 U	390 U	390 U
330	2,4,5-Trichlorophenol	360 U	390 U	390 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Semivolatile Organic Compounds**			
330	Acenaphthene	380 UJ	430 UJ	420 UJ
330	Acenaphthylene	380 U	430 U	420 U
330	Anthracene	380 U	430 U	420 U
330	Benzo[a]anthracene	380 U	430 U	420 U
330	Benzo[a]pyrene	380 U	430 U	420 U
330	Benzo[b]fluoranthene	380 U	430 U	420 U
330	Benzo[g,h,i]perylene	380 U	430 U	420 U
330	Benzo[k]fluoranthene	380 U	430 U	420 U
330	Bis(2-chloroethoxy)methane	380 U	430 U	420 U
330	Bis(2-chloroethyl)ether	380 U	430 U	420 U
330	bis(chloroisopropyl) ether	380 U	430 U	420 U
330	Bis(2-ethylhexyl) phthalate	380 U	430 U	420 U
330	4-Bromophenyl phenyl ether	380 U	430 U	420 U
330	Butyl benzyl phthalate	380 U	430 U	420 U
330	Carbazole	380 U	430 U	420 U
660	4-Chloroaniline	770 U	860 U	820 U
330	4-Chloro-3-methylphenol	380 U	430 U	420 U
330	2-Chloronaphthalene	380 U	430 U	420 U
330	2-Chlorophenol	380 U	430 U	420 U
330	4-Chlorophenyl phenyl ether	380 U	430 U	420 U
330	Chrysene	380 U	430 U	420 U
330	Dibenz(a,h)anthracene	380 U	430 U	420 U
330	Dibenzofuran	380 U	430 U	420 U
330	1,3-Dichlorobenzene	380 U	430 U	420 U
330	1,4-Dichlorobenzene	380 U	430 U	420 U
330	1,2-Dichlorobenzene	380 U	430 U	420 U
660	3,3'-Dichlorobenzidine	770 U	860 U	820 U
330	2,4-Dichlorophenol	380 U	430 U	420 U
330	Diethyl phthalate	380 U	430 U	420 U
330	2,4-Dimethylphenol	380 U	430 U	420 U
330	Dimethyl phthalate	380 U	430 U	420 U
330	Di-n-butyl phthalate	**36 J**	430 U	420 U
1700	4,6-Dinitro-2-methylphenol	2000 U	2200 U	2100 U
1700	2,4-Dinitrophenol	2000 UJ	2200 UJ	2100 UJ
330	2,4-Dinitrotoluene	380 U	430 U	420 U
330	2,6-Dinitrotoluene	380 U	430 U	420 U
330	Di-n-octyl phthalate	380 U	430 U	420 U
330	Fluoranthene	380 U	430 U	420 U

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Semivolatile Organic Compounds**			
330	Fluorene	380 U	430 U	420 U
330	Hexachlorobenzene	380 U	430 U	420 U
330	Hexachlorobutadiene	380 U	430 U	420 U
330	Hexachlorocyclopentadiene	380 U	430 U	420 U
330	Hexachloroethane	380 U	430 U	420 U
330	Indeno[1,2,3-cd]pyrene	380 U	430 U	420 U
330	Isophorone	380 U	430 U	420 U
330	2-Methylnaphthalene	380 U	430 U	420 U
330	2-Methylphenol	380 U	430 U	420 U
330	3 & 4 Methylphenol	380 U	430 U	420 U
330	Naphthalene	380 U	430 U	420 U
1700	2-Nitroaniline	2000 U	2200 U	2100 U
1700	3-Nitroaniline	2000 U	2200 U	2100 U
1700	4-Nitroaniline	2000 U	2200 U	2100 U
330	Nitrobenzene	380 U	430 U	420 U
330	2-Nitrophenol	380 U	430 U	420 U
1700	4-Nitrophenol	2000 U	2200 U	2100 U
330	N-Nitrosodi-n-propylamine	380 UL	430 UL	420 UL
330	N-Nitrosodiphenylamine	380 U	430 U	420 U
1700	Pentachlorophenol	2000 U	2200 U	2100 U
330	Phenanthrene	380 U	430 U	420 U
330	Phenol	380 U	430 U	420 U
330	Pyrene	380 UJ	430 UJ	420 UJ
330	1,2,4-Trichlorobenzene	380 UL	430 UL	420 UL
330	2,4,6-Trichlorophenol	380 U	430 U	420 U
330	2,4,5-Trichlorophenol	380 U	430 U	420 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	7.5	62.9	61.3
CRQL	**Semivolatile Organic Compounds**			
330	Acenaphthene	4400 UJ	520 U	540 U
330	Acenaphthylene	4400 UJ	520 U	540 U
330	Anthracene	**630 J**	**74 J**	**64 J**
330	Benzo[a]anthracene	**2100 J**	**400 J**	**290 J**
330	Benzo[a]pyrene	**910 J**	**490 J**	**290 J**
330	Benzo[b]fluoranthene	**4800 J**	**870**	**550**
330	Benzo[g,h,i]perylene	**1200 J**	**390 J**	**270 J**
330	Benzo[k]fluoranthene	**2400 J**	**590**	**290 J**
330	Bis(2-chloroethoxy)methane	4400 UJ	520 U	540 U
330	Bis(2-chloroethyl)ether	4400 UJ	520 U	540 U
330	bis(chloroisopropyl) ether	4400 UJ	520 U	540 U
330	Bis(2-ethylhexyl) phthalate	4400 UJ	**79 J**	540 U
330	4-Bromophenyl phenyl ether	4400 UJ	520 U	540 U
330	Butyl benzyl phthalate	4400 UJ	520 U	540 U
330	Carbazole	4400 UJ	**53 J**	540 U
660	4-Chloroaniline	8800 UJ	1000 U	1100 U
330	4-Chloro-3-methylphenol	4400 UJ	520 U	540 U
330	2-Chloronaphthalene	4400 UJ	520 U	540 U
330	2-Chlorophenol	4400 UJ	520 U	540 U
330	4-Chlorophenyl phenyl ether	4400 UJ	520 U	540 U
330	Chrysene	**4700 J**	**570**	**480 J**
330	Dibenz(a,h)anthracene	4400 UJ	520 U	**76 J**
330	Dibenzofuran	4400 UJ	520 U	540 U
330	1,3-Dichlorobenzene	4400 UJ	520 U	540 U
330	1,4-Dichlorobenzene	4400 UJ	**84 J**	**84 J**
330	1,2-Dichlorobenzene	4400 UJ	520 U	540 U
660	3,3'-Dichlorobenzidine	8800 UJ	1000 U	1100 U
330	2,4-Dichlorophenol	4400 UJ	520 UJ	540 UJ
330	Diethyl phthalate	4400 UJ	520 U	540 U
330	2,4-Dimethylphenol	4400 UJ	520 U	540 U
330	Dimethyl phthalate	4400 UJ	520 U	540 U
330	Di-n-butyl phthalate	4400 UJ	**110 J**	**89 J**
1700	4,6-Dinitro-2-methylphenol	23000 UJ	2700 U	2800 U
1700	2,4-Dinitrophenol	23000 UJ	2700 UJ	2800 UJ
330	2,4-Dinitrotoluene	4400 UJ	520 U	540 U
330	2,6-Dinitrotoluene	4400 UJ	520 U	540 U
330	Di-n-octyl phthalate	4400 UJ	520 U	540 U
330	Fluoranthene	**9000 J**	**500 J**	**410 J**

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	7.5	62.9	61.3
CRQL	**Semivolatile Organic Compounds**			
330	Fluorene	**360 J**	520 U	540 U
330	Hexachlorobenzene	4400 UJ	520 U	540 U
330	Hexachlorobutadiene	4400 UJ	520 U	540 U
330	Hexachlorocyclopentadiene	4400 UJ	520 U	540 U
330	Hexachloroethane	4400 UJ	520 U	540 U
330	Indeno[1,2,3-cd]pyrene	**1400 J**	**330 J**	**230 J**
330	Isophorone	4400 UJ	520 U	540 U
330	2-Methylnaphthalene	4400 UJ	520 U	540 U
330	2-Methylphenol	4400 UJ	520 U	540 U
330	3 & 4 Methylphenol	4400 UJ	520 U	540 U
330	Naphthalene	4400 UJ	520 U	540 U
1700	2-Nitroaniline	23000 UJ	2700 U	2800 U
1700	3-Nitroaniline	23000 UJ	2700 U	2800 U
1700	4-Nitroaniline	23000 UJ	2700 U	2800 U
330	Nitrobenzene	4400 UJ	520 U	540 U
330	2-Nitrophenol	4400 UJ	520 U	540 U
1700	4-Nitrophenol	23000 UJ	2700 U	2800 U
330	N-Nitrosodi-n-propylamine	4400 UJ	520 U	540 U
330	N-Nitrosodiphenylamine	4400 UJ	520 U	540 U
1700	Pentachlorophenol	23000 UJ	2700 U	2800 U
330	Phenanthrene	**3000 J**	**200 J**	**170 J**
330	Phenol	4400 UJ	520 U	540 U
330	Pyrene	**6300 J**	**420 J**	**360 J**
330	1,2,4-Trichlorobenzene	4400 UJ	520 U	540 U
330	2,4,6-Trichlorophenol	4400 UJ	520 U	540 U
330	2,4,5-Trichlorophenol	4400 UJ	520 U	540 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume	1030	1020	1040	1000
CRQL	**Semivolatile Organic Compounds**				
10	Acenaphthene	9.7 U	9.8 U	9.6 U	10 U
10	Acenaphthylene	9.7 U	9.8 U	9.6 U	10 U
10	Anthracene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[a]anthracene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[a]pyrene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[b]fluoranthene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[g,h,i]perylene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[k]fluoranthene	9.7 U	9.8 U	9.6 U	10 U
10	Bis(2-chloroethoxy)methan	9.7 U	9.8 U	9.6 U	10 U
10	Bis(2-chloroethyl)ether	9.7 U	9.8 U	9.6 U	10 U
10	bis(chloroisopropyl) ether	9.7 U	9.8 U	9.6 U	10 U
10	Bis(2-ethylhexyl) phthalate	**1.5 J**	9.8 U	9.6 U	10 U
10	4-Bromophenyl phenyl eth	9.7 U	9.8 U	9.6 U	10 U
10	Butyl benzyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	Carbazole	9.7 U	9.8 U	9.6 U	10 U
20	4-Chloroaniline	19 U	20 U	19 U	20 U
10	4-Chloro-3-methylphenol	9.7 U	9.8 U	9.6 U	10 U
10	2-Chloronaphthalene	9.7 U	9.8 U	9.6 U	10 U
10	2-Chlorophenol	9.7 U	9.8 U	9.6 U	10 U
10	4-Chlorophenyl phenyl eth	9.7 U	9.8 U	9.6 U	10 U
10	Chrysene	9.7 U	9.8 U	9.6 U	10 U
10	Dibenz(a,h)anthracene	9.7 U	9.8 U	9.6 U	10 U
10	Dibenzofuran	9.7 U	9.8 U	9.6 U	10 U
10	1,3-Dichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	1,4-Dichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	1,2-Dichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
20	3,3'-Dichlorobenzidine	19 U	20 U	19 U	20 U
10	2,4-Dichlorophenol	9.7 U	9.8 U	9.6 U	10 U
10	Diethyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	2,4-Dimethylphenol	9.7 U	9.8 U	9.6 U	10 U
10	Dimethyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	Di-n-butyl phthalate	9.7 U	9.8 U	9.6 U	10 U
50	4,6-Dinitro-2-methylpheno	49 U	49 U	48 U	50 U
50	2,4-Dinitrophenol	49 UR	49 UR	48 UR	50 UR
10	2,4-Dinitrotoluene	9.7 U	9.8 U	9.6 U	10 U
10	2,6-Dinitrotoluene	9.7 U	9.8 U	9.6 U	10 U
10	Di-n-octyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	Fluoranthene	9.7 U	9.8 U	9.6 U	10 U
10	Fluorene	9.7 U	9.8 U	9.6 U	10 U

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume	1030	1020	1040	1000
CRQL	**Semivolatile Organic Compounds**				
10	Hexachlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	Hexachlorobutadiene	9.7 U	9.8 U	9.6 U	10 U
10	Hexachlorocyclopentadien	9.7 U	9.8 U	9.6 U	10 U
10	Hexachloroethane	9.7 U	9.8 U	9.6 U	10 U
10	Indeno[1,2,3-cd]pyrene	9.7 U	9.8 U	9.6 U	10 U
10	Isophorone	9.7 U	9.8 U	9.6 U	10 U
10	2-Methylnaphthalene	9.7 U	9.8 U	9.6 U	10 U
10	2-Methylphenol	9.7 U	9.8 U	9.6 U	10 U
10	3 & 4 Methylphenol	9.7 U	9.8 U	**7.8 J**	**4.7 J**
10	Naphthalene	9.7 U	9.8 U	9.6 U	10 U
50	2-Nitroaniline	49 U	49 U	48 U	50 U
50	3-Nitroaniline	49 U	49 U	48 U	50 U
50	4-Nitroaniline	49 U	49 U	48 U	50 U
10	Nitrobenzene	9.7 U	9.8 U	9.6 U	10 U
50	2-Nitrophenol	9.7 U	9.8 U	9.6 U	10 U
50	4-Nitrophenol	49 U	49 U	48 U	50 U
10	N-Nitrosodi-n-propylamine	9.7 U	9.8 U	9.6 U	10 U
10	N-Nitrosodiphenylamine	9.7 U	9.8 U	9.6 U	10 U
50	Pentachlorophenol	49 U	49 U	48 U	50 U
10	Phenanthrene	9.7 U	9.8 U	9.6 U	10 U
10	Phenol	9.7 U	9.8 U	**8.6 J**	**7.8 J**
10	Pyrene	9.7 U	9.8 U	9.6 U	10 U
10	1,2,4-Trichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	2,4,6-Trichlorophenol	9.7 U	9.8 U	9.6 U	10 U
10	2,4,5-Trichlorophenol	9.7 U	9.8 U	9.6 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
R	Rejected value based on QC data
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Volume)

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Sample Volume	1000	1000	1000	1060	1000
CRQL	**Semivolatile Organic Compounds**					
10	Acenaphthene	10 U	10 U	10 U	9.4 U	10 U
10	Acenaphthylene	10 U	10 U	10 U	9.4 U	10 U
10	Anthracene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[a]anthracene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[a]pyrene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[b]fluoranthene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[g,h,i]perylene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[k]fluoranthene	10 U	10 U	10 U	9.4 U	10 U
10	Bis(2-chloroethoxy)methane	10 U	10 U	10 U	9.4 U	10 U
10	Bis(2-chloroethyl)ether	10 U	10 U	10 U	9.4 U	10 U
10	bis(chloroisopropyl) ether	10 U	10 U	10 U	9.4 U	10 U
10	Bis(2-ethylhexyl) phthalate	10 U	10 U	**1.1 J**	9.4 U	10 U
10	4-Bromophenyl phenyl ether	10 U	10 U	10 U	9.4 U	10 U
10	Butyl benzyl phthalate	10 U	10 U	10 U	9.4 U	10 U
10	Carbazole	10 U	10 U	10 U	9.4 U	10 U
20	4-Chloroaniline	20 U	20 U	20 U	19 U	20 U
10	4-Chloro-3-methylphenol	10 U	10 U	10 U	9.4 U	10 U
10	2-Chloronaphthalene	10 U	10 U	10 U	9.4 U	10 U
10	2-Chlorophenol	10 U	10 U	10 U	9.4 U	10 U
10	4-Chlorophenyl phenyl ether	10 U	10 U	10 U	9.4 U	10 U
10	Chrysene	10 U	10 U	10 U	9.4 U	10 U
10	Dibenz(a,h)anthracene	10 U	10 U	10 U	9.4 U	10 U
10	Dibenzofuran	10 U	10 U	10 U	9.4 U	10 U
10	1,3-Dichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	1,4-Dichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	1,2-Dichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
20	3,3'-Dichlorobenzidine	20 U	20 U	20 U	19 U	20 U
10	2,4-Dichlorophenol	10 U	10 U	10 U	9.4 U	10 U
10	Diethyl phthalate	10 U	10 U	10 U	**0.73 J**	10 U
10	2,4-Dimethylphenol	10 U	10 U	10 U	9.4 U	**100**
10	Dimethyl phthalate	10 U	10 U	10 U	9.4 U	10 U
10	Di-n-butyl phthalate	10 U	10 U	10 U	9.4 U	10 U
50	4,6-Dinitro-2-methylphenol	50 U	50 U	50 U	47 U	50 U
50	2,4-Dinitrophenol	50 UR	50 UR	50 UR	47 UR	50 UR
10	2,4-Dinitrotoluene	10 U	10 U	10 U	9.4 U	10 U
10	2,6-Dinitrotoluene	10 U	10 U	10 U	9.4 U	10 U
10	Di-n-octyl phthalate	10 U	10 U	10 U	9.4 U	10 U
10	Fluoranthene	10 U	10 U	10 U	9.4 U	10 U

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Sample Volume	1000	1000	1000	1060	1000
CRQL	**Semivolatile Organic Compounds**					
10	Fluorene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachlorobutadiene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachlorocyclopentadiene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachloroethane	10 U	10 U	10 U	9.4 U	10 U
10	Indeno[1,2,3-cd]pyrene	10 U	10 U	10 U	9.4 U	10 U
10	Isophorone	10 U	10 U	10 U	9.4 U	10 U
10	2-Methylnaphthalene	10 U	10 U	10 U	9.4 U	10 U
10	2-Methylphenol	10 U	10 U	10 U	9.4 U	10 U
10	3 & 4 Methylphenol	10 U	10 U	10 U	9.4 U	**11**
10	Naphthalene	10 U	10 U	10 U	9.4 U	10 U
50	2-Nitroaniline	50 U	50 U	50 U	47 U	50 U
50	3-Nitroaniline	50 U	50 U	50 U	47 U	50 U
50	4-Nitroaniline	50 U	50 U	50 U	47 U	50 U
10	Nitrobenzene	10 U	10 U	10 U	9.4 U	10 U
50	2-Nitrophenol	10 U	10 U	10 U	9.4 U	10 U
50	4-Nitrophenol	50 U	50 U	50 U	47 U	50 U
10	N-Nitrosodi-n-propylamine	10 U	10 U	10 U	9.4 U	10 U
10	N-Nitrosodiphenylamine	10 U	10 U	10 U	9.4 U	10 U
50	Pentachlorophenol	50 U	50 U	50 U	47 U	50 U
10	Phenanthrene	10 U	10 U	10 U	9.4 U	10 U
10	Phenol	10 U	10 U	10 U	9.4 U	**12**
10	Pyrene	10 U	10 U	10 U	9.4 U	10 U
10	1,2,4-Trichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	2,4,6-Trichlorophenol	10 U	10 U	10 U	9.4 U	10 U
10	2,4,5-Trichlorophenol	10 U	10 U	10 U	9.4 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
NA	Not analyzed
R	Rejected value based on QC data
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Volume)

TABLE 2F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4
	Sample Date	2/22/2007	2/23/2007
	Location	Field QC	Field QC
	Dilution Factor	1.0	1.0
	Sample Volume (ml)	1040	1000
CRQL	**Semivolatile Organic Compounds**		
10	Acenaphthene	9.6 U	10 U
10	Acenaphthylene	9.6 U	10 U
10	Anthracene	9.6 U	10 U
10	Benzo[a]anthracene	9.6 U	10 U
10	Benzo[a]pyrene	9.6 U	10 U
10	Benzo[b]fluoranthene	9.6 U	10 U
10	Benzo[g,h,i]perylene	9.6 U	10 U
10	Benzo[k]fluoranthene	9.6 U	10 U
10	Bis(2-chloroethoxy)methar	9.6 U	10 U
10	Bis(2-chloroethyl)ether	9.6 U	10 U
10	bis(chloroisopropyl) ether	9.6 U	10 U
10	Bis(2-ethylhexyl) phthalate	9.6 U	10 U
10	4-Bromophenyl phenyl eth	9.6 U	10 U
10	Butyl benzyl phthalate	9.6 U	10 U
10	Carbazole	9.6 U	10 U
20	4-Chloroaniline	19 U	20 U
10	4-Chloro-3-methylphenol	9.6 U	10 U
10	2-Chloronaphthalene	9.6 U	10 U
10	2-Chlorophenol	9.6 U	10 U
10	4-Chlorophenyl phenyl eth	9.6 U	10 U
10	Chrysene	9.6 U	10 U
10	Dibenz(a,h)anthracene	9.6 U	10 U
10	Dibenzofuran	9.6 U	10 U
10	1,3-Dichlorobenzene	9.6 U	10 U
10	1,4-Dichlorobenzene	9.6 U	10 U
10	1,2-Dichlorobenzene	9.6 U	10 U
20	3,3'-Dichlorobenzidine	19 U	20 U
10	2,4-Dichlorophenol	9.6 U	10 U
10	Diethyl phthalate	9.6 U	10 U
10	2,4-Dimethylphenol	9.6 U	10 U
10	Dimethyl phthalate	9.6 U	10 U
10	Di-n-butyl phthalate	9.6 U	10 U
50	4,6-Dinitro-2-methylpheno	48 U	50 U
50	2,4-Dinitrophenol	48 UR	50 UR
10	2,4-Dinitrotoluene	9.6 U	10 U
10	2,6-Dinitrotoluene	9.6 U	10 U
10	Di-n-octyl phthalate	9.6 U	10 U
10	Fluoranthene	9.6 U	10 U

TABLE 2F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4
	Sample Date	2/22/2007	2/23/2007
	Location	Field QC	Field QC
	Dilution Factor	1.0	1.0
	Sample Volume (ml)	1040	1000
CRQL	**Semivolatile Organic Compounds**		
10	Fluorene	9.6 U	10 U
10	Hexachlorobenzene	9.6 U	10 U
10	Hexachlorobutadiene	9.6 U	10 U
10	Hexachlorocyclopentadien	9.6 U	10 U
10	Hexachloroethane	9.6 U	10 U
10	Indeno[1,2,3-cd]pyrene	9.6 U	10 U
10	Isophorone	9.6 U	10 U
10	2-Methylnaphthalene	9.6 U	10 U
10	2-Methylphenol	9.6 U	10 U
10	3 & 4 Methylphenol	9.6 U	10 U
10	Naphthalene	9.6 U	10 U
50	2-Nitroaniline	48 U	50 U
50	3-Nitroaniline	48 U	50 U
50	4-Nitroaniline	48 U	50 U
10	Nitrobenzene	9.6 U	10 U
50	2-Nitrophenol	9.6 U	10 U
50	4-Nitrophenol	48 U	50 U
10	N-Nitrosodi-n-propylamine	9.6 U	10 U
10	N-Nitrosodiphenylamine	9.6 U	10 U
50	Pentachlorophenol	48 U	50 U
10	Phenanthrene	9.6 U	10 U
10	Phenol	9.6 U	10 U
10	Pyrene	9.6 U	10 U
10	1,2,4-Trichlorobenzene	9.6 U	10 U
10	2,4,6-Trichlorophenol	9.6 U	10 U
10	2,4,5-Trichlorophenol	9.6 U	10 U

Notes: B - Present in laboratory blank and/or field QC samples
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/L - Microgram per liter
ml - Milliliter
NA - Not analyzed
R - Rejected value based on QC data
Bold - Reported value is above lab method detection limit
* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

TABLE 3A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Pesticide Compounds**			
1.7	Aldrin	1.8 U	2.0 U	2.0 U
1.7	alpha-BHC	1.8 U	2.0 U	2.0 U
1.7	beta-BHC	1.8 U	2.0 U	2.0 U
1.7	Chlordane (technical)	18 U	20 U	20 U
3.3	4,4'-DDD	3.5 U	3.9 U	3.8 U
3.3	4,4'-DDE	**0.42 J**	**0.41 J**	**0.65 J**
3.3	4,4'-DDT	3.5 U	3.9 U	3.8 U
1.7	delta-BHC	1.8 U	2.0 U	2.0 U
3.3	Dieldrin	3.5 U	3.9 U	3.8 U
1.7	Endosulfan I	1.8 U	2.0 U	2.0 U
3.3	Endosulfan II	3.5 U	3.9 U	3.8 U
3.3	Endosulfan sulfate	3.5 U	3.9 U	3.8 U
3.3	Endrin	3.5 U	3.9 U	3.8 U
3.3	Endrin aldehyde	3.5 U	3.9 U	3.8 U
3.3	Endrin ketone	3.5 U	3.9 U	3.8 U
1.7	gamma-BHC (Lindane)	1.8 U	2.0 U	2.0 U
1.7	Heptachlor	1.8 U	2.0 U	2.0 U
1.7	Heptachlor epoxide	1.8 U	2.0 U	2.0 U
17	Methoxychlor	18 U	20 U	20 U
33	PCB-1016	35 U	39 U	38 U
67	PCB-1221	72 U	79 U	77 U
33	PCB-1232	35 U	39 U	38 U
33	PCB-1242	35 U	39 U	38 U
33	PCB-1248	35 U	39 U	38 U
33	PCB-1254	35 U	39 U	38 U
33	PCB-1260	35 U	39 U	38 U
170	Toxaphene	180 U	200 U	200 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Pesticide Compounds**			
1.7	Aldrin	2.0 U	2.2 UJ	2.1 UJ
1.7	alpha-BHC	2.0 U	2.2 UJ	2.1 UJ
1.7	beta-BHC	2.0 U	2.2 UJ	2.1 UJ
1.7	Chlordane (technical)	20 U	22 UJ	21 UJ
3.3	4,4'-DDD	3.8 U	4.3 UJ	**3.8 J**
3.3	4,4'-DDE	**0.76 J**	**0.77 J**	**3.2 J**
3.3	4,4'-DDT	3.8 U	4.3 UJ	**3.8 J**
1.7	delta-BHC	2.0 U	2.2 UJ	2.1 UJ
3.3	Dieldrin	3.8 U	4.3 UJ	4.1 UJ
1.7	Endosulfan I	2.0 U	2.2 UJ	2.1 UJ
3.3	Endosulfan II	3.8 U	4.3 UJ	4.1 UJ
3.3	Endosulfan sulfate	3.8 U	4.3 UJ	4.1 UJ
3.3	Endrin	3.8 U	4.3 UJ	4.1 UJ
3.3	Endrin aldehyde	3.8 U	4.3 UJ	4.1 UJ
3.3	Endrin ketone	3.8 U	4.3 UJ	4.1 UJ
1.7	gamma-BHC (Lindane)	2.0 U	2.2 UJ	2.1 UJ
1.7	Heptachlor	2.0 U	2.2 UJ	2.1 UJ
1.7	Heptachlor epoxide	2.0 U	2.2 UJ	2.1 UJ
17	Methoxychlor	20 U	22 UJ	21 UJ
33	PCB-1016	38 U	43 UJ	41 UJ
67	PCB-1221	77 U	88 UJ	83 UJ
33	PCB-1232	38 U	43 UJ	41 UJ
33	PCB-1242	38 U	43 UJ	41 UJ
33	PCB-1248	38 U	43 UJ	41 UJ
33	PCB-1254	38 U	43 UJ	41 UJ
33	PCB-1260	38 U	43 UJ	41 UJ
170	Toxaphene	200 U	220 UJ	210 UJ

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0/10[a]	5.0/50[a]	4.0/40[a]
	Percent Solids	10	62.9	61.3
CRQL	**Pesticide Compounds**			
1.7	Aldrin	220 UJ	13 U	11 U
1.7	alpha-BHC	220 UJ	13 U	11 U
1.7	beta-BHC	220 UJ	13 U	11 U
1.7	Chlordane (technical)	2200 UJ	130 U	110 U
3.3	4,4'-DDD	**110 J**	**1100 J**	**1200 J**
3.3	4,4'-DDE	**67 J**	**1400**	**1300**
3.3	4,4'-DDT	**110 J**	**890 J**	**1100 J**
1.7	delta-BHC	220 UJ	13 U	11 U
3.3	Dieldrin	440 UJ	**9.9 J**	**5.6 J**
1.7	Endosulfan I	220 UJ	13 U	11 U
3.3	Endosulfan II	440 UJ	26 U	21 U
3.3	Endosulfan sulfate	440 UJ	26 U	21 U
3.3	Endrin	440 UJ	26 U	21 U
3.3	Endrin aldehyde	440 UJ	26 U	21 U
3.3	Endrin ketone	440 UJ	26 U	21 U
1.7	gamma-BHC (Lindane)	220 UJ	13 U	11 U
1.7	Heptachlor	220 UJ	13 U	11 U
1.7	Heptachlor epoxide	220 UJ	13 U	11 U
17	Methoxychlor	2200 UJ	130 U	110 U
33	PCB-1016	4400 UJ	260 U	210 U
67	PCB-1221	8900 UJ	530 U	440 U
33	PCB-1232	4400 UJ	260 U	210 U
33	PCB-1242	4400 UJ	260 U	210 U
33	PCB-1248	4400 UJ	260 U	210 U
33	PCB-1254	4400 UJ	260 U	210 U
33	PCB-1260	4400 UJ	260 U	210 U
170	Toxaphene	22000 UJ	1300 U	1100 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit
a	Second dilution performed for DDx compounds

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1040	1040	1060	1000
CRQL	**Pesticides Compounds**				
0.050	Aldrin	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	alpha-BHC	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	beta-BHC	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.50	Chlordane (technical)	0.48 U	0.48 U	0.47 UJ	0.50 UJ
0.10	4,4'-DDD	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	4,4'-DDE	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	4,4'-DDT	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.50	delta-BHC	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.10	Dieldrin	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.050	Endosulfan I	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.10	Endosulfan II	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endosulfan sulfate	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endrin	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endrin aldehyde	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endrin ketone	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.050	gamma-BHC (Lindane)	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	Heptachlor	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	Heptachlor epoxide	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.50	Methoxychlor	0.48 U	0.48 U	0.47 UJ	0.50 UJ
1.0	PCB-1016	0.96 U	0.96 U	0.94 UJ	1.0 UJ
2.0	PCB-1221	1.9 U	1.9 U	1.9 UJ	2.0 UJ
1.0	PCB-1232	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1242	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1248	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1254	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1260	0.96 U	0.96 U	0.94 UJ	1.0 UJ
5.0	Toxaphene	4.8 U	4.8 U	4.7 UJ	5.0 UJ

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

TABLE 3E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1000	1040	1000	1000	980
CRQL	**Pesticides Compounds**					
0.050	Aldrin	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	alpha-BHC	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	beta-BHC	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.50	Chlordane (technical)	0.50 U	0.48 U	0.50 UJ	0.50 U	0.51 UJ
0.10	4,4'-DDD	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	4,4'-DDE	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	4,4'-DDT	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.50	delta-BHC	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.10	Dieldrin	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.050	Endosulfan I	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.10	Endosulfan II	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endosulfan sulfate	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endrin	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endrin aldehyde	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endrin ketone	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.050	gamma-BHC (Lindane)	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	Heptachlor	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	Heptachlor epoxide	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.50	Methoxychlor	0.50 U	0.48 U	0.50 UJ	0.50 U	0.51 UJ
1.0	PCB-1016	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
2.0	PCB-1221	2.0 U	1.9 U	2.0 UJ	2.0 U	2.0 UJ
1.0	PCB-1232	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1242	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1248	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1254	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1260	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
5.0	Toxaphene	5.0 U	4.8 U	5.0 UJ	5.0 U	5.1 UJ

Notes:

B	Present in laboratory blank and/or field QC blank sample
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

TABLE 3F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4
	Sample Date	2/22/2007	2/23/2007
	Location	Field QC	Field QC
	Dilution Factor	1.0	1.0
	Sample Volume	1000	850
CRQL	**Pesticides Compounds**		
0.050	Aldrin	0.050 U	0.059 UJ
0.050	alpha-BHC	0.050 U	0.059 UJ
0.050	beta-BHC	0.050 U	0.059 UJ
0.50	Chlordane (technical)	0.50 U	0.59 UJ
0.10	4,4'-DDD	0.10 U	0.12 UJ
0.10	4,4'-DDE	0.10 U	0.12 UJ
0.10	4,4'-DDT	0.10 U	0.12 UJ
0.50	delta-BHC	0.050 U	0.059 UJ
0.10	Dieldrin	0.10 U	0.12 UJ
0.050	Endosulfan I	0.050 U	0.059 UJ
0.10	Endosulfan II	0.10 U	0.12 UJ
0.10	Endosulfan sulfate	0.10 U	0.12 UJ
0.10	Endrin	0.10 U	0.12 UJ
0.10	Endrin aldehyde	0.10 U	0.12 UJ
0.10	Endrin ketone	0.10 U	0.12 UJ
0.050	gamma-BHC (Lindane)	0.050 U	0.059 UJ
0.050	Heptachlor	0.050 U	0.059 UJ
0.050	Heptachlor epoxide	0.050 U	0.059 UJ
0.50	Methoxychlor	0.50 U	0.59 UJ
1.0	PCB-1016	1.0 U	1.2 UJ
2.0	PCB-1221	2.0 U	2.4 UJ
1.0	PCB-1232	1.0 U	1.2 UJ
1.0	PCB-1242	1.0 U	1.2 UJ
1.0	PCB-1248	1.0 U	1.2 UJ
1.0	PCB-1254	1.0 U	1.2 UJ
1.0	PCB-1260	1.0 U	1.2 UJ
5.0	Toxaphene	5.0 U	5.9 UJ

Notes: B - Present in the laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/L - Microgram per liter
ml - Milliliter
NA - Not analyzed
Bold - Reported value is above lab method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

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Memorandum
Norcross Office

DATE: April 23, 2007

TO: Teresa Offner, Project Manager

FROM: Paula MacLaren, Environmental Scientist

RE: Inorganic Data Validation and Usability Report
Wallops Island Flight Facility, VA - Old Waste Water Treatment Plant No.1
Site Investigation – Sampling Event
Contract Number (No.) W91236-05-D-0036
Laboratory Sample Delivery Group (SDG) No. 680-24460

OVERVIEW

Severn Trent Laboratories, Inc. analyzed 16 soil samples and 1 QC sample collected by Weston Solutions, Inc., (WESTON) at the Old Waste Water Treatment Plant No.1 located at Wallops Island Flight Facility, Virginia, on February 19-20, 2007. The sample identifications are presented below:

WFFI-MW2-0-0.5	WFFI-MW5-0.5-2	WFFI-SS1
WFFI-MW2-0.5-2	WFFI-MW5-2-4	WFFI-SS1-D (QC)
WFFI-MW2-19-21	WFFI-MW6-0-0.5	WWFI-SS6
WFFI-MW4-0-0.5	WFFI-WW6-0.5-2	
WFFI-MW4-0.5-2	WFFI-MW6-2-4	
WFFI-MW4-3-5	WFFI-MW7-0-0.5	
WFFI-MW5-0-0.5	WFFI-MW7-0.5-2	

The samples were analyzed for the following parameters:

- Target analyte list (TAL) metals; *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846) Methods 6010B and 7471A
- Total cyanide; SW-846 Method 9012A

SUMMARY

WESTON performed data validation in accordance with the *U.S. Environmental Protection Agency (USEPA) Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses*, April 1993. This report only addresses quality assurance/quality control

(QA/QC) problems which affect data usability in meeting site objectives. The following quality assurance/quality control (QA/QC) criteria were reviewed:

- Case narrative and deliverables compliance
- Holding Time, sample preservation and storage
- Field sample identity and laboratory sample identity comparison
- QC accuracy and precision acceptance criteria
- Solid sample moisture contents and dry weight
- Instrument calibration
- Instrument linearity
- Initial and continuing calibration blank checks
- Laboratory method blank, field QC blanks
- Continuing calibration verification
- Inductively coupled plasma (ICP) Interference check samples
- Laboratory control sample percent recovery
- Matrix spike and matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD)
- ICP serial dilution QC check sample
- Laboratory duplicates and percent RPD
- Method detection limits (MDL) and reporting limits (RL)
- Qualitative and quantitative analyte identification
- Field duplicate samples
- Chain-of-custody (COC)
- Overall assessment of data

The laboratory deliverable report met the requirements and format of a full EPA Contract Laboratory Program (CLP) data deliverable package. The following QA/QC sample analysis observations were noted:

MAJOR PROBLEMS

- No major problems resulting in the rejection of sample data were found.

MINOR PROBLEMS

ICP TAL Metals Analysis:

- The laboratory method blank showed contamination of lead at 0.35 milligrams per kilogram (mg/kg), and potassium at 1.5 mg/kg. Sample lead and potassium raw data were evaluated against the blank concentrations to determine if their reported values were affected; concentrations less than 5 times the blank concentration. No sample potassium data were

impacted. Soil samples with reported lead concentrations at less than five times the blank concentration were qualified as having possible laboratory contamination (B) and are considered invalid. These samples are presented below:

WFFI-MW2-19-21
WFFI-MW6-0.5-2
WFFI-MW6-2-4

- The CCB QC check sample series showed antimony, beryllium, chromium, copper, lead, manganese, and vanadium contamination. Associated sample antimony, chromium, manganese, and vanadium results were either not detected or greater than 5 times the CCB and determined not to be impacted. Samples with concentrations less than 5 times the corresponding CCB for beryllium, copper, and lead were qualified (B) as having possible laboratory contamination and are considered invalid. These samples are presented below:

WFFI-MW4-0-0.5 (beryllium)
WFFI-MW4-3-5 (beryllium)
WFFI-MW-5-2-4 (copper)
WFFI-MW6-0.5-2 (beryllium and copper)
WFFI-MW6-2-4 (beryllium and copper)

- Several sample lead and potassium results were greater than 5 times the blank concentrations [lead at 1.7 micrograms per liter (ug/L) and potassium at 15.4 ug/L] but still had been qualified by the laboratory as having been affected by laboratory contamination (B). The data qualifier (B), therefore, has been removed from the following samples:

WFFI-MW2-0-0.5 (lead and potassium)
WFFI-MW2-0.5-2 (lead and potassium)
WWFI-MW2-19-21 (potassium)
WFFI-MW4-0-0.5 (lead and potassium)
WFFI-MW4-0.5-2 (lead and potassium)
WFFI-MW4-3-5 (lead and potassium)
WFFI-MW5-0-0.5 (lead and potassium)
WFFI-MW5-0.5-2 (lead and potassium)
WFFI-MW5-2-4 (lead and potassium)
WFFI-MW6-0-0.5 (lead and potassium)
WFFI-MW6-0.5-2 (potassium)
WFFI-MW6-2-4 (potassium)
WFFI-MW7-0.5-2 (lead and potassium)
WFFI-SS1 (lead and potassium)
WFFI-SS1-D (lead and potassium)
WFFI-SS6 (lead and potassium)

- The contract quantitation detection limit (CRQL) check standard (CRI) percent recoveries for arsenic, antimony, iron, lead, selenium, and sodium exceeded the recommended QA/QC upper control limit of 110 percent. The following samples with reported concentrations above the method detection limit but less than or equal to 2 times the analyte CRQL were qualified as estimated high (K).

WFFI-MW2-0-0.5 estimated high for sodium
WFFI-MW2-0-5-2 estimated high for sodium
WFFI-MW2-19-21 estimated high for arsenic, lead, and sodium
WFFI-MW4-0-0.5 estimated high for antimony, arsenic, and sodium
WFFI-MW4-0.5-2 estimated high for sodium

WFFI-MW4-3-5 estimated high for arsenic and sodium
WFFI-MW5-0-0.5 estimated high for arsenic and sodium
WFFI-MW5-0.5-2 estimated high for sodium
WFFI-MW5-2-4 estimated high for arsenic, lead, and sodium
WFFI-MW6-0-0.5 estimated high for arsenic and sodium
WFFI-MW6-0.5-2 estimated high for lead and sodium
WFFI-MW6-2-4 estimated high for lead and sodium
WFFI-MW7-0-0.5 estimated high for antimony and sodium
WFFI-MW7-0.5-2 estimated high for arsenic and sodium
WFFI-SS1 estimated high for antimony and sodium
WFFI-SS1-D estimated high for antimony and sodium
WFFI-SS6 estimated high for antimony and sodium

Metals of interest not detected or samples with concentrations above 2 times the CRQL did not require data qualifiers. Selenium was not detected in any of the site soil samples.

- ICP metals MS/MSD analysis was performed on site soil sample WFFI-MW2-0.5-2. The MS and MSD percent recoveries for aluminum and iron exceeded the QA/QC recommendation of 75 to 125 percent. The sample aluminum and iron concentrations, however, were greater than four times their spike concentrations, and therefore, these matrix spike recovery limits do not apply. No data qualifiers were applied to site sample results.

- Field duplicate sample set WFFI-SS1/WFFI-SS1-D showed barium at the QA/QC limit of 35 RPD. No data qualifiers were applied to site samples. All other metals were within 35 RPD.

Mercury Analysis:

- The CRQL check standard (CRI) percent recovery for mercury (73 percent) exceeded the recommended QA/QC lower control limit of 80 percent. The following samples with reported concentrations above the method detection limit but less than or equal to 2 times the mercury CRQL were qualified as biased low (L). In addition, samples with mercury reported as not detected were qualified as biased low (UL).

WFFI-MW2-0-0.5	WFFI-MW5-0.5-2
WFFI-MW2-0-5-2	WFFI-MW5-2-4
WFFI-MW2-19-21	WFFI-MW6-0-0.5
WFFI-MW4-0-0.5	WFFI-MW6-0.5-2
WFFI-MW4-0.5-2	WFFI-MW6-2-4
WFFI-MW4-3-5	WFFI-MW7-0-0.5
WFFI-MW5-0-0.5	WFFI-MW7-0.5-2

- The mercury MS/MSD analysis was performed on site soil sample WFFI-SS6. Both spiked percent recoveries exceeded the QA/QC limit of 125 percent; 132 percent and 175 percent,

respectively. Site soil sample mercury results with matrices similar to sample WFFI-SS6 were qualified as biased high (K):

WFFI-SS1
WFFI-SS1-D
WFFI-SS6

The post digestion spike analysis showed mercury percent recovery within limits at 88 percent.

NOTES

- Inorganic analyses were not performed on site soil samples WFFI-SS2 and WFFI-SS3.
- Samples were received by the laboratory slightly below the QA/QC recommended preservative temperature of 4°C±2°C; 1.1, 1.4, and 1.6 °C. Based on this observation, it has been determined that no impact to sample data had occurred.
- Due to the limited information concerning cyanide holding times for soil samples, the water sample holding time of 14-days as referenced in *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (April 1993), were applied for soil samples.
- When there are several QC data qualifiers applied to a value, the hierarchy of qualifiers is followed: R, B, L, K, J.

The laboratory has provided additional information in their case narrative. Based on the evaluation of all information provided in the analytical data package, the results are highly usable with the data validation qualifiers as noted. The sample data is presented in the following attachments.

ATTACHMENTS

Appendix A – Glossary of Data Qualifier Codes
Appendix B – Data Summary Tables
Appendix C – Laboratory Reported Results
Appendix D – Support Documentation

APPENDIX A

Glossary of Data Qualifier Codes
(Inorganic)

DATA QUALIFIER CODES
(Inorganic Analyses)

Codes Related To Identification

(confidence concerning presence or absence of compounds):

U = The analyte was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

R = The data are unusable. (Note: The analyte may or may not be present.)

Codes Related To Quantitation

(can be used for both positive results and sample quantitation limits):

J = The associated value is an estimated quantity

UJ = The analyte was analyzed for, but was not detected. The associated detection limit is an estimate and may be inaccurate or imprecise.

K = The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L = The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL = The analyte was not detected, and the actual quantitation limit is probably higher than reported.

APPENDIX B

Data Summary Tables
(Inorganic)

TABLE 1
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5	WFFI-MW4-0.5-2
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0	90.9
CRQL	Analyte					
20	Aluminum	**13000**	**8100**	**2600**	**4600**	**9700**
6.0	Antimony	2.2 U	2.0 U	2.2 U	**0.72 K**	2.0 U
1.0	Arsenic	**3.4**	**2.2**	**0.96 K**	**1.6 K**	**3.4**
20	Barium	**43**	**25**	**11**	**18**	**38**
0.5	Beryllium	**0.33 J**	**0.21 J**	**0.084 J**	**0.13 B**	**0.29 J**
0.5	Cadmium	0.55 U	0.50 U	0.55 U	0.56 U	0.51 U
500	Calcium	**970**	**490**	**140**	**530**	**420**
1.0	Chromium	**13**	**8.2**	**3.7**	**5.6**	**9.3**
5.0	Cobalt	**2.8**	**1.4**	**0.39 J**	**0.98 J**	**2.0**
2.5	Copper	**3.6**	**2.6**	**0.85 J**	**3.0**	**2.6**
10	Iron	**8400**	**4500**	**1400**	**3600**	**6500**
1.0	Lead	**5.3**	**3.0**	**1.1 B**	**6.7**	**4.8**
500	Magnesium	**790**	**410**	**140**	**430**	**720**
1.5	Manganese	**97**	**56**	**26**	**71**	**90**
0.1	Mercury	**0.027 L**	**0.023 L**	0.020 UL	**0.046 L**	**0.020 L**
4.0	Nickel	**6.2**	**3.9 J**	**1.2 J**	**4.5 J**	**4.7**
500	Potassium	**540**	**340**	**180**	**380**	**460**
3.5	Selenium	2.8 U	2.5 U	2.7 U	2.8 U	2.5 U
1.0	Silver	1.1 U	0.99 U	1.1 U	1.1 U	1.0 U
500	Sodium	**94 K**	**67 K**	**73 K**	**96 K**	**85 K**
2.5	Thallium	2.8 U	2.5 U	2.7 U	2.8 U	2.5 U
5.0	Vanadium	**18**	**9.8**	**2.9**	**22**	**14**
6.0	Zinc	**14**	**7.2**	**3.8**	**14**	**13**
2.5	Total Cyanide	0.58 U	0.54 U	0.58 U	0.59 U	0.54 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 2
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-3-5	WFFI-MW5-0-0.5	WFFI-MW5-0.5-2	WFFI-MW5-2-4	WFFI-MW6-0-0.5
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	87.2	89.4	89.9	86.9	86.4
CRQL	Analyte					
20	Aluminum	**3800**	**4400**	**8100**	**4300**	**3000**
6.0	Antimony	2.2 U	2.2 U	2.1 U	2.1 U	2.1 U
1.0	Arsenic	**1.2 K**	**2.0 K**	**3.5**	**0.76 K**	**1.2 K**
20	Barium	**14**	**15**	**27**	**21**	**13**
0.5	Beryllium	**0.13 B**	**0.15 J**	**0.23 J**	**0.16 J**	**0.087 J**
0.5	Cadmium	0.55 U	0.54 U	0.52 U	0.51 U	0.54 U
500	Calcium	**200**	**160**	**200**	**170**	**570**
1.0	Chromium	**4.7**	**5.1**	**6.7**	**4.3**	**4.6**
5.0	Cobalt	**0.69 J**	**0.84 J**	**1.4**	**1.0 J**	**0.57 J**
2.5	Copper	**1.3 J**	**1.7 J**	**2.4**	**1.2 B**	**1.5 J**
10	Iron	**2300**	**3000**	**4200**	**2600**	**2600**
1.0	Lead	**2.3**	**5.4**	**2.5**	**1.9 K**	**6.1**
500	Magnesium	**250**	**340**	**350**	**320**	**280**
1.5	Manganese	**28**	**42**	**53**	**20**	**49**
0.1	Mercury	**0.015 L**	**0.024 L**	**0.016 L**	**0.012 L**	**0.028 L**
4.0	Nickel	**1.7 B**	**2.1 B**	**2.9 B**	**2.5 B**	**2.9 B**
500	Potassium	**240**	**300**	**320**	**250**	**250**
3.5	Selenium	2.7 U	2.7 U	2.6 U	2.6 U	2.7 U
1.0	Silver	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U
500	Sodium	**66 K**	**68 K**	**62 K**	**67 K**	**83 K**
2.5	Thallium	2.7 U	2.7 U	2.6 U	2.6 U	2.7 U
5.0	Vanadium	**5.4**	**7.4**	**9.1**	**6.9**	**14**
6.0	Zinc	**5.8**	**13**	**11**	**6.4**	**13**
2.5	Total Cyanide	0.57 U	0.55 U	0.55 U	0.56 U	**0.34 J**

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 3
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW6-0.5-2	WFFI-MW6-2-4	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	87.1	82.7	74.6	80.7
CRQL	Analyte				
20	Aluminum	**1400**	**1300**	**12000**	**5100**
6.0	Antimony	2.2 U	2.2 U	**0.59 K**	2.2 U
1.0	Arsenic	1.1 U	1.1 U	**5.4**	**1.4 K**
20	Barium	**7.1**	**5.9**	**54**	**20**
0.5	Beryllium	**0.046 B**	**0.044 B**	**0.42 J**	**0.16 J**
0.5	Cadmium	0.55 U	0.56 U	0.62 U	0.56 U
500	Calcium	**79 B**	**96 B**	**1200**	**270**
1.0	Chromium	**2.0**	**1.6 B**	**13**	**5.7**
5.0	Cobalt	**0.26 J**	**0.23 J**	**3.3**	**0.92 J**
2.5	Copper	**0.41 B**	**0.31 B**	**6.7**	**2.3**
10	Iron	**940 B**	**620 B**	**8800**	**2500**
1.0	Lead	**1.7 B**	**0.85 B**	**20**	**5.0**
500	Magnesium	**100**	**85**	**1100**	**390**
1.5	Manganese	**9.5**	**5.5**	**130**	**15**
0.1	Mercury	**0.0046 L**	**0.0055 L**	**0.099 L**	**0.027 L**
4.0	Nickel	**0.76 B**	**0.65 B**	**7.7**	**3.0 B**
500	Potassium	**120**	**130**	**540**	**280**
3.5	Selenium	2.8 U	2.8 U	3.1 U	2.8 U
1.0	Silver	1.1 U	1.1 U	**0.20 J**	1.1 U
500	Sodium	**64 K**	**71 K**	**120 K**	**78 K**
2.5	Thallium	2.8 U	2.8 U	3.1 U	2.8 U
5.0	Vanadium	**2.4**	**1.8**	**24**	**7.7**
6.0	Zinc	**2.5 B**	**1.8 B**	**60**	**27**
2.5	Total Cyanide	0.56 U	0.59 U	0.65 U	0.61 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 4
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	Analyte					
20	Aluminum	**8400**	**7900**	NA	NA	**9500**
6.0	Antimony	**2.8 K**	**3.0 K**	NA	NA	**3.2 K**
1.0	Arsenic	**3.2**	**2.6**	NA	NA	**3.2**
20	Barium	**100**	**69**	NA	NA	**67**
0.5	Beryllium	**0.25 J**	**0.24 J**	NA	NA	**0.27 J**
0.5	Cadmium	**0.35 J**	**0.35 J**	NA	NA	**0.37 J**
500	Calcium	**2500**	**2400**	NA	NA	**2300**
1.0	Chromium	**9.3**	**9.2**	NA	NA	**11**
5.0	Cobalt	**2.0**	**2.0**	NA	NA	**2.2**
2.5	Copper	**13**	**15**	NA	NA	**12**
10	Iron	**5500**	**5300**	NA	NA	**6500**
1.0	Lead	**400**	**460**	NA	NA	**400**
500	Magnesium	**620**	**610**	NA	NA	**690**
1.5	Manganese	**120**	**130**	NA	NA	**120**
0.1	Mercury	**0.13 K**	**0.14 K**	NA	NA	**0.13 K**
4.0	Nickel	**5.8**	**5.6**	NA	NA	**6.2**
500	Potassium	**470**	**440**	NA	NA	**500**
3.5	Selenium	2.8 U	2.8 U	NA	NA	2.8 U
1.0	Silver	1.1 U	**0.12 J**	NA	NA	**0.17 J**
500	Sodium	**100 K**	**100 J**	NA	NA	**100 K**
2.5	Thallium	2.8 U	2.8 U	NA	NA	2.8 U
5.0	Vanadium	**18**	**18**	NA	NA	**19**
6.0	Zinc	**240**	**250**	NA	NA	**230**
2.5	Total Cyanide	0.60 U	0.61 U	0.54 U	0.53 U	0.59 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
NA	Not analyzed
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

APPENDIX C

Laboratory Reported Results
(Inorganic)

Copy

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-1

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 83

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	3.4			P
7440-39-3	Barium	43			P
7440-41-7	Beryllium	0.33	J		P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	970			P
7440-47-3	Chromium	13			P
7440-48-4	Cobalt	2.8			P
7440-50-8	Copper	3.6			P
7439-89-6	Iron	8400			P
7439-92-1	Lead	5.3		B	P
7439-95-4	Magnesium	790			P
7439-96-5	Manganese	97			P
7440-02-0	Nickel	6.2			P
7440-09-7	Potassium	540		B	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	94	J	K	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	18			P
7440-66-6	Zinc	14			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high; CRI percent recovery above 110%.
B- Reported also in sample concentration > 5 times blank concentration.

yes

Copy

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-1

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 83

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.027		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRI percent recovery below 80%.

Copy

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2-0-5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-2

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 91

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8100			P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	2.2			P
7440-39-3	Barium	25			P
7440-41-7	Beryllium	0.21	J		P
7440-43-9	Cadmium	0.50	U		P
7440-70-2	Calcium	490			P
7440-47-3	Chromium	8.2			P
7440-48-4	Cobalt	1.4			P
7440-50-8	Copper	2.6			P
7439-89-6	Iron	4500			P
7439-92-1	Lead	3.0		B	P
7439-95-4	Magnesium	410			P
7439-96-5	Manganese	56			P
7440-02-0	Nickel	3.9	J		P
7440-09-7	Potassium	340		B	P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	0.99	U		P
7440-23-5	Sodium	67	J	K	P
7440-28-0	Thallium	2.5	U		P
7440-62-2	Vanadium	9.8			P
7440-66-6	Zinc	7.2			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K-Biased high; CRi percent recovery above 110%.
B-Reported due to sample concentration >5 times blank contaminant?

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-2

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 91

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.023		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low, CRI percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2-19-21

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-3

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2600			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	0.96	J	K	P
7440-39-3	Barium	11			P
7440-41-7	Beryllium	0.084	J		P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	140			P
7440-47-3	Chromium	3.7			P
7440-48-4	Cobalt	0.39	J		P
7440-50-8	Copper	0.85	J		P
7439-89-6	Iron	1400			P
7439-92-1	Lead	1.1		B, K	P
7439-95-4	Magnesium	140			P
7439-96-5	Manganese	26			P
7440-02-0	Nickel	1.2	J		P
7440-09-7	Potassium	180		B	P
7782-49-2	Selenium	2.7	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	73	J	K	P
7440-28-0	Thallium	2.7	U	K	P
7440-62-2	Vanadium	2.9			P
7440-66-6	Zinc	3.8			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high, CRI percent recovery above 110%.
B- Present in laboratory blank (Lead at 0.35 mg/kg)
B- Reported due to sample concentration >5 times blank concentration.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2-19-21

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-3

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.020	U	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRI percent recovery below 80%

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW4-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-12

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 85

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4600			P
7440-36-0	Antimony	0.72	J	K	P
7440-38-2	Arsenic	1.6		K	P
7440-39-3	Barium	18			P
7440-41-7	Beryllium	0.13	J	B	P
7440-43-9	Cadmium	0.56	U		P
7440-70-2	Calcium	530			P
7440-47-3	Chromium	5.6			P
7440-48-4	Cobalt	0.98	J		P
7440-50-8	Copper	3.0			P
7439-89-6	Iron	3600			P
7439-92-1	Lead	6.7		B	P
7439-95-4	Magnesium	430			P
7439-96-5	Manganese	71			P
7440-02-0	Nickel	4.5	J		P
7440-09-7	Potassium	380		B	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	96	J	K	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	22			P
7440-66-6	Zinc	14			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high. CCC percent recovery exceeded 110%.
B- Present in laboratory QC.
B- Reported due to sample concentration >5 times lab enhancement.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW4-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-12

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 85

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.046		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low, CRi percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW4-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-13

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 91

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9700			P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	3.4			P
7440-39-3	Barium	38			P
7440-41-7	Beryllium	0.29	J		P
7440-43-9	Cadmium	0.51	U		P
7440-70-2	Calcium	420			P
7440-47-3	Chromium	9.3			P
7440-48-4	Cobalt	2.0			P
7440-50-8	Copper	2.6			P
7439-89-6	Iron	6500			P
7439-92-1	Lead	4.8		B	P
7439-95-4	Magnesium	720			P
7439-96-5	Manganese	90			P
7440-02-0	Nickel	4.7			P
7440-09-7	Potassium	460		B	P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	85	J	K	P
7440-28-0	Thallium	2.5	U		P
7440-62-2	Vanadium	14			P
7440-66-6	Zinc	13			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high. CRI percent recovery exceeded 110%.
B - Reported due to sample concentration greater than 5 times laboratory contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW4-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-13

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 91

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.020	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRI percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW4-3-5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-14

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 87

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3800			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	1.2		K	P
7440-39-3	Barium	14			P
7440-41-7	Beryllium	0.13	J	B'	P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	200			P
7440-47-3	Chromium	4.7			P
7440-48-4	Cobalt	0.69	J		P
7440-50-8	Copper	1.3	J		P
7439-89-6	Iron	2300			P
7439-92-1	Lead	2.3		B	P
7439-95-4	Magnesium	250			P
7439-96-5	Manganese	28			P
7440-02-0	Nickel	1.7	J	B'	P
7440-09-7	Potassium	240		B	P
7782-49-2	Selenium	2.7	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	66	J	K	P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	5.4			P
7440-66-6	Zinc	5.8			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K-Biased high. CRI percent recovery exceeded 110%.
B'-present within the laboratory blank (LOB).
B2-present within the Reicate / QA target; concentration is less than
a [illegible] to [illegible] ... 5 times Blocat. [illegible]

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW4-3-5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-14

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 87

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.015	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low, CRI percent recovery below 80%.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW5-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-9

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 89

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4400			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	2.0		K	P
7440-39-3	Barium	15			P
7440-41-7	Beryllium	0.15	J		P
7440-43-9	Cadmium	0.54	U		P
7440-70-2	Calcium	160			P
7440-47-3	Chromium	5.1			P
7440-48-4	Cobalt	0.84	J		P
7440-50-8	Copper	1.7	J		P
7439-89-6	Iron	3000			P
7439-92-1	Lead	5.4		B	P
7439-95-4	Magnesium	340			P
7439-96-5	Manganese	42			P
7440-02-0	Nickel	2.1	J	B	P
7440-09-7	Potassium	300		B	P
7782-49-2	Selenium	2.7	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	68	J	K	P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	7.4			P
7440-66-6	Zinc	13			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high, CRI percent recovery exceeded 110%.
B - Present in Reagent / QC sample; concentration is less than 5 times
B - Present in Reagent / QC sample; concentration is less than 5 times Reagent Sample

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW5-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-9

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 89

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.024		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRI percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1MW5-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-10

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8100			P
7440-36-0	Antimony	2.1	U		P
7440-38-2	Arsenic	3.5			P
7440-39-3	Barium	27			P
7440-41-7	Beryllium	0.23	J		P
7440-43-9	Cadmium	0:52	U		P
7440-70-2	Calcium	200			P
7440-47-3	Chromium	6.7			P
7440-48-4	Cobalt	1.4			P
7440-50-8	Copper	2.4			P
7439-89-6	Iron	4200			P
7439-92-1	Lead	2.5		B	P
7439-95-4	Magnesium	350			P
7439-96-5	Manganese	53			P
7440-02-0	Nickel	2.9	J	B	P
7440-09-7	Potassium	320		B	P
7782-49-2	Selenium	2.6	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	62	J	K	P
7440-28-0	Thallium	2.6	U		P
7440-62-2	Vanadium	9.1			P
7440-66-6	Zinc	11			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K-Biased high; CRI percent recovery exceeded 110%.
B-Presented in Rinsate (Sample) concentration is less than 5 times Rinsate Sample.
B-Removed due to sample concentration is greater than 5 times value in Blk.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1MW5-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-10

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.016	J		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L- Biased low; CRI percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW5-2-4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-11

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 87

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4300			P
7440-36-0	Antimony	2.1	U		P
7440-38-2	Arsenic	0.76	J	K	P
7440-39-3	Barium	21			P
7440-41-7	Beryllium	0.16	J		P
7440-43-9	Cadmium	0.51	U		P
7440-70-2	Calcium	170			P
7440-47-3	Chromium	4.3			P
7440-48-4	Cobalt	1.0	J		P
7440-50-8	Copper	1.2	J	B'	P
7439-89-6	Iron	2600			P
7439-92-1	Lead	1.9		B K	P
7439-95-4	Magnesium	320			P
7439-96-5	Manganese	20			P
7440-02-0	Nickel	2.5	J	B2	P
7440-09-7	Potassium	250		B	P
7782-49-2	Selenium	2.6	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	67	J	K	P
7440-28-0	Thallium	2.6	U		P
7440-62-2	Vanadium	6.9			P
7440-66-6	Zinc	6.4			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high; CRI percent recovery exceeded 110%.
B- Present in laboratory QC B.
B2- Present in Request & QC sample; concentration is less than 5 times
B- Detected due to sample concentration > Request sample

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW5-2.4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-11

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 87

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.012	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRL percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW6-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-4

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 86

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3000			P
7440-36-0	Antimony	2.1	U		P
7440-38-2	Arsenic	1.2		K	P
7440-39-3	Barium	13			P
7440-41-7	Beryllium	0.087	J		P
7440-43-9	Cadmium	0.54	U		P
7440-70-2	Calcium	570			P
7440-47-3	Chromium	4.6			P
7440-48-4	Cobalt	0.57	J		P
7440-50-8	Copper	1.5	J		P
7439-89-6	Iron	2600			P
7439-92-1	Lead	6.1		B	P
7439-95-4	Magnesium	280			P
7439-96-5	Manganese	49			P
7440-02-0	Nickel	2.9	J	B	P
7440-09-7	Potassium	250		B	P
7782-49-2	Selenium	2.7	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	83	J	K	P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	14			P
7440-66-6	Zinc	13			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high. CRI percent recovery above 110%

B - Present in Blank(s) (Nickel at 2.9ug/L)

B - Reported due to sample concentration >5 times blank concentration

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW6-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-4

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 86

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.028		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: 1 - Biased low; CRi percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW6-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-5

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 87

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1400			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	1.1	U		P
7440-39-3	Barium	7.1			P
7440-41-7	Beryllium	0.046	J	B'	P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	79		B'	P
7440-47-3	Chromium	2.0			P
7440-48-4	Cobalt	0.26	J		P
7440-50-8	Copper	0.41	J	B'	P
7439-89-6	Iron	940		B'	P
7439-92-1	Lead	1.7		B' K	P
7439-95-4	Magnesium	100			P
7439-96-5	Manganese	9.5			P
7440-02-0	Nickel	0.76	J	B'	P
7440-09-7	Potassium	120		B'	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	64	J	K	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	2.4			P
7440-66-6	Zinc	2.5		B'	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high. CCBi percent recovery above 110%

B' - Present in laboratory blank

B - Present in associated (QC sample) sample concentration < 5 times blank

B - Removed due to sample concentration greater than 5 times blank

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW6-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-5

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 87

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.0046	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low, CRi percent recovery below 80%.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW6-2-4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-6

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 83

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1300			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	1.1	U		P
7440-39-3	Barium	5.9			P
7440-41-7	Beryllium	0.044	J	B1	P
7440-43-9	Cadmium	0.56	U		P
7440-70-2	Calcium	96		B2	P
7440-47-3	Chromium	1.6		B2	P
7440-48-4	Cobalt	0.23	J		P
7440-50-8	Copper	0.31	J	B1	P
7439-89-6	Iron	620		B2	P
7439-92-1	Lead	0.85		B K	P
7439-95-4	Magnesium	85			P
7439-96-5	Manganese	5.5			P
7440-02-0	Nickel	0.65	J	B2	P
7440-09-7	Potassium	130		B	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	71	J	K	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	1.8			P
7440-66-6	Zinc	1.8	J	B2	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high. CRI percent recovery above 110%
B1 - present in laboratory blank
B2 - present in Rinsate if the sample concentration is less than 5 times Rinsate.
B - Removed due to sample concentration greater than 5 times blank contaminant.

SW 2A

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW6-2-4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-6

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 83

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.0055	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRI percent recovery below 80%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW7-0.-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-7

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 75

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12000			P
7440-36-0	Antimony	0.59	J	K	P
7440-38-2	Arsenic	5.4			P
7440-39-3	Barium	54			P
7440-41-7	Beryllium	0.42	J		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	1200			P
7440-47-3	Chromium	13			P
7440-48-4	Cobalt	3.3			P
7440-50-8	Copper	6.7			P
7439-89-6	Iron	8800			P
7439-92-1	Lead	20			P
7439-95-4	Magnesium	1100			P
7439-96-5	Manganese	130			P
7440-02-0	Nickel	7.7			P
7440-09-7	Potassium	540			P
7782-49-2	Selenium	3.1	U		P
7440-22-4	Silver	0.20	J		P
7440-23-5	Sodium	120		K	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	24			P
7440-66-6	Zinc	60			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high, CRI percent recovery above 110%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW7-0.-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-7

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 75

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.099		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - biased low, CRi percent recovery below 80 percent.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW7-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-8

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5100			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	1.4		K	P
7440-39-3	Barium	20			P
7440-41-7	Beryllium	0.16	J		P
7440-43-9	Cadmium	0.56	U		P
7440-70-2	Calcium	270			P
7440-47-3	Chromium	5.7			P
7440-48-4	Cobalt	0.92	J		P
7440-50-8	Copper	2.3			P
7439-89-6	Iron	2500			P
7439-92-1	Lead	5.0		B	P
7439-95-4	Magnesium	390			P
7439-96-5	Manganese	15			P
7440-02-0	Nickel	3.0	J	B	P
7440-09-7	Potassium	280		B	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	78	J	K	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	7.7			P
7440-66-6	Zinc	27			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high; CRI percent recovery above 110%
B- Present in Reprep / MB sample concentration is less than five times Reprep sample

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW7-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-8

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.027		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRi percent recovery below 80%.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-SS1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-17

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8400			P
7440-36-0	Antimony	2.8		K	P
7440-38-2	Arsenic	3.2			P
7440-39-3	Barium	100			P
7440-41-7	Beryllium	0.25	J		P
7440-43-9	Cadmium	0.35	J		P
7440-70-2	Calcium	2500			P
7440-47-3	Chromium	9.3			P
7440-48-4	Cobalt	2.0			P
7440-50-8	Copper	13			P
7439-89-6	Iron	5500			P
7439-92-1	Lead	400		B	P
7439-95-4	Magnesium	620			P
7439-96-5	Manganese	120			P
7440-02-0	Nickel	5.8			P
7440-09-7	Potassium	470		B	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	100	J	K	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	18			P
7440-66-6	Zinc	240			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K-Biased high. CCi percent percent recovery exceeded 110%.
B-Reported value is between instrument detection limit and the 5 time laboratory contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-17

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13		K	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high. MS/MSD percent recovery exceeded 125%. LCS percent recovery at 68%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS1-D

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-18

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7900			P
7440-36-0	Antimony	3.0		K	P
7440-38-2	Arsenic	2.6			P
7440-39-3	Barium	69			P
7440-41-7	Beryllium	0.24	J		P
7440-43-9	Cadmium	0.35	J		P
7440-70-2	Calcium	2400			P
7440-47-3	Chromium	9.2			P
7440-48-4	Cobalt	2.0			P
7440-50-8	Copper	15			P
7439-89-6	Iron	5300			P
7439-92-1	Lead	460		B	P
7439-95-4	Magnesium	610			P
7439-96-5	Manganese	130			P
7440-02-0	Nickel	5.6			P
7440-09-7	Potassium	440		B	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	0.12	J		P
7440-23-5	Sodium	100	J		P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	18			P
7440-66-6	Zinc	250			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K-Biased high. CCi percent recovery exceeded 110%.
B-Reported due to sample concentration greater than 5 times laboratory contamination.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS1-D

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-18

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14		K	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high. MS/MSD percent recovery exceeded 125%. PDS percent recovery at 68%.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS6

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-19

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 82

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9500			P
7440-36-0	Antimony	3.2		K	P
7440-38-2	Arsenic	3.2			P
7440-39-3	Barium	67			P
7440-41-7	Beryllium	0.27	J		P
7440-43-9	Cadmium	0.37	J		P
7440-70-2	Calcium	2300			P
7440-47-3	Chromium	11			P
7440-48-4	Cobalt	2.2			P
7440-50-8	Copper	12			P
7439-89-6	Iron	6500			P
7439-92-1	Lead	400		B	P
7439-95-4	Magnesium	690			P
7439-96-5	Manganese	120			P
7440-02-0	Nickel	6.2			P
7440-09-7	Potassium	500		B	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	0.17	J		P
7440-23-5	Sodium	100	J	K	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	19			P
7440-66-6	Zinc	230			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high. CRI percent recovery exceeded 110%.
B- Reported due to sample concentration greater than 5 times laboratory contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS6

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Lab Sample ID: 680-24460-19

Level (low/med): LOW Date Received: 2/21/2007

% Solids: 82

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13		K	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high. MS/MSD percent recovery exceeded 125%. PDS percent recovery at 88%.

Client: Weston Solutions, Inc.

Job Number: 680-24460-1
Sdg Number: 68024460

General Chemistry

Client Sample ID: WFF1-MW2-0-0.5

Lab Sample ID: 680-24460-1
Client Matrix: Solid
% Moisture: 16.6
Date Sampled: 02/19/2007 1210
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.58	U	mg/Kg	0.58	0.58	1.0	9012A
Anly Batch: 680-68194	Date Analyzed	02/23/2007 1209				DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared:	02/23/2007 0700					

Client Sample ID: WFF1-MW2-0.5-2

Lab Sample ID: 680-24460-2
Client Matrix: Solid
% Moisture: 8.5
Date Sampled: 02/19/2007 1220
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.54	U	mg/Kg	0.54	0.54	1.0	9012A
Anly Batch: 680-68194	Date Analyzed	02/23/2007 1211				DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared:	02/23/2007 0700					

Client Sample ID: WFF1-MW2-19-21

Lab Sample ID: 680-24460-3
Client Matrix: Solid
% Moisture: 16.2
Date Sampled: 02/19/2007 1400
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.58	U	mg/Kg	0.58	0.58	1.0	9012A
Anly Batch: 680-68194	Date Analyzed	02/23/2007 1211				DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared:	02/23/2007 0700					

Client Sample ID: WFF1-MW6-0-0.5

Lab Sample ID: 680-24460-4
Client Matrix: Solid
% Moisture: 13.6
Date Sampled: 02/20/2007 0745
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.34	J	mg/Kg	0.28	0.57	1.0	9012A
Anly Batch: 680-68194	Date Analyzed	02/23/2007 1212				DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared:	02/23/2007 0700					

General Chemistry

Client Sample ID: WFF1-MW6-0.5-2

Lab Sample ID: 680-24460-5
Client Matrix: Solid
% Moisture: 12.9
Date Sampled: 02/20/2007 0755
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.56	U	mg/Kg	0.56	0.56	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1213 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client Sample ID: WFF1-MW6-2-4

Lab Sample ID: 680-24460-6
Client Matrix: Solid
% Moisture: 17.3
Date Sampled: 02/20/2007 0815
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.59	U	mg/Kg	0.59	0.59	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1215 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client Sample ID: WFF1-MW7-0.-0.5

Lab Sample ID: 680-24460-7
Client Matrix: Solid
% Moisture: 25.4
Date Sampled: 02/20/2007 0950
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.65	U	mg/Kg	0.65	0.65	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1216 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client Sample ID: WFF1-MW7-0.5-2

Lab Sample ID: 680-24460-8
Client Matrix: Solid
% Moisture: 19.3
Date Sampled: 02/20/2007 1000
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.61	U	mg/Kg	0.61	0.61	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1216 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client: Weston Solutions, Inc.

Job Number: 680-24460-1
Sdg Number: 68024460

General Chemistry

Client Sample ID: WFF1-MW5-0-0.5

Lab Sample ID: 680-24460-9
Client Matrix: Solid
% Moisture: 10.6
Date Sampled: 02/20/2007 1055
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.55	U	mg/Kg	0.55	0.55	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1217 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client Sample ID: WFF1MW5-0.5-2

Lab Sample ID: 680-24460-10
Client Matrix: Solid
% Moisture: 10.1
Date Sampled: 02/20/2007 1105
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.55	U	mg/Kg	0.55	0.55	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1218 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client Sample ID: WFF1-MW5-2-4

Lab Sample ID: 680-24460-11
Client Matrix: Solid
% Moisture: 13.1
Date Sampled: 02/20/2007 1125
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.56	U	mg/Kg	0.56	0.56	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1219 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client Sample ID: WFF1-MW4-0-0.5

Lab Sample ID: 680-24460-12
Client Matrix: Solid
% Moisture: 15.0
Date Sampled: 02/20/2007 1245
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.59	U	mg/Kg	0.59	0.59	1.0	9012A

Anly Batch: 680-68194 Date Analyzed 02/23/2007 1220 DryWt Corrected: Y
Prep Batch: 680-68192 Date Prepared: 02/23/2007 0700

Client: Weston Solutions, Inc.

Job Number: 680-24460-1
Sdg Number: 68024460

General Chemistry

Client Sample ID: WFF1-MW4-0.5-2

Lab Sample ID: 680-24460-13
Client Matrix: Solid
% Moisture: 9.1
Date Sampled: 02/20/2007 1300
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.54	U	mg/Kg	0.54	0.54	1.0	9012A
Anly Batch: 680-68194	Date Analyzed 02/23/2007 1221					DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared: 02/23/2007 0700						

Client Sample ID: WFF1-MW4-3-5

Lab Sample ID: 680-24460-14
Client Matrix: Solid
% Moisture: 12.8
Date Sampled: 02/20/2007 1330
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.57	U	mg/Kg	0.57	0.57	1.0	9012A
Anly Batch: 680-68194	Date Analyzed 02/23/2007 1221					DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared: 02/23/2007 0700						

Client Sample ID: WFF1-SS2

Lab Sample ID: 680-24460-15
Client Matrix: Solid
% Moisture: 10.2
Date Sampled: 02/20/2007 0945
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.54	U	mg/Kg	0.54	0.54	1.0	9012A
Anly Batch: 680-68194	Date Analyzed 02/23/2007 1224					DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared: 02/23/2007 0700						

Client Sample ID: WFF1-SS3

Lab Sample ID: 680-24460-16
Client Matrix: Solid
% Moisture: 10.4
Date Sampled: 02/20/2007 1045
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.53	U	mg/Kg	0.53	0.53	1.0	9012A
Anly Batch: 680-68194	Date Analyzed 02/23/2007 1224					DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared: 02/23/2007 0700						

Client: Weston Solutions, Inc.

Job Number: 680-24460-1
Sdg Number: 68024460

General Chemistry

Client Sample ID: **WFF1-SS1**

Lab Sample ID: 680-24460-17
Client Matrix: Solid
% Moisture: 19.0
Date Sampled: 02/20/2007 1345
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.60	U	mg/Kg	0.60	0.60	1.0	9012A
Anly Batch: 680-68194	Date Analyzed 02/23/2007 1225					DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared: 02/23/2007 0700						

Client Sample ID: **WFF1-SS1-D**

Lab Sample ID: 680-24460-18
Client Matrix: Solid
% Moisture: 18.5
Date Sampled: 02/20/2007 1345
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.61	U	mg/Kg	0.61	0.61	1.0	9012A
Anly Batch: 680-68194	Date Analyzed 02/23/2007 1226					DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared: 02/23/2007 0700						

Client Sample ID: **WFF1-SS6**

Lab Sample ID: 680-24460-19
Client Matrix: Solid
% Moisture: 18.1
Date Sampled: 02/20/2007 1345
Date Received: 02/21/2007 0917

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Cyanide, Total	0.59	U	mg/Kg	0.59	0.59	1.0	9012A
Anly Batch: 680-68194	Date Analyzed 02/23/2007 1226					DryWt Corrected: Y	
Prep Batch: 680-68192	Date Prepared: 02/23/2007 0700						

APPENDIX D

Support Documentation
(Inorganic)

STL SAVANNAH

METALS

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BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.000	U	200.000	U	200.000	U	200.000	U	20.000	U	P
Antimony	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Barium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Beryllium	4.000	U	4.000	U	4.000	U	0.239	J	0.400	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Calcium	500.000	U	500.000	U	500.000	U	500.000	U	50.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	2.506	J	1.000	U	P
Cobalt	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Copper	20.000	U	20.000	U	20.000	U	2.405	J	2.000	U	P
Iron	50.000	U	50.000	U	50.000	U	50.000	U	5.000	U	P
Lead	5.000	U	2.187	J	5.000	U	2.713	J	0.347 0.213	J	P
Magnesium	500.000	U	500.000	U	500.000	U	500.000	U	50.000	U	P
Manganese	10.000	U	10.000	U	10.000	U	2.485	J	1.000	U	P
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	4.000	U	P
Potassium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	3.08 1.474	J	P
Selenium	10.000	U	10.000	U	10.000	U	10.000	U	2.500	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Sodium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	100.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	2.500	U	P
Vanadium	10.000	U	10.000	U	10.000	U	2.683	J	1.000	U	P
Zinc	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P

Comments:

STL SAVANNAH

METALS

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BLANKS

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG NO.: 68024460

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.000	U	200.000	U	200.000	U			P
Antimony			20.000	U	5.200	J	20.000	U			P
Arsenic			10.000	U	10.000	U	10.000	U			P
Barium			10.000	U	10.000	U	10.000	U			P
Beryllium			4.000	U	0.197	J	4.000	U			P
Cadmium			5.000	U	5.000	U	5.000	U			P
Calcium			500.000	U	500.000	U	500.000	U			P
Chromium			1.363	J	1.836	J	10.000	U			P
Cobalt			10.000	U	10.000	U	10.000	U			P
Copper			1.729	J	2.038	J	20.000	U			P
Iron			50.000	U	50.000	U	50.000	U			P
Lead			5.000	U	2.793	J	5.000	U			P
Magnesium			500.000	U	500.000	U	500.000	U			P
Manganese			10.000	U	2.390	J	10.000	U			P
Nickel			40.000	U	40.000	U	40.000	U			P
Potassium			1000.000	U	1000.000	U	1000.000	U			P
Selenium			10.000	U	10.000	U	10.000	U			P
Silver			10.000	U	10.000	U	10.000	U			P
Sodium			1000.000	U	1000.000	U	1000.000	U			P
Thallium			25.000	U	25.000	U	25.000	U			P
Vanadium			1.612	J	1.967	J	10.000	U			P
Zinc			20.000	U	20.000	U	20.000	U			P

Comments:

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.000	U	200.000	U					P
Antimony			20.000	U	20.000	U					P
Arsenic			10.000	U	10.000	U					P
Barium			10.000	U	10.000	U					P
Beryllium			4.000	U	4.000	U					P
Cadmium			5.000	U	5.000	U					P
Calcium			500.000	U	500.000	U					P
Chromium			10.000	U	10.000	U					P
Cobalt			10.000	U	10.000	U					P
Copper			20.000	U	20.000	U					P
Iron			50.000	U	50.000	U					P
Lead			5.000	U	5.000	U					P
Magnesium			500.000	U	500.000	U					P
Manganese			10.000	U	10.000	U					P
Nickel			40.000	U	40.000	U					P
Potassium			1000.000	U	1000.000	U					P
Selenium			10.000	U	10.000	U					P
Silver			10.000	U	10.000	U					P
Sodium			1000.000	U	1000.000	U					P
Thallium			25.000	U	25.000	U					P
Vanadium			10.000	U	10.000	U					P
Zinc			20.000	U	20.000	U					P

Comments:

METALS
-2B-
CRDL STANDARD FOR AA AND ICP

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG No.: 68024460

AA CRDL Standard Source:

ICP CRDL Standard Source: SPEX/CPI

Concentration Units: ug/L

Req 3 ±10%R

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum				200.0	208.67	104	201.72	101
Antimony				20.0	22.93	115	22.87	114
Arsenic				10.0	12.17	122	13.30	133
Barium				10.0	10.36	104	10.24	102
Beryllium				4.0	4.17	104	4.18	104
Cadmium				5.0	5.26	105	5.22	104
Calcium				500.0	505.12	101	515.84	103
Chromium				10.0	10.00	100	10.22	102
Cobalt				10.0	9.86	99	9.93	99
Copper				20.0	20.23	101	20.66	103
Iron				50.0	64.30	129	59.83	120
Lead				5.0	5.61	112	6.42	128
Magnesium				500.0	503.74	101	504.34	101
Manganese				10.0	10.37	104	10.40	104
Nickel				40.0	42.54	106	42.20	106
Potassium				1000.0	1041.71	104	1060.27	106
Selenium				10.0	11.86	119	12.32	123
Silver				10.0	9.80	98	10.20	102
Sodium				500.0	396.37	79	486.13	97
Thallium				25.0	24.76	99	26.05	104
Vanadium				10.0	10.19	102	10.16	102
Zinc				20.0	21.01	105	21.24	106

Comments:

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW2-0-5-2S

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 91.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		7807.2090		8103.8472		198.81	-149		P
Antimony	75 - 125	44.6593		1.9881	U	49.70	90		P
Arsenic	75 - 125	191.5944		2.1532		198.81	95		P
Barium	75 - 125	225.4825		24.8108		198.81	101		P
Beryllium	75 - 125	5.3299		0.2148	J	4.97	103		P
Cadmium	75 - 125	4.8800		0.4970	U	4.97	98		P
Calcium	75 - 125	920.4023		493.0752		497.03	86		P
Chromium	75 - 125	28.2555		8.1834		19.88	101		P
Cobalt	75 - 125	51.7299		1.3996		49.70	101		P
Copper	75 - 125	27.7299		2.6094		24.85	101		P
Iron		3900.9580		4510.2539		99.41	-613		P
Lead	75 - 125	51.9546		3.0270		49.70	98		P
Magnesium	75 - 125	856.9854		408.4793		497.03	90		P
Manganese	75 - 125	98.9454		55.6516		49.70	87		P
Nickel	75 - 125	53.4399		3.8802	J	49.70	100		P
Potassium	75 - 125	780.2520		336.6743		497.03	89		P
Selenium	75 - 125	185.9405		2.4852	U	198.81	94		P
Silver	75 - 125	4.8503		0.9941	U	4.97	98		P
Sodium	75 - 125	542.2288		66.7411	J	497.03	96		P
Thallium	75 - 125	200.2696		2.4852	U	198.81	101		P
Vanadium	75 - 125	58.0892		9.7861		49.70	97		P
Zinc	75 - 125	56.7114		7.1608		49.70	100		P

Comments:

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW2-0-5-2SD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 91.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		9836.1074		8103.8472		198.81	871		P
Antimony	75 - 125	43.7202		1.9881	U	49.70	88		P
Arsenic	75 - 125	190.7623		2.1532		198.81	95		P
Barium	75 - 125	228.1642		24.8108		198.81	102		P
Beryllium	75 - 125	5.3567		0.2148		4.97	103		P
Cadmium	75 - 125	4.8190		0.4970	U	4.97	97		P
Calcium	75 - 125	1031.8510		493.0752		497.03	108		P
Chromium	75 - 125	30.0948		8.1834		19.88	110		P
Cobalt	75 - 125	51.6706		1.3996		49.70	101		P
Copper	75 - 125	28.1551		2.6094		24.85	103		P
Iron		5383.7432		4510.2539		99.41	879		P
Lead	75 - 125	51.3637		3.0270		49.70	97		P
Magnesium	75 - 125	979.7195		408.4793		497.03	115		P
Manganese	75 - 125	114.6869		55.6516		49.70	119		P
Nickel	75 - 125	54.2876		3.8802		49.70	101		P
Potassium	75 - 125	878.0729		336.6743		497.03	109		P
Selenium	75 - 125	185.6526		2.4852	U	198.81	93		P
Silver	75 - 125	4.8595		0.9941	U	4.97	98		P
Sodium	75 - 125	544.2140		66.7411		497.03	96		P
Thallium	75 - 125	198.8790		2.4852	U	198.81	100		P
Vanadium	75 - 125	60.9502		9.7861		49.70	103		P
Zinc	75 - 125	58.4696		7.1608		49.70	103		P

Comments:

STL SAVANNAH

METALS
-5B-
POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW2-0-5-2A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024460

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		82483.63		81522.53		2000.0	48		P
Antimony		472.52		20.00	U	500.0	95		P
Arsenic		1972.89		21.66		2000.0	98		P
Barium		2312.90		249.59		2000.0	103		P
Beryllium		54.19		2.16	J	50.0	104		P
Cadmium		49.57		5.00	U	50.0	99		P
Calcium		10389.99		4960.20		5000.0	109		P
Chromium		286.67		82.32		200.0	102		P
Cobalt		526.62		14.08		500.0	103		P
Copper		287.79		26.25		250.0	105		P
Iron		45519.16		45371.95		1000.0	15		P
Lead		524.72		30.45		500.0	99		P
Magnesium		9393.25		4109.19		5000.0	106		P
Manganese		1083.29		559.84		500.0	105		P
Nickel		546.35		39.03	J	500.0	101		P
Potassium		8571.37		3386.85		5000.0	104		P
Selenium		1907.00		10.00	U	2000.0	95		P
Silver		49.76		10.00	U	50.0	100		P
Sodium		5830.22		671.40	J	5000.0	103		P
Thallium		2050.06		25.00	U	2000.0	103		P
Vanadium		600.97		98.45		500.0	101		P
Zinc		582.78		72.04		500.0	102		P

Comments:

STL SAVANNAH

METALS
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG No.: 68024460

AA CRDL Standard Source: _____

ICP CRDL Standard Source:

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.200	0.1464	73.2					

Comments:

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SS6S

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 81.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury	80 - 120	0.2076		0.1348		0.055	132.4	F	CV

Comments:

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SS6SD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 81.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury	80 - 120	0.2313		0.1348		0.055	175.5	F	CV

Comments:

STL SAVANNAH

METALS
-5B-
POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SS6A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 680-24460

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury		3.331		2.450		1.0	88.1		CV

Comments:

Serial Number 94413

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WWF - WWTP - #1		VA
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Page	0057557	
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Theresa Offner	770-325-7961	
CLIENT NAME	CLIENT E-MAIL	
Weston Solutions	Teresa.Offner@weston	
CLIENT ADDRESS		
5430 Metric Pl Ste 100 Norcross GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF

STANDARD REPORT DELIVERY ⊗
DATE DUE
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC, Pest, PCB	Cyanide	Metals / Mercury	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2/19/07	1210	WFF1-MW2-0-0.5			X			X	X	X	X		
	1220	WFF1-MW2-0.5-2			X			X	X	X	X		
	1400	WFF1-MW2-19-21			X			X	X	X	X		
2/20/07	0745	WFF1-MW6-0-0.5			X			X	X	X	X		
	0755	WFF1-MW6-0.5-2			X			X	X	X	X		
	0815	WFF1-MW6-2-4			X			X	X	X	X		
	0950	WFF1-MW7-0-0.5			X			X	X	X	X		
	1000	WFF1-MW7-0.5-2			X			X	X	X	X		
	1055	WFF1-MW5-0-0.5			X			X	X	X	X		
	1105	WFF1-MW5-0.5-2			X			X	X	X	X		
	1125	WFF1-MW5-2-4			X			X	X	X	X		
	1245	WFF1-MW4-0-0.5			X			X	X	X	X		

PRESERVATIVE

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/20/07	1440						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Amelia Kennedy	2/20/07	1440						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
	022107	0917	YES ○ NO ○		680-24460	

STL8240-680 (12/02)

Serial Number 94414

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

X **STL Savannah**
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

○ Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WWF - WWTP - #1		VA
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Page	0057557	
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Teresa Offner	770 325 7561	
CLIENT NAME	CLIENT E-MAIL	
Weston Solutions	Teresa.Offner@WestonSolutions.com	
CLIENT ADDRESS		
5430 Metric Pl Ste 100, Norcross GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF

STANDARD REPORT DELIVERY X
DATE DUE
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	REQUIRED ANALYSIS: SVOC, Pest/PCB	REQUIRED ANALYSIS: Cyanide	REQUIRED ANALYSIS: Metals/Mercury	REMARKS
2/20/07	1300	WFF1-MW4-0.5-2			X			X	X	X	X	
	1330	WFF1-MW4-3-5			X			X	X	X	X	
	0940	WFF1-SS2			X			X	X	X	X	
	1045	WFF1-SS3			X			X	X	X	X	
	1345	WFF1-SS1			X			X	X	X	X	
	1345	WFF1-SS1-D			X			X	X	X	X	FIELD DUPLICATE
	1345	WFF1-SS6			X			X	X	X	X	
	—	TB-1		X				X				
		TB-2		X				X				

PRESERVATIVE

NUMBER OF CONTAINERS SUBMITTED

TEMP. 1.4 / 1.6 / 1.1 / 2.9

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/20/07	1440						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Amelia Kennedy	2/20/07	1440						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
	022107	0917	YES ○ NO ○		680-24460	

STL 8240-680 (12/02)

Weston Solutions, Inc.
5430 Metric Place
Suite 100
Norcross, GA 30092
770-325-7900 • FAX 770-325-7950
www.westonsolutions.com

Memorandum
Norcross Office

DATE: April 25, 2007

TO: Teresa Offner, Project Manager

FROM: Paula MacLaren, Environmental Scientist

RE: Organic Data Validation and Usability Report
Wallops Island Flight Facility, VA - Old Waste Water Treatment Plant No. 1
Site Investigation – Sampling Event
Contract Number (No.) W91236-05-D-0036
Laboratory Sample Delivery Group (SDG) No. 680-24460

OVERVIEW

Severn Trent Laboratories, Inc. analyzed 18 soil samples and 3 field quality control (QC) samples collected by Weston Solutions, Inc., (WESTON) at the Old Waste Water Treatment Plant No. 1 located at Wallops Island Flight Facility, Virginia, on February 19 through 20, 2007. The sample identifications are presented below:

WFFI-MW2-0-0.5	WFFI-MW5-0.5-2	WFFI-SS1	
WFFI-MW2-0.5-2	WFFI-MW5-2-4	WFFI-SS1-D (QC)	
WFFI-MW2-19-21	WFFI-MW6-0-0.5	WFFI-SS2	
WFFI-MW4-0-0.5	WFFI-MW6-0.5-2	WFFI-SS3	
WFFI-MW4-0.5-2	WFFI-MW6-2-4	WFFI-SS6	
WFFI-MW4-3-5	WFFI-MW7-0-0.5	TB1 (QC)	(aqueous)
WFFI-MW5-0-0.5	WFFI-MW7-0.5-2	TB-2 (QC)	(aqueous)

The samples were analyzed for the following parameters:

- Volatile organic compounds (VOCs) target compound list (TCL); *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846), Method 8260B
- Semivolatile organic compounds (SVOCs) TCL; SW-846 Method 8270C
- Organochlorine pesticide TCL; SW-846 Method 8081A
- Polychlorinated biphenyls (PCBs) TCL; SW-846 Method 8082

SUMMARY

WESTON performed data validation in accordance with the *U.S. Environmental Protection Agency (USEPA) Region III Modifications To National Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration*, September 1994. This report only addresses quality assurance/quality control (QA/QC) problems which affect data usability in meeting site objectives. The following quality assurance/quality control (QA/QC) criteria were reviewed:

- Holding times, sample preservation and storage
- Sample condition upon laboratory receipt
- Field and laboratory sample identification comparison
- Sample preparation
- Method detection limits (MDL) and reporting limits (RL)
- Instrument performance checks
- 4,4'-DDT and endrin breakdown evaluation
- Instrument calibration
- Initial and continuing calibration verification summaries
- Initial and continuing calibration blank summaries
- Internal standards
- Method blanks
- Ambient, equipment, and trip blanks (as applicable)
- System monitoring compound spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD)
- Laboratory control sample (LCS)
- Qualitative and quantitative compound identification
- Second column confirmation (as applicable)
- Tentatively identified compounds
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The laboratory deliverable reports met the requirements and format of a contract laboratory program (CLP) for organic compounds data deliverable package. The following QA/QC sample analysis observations were noted:

MAJOR PROBLEMS

- No major problems resulting in the rejection of sample data were found.

MINOR PROBLEMS

Volatile Organic Analyses:

- Initial calibration performed on instrument MSP5973 (water analyses) showed bromomethane percent relative standard deviation (RSD) exceeding the QA/QC acceptance criteria of 30.0 percent; at 41% RSD. Bromomethane was not detected in any of the associated samples therefore, no data qualifiers were applied.

- Initial calibration verification (ICV) QC check sample on instrument MSP5973 (water analyses)

showed bromomethane exceeding the percent drift (%D) of 25.0; 25.2%D. The relative response factor (RRF) was within acceptance criteria. Bromomethane was not detected in any of the associated site samples; therefore, no data qualifiers were applied.

- Site QC trip blanks, TB-1 and TB-2, contained methylene chloride contamination at 0.55 micrograms per liter (ug/L) and 0.47 ug/L, respectively. These contaminants were not found within the associated site samples. No data qualifiers were applied.

- A field duplicate soil sample was collected at sample location SS1. Comparison data for sample set WFFI-SS1/WFFI-SS1-D showed methyl ethyl ketone was present in sample WFFI-SS1 at 19 J ug/L, however; it was not detected in sample WFFI-SS1-D. All other compounds were within 20 RPD. Evaluation of field duplicate sample data is for information purposes only. No data qualifiers were applied based on these results.

Semivolatile Organic Analysis:

- The laboratory extracted and analyzed site soil samples within the technical holding time of 14-days for the initial sample analysis performed on March 5, 2007. Although sample surrogate spiked component percent recoveries were within *Region III Modifications To National Functional Guidelines* established acceptance criteria, several samples had surrogate recoveries below laboratory limits. No semivolatile compounds were detected in any of the soil samples.

  The laboratory re-extracted all site samples 1 to 2 days outside their technical holding times and reanalyzed due to low surrogate recoveries. The second sample analyses showed similar results as the initial run but with some samples showing semivolatile compounds at estimated (J) concentrations; above the laboratory method detection limit but below the reporting limit. After evaluation of both sets of data, and since many target compounds such as polynuclear aromatic hydrocarbon (PAH) compounds are extremely persistent and do not degrade easily, it has been determined that the reported concentrations in the re-analysis are valid and is the best data to report. The re-analysis have been reported for the following soil samples and qualified as estimated (J, UJ):

  WFFI-MW2-0-0.5
  WFFI-MW2-0.5-2
  WFFI-MW2-19-21
  WFFI-MW4-0.5-2
  WFFI-MW6-0-0.5

- The laboratory method blank (MB 680-69131/20-AA) showed diethyl phthalate contamination at 48 micrograms per kilogram (ug/kg). The following site samples with concentrations less than 5 times the MB concentration have been qualified as having possible laboratory contamination (B) and are considered invalid:

  WFFI-MW2-0-0.5RE (March 8, 2007)

- Initial calibration performed on instrument MSE5973 showed 2,4-dinitrophenol percent relative standard deviation (35.5 % RSD) exceeding the QA/QC acceptance criteria of 30.0. In addition, the ICV for 2,4-dinitrophenol percent difference exceeded the QA/QC limit of ±25.0 %D; at 29.2 %. It has been determined that the low end of the curve was outside the linearity criteria. Based on this evaluation, the following soil samples with 2,4-dinitrophenol reported as non-detected have been qualified as estimated (UJ):

  WFFI-MW5-2-4
  WFFI-MW4-3-5

- The CCV QC check sample on instrument E5973 showed N-nitroso-di-n-propylamine slightly exceeding the recommended QA/QC limit of ±25.0 %D; at 25.1. The relative response factor (RRF) was within acceptance criteria. N-nitroso-di-n-propylamine was not detected in the associated site samples, therefore, no data qualifiers were applied.

- Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on soil sample WFFI-SS1-D. The MS analysis showed 1,2,4-trichlorobenzene percent recovery below the *Region III Modifications To National Functional Guidelines* QA/QC lower limit of 38 percent; at 34 percent. The MSD analysis showed N-nitrosodi-n-propylamine (30 %) and 1,2,4-trichlorobenzene (35 %) percent recoveries below their QA/QC lower limits indicating possible matrix interference. The following site samples with similar matrices have been qualified as biased low (L):

  WFFI-SS1
  WFFI-SS1-D
  WFFI-SS6

- A field duplicate soil sample was collected at sample location SS1. Comparison data for sample set WFFI-SS1/WFFI-SS1-D showed relative percent difference (RPD) within 20 RPD.

Pesticide/PCB Analysis:

- Soil samples WFFI-SS1 and WFFI-SS1-D required a 2:1 dilution in order to reduce matrix interference.

- The final continuing calibration standard mixture bracketing samples analyzed on March 6, 2007 at 1326, showed 4,4-DDT compound %D (instrument SGJECD1 at -38.0 %D; instrument SGJECD2 at -28.7%) below the recommended QA/QC limit of ±25.0 %D. The following samples with reported positive 4,4-DDT concentrations have been qualified as estimated (J):

WFFI-MW-2-0-0.5	WFFI-MW7-0-0.5
WFFI-MW4-0-0.5	WFFI-SS1
WFFI-MW6-0-0.5	WFFI-SS1-D
WFFI-MW6-2-4	WFFI-SS6

- Several soil samples had two (from different columns) out of four spiked percent recoveries below the QA/QC lower limit of 30 percent but were greater than 10 percent. Reported positive results have been qualified as estimated (J) and all non-detected compounds have been qualified as estimated (UJ) in the following site samples:

WFFI-MW2-19-21	WFFI-MW5-0.5-2
WFFI-MW4-0-0.5	WFFI-MW5-2-4
WFFI-MW4-0.5-2	WFFI-6-0.5-2
WFFI-MW4-3-5	

- Several sample analyses showed the agreement between the two columns exceeding the recommended QA/QC range of no greater than 40 RPD. In reviewing the raw data chromatograms, no anomalies were noted. The more conservative, higher concentration, as recommended in method SW-846 have been reported for the following samples and qualified as estimated (J):

WFFI-MW6-0-0.5	(4,4'-DDD)
WFFI-SS1	(dieldrin, 4,4'-DDT)
WFFI-SS1-D	(4,4'-DDD, 4,4'-DDT)
WFFI-SS6	(dieldrin, 4,4'-DDD, 4,4'-DDT)

- MS/MSD analysis was performed on soil sample WFFI-SS6. Strong matrix interference was observed with the MS analysis showing 4,4'-DDT (-148%) below the Region III recommended QA/QC lower limit of 24%. In addition, spiked components 4,4'-DDE (0 % R) and endosulfan sulfate (49 % R) were below the laboratory lower limit guidance criteria. The MSD analysis again showed 4,4'-DDT spiked percent recovery (-12 %) below Region III QA/QC lower limit. In addition, endosulfan sulfate (48% R) and endrin ketone (38% R) spiked components were below laboratory recommended limits.

  Analytical precision, measured as relative percent difference (RPD), exceeded the recommended limit of 50 for 4,4'-DDT (54 RPD).

  Reported positive results for 4,4'-DDE, and 4,4'-DDT, and non-detected results for endosulfan sulfate in the following site samples with similar matrices have been qualified as biased low (L, UL):

  WFFI-SS1
  WFFI-SS1-D
  WWFI-SS6

- A field duplicate soil sample was collected at sample location SS1. Comparison data for sample set WFFI-SS1/WFFI-SS1-D showed relative percent difference (RPD) within 25 RPD.

NOTES

- Soil samples WFFI-SS2 and WFFI-SS3 were analyzed for volatile organic compounds only.
- Samples were received by the laboratory slightly below the QA/QC recommended preservative temperature of 4°C±2°C; 1.1, 1.4, and 1.6 °C. Based on this observation, it has been determined that no impact to sample data had occurred.
- For volatile organic analyses, the laboratory used system monitoring compound dibromofluoromethane, as allowed in SW-846 method 8260, in place of 1,2-dichloroethane-d4.
- The soil sample technical holding time for sample organic extraction/analysis was evaluated using the USEPA *National Function Guideline* technical holding time of 14-days for preserved VOC analysis; 14-days to extraction and 40-days to analysis for SVOC and pesticides/PCBs analyses.
- For pesticide/PCB analyses, instrument performance was monitored using the internal standard bromonitrobenzene (BNB) as described in SW-846 method 8081A.
- Tentatively identified compounds (TICs) are not included in this data package.
- When there are several QC data qualifiers applied to a value, the hierarchy of qualifiers is followed; R, B, L, K, J.

The laboratory has provided additional information in their case narrative. Based on the evaluation of all information provided in the analytical data package, the results are highly usable with the data validation qualifiers as noted. The sample data is presented in the following attachments.

ATTACHMENTS

Appendix A – Glossary of Data Qualifier Codes
Appendix B – Data Summary Tables
Appendix C – Laboratory Reported Results
Appendix D – Support Documentation

APPENDIX A

Glossary of Data Qualifier Codes
(Organic)

DATA QUALIFIER CODES
(Organic Analyses)

Codes Related To Identification

(Confidence concerning presence or absence of compounds):

U = the compound was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

R = the data are unusable. (Note: The compound may or may not be present.)

Codes Related To Quantitation

(Can be used for both positive results and sample quantitation limits):

J = the associated value is an estimated quantity

UJ = the compound was analyzed for, but was not detected. The associated detection limit is an estimate and may be inaccurate or imprecise.

K = the compound is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L = the compound is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL = the compound was not detected, and the actual quantitation limit is probably higher than reported.

APPENDIX B

Data Summary Tables
(Organic)

TABLE 1A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	Volatile Organic Compounds				
10	Acetone	**170**	**36 J**	**29 J**	**110**
5.0	Benzene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Bromoform	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Bromomethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Carbon disulfide	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Carbon tetrachloride	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chlorobenzene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chlorodibromomethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chloroform	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Chloromethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	cis-1,2-Dichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	cis-1,3-Dichloropropene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Dichlorobromomethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1-Dichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,2-Dichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1-Dichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,2-Dichloropropane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Ethylbenzene	7.3 U	4.3 U	5.1 U	4.8 U
10	2-Hexanone	37 U	22 U	26 U	24 U
5.0	Methylene Chloride	7.3 U	4.3 U	5.1 U	4.8 U
10	Methyl Ethyl Ketone	**33 J**	**6.1 J**	26 U	24 U
10	Methyl isobutyl ketone	**340**	**140**	**150**	24 U
5.0	Styrene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1,2,2-Tetrachloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Tetrachloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Toluene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	trans-1,2-Dichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	trans-1,3-Dichloropropene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1,1-Trichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	1,1,2-Trichloroethane	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Trichloroethene	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Vinyl chloride	7.3 U	4.3 U	5.1 U	4.8 U
5.0	Xylenes, Total	15 U	8.7 U	10 U	9.6 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	WFFI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	**Volatile Organic Compounds**				
10	Acetone	**33 J**	**22 J**	**64**	**37 J**
5.0	Benzene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Bromoform	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Bromomethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Carbon disulfide	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Carbon tetrachloride	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chlorobenzene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chlorodibromomethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chloroform	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Chloromethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	cis-1,2-Dichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	cis-1,3-Dichloropropene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Dichlorobromomethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1-Dichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,2-Dichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1-Dichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,2-Dichloropropane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Ethylbenzene	4.5 U	3.8 U	5.0 U	4.6 U
10	2-Hexanone	23 U	19 U	25 U	23 U
5.0	Methylene Chloride	4.5 U	3.8 U	5.0 U	4.6 U
10	Methyl Ethyl Ketone	**4.6 J**	19 U	**7.7 J**	23 U
10	Methyl isobutyl ketone	**12 J**	19 U	25 U	23 U
5.0	Styrene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1,2,2-Tetrachloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Tetrachloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Toluene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	trans-1,2-Dichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	trans-1,3-Dichloropropene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1,1-Trichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	1,1,2-Trichloroethane	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Trichloroethene	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Vinyl chloride	4.5 U	3.8 U	5.0 U	4.6 U
5.0	Xylenes, Total	9.0 U	7.5 U	10 U	9.1 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Volatile Organic Compounds**				
10	Acetone	**48**	**220**	**31 J**	**9.5 J**
5.0	Benzene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Bromoform	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Bromomethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Carbon disulfide	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Carbon tetrachloride	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chlorobenzene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chlorodibromomethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chloroform	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Chloromethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	cis-1,2-Dichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	cis-1,3-Dichloropropene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Dichlorobromomethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1-Dichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,2-Dichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1-Dichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,2-Dichloropropane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Ethylbenzene	4.6 U	5.8 U	5.2 U	4.9 U
10	2-Hexanone	23 U	29 U	26 U	24 U
5.0	Methylene Chloride	4.6 U	5.8 U	5.2 U	4.9 U
10	Methyl Ethyl Ketone	**7.7 J**	**9.0 J**	26 U	24 U
10	Methyl isobutyl ketone	23 U	**7.4 J**	26 U	**280**
5.0	Styrene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1,2,2-Tetrachloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Tetrachloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Toluene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	trans-1,2-Dichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	trans-1,3-Dichloropropene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1,1-Trichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	1,1,2-Trichloroethane	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Trichloroethene	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Vinyl chloride	4.6 U	5.8 U	5.2 U	4.9 U
5.0	Xylenes, Total	9.3 U	12 U	10 U	9.7 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	**Volatile Organic Compounds**		
10	Acetone	**160**	**58**
5.0	Benzene	5.3 U	5.1 U
5.0	Bromoform	5.3 U	5.1 U
5.0	Bromomethane	5.3 U	5.1 U
5.0	Carbon disulfide	5.3 U	5.1 U
5.0	Carbon tetrachloride	5.3 U	5.1 U
5.0	Chlorobenzene	5.3 U	5.1 U
5.0	Chlorodibromomethane	5.3 U	5.1 U
5.0	Chloroethane	5.3 U	5.1 U
5.0	Chloroform	5.3 U	5.1 U
5.0	Chloromethane	5.3 U	5.1 U
5.0	cis-1,2-Dichloroethene	5.3 U	5.1 U
5.0	cis-1,3-Dichloropropene	5.3 U	5.1 U
5.0	Dichlorobromomethane	5.3 U	5.1 U
5.0	1,1-Dichloroethane	5.3 U	5.1 U
5.0	1,2-Dichloroethane	5.3 U	5.1 U
5.0	1,1-Dichloroethene	5.3 U	5.1 U
5.0	1,2-Dichloropropane	5.3 U	5.1 U
5.0	Ethylbenzene	5.3 U	5.1 U
10	2-Hexanone	27 U	25 U
5.0	Methylene Chloride	5.3 U	5.1 U
10	Methyl Ethyl Ketone	**14 J**	25 U
10	Methyl isobutyl ketone	**24 J**	25 U
5.0	Styrene	5.3 U	5.1 U
5.0	1,1,2,2-Tetrachloroethane	5.3 U	5.1 U
5.0	Tetrachloroethene	5.3 U	5.1 U
5.0	Toluene	5.3 U	5.1 U
5.0	trans-1,2-Dichloroethene	5.3 U	5.1 U
5.0	trans-1,3-Dichloropropene	5.3 U	5.1 U
5.0	1,1,1-Trichloroethane	5.3 U	5.1 U
5.0	1,1,2-Trichloroethane	5.3 U	5.1 U
5.0	Trichloroethene	5.3 U	5.1 U
5.0	Vinyl chloride	5.3 U	5.1 U
5.0	Xylenes, Total	11 U	10 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

TABLE 1E
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	Volatile Organic Compounds					
10	Acetone	**210**	**180**	**50**	**57**	**210**
5.0	Benzene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Bromoform	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Bromomethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Carbon disulfide	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Carbon tetrachloride	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chlorobenzene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chlorodibromomethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chloroform	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Chloromethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	cis-1,2-Dichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	cis-1,3-Dichloropropene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Dichlorobromomethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1-Dichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,2-Dichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1-Dichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,2-Dichloropropane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Ethylbenzene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
10	2-Hexanone	26 U	26 U	25 U	27 U	29 U
5.0	Methylene Chloride	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
10	Methyl Ethyl Ketone	**19 J**	26 U	**7.3 J**	**7.1 J**	**23 J**
10	Methyl isobutyl ketone	26 U	26 U	25 U	27 U	**13 J**
5.0	Styrene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1,2,2-Tetrachloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Tetrachloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Toluene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	trans-1,2-Dichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	trans-1,3-Dichloropropene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1,1-Trichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	1,1,2-Trichloroethane	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Trichloroethene	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Vinyl chloride	5.2 U	5.1 U	5.0 U	5.5 U	5.8 U
5.0	Xylenes, Total	10 U	10 U	9.9 U	11 U	12 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER QC SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	TB-1	TB-2
	Sample Date	2/20/2007	2/20/2007
	Location	Trip Blank	Trip Blank
	Dilution Factor	1.0	1.0
CRQL	**Volatile Organic Compounds**		
25	Acetone	25 U	25 U
1.0	Benzene	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U
5.0	Methylene Chloride	**0.55 J**	**0.47 J**
10	Methyl Ethyl Ketone	10 U	10 U
10	Methyl isobutyl ketone	10 U	10 U
1.0	Styrene	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/L - Microgram per liter
Bold - Reported value is above lab method detection limit

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachlorobutadiene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachlorocyclopentadiene	400 UJ	360 UJ	390 UJ	390 U
330	Hexachloroethane	400 UJ	360 UJ	390 UJ	390 U
330	Indeno[1,2,3-cd]pyrene	**52 J**	360 UJ	**40 J**	390 U
330	Isophorone	400 UJ	360 UJ	390 UJ	390 U
330	2-Methylnaphthalene	400 UJ	360 UJ	390 UJ	390 U
330	2-Methylphenol	400 UJ	360 UJ	390 UJ	390 U
330	3 & 4 Methylphenol	400 UJ	360 UJ	390 UJ	390 U
330	Naphthalene	400 UJ	360 UJ	390 UJ	390 U
1700	2-Nitroaniline	2000 UJ	1900 UJ	2000 UJ	2000 U
1700	3-Nitroaniline	2000 UJ	1900 UJ	2000 UJ	2000 U
1700	4-Nitroaniline	2000 UJ	1900 UJ	2000 UJ	2000 U
330	Nitrobenzene	400 UJ	360 UJ	390 UJ	390 U
330	2-Nitrophenol	400 UJ	360 UJ	390 UJ	390 U
1700	4-Nitrophenol	2000 UJ	1900 UJ	2000 UJ	2000 U
330	N-Nitrosodi-n-propylamine	400 UJ	360 UJ	390 UJ	390 U
330	N-Nitrosodiphenylamine	400 UJ	360 UJ	390 UJ	390 U
1700	Pentachlorophenol	2000 UJ	1900 UJ	2000 UJ	2000 U
330	Phenanthrene	400 UJ	360 UJ	390 UJ	390 U
330	Phenol	400 UJ	360 UJ	390 UJ	390 U
330	Pyrene	400 UJ	360 UJ	390 UJ	390 U
330	1,2,4-Trichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	2,4,6-Trichlorophenol	400 UJ	360 UJ	390 UJ	390 U
330	2,4,5-Trichlorophenol	400 UJ	360 UJ	390 UJ	390 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	**Semivolatile Organic Compounds**				
330	Acenaphthene	400 UJ	360 UJ	390 UJ	390 U
330	Acenaphthylene	400 UJ	360 UJ	390 UJ	390 U
330	Anthracene	400 UJ	360 UJ	390 UJ	390 U
330	Benzo[a]anthracene	400 UJ	360 UJ	390 UJ	390 U
330	Benzo[a]pyrene	**34 J**	360 UJ	**30 J**	390 U
330	Benzo[b]fluoranthene	400 UJ	360 UJ	390 UJ	390 U
330	Benzo[g,h,i]perylene	**52 J**	**31 J**	**46 J**	390 U
330	Benzo[k]fluoranthene	400 UJ	360 UJ	390 UJ	390 U
330	Bis(2-chloroethoxy)methane	400 UJ	360 UJ	390 UJ	390 U
330	Bis(2-chloroethyl)ether	400 UJ	360 UJ	390 UJ	390 U
330	bis(chloroisopropyl) ether	400 UJ	360 UJ	390 UJ	390 U
330	Bis(2-ethylhexyl) phthalate	400 UJ	360 UJ	390 UJ	390 U
330	4-Bromophenyl phenyl ether	400 UJ	360 UJ	390 UJ	390 U
330	Butyl benzyl phthalate	400 UJ	360 UJ	390 UJ	390 U
330	Carbazole	400 UJ	360 UJ	390 UJ	390 U
660	4-Chloroaniline	790 UJ	720 UJ	790 UJ	780 U
330	4-Chloro-3-methylphenol	400 UJ	360 UJ	390 UJ	390 U
330	2-Chloronaphthalene	400 UJ	360 UJ	390 UJ	390 U
330	2-Chlorophenol	400 UJ	360 UJ	390 UJ	390 U
330	4-Chlorophenyl phenyl ether	400 UJ	360 UJ	390 UJ	390 U
330	Chrysene	400 UJ	360 UJ	390 UJ	390 U
330	Dibenz(a,h)anthracene	**50 J**	360 UJ	**44 J**	390 U
330	Dibenzofuran	400 UJ	360 UJ	390 UJ	390 U
330	1,3-Dichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	1,4-Dichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
330	1,2-Dichlorobenzene	400 UJ	360 UJ	390 UJ	390 U
660	3,3'-Dichlorobenzidine	790 UJ	720 UJ	790 UJ	780 U
330	2,4-Dichlorophenol	400 UJ	360 UJ	390 UJ	390 U
330	Diethyl phthalate	**27 B**	360 UJ	390 UJ	390 U
330	2,4-Dimethylphenol	400 UJ	360 UJ	390 UJ	390 U
330	Dimethyl phthalate	400 UJ	360 UJ	390 UJ	390 U
330	Di-n-butyl phthalate	400 UJ	360 UJ	390 UJ	390 U
1700	4,6-Dinitro-2-methylphenol	2000 UJ	1900 UJ	2000 UJ	2000 U
1700	2,4-Dinitrophenol	2000 UJ	1900 UJ	2000 UJ	2000 U
330	2,4-Dinitrotoluene	400 UJ	360 UJ	390 UJ	390 U
330	2,6-Dinitrotoluene	400 UJ	360 UJ	390 UJ	390 U
330	Di-n-octyl phthalate	400 UJ	360 UJ	390 UJ	390 U
330	Fluoranthene	400 UJ	360 UJ	390 UJ	390 U

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	FFI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	360 UJ	380 U	370 U	370 U
330	Hexachlorobenzene	360 UJ	380 U	370 U	370 U
330	Hexachlorobutadiene	360 UJ	380 U	370 U	370 U
330	Hexachlorocyclopentadiene	360 UJ	380 U	370 U	370 U
330	Hexachloroethane	360 UJ	380 U	370 U	370 U
330	Indeno[1,2,3-cd]pyrene	**43 J**	380 U	370 U	370 U
330	Isophorone	360 UJ	380 U	370 U	370 U
330	2-Methylnaphthalene	360 UJ	380 U	370 U	370 U
330	2-Methylphenol	360 UJ	380 U	370 U	370 U
330	3 & 4 Methylphenol	360 UJ	380 U	370 U	370 U
330	Naphthalene	360 UJ	380 U	370 U	370 U
1700	2-Nitroaniline	1900 UJ	1900 U	1900 U	1900 U
1700	3-Nitroaniline	1900 UJ	1900 U	1900 U	1900 U
1700	4-Nitroaniline	1900 UJ	1900 U	1900 U	1900 U
330	Nitrobenzene	360 UJ	380 U	370 U	370 U
330	2-Nitrophenol	360 UJ	380 U	370 U	370 U
1700	4-Nitrophenol	1900 UJ	1900 U	1900 U	1900 U
330	N-Nitrosodi-n-propylamine	360 UJ	380 U	370 U	370 U
330	N-Nitrosodiphenylamine	360 UJ	380 U	370 U	370 U
1700	Pentachlorophenol	1900 UJ	1900 U	1900 U	1900 U
330	Phenanthrene	360 UJ	380 U	370 U	370 U
330	Phenol	360 UJ	380 U	370 U	370 U
330	Pyrene	360 UJ	380 U	370 U	370 U
330	1,2,4-Trichlorobenzene	360 UJ	380 U	370 U	370 U
330	2,4,6-Trichlorophenol	360 UJ	380 U	370 U	370 U
330	2,4,5-Trichlorophenol	360 UJ	380 U	370 U	370 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	FFI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	Semivolatile Organic Compounds				
330	Acenaphthene	360 UJ	380 U	370 U	370 U
330	Acenaphthylene	360 UJ	380 U	370 U	370 U
330	Anthracene	360 UJ	380 U	370 U	370 U
330	Benzo[a]anthracene	360 UJ	380 U	370 U	370 U
330	Benzo[a]pyrene	360 UJ	380 U	370 U	370 U
330	Benzo[b]fluoranthene	360 UJ	380 U	370 U	370 U
330	Benzo[g,h,i]perylene	**63 J**	380 U	370 U	370 U
330	Benzo[k]fluoranthene	360 UJ	380 U	370 U	370 U
330	Bis(2-chloroethoxy)methane	360 UJ	380 U	370 U	370 U
330	Bis(2-chloroethyl)ether	360 UJ	380 U	370 U	370 U
330	bis(chloroisopropyl) ether	360 UJ	380 U	370 U	370 U
330	Bis(2-ethylhexyl) phthalate	**59 J**	380 U	370 U	370 U
330	4-Bromophenyl phenyl ether	360 UJ	380 U	370 U	370 U
330	Butyl benzyl phthalate	360 UJ	380 U	370 U	370 U
330	Carbazole	360 UJ	380 U	370 U	370 U
660	4-Chloroaniline	730 UJ	760 U	740 U	730 U
330	4-Chloro-3-methylphenol	360 UJ	380 U	370 U	370 U
330	2-Chloronaphthalene	360 UJ	380 U	370 U	370 U
330	2-Chlorophenol	360 UJ	380 U	370 U	370 U
330	4-Chlorophenyl phenyl ether	360 UJ	380 U	370 U	370 U
330	Chrysene	360 UJ	380 U	370 U	370 U
330	Dibenz(a,h)anthracene	**46 J**	380 U	370 U	370 U
330	Dibenzofuran	360 UJ	380 U	370 U	370 U
330	1,3-Dichlorobenzene	360 UJ	380 U	370 U	370 U
330	1,4-Dichlorobenzene	360 UJ	380 U	370 U	370 U
330	1,2-Dichlorobenzene	360 UJ	380 U	370 U	370 U
660	3,3'-Dichlorobenzidine	730 UJ	760 U	740 U	730 U
330	2,4-Dichlorophenol	360 UJ	380 U	370 U	370 U
330	Diethyl phthalate	360 UJ	380 U	370 U	370 U
330	2,4-Dimethylphenol	360 UJ	380 U	370 U	370 U
330	Dimethyl phthalate	360 UJ	380 U	370 U	370 U
330	Di-n-butyl phthalate	**58 J**	380 U	370 U	370 U
1700	4,6-Dinitro-2-methylphenol	1900 UJ	1900 U	1900 U	1900 U
1700	2,4-Dinitrophenol	1900 UJ	1900 UJ	1900 U	1900 U
330	2,4-Dinitrotoluene	360 UJ	380 U	370 U	370 U
330	2,6-Dinitrotoluene	360 UJ	380 U	370 U	370 U
330	Di-n-octyl phthalate	360 UJ	380 U	370 U	370 U
330	Fluoranthene	360 UJ	380 U	370 U	370 U

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	380 U	380 UJ	380 U	400 U
330	Hexachlorobenzene	380 U	380 UJ	380 U	400 U
330	Hexachlorobutadiene	380 U	380 UJ	380 U	400 U
330	Hexachlorocyclopentadiene	380 U	380 UJ	380 U	400 U
330	Hexachloroethane	380 U	380 UJ	380 U	400 U
330	Indeno[1,2,3-cd]pyrene	380 U	**30 J**	380 U	400 U
330	Isophorone	380 U	380 UJ	380 U	400 U
330	2-Methylnaphthalene	380 U	380 UJ	380 U	400 U
330	2-Methylphenol	380 U	380 UJ	380 U	400 U
330	3 & 4 Methylphenol	380 U	380 UJ	380 U	400 U
330	Naphthalene	380 U	380 UJ	380 U	400 U
1700	2-Nitroaniline	2000 U	2000 UJ	2000 U	2100 U
1700	3-Nitroaniline	2000 U	2000 UJ	2000 U	2100 U
1700	4-Nitroaniline	2000 U	2000 UJ	2000 U	2100 U
330	Nitrobenzene	380 U	380 UJ	380 U	400 U
330	2-Nitrophenol	380 U	380 UJ	380 U	400 U
1700	4-Nitrophenol	2000 U	2000 UJ	2000 U	2100 U
330	N-Nitrosodi-n-propylamine	380 U	380 UJ	380 U	400 U
330	N-Nitrosodiphenylamine	380 U	380 UJ	380 U	400 U
1700	Pentachlorophenol	2000 U	2000 UJ	2000 U	2100 U
330	Phenanthrene	380 U	380 UJ	380 U	400 U
330	Phenol	380 U	380 UJ	380 U	400 U
330	Pyrene	380 U	380 UJ	380 U	400 U
330	1,2,4-Trichlorobenzene	380 U	380 UJ	380 U	400 U
330	2,4,6-Trichlorophenol	380 U	380 UJ	380 U	400 U
330	2,4,5-Trichlorophenol	380 U	380 UJ	380 U	400 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Semivolatile Organic Compounds**				
330	Acenaphthene	380 U	380 UJ	380 U	400 U
330	Acenaphthylene	380 U	380 UJ	380 U	400 U
330	Anthracene	380 U	380 UJ	380 U	400 U
330	Benzo[a]anthracene	380 U	380 UJ	380 U	400 U
330	Benzo[a]pyrene	380 U	380 UJ	380 U	400 U
330	Benzo[b]fluoranthene	380 U	380 UJ	380 U	400 U
330	Benzo[g,h,i]perylene	380 U	**35 J**	380 U	400 U
330	Benzo[k]fluoranthene	380 U	380 UJ	380 U	400 U
330	Bis(2-chloroethoxy)methane	380 U	380 UJ	380 U	400 U
330	Bis(2-chloroethyl)ether	380 U	380 UJ	380 U	400 U
330	bis(chloroisopropyl) ether	380 U	380 UJ	380 U	400 U
330	Bis(2-ethylhexyl) phthalate	380 U	380 UJ	380 U	400 U
330	4-Bromophenyl phenyl ether	380 U	380 UJ	380 U	400 U
330	Butyl benzyl phthalate	380 U	380 UJ	380 U	400 U
330	Carbazole	380 U	380 UJ	380 U	400 U
660	4-Chloroaniline	760 U	760 UJ	760 U	800 U
330	4-Chloro-3-methylphenol	380 U	380 UJ	380 U	400 U
330	2-Chloronaphthalene	380 U	380 UJ	380 U	400 U
330	2-Chlorophenol	380 U	380 UJ	380 U	400 U
330	4-Chlorophenyl phenyl ether	380 U	380 UJ	380 U	400 U
330	Chrysene	380 U	380 UJ	380 U	400 U
330	Dibenz(a,h)anthracene	380 U	**33 J**	380 U	400 U
330	Dibenzofuran	380 U	380 UJ	380 U	400 U
330	1,3-Dichlorobenzene	380 U	380 UJ	380 U	400 U
330	1,4-Dichlorobenzene	380 U	380 UJ	380 U	400 U
330	1,2-Dichlorobenzene	380 U	380 UJ	380 U	400 U
660	3,3'-Dichlorobenzidine	760 U	760 UJ	760 U	800 U
330	2,4-Dichlorophenol	380 U	380 UJ	380 U	400 U
330	Diethyl phthalate	380 U	380 UJ	380 U	400 U
330	2,4-Dimethylphenol	380 U	380 UJ	380 U	400 U
330	Dimethyl phthalate	380 U	380 UJ	380 U	400 U
330	Di-n-butyl phthalate	380 U	380 UJ	380 U	400 U
1700	4,6-Dinitro-2-methylphenol	2000 U	2000 UJ	2000 U	2100 U
1700	2,4-Dinitrophenol	2000 UJ	2000 UJ	2000 U	2100 U
330	2,4-Dinitrotoluene	380 U	380 UJ	380 U	400 U
330	2,6-Dinitrotoluene	380 U	380 UJ	380 U	400 U
330	Di-n-octyl phthalate	380 U	380 UJ	380 U	400 U
330	Fluoranthene	380 U	380 UJ	380 U	400 U

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	**Semivolatile Organic Compounds**		
330	Fluoranthene	440 U	410 U
330	Fluorene	440 U	410 U
330	Hexachlorobenzene	440 U	410 U
330	Hexachlorobutadiene	440 U	410 U
330	Hexachlorocyclopentadiene	440 U	410 U
330	Hexachloroethane	440 U	410 U
330	Indeno[1,2,3-cd]pyrene	440 U	410 U
330	Isophorone	440 U	410 U
330	2-Methylnaphthalene	440 U	410 U
330	2-Methylphenol	440 U	410 U
330	3 & 4 Methylphenol	440 U	410 U
330	Naphthalene	440 U	410 U
1700	2-Nitroaniline	2300 U	2100 U
1700	3-Nitroaniline	2300 U	2100 U
1700	4-Nitroaniline	2300 U	2100 U
330	Nitrobenzene	440 U	410 U
330	2-Nitrophenol	440 U	410 U
1700	4-Nitrophenol	2300 U	2100 U
330	N-Nitrosodi-n-propylamine	440 U	410 U
330	N-Nitrosodiphenylamine	440 U	410 U
1700	Pentachlorophenol	2300 U	2100 U
330	Phenanthrene	440 U	410 U
330	Phenol	440 U	410 U
330	Pyrene	440 U	410 U
330	1,2,4-Trichlorobenzene	440 U	410 U
330	2,4,6-Trichlorophenol	440 U	410 U
330	2,4,5-Trichlorophenol	440 U	410 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	Semivolatile Organic Compounds		
330	Acenaphthene	440 U	410 U
330	Acenaphthylene	440 U	410 U
330	Anthracene	440 U	410 U
330	Benzo[a]anthracene	440 U	410 U
330	Benzo[a]pyrene	440 U	410 U
330	Benzo[b]fluoranthene	440 U	410 U
330	Benzo[g,h,i]perylene	440 U	410 U
330	Benzo[k]fluoranthene	440 U	410 U
330	Bis(2-chloroethoxy)methane	440 U	410 U
330	Bis(2-chloroethyl)ether	440 U	410 U
330	bis(chloroisopropyl) ether	440 U	410 U
330	Bis(2-ethylhexyl) phthalate	440 U	410 U
330	4-Bromophenyl phenyl ether	440 U	410 U
330	Butyl benzyl phthalate	440 U	410 U
330	Carbazole	440 U	410 U
660	4-Chloroaniline	880 U	820 U
330	4-Chloro-3-methylphenol	440 U	410 U
330	2-Chloronaphthalene	440 U	410 U
330	2-Chlorophenol	440 U	410 U
330	4-Chlorophenyl phenyl ether	440 U	410 U
330	Chrysene	440 U	410 U
330	Dibenz(a,h)anthracene	440 U	410 U
330	Dibenzofuran	440 U	410 U
330	1,3-Dichlorobenzene	440 U	410 U
330	1,4-Dichlorobenzene	440 U	410 U
330	1,2-Dichlorobenzene	440 U	410 U
660	3,3'-Dichlorobenzidine	880 U	820 U
330	2,4-Dichlorophenol	440 U	410 U
330	Diethyl phthalate	440 U	410 U
330	2,4-Dimethylphenol	440 U	410 U
330	Dimethyl phthalate	440 U	410 U
330	Di-n-butyl phthalate	440 U	410 U
1700	4,6-Dinitro-2-methylphenol	2300 U	2100 U
1700	2,4-Dinitrophenol	2300 U	2100 U
330	2,4-Dinitrotoluene	440 U	410 U
330	2,6-Dinitrotoluene	440 U	410 U
330	Di-n-octyl phthalate	440 U	410 U

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	**Semivolatile Organic Compounds**					
330	Fluorene	410 U	400 U	NA	NA	400 U
330	Hexachlorobenzene	410 U	400 U	NA	NA	400 U
330	Hexachlorobutadiene	410 U	400 U	NA	NA	400 U
330	Hexachlorocyclopentadiene	410 U	400 U	NA	NA	400 U
330	Hexachloroethane	410 U	400 U	NA	NA	400 U
330	Indeno[1,2,3-cd]pyrene	410 U	400 U	NA	NA	400 U
330	Isophorone	410 U	400 U	NA	NA	400 U
330	2-Methylnaphthalene	410 U	400 U	NA	NA	400 U
330	2-Methylphenol	410 U	400 U	NA	NA	400 U
330	3 & 4 Methylphenol	410 U	400 U	NA	NA	400 U
330	Naphthalene	410 U	400 U	NA	NA	400 U
1700	2-Nitroaniline	2100 U	2100 U	NA	NA	2100 U
1700	3-Nitroaniline	2100 U	2100 U	NA	NA	2100 U
1700	4-Nitroaniline	2100 U	2100 U	NA	NA	2100 U
330	Nitrobenzene	410 U	400 U	NA	NA	400 U
330	2-Nitrophenol	410 U	400 U	NA	NA	400 U
1700	4-Nitrophenol	2100 U	2100 U	NA	NA	2100 U
330	N-Nitrosodi-n-propylamine	410 UL	400 UL	NA	NA	400 UL
330	N-Nitrosodiphenylamine	410 U	400 U	NA	NA	400 U
1700	Pentachlorophenol	2100 U	2100 U	NA	NA	2100 U
330	Phenanthrene	410 U	400 U	NA	NA	400 U
330	Phenol	410 U	400 U	NA	NA	400 U
330	Pyrene	410 U	400 U	NA	NA	400 U
330	1,2,4-Trichlorobenzene	410 UL	400 UL	NA	NA	400 UL
330	2,4,6-Trichlorophenol	410 U	400 U	NA	NA	400 U
330	2,4,5-Trichlorophenol	410 U	400 U	NA	NA	400 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	Semivolatile Organic Compounds					
330	Acenaphthene	410 U	400 U	NA	NA	400 U
330	Acenaphthylene	410 U	400 U	NA	NA	400 U
330	Anthracene	410 U	400 U	NA	NA	400 U
330	Benzo[a]anthracene	410 U	400 U	NA	NA	400 U
330	Benzo[a]pyrene	410 U	400 U	NA	NA	400 U
330	Benzo[b]fluoranthene	410 U	400 U	NA	NA	400 U
330	Benzo[g,h,i]perylene	410 U	400 U	NA	NA	400 U
330	Benzo[k]fluoranthene	410 U	400 U	NA	NA	400 U
330	Bis(2-chloroethoxy)methane	410 U	400 U	NA	NA	400 U
330	Bis(2-chloroethyl)ether	410 U	400 U	NA	NA	400 U
330	bis(chloroisopropyl) ether	410 U	400 U	NA	NA	400 U
330	Bis(2-ethylhexyl) phthalate	410 U	400 U	NA	NA	400 U
330	4-Bromophenyl phenyl ether	410 U	400 U	NA	NA	400 U
330	Butyl benzyl phthalate	410 U	400 U	NA	NA	400 U
330	Carbazole	410 U	400 U	NA	NA	400 U
660	4-Chloroaniline	810 U	810 U	NA	NA	810 U
330	4-Chloro-3-methylphenol	410 U	400 U	NA	NA	400 U
330	2-Chloronaphthalene	410 U	400 U	NA	NA	400 U
330	2-Chlorophenol	410 U	400 U	NA	NA	400 U
330	4-Chlorophenyl phenyl ether	410 U	400 U	NA	NA	400 U
330	Chrysene	410 U	400 U	NA	NA	400 U
330	Dibenz(a,h)anthracene	410 U	400 U	NA	NA	400 U
330	Dibenzofuran	410 U	400 U	NA	NA	400 U
330	1,3-Dichlorobenzene	410 U	400 U	NA	NA	400 U
330	1,4-Dichlorobenzene	410 U	400 U	NA	NA	400 U
330	1,2-Dichlorobenzene	410 U	400 U	NA	NA	400 U
660	3,3'-Dichlorobenzidine	810 U	810 U	NA	NA	810 U
330	2,4-Dichlorophenol	410 U	400 U	NA	NA	400 U
330	Diethyl phthalate	410 U	400 U	NA	NA	400 U
330	2,4-Dimethylphenol	410 U	400 U	NA	NA	400 U
330	Dimethyl phthalate	410 U	400 U	NA	NA	400 U
330	Di-n-butyl phthalate	410 U	400 U	NA	NA	400 U
1700	4,6-Dinitro-2-methylphenol	2100 U	2100 U	NA	NA	2100 U
1700	2,4-Dinitrophenol	2100 U	2100 U	NA	NA	2100 U
330	2,4-Dinitrotoluene	410 U	400 U	NA	NA	400 U
330	2,6-Dinitrotoluene	410 U	400 U	NA	NA	400 U
330	Di-n-octyl phthalate	410 U	400 U	NA	NA	400 U
330	Fluoranthene	410 U	400 U	NA	NA	400 U

TABLE 3A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW2-0-0.5	WFFI-MW2-0.5-2	WFFI-MW2-19-21	WFFI-MW4-0-0.5
	Sample Date	2/19/2007	2/19/2007	2/19/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	83.4	91.5	83.8	85.0
CRQL	**Pesticide Compounds**				
1.7	Aldrin	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	alpha-BHC	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	beta-BHC	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	Chlordane (technical)	20 U	19 U	20 UJ	20 UJ
3.3	4,4'-DDD	4.0 U	3.6 U	3.9 UJ	**0.57 J**
3.3	4,4'-DDE	**7.2**	3.6 U	3.9 UJ	**4.2 J**
3.3	4,4'-DDT	**1.1 J**	3.6 U	3.9 UJ	**0.79 J**
1.7	delta-BHC	2.0 U	1.9 U	2.0 UJ	2.0 UJ
3.3	Dieldrin	4.0 U	3.6 U	3.9 UJ	3.9 UJ
1.7	Endosulfan I	2.0 U	1.9 U	2.0 UJ	2.0 UJ
3.3	Endosulfan II	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endosulfan sulfate	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endrin	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endrin aldehyde	4.0 U	3.6 U	3.9 UJ	3.9 UJ
3.3	Endrin ketone	4.0 U	3.6 U	3.9 UJ	3.9 UJ
1.7	gamma-BHC (Lindane)	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	Heptachlor	2.0 U	1.9 U	2.0 UJ	2.0 UJ
1.7	Heptachlor epoxide	2.0 U	1.9 U	2.0 UJ	2.0 UJ
17	Methoxychlor	20 U	19 U	20 UJ	20 UJ
33	PCB-1016	40 U	36 U	39 UJ	39 UJ
67	PCB-1221	80 U	73 U	80 UJ	79 UJ
33	PCB-1232	40 U	36 U	39 UJ	39 UJ
33	PCB-1242	40 U	36 U	39 UJ	39 UJ
33	PCB-1248	40 U	36 U	39 UJ	39 UJ
33	PCB-1254	40 U	36 U	39 UJ	39 UJ
33	PCB-1260	40 U	36 U	39 UJ	39 UJ
170	Toxaphene	200 U	190 U	200 UJ	200 UJ

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW4-0.5-2	WFFI-MW4-3-5	WFFI-MW5-0-0.5	WFFI-MW5-0.5-2
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.9	87.2	89.4	89.9
CRQL	**Pesticides Compounds**				
1.7	Aldrin	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	alpha-BHC	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	beta-BHC	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	Chlordane (technical)	19 UJ	19 UJ	19 U	19 UJ
3.3	4,4'-DDD	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	4,4'-DDE	3.6 UJ	3.8 UJ	**0.56 J**	3.7 UJ
3.3	4,4'-DDT	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
1.7	delta-BHC	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
3.3	Dieldrin	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
1.7	Endosulfan I	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
3.3	Endosulfan II	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endosulfan sulfate	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endrin	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endrin aldehyde	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
3.3	Endrin ketone	3.6 UJ	3.8 UJ	3.7 U	3.7 UJ
1.7	gamma-BHC (Lindane)	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	Heptachlor	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
1.7	Heptachlor epoxide	1.9 UJ	1.9 UJ	1.9 U	1.9 UJ
17	Methoxychlor	19 UJ	19 UJ	19 U	19 UJ
33	PCB-1016	36 UJ	38 UJ	37 U	37 UJ
67	PCB-1221	74 UJ	77 UJ	75 U	74 UJ
33	PCB-1232	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1242	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1248	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1254	36 UJ	38 UJ	37 U	37 UJ
33	PCB-1260	36 UJ	38 UJ	37 U	37 UJ
170	Toxaphene	190 UJ	190 UJ	190 U	190 UJ

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3C
DATA SUMMARY FORM: ORGANIC COMPOUONDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW5-2-4	WFFI-MW6-0-0.5	WFFI-MW6-0.5-2	WFFI-MW6-2-4
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	86.9	86.4	87.1	82.7
CRQL	**Pesticides Compounds**				
1.7	Aldrin	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	alpha-BHC	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	beta-BHC	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	Chlordane (technical)	19 UJ	20 U	19 UJ	21 U
3.3	4,4'-DDD	3.8 UJ	**1.9 J**	3.8 UJ	4.0 U
3.3	4,4'-DDE	3.8 UJ	**14**	**0.48 J**	**1.5 J**
3.3	4,4'-DDT	3.8 UJ	**8.0 J**	3.8 UJ	**0.79 J**
1.7	delta-BHC	1.9 UJ	2.0 U	1.9 UJ	2.1 U
3.3	Dieldrin	3.8 UJ	3.8 U	3.8 UJ	4.0 U
1.7	Endosulfan I	1.9 UJ	2.0 U	1.9 UJ	2.1 U
3.3	Endosulfan II	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endosulfan sulfate	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endrin	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endrin aldehyde	3.8 UJ	3.8 U	3.8 UJ	4.0 U
3.3	Endrin ketone	3.8 UJ	3.8 U	3.8 UJ	4.0 U
1.7	gamma-BHC (Lindane)	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	Heptachlor	1.9 UJ	2.0 U	1.9 UJ	2.1 U
1.7	Heptachlor epoxide	1.9 UJ	2.0 U	1.9 UJ	2.1 U
17	Methoxychlor	19 UJ	20 U	19 UJ	21 U
33	PCB-1016	38 UJ	38 U	38 UJ	40 U
67	PCB-1221	77 UJ	77 U	77 UJ	81 U
33	PCB-1232	38 UJ	38 U	38 UJ	40 U
33	PCB-1242	38 UJ	38 U	38 UJ	40 U
33	PCB-1248	38 UJ	38 U	38 UJ	40 U
33	PCB-1254	38 UJ	38 U	38 UJ	40 U
33	PCB-1260	38 UJ	38 U	38 UJ	40 U
170	Toxaphene	190 UJ	200 U	190 UJ	210 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW7-0-0.5	WFFI-MW7-0.5-2
	Sample Date	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	74.6	80.7
CRQL	**Pesticides/PCBs**		
1.7	Aldrin	2.3 U	2.1 U
1.7	alpha-BHC	2.3 U	2.1 U
1.7	beta-BHC	2.3 U	2.1 U
1.7	Chlordane (technical)	23 U	21 U
3.3	4,4'-DDD	**0.78 J**	4.1 U
3.3	4,4'-DDE	**11**	4.1 U
3.3	4,4'-DDT	**2.0 J**	4.1 U
1.7	delta-BHC	2.3 U	2.1 U
3.3	Dieldrin	4.4 U	4.1 U
1.7	Endosulfan I	2.3 U	2.1 U
3.3	Endosulfan II	4.4 U	4.1 U
3.3	Endosulfan sulfate	4.4 U	4.1 U
3.3	Endrin	4.4 U	4.1 U
3.3	Endrin aldehyde	4.4 U	4.1 U
3.3	Endrin ketone	4.4 U	4.1 U
1.7	gamma-BHC (Lindane)	2.3 U	2.1 U
1.7	Heptachlor	2.3 U	2.1 U
1.7	Heptachlor epoxide	2.3 U	2.1 U
17	Methoxychlor	23 U	21 U
33	PCB-1016	44 U	41 U
67	PCB-1221	90 U	83 U
33	PCB-1232	44 U	41 U
33	PCB-1242	44 U	41 U
33	PCB-1248	44 U	41 U
33	PCB-1254	44 U	41 U
33	PCB-1260	44 U	41 U
170	Toxaphene	230 U	210 U

Notes: B - Present in laboratory blank and/or field QC blank sample
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS1	WFFI-SS1-D	WFFI-SS2	WFFI-SS3	WFFI-SS6
	Sample Date	2/20/2007	2/20/2007	2/20/2007	2/20/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	2.0	2.0	1.0	1.0	1.0
	Percent Solids	81.0	81.5	89.8	89.6	81.9
CRQL	**Pesticides Compounds**					
1.7	Aldrin	4.2 U	4.2 U	NA	NA	2.1 U
1.7	alpha-BHC	4.2 U	4.2 U	NA	NA	2.1 U
1.7	beta-BHC	4.2 U	4.2 U	NA	NA	2.1 U
1.7	Chlordane (technical)	42 U	42 U	NA	NA	21 U
3.3	4,4'-DDD	**12**	**12 J**	NA	NA	**6.2 J**
3.3	4,4'-DDE	**6.0 L**	**6.9 L**	NA	NA	**11 L**
3.3	4,4'-DDT	**37 L**	**30 L**	NA	NA	**43 L**
1.7	delta-BHC	4.2 U	4.2 U	NA	NA	2.1 U
3.3	Dieldrin	**5.7 J**	8.1 U	NA	NA	**3.9 J**
1.7	Endosulfan I	4.2 U	4.2 U	NA	NA	2.1 U
3.3	Endosulfan II	8.1 U	8.1 U	NA	NA	4.0 U
3.3	Endosulfan sulfate	8.1 UL	8.1 UL	NA	NA	4.0 UL
3.3	Endrin	8.1 U	8.1 U	NA	NA	4.0 U
3.3	Endrin aldehyde	8.1 U	8.1 U	NA	NA	4.0 U
3.3	Endrin ketone	8.1 U	8.1 U	NA	NA	4.0 U
1.7	gamma-BHC (Lindane)	4.2 U	4.2 U	NA	NA	2.1 U
1.7	Heptachlor	4.2 U	4.2 U	NA	NA	2.1 U
1.7	Heptachlor epoxide	4.2 U	4.2 U	NA	NA	2.1 U
17	Methoxychlor	42 U	42 U	NA	NA	21 U
33	PCB-1016	81 U	81 U	NA	NA	40 U
67	PCB-1221	170 U	160 U	NA	NA	82 U
33	PCB-1232	81 U	81 U	NA	NA	40 U
33	PCB-1242	81 U	81 U	NA	NA	40 U
33	PCB-1248	81 U	81 U	NA	NA	40 U
33	PCB-1254	81 U	81 U	NA	NA	40 U
33	PCB-1260	**290**	**290**	NA	NA	**190**
170	Toxaphene	420 U	420 U	NA	NA	210 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

APPENDIX C

Laboratory Reported Results
(Organic)

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW2-0-0.5

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-1

Sample wt/vol: 4.1 (g) | Lab File ID: m0342.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 16.6 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	170	
71-43-2	Benzene	7.3	U
75-25-2	Bromoform	7.3	U
74-83-9	Bromomethane	7.3	U
75-15-0	Carbon disulfide	7.3	U
56-23-5	Carbon tetrachloride	7.3	U
108-90-7	Chlorobenzene	7.3	U
124-48-1	Chlorodibromomethane	7.3	U
75-00-3	Chloroethane	7.3	U
67-66-3	Chloroform	7.3	U
74-87-3	Chloromethane	7.3	U
156-59-2	cis-1,2-Dichloroethene	7.3	U
10061-01-5	cis-1,3-Dichloropropene	7.3	U
75-27-4	Dichlorobromomethane	7.3	U
107-06-2	1,2-Dichloroethane	7.3	U
75-34-3	1,1-Dichloroethane	7.3	U
75-35-4	1,1-Dichloroethene	7.3	U
78-87-5	1,2-Dichloropropane	7.3	U
100-41-4	Ethylbenzene	7.3	U
591-78-6	2-Hexanone	37	U
75-09-2	Methylene Chloride	7.3	U
78-93-3	Methyl Ethyl Ketone	33	J
108-10-1	methyl isobutyl ketone	340	
100-42-5	Styrene	7.3	U
79-34-5	1,1,2,2-Tetrachloroethane	7.3	U
127-18-4	Tetrachloroethene	7.3	U
108-88-3	Toluene	7.3	U
156-60-5	trans-1,2-Dichloroethene	7.3	U
10061-02-6	trans-1,3-Dichloropropene	7.3	U
79-00-5	1,1,2-Trichloroethane	7.3	U
71-55-6	1,1,1-Trichloroethane	7.3	U
79-01-6	Trichloroethene	7.3	U
75-01-4	Vinyl chloride	7.3	U
1330-20-7	Xylenes, Total	15	U

FORM I 8260B

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW2-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-2

Sample wt/vol: 6.3 (g) | Lab File ID: m0343.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 8.5 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	36	J
71-43-2	Benzene	4.3	U
75-25-2	Bromoform	4.3	U
74-83-9	Bromomethane	4.3	U
75-15-0	Carbon disulfide	4.3	U
56-23-5	Carbon tetrachloride	4.3	U
108-90-7	Chlorobenzene	4.3	U
124-48-1	Chlorodibromomethane	4.3	U
75-00-3	Chloroethane	4.3	U
67-66-3	Chloroform	4.3	U
74-87-3	Chloromethane	4.3	U
156-59-2	cis-1,2-Dichloroethene	4.3	U
10061-01-5	cis-1,3-Dichloropropene	4.3	U
75-27-4	Dichlorobromomethane	4.3	U
107-06-2	1,2-Dichloroethane	4.3	U
75-34-3	1,1-Dichloroethane	4.3	U
75-35-4	1,1-Dichloroethene	4.3	U
78-87-5	1,2-Dichloropropane	4.3	U
100-41-4	Ethylbenzene	4.3	U
591-78-6	2-Hexanone	22	U
75-09-2	Methylene Chloride	4.3	U
78-93-3	Methyl Ethyl Ketone	6.1	J
108-10-1	methyl isobutyl ketone	140	
100-42-5	Styrene	4.3	U
79-34-5	1,1,2,2-Tetrachloroethane	4.3	U
127-18-4	Tetrachloroethene	4.3	U
108-88-3	Toluene	4.3	U
156-60-5	trans-1,2-Dichloroethene	4.3	U
10061-02-6	trans-1,3-Dichloropropene	4.3	U
79-00-5	1,1,2-Trichloroethane	4.3	U
71-55-6	1,1,1-Trichloroethane	4.3	U
79-01-6	Trichloroethene	4.3	U
75-01-4	Vinyl chloride	4.3	U
1330-20-7	Xylenes, Total	8.7	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW2-19-21

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-3

Sample wt/vol: 5.8 (g) | Lab File ID: m0344.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 16.2 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	29	J
71-43-2	Benzene	5.1	U
75-25-2	Bromoform	5.1	U
74-83-9	Bromomethane	5.1	U
75-15-0	Carbon disulfide	5.1	U
56-23-5	Carbon tetrachloride	5.1	U
108-90-7	Chlorobenzene	5.1	U
124-48-1	Chlorodibromomethane	5.1	U
75-00-3	Chloroethane	5.1	U
67-66-3	Chloroform	5.1	U
74-87-3	Chloromethane	5.1	U
156-59-2	cis-1,2-Dichloroethene	5.1	U
10061-01-5	cis-1,3-Dichloropropene	5.1	U
75-27-4	Dichlorobromomethane	5.1	U
107-06-2	1,2-Dichloroethane	5.1	U
75-34-3	1,1-Dichloroethane	5.1	U
75-35-4	1,1-Dichloroethene	5.1	U
78-87-5	1,2-Dichloropropane	5.1	U
100-41-4	Ethylbenzene	5.1	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.1	U
78-93-3	Methyl Ethyl Ketone	26	U
108-10-1	methyl isobutyl ketone	150	
100-42-5	Styrene	5.1	U
79-34-5	1,1,2,2-Tetrachloroethane	5.1	U
127-18-4	Tetrachloroethene	5.1	U
108-88-3	Toluene	5.1	U
156-60-5	trans-1,2-Dichloroethene	5.1	U
10061-02-6	trans-1,3-Dichloropropene	5.1	U
79-00-5	1,1,2-Trichloroethane	5.1	U
71-55-6	1,1,1-Trichloroethane	5.1	U
79-01-6	Trichloroethene	5.1	U
75-01-4	Vinyl chloride	5.1	U
1330-20-7	Xylenes, Total	10	U

FORM I 8260B

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW4-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-12

Sample wt/vol: 6.1 (g) | Lab File ID: m0363.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 15.0 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	110	
71-43-2	Benzene	4.8	U
75-25-2	Bromoform	4.8	U
74-83-9	Bromomethane	4.8	U
75-15-0	Carbon disulfide	4.8	U
56-23-5	Carbon tetrachloride	4.8	U
108-90-7	Chlorobenzene	4.8	U
124-48-1	Chlorodibromomethane	4.8	U
75-00-3	Chloroethane	4.8	U
67-66-3	Chloroform	4.8	U
74-87-3	Chloromethane	4.8	U
156-59-2	cis-1,2-Dichloroethene	4.8	U
10061-01-5	cis-1,3-Dichloropropene	4.8	U
75-27-4	Dichlorobromomethane	4.8	U
107-06-2	1,2-Dichloroethane	4.8	U
75-34-3	1,1-Dichloroethane	4.8	U
75-35-4	1,1-Dichloroethene	4.8	U
78-87-5	1,2-Dichloropropane	4.8	U
100-41-4	Ethylbenzene	4.8	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.8	U
78-93-3	Methyl Ethyl Ketone	24	U
108-10-1	methyl isobutyl ketone	24	U
100-42-5	Styrene	4.8	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	U
127-18-4	Tetrachloroethene	4.8	U
108-88-3	Toluene	4.8	U
156-60-5	trans-1,2-Dichloroethene	4.8	U
10061-02-6	trans-1,3-Dichloropropene	4.8	U
79-00-5	1,1,2-Trichloroethane	4.8	U
71-55-6	1,1,1-Trichloroethane	4.8	U
79-01-6	Trichloroethene	4.8	U
75-01-4	Vinyl chloride	4.8	U
1330-20-7	Xylenes, Total	9.6	U

FORM I 8260B

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW4-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-13

Sample wt/vol: 6.1 (g) | Lab File ID: m0353.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 9.1 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	33	J
71-43-2	Benzene	4.5	U
75-25-2	Bromoform	4.5	U
74-83-9	Bromomethane	4.5	U
75-15-0	Carbon disulfide	4.5	U
56-23-5	Carbon tetrachloride	4.5	U
108-90-7	Chlorobenzene	4.5	U
124-48-1	Chlorodibromomethane	4.5	U
75-00-3	Chloroethane	4.5	U
67-66-3	Chloroform	4.5	U
74-87-3	Chloromethane	4.5	U
156-59-2	cis-1,2-Dichloroethene	4.5	U
10061-01-5	cis-1,3-Dichloropropene	4.5	U
75-27-4	Dichlorobromomethane	4.5	U
107-06-2	1,2-Dichloroethane	4.5	U
75-34-3	1,1-Dichloroethane	4.5	U
75-35-4	1,1-Dichloroethene	4.5	U
78-87-5	1,2-Dichloropropane	4.5	U
100-41-4	Ethylbenzene	4.5	U
591-78-6	2-Hexanone	23	U
75-09-2	Methylene Chloride	4.5	U
78-93-3	Methyl Ethyl Ketone	4.6	J
108-10-1	methyl isobutyl ketone	12	J
100-42-5	Styrene	4.5	U
79-34-5	1,1,2,2-Tetrachloroethane	4.5	U
127-18-4	Tetrachloroethene	4.5	U
108-88-3	Toluene	4.5	U
156-60-5	trans-1,2-Dichloroethene	4.5	U
10061-02-6	trans-1,3-Dichloropropene	4.5	U
79-00-5	1,1,2-Trichloroethane	4.5	U
71-55-6	1,1,1-Trichloroethane	4.5	U
79-01-6	Trichloroethene	4.5	U
75-01-4	Vinyl chloride	4.5	U
1330-20-7	Xylenes, Total	9.0	U

FORM I 8260B

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW4-3-5

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-14

Sample wt/vol: 7.6 (g) | Lab File ID: m0354.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 12.8 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	22	J
71-43-2	Benzene	3.8	U
75-25-2	Bromoform	3.8	U
74-83-9	Bromomethane	3.8	U
75-15-0	Carbon disulfide	3.8	U
56-23-5	Carbon tetrachloride	3.8	U
108-90-7	Chlorobenzene	3.8	U
124-48-1	Chlorodibromomethane	3.8	U
75-00-3	Chloroethane	3.8	U
67-66-3	Chloroform	3.8	U
74-87-3	Chloromethane	3.8	U
156-59-2	cis-1,2-Dichloroethene	3.8	U
10061-01-5	cis-1,3-Dichloropropene	3.8	U
75-27-4	Dichlorobromomethane	3.8	U
107-06-2	1,2-Dichloroethane	3.8	U
75-34-3	1,1-Dichloroethane	3.8	U
75-35-4	1,1-Dichloroethene	3.8	U
78-87-5	1,2-Dichloropropane	3.8	U
100-41-4	Ethylbenzene	3.8	U
591-78-6	2-Hexanone	19	U
75-09-2	Methylene Chloride	3.8	U
78-93-3	Methyl Ethyl Ketone	19	U
108-10-1	methyl isobutyl ketone	19	U
100-42-5	Styrene	3.8	U
79-34-5	1,1,2,2-Tetrachloroethane	3.8	U
127-18-4	Tetrachloroethene	3.8	U
108-88-3	Toluene	3.8	U
156-60-5	trans-1,2-Dichloroethene	3.8	U
10061-02-6	trans-1,3-Dichloropropene	3.8	U
79-00-5	1,1,2-Trichloroethane	3.8	U
71-55-6	1,1,1-Trichloroethane	3.8	U
79-01-6	Trichloroethene	3.8	U
75-01-4	Vinyl chloride	3.8	U
1330-20-7	Xylenes, Total	7.5	U

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW5-0-0.5

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-9

Sample wt/vol: 5.6 (g) | Lab File ID: m0350.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.6 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	64	
71-43-2	Benzene	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Chlorodibromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-27-4	Dichlorobromomethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	25	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	7.7	J
108-10-1	methyl isobutyl ketone	25	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	5.0	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1MW5-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-10

Sample wt/vol: 6.1 (g) | Lab File ID: m0351.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.1 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	37	J
71-43-2	Benzene	4.6	U
75-25-2	Bromoform	4.6	U
74-83-9	Bromomethane	4.6	U
75-15-0	Carbon disulfide	4.6	U
56-23-5	Carbon tetrachloride	4.6	U
108-90-7	Chlorobenzene	4.6	U
124-48-1	Chlorodibromomethane	4.6	U
75-00-3	Chloroethane	4.6	U
67-66-3	Chloroform	4.6	U
74-87-3	Chloromethane	4.6	U
156-59-2	cis-1,2-Dichloroethene	4.6	U
10061-01-5	cis-1,3-Dichloropropene	4.6	U
75-27-4	Dichlorobromomethane	4.6	U
107-06-2	1,2-Dichloroethane	4.6	U
75-34-3	1,1-Dichloroethane	4.6	U
75-35-4	1,1-Dichloroethene	4.6	U
78-87-5	1,2-Dichloropropane	4.6	U
100-41-4	Ethylbenzene	4.6	U
591-78-6	2-Hexanone	23	U
75-09-2	Methylene Chloride	4.6	U
78-93-3	Methyl Ethyl Ketone	23	U
108-10-1	methyl isobutyl ketone	23	U
100-42-5	Styrene	4.6	U
79-34-5	1,1,2,2-Tetrachloroethane	4.6	U
127-18-4	Tetrachloroethene	4.6	U
108-88-3	Toluene	4.6	U
156-60-5	trans-1,2-Dichloroethene	4.6	U
10061-02-6	trans-1,3-Dichloropropene	4.6	U
79-00-5	1,1,2-Trichloroethane	4.6	U
71-55-6	1,1,1-Trichloroethane	4.6	U
79-01-6	Trichloroethene	4.6	U
75-01-4	Vinyl chloride	4.6	U
1330-20-7	Xylenes, Total	9.1	U

FORM I 8260B

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW5-2-4

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-11

Sample wt/vol: 6.2 (g) | Lab File ID: m0352.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 13.1 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	48	
71-43-2	Benzene	4.6	U
75-25-2	Bromoform	4.6	U
74-83-9	Bromomethane	4.6	U
75-15-0	Carbon disulfide	4.6	U
56-23-5	Carbon tetrachloride	4.6	U
108-90-7	Chlorobenzene	4.6	U
124-48-1	Chlorodibromomethane	4.6	U
75-00-3	Chloroethane	4.6	U
67-66-3	Chloroform	4.6	U
74-87-3	Chloromethane	4.6	U
156-59-2	cis-1,2-Dichloroethene	4.6	U
10061-01-5	cis-1,3-Dichloropropene	4.6	U
75-27-4	Dichlorobromomethane	4.6	U
107-06-2	1,2-Dichloroethane	4.6	U
75-34-3	1,1-Dichloroethane	4.6	U
75-35-4	1,1-Dichloroethene	4.6	U
78-87-5	1,2-Dichloropropane	4.6	U
100-41-4	Ethylbenzene	4.6	U
591-78-6	2-Hexanone	23	U
75-09-2	Methylene Chloride	4.6	U
78-93-3	Methyl Ethyl Ketone	7.7	J
108-10-1	methyl isobutyl ketone	23	U
100-42-5	Styrene	4.6	U
79-34-5	1,1,2,2-Tetrachloroethane	4.6	U
127-18-4	Tetrachloroethene	4.6	U
108-88-3	Toluene	4.6	U
156-60-5	trans-1,2-Dichloroethene	4.6	U
10061-02-6	trans-1,3-Dichloropropene	4.6	U
79-00-5	1,1,2-Trichloroethane	4.6	U
71-55-6	1,1,1-Trichloroethane	4.6	U
79-01-6	Trichloroethene	4.6	U
75-01-4	Vinyl chloride	4.6	U
1330-20-7	Xylenes, Total	9.3	U

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW6-0-0.5

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-4

Sample wt/vol: 5.0 (g) | Lab File ID: m0345.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 13.6 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	220	
71-43-2	Benzene	5.8	U
75-25-2	Bromoform	5.8	U
74-83-9	Bromomethane	5.8	U
75-15-0	Carbon disulfide	5.8	U
56-23-5	Carbon tetrachloride	5.8	U
108-90-7	Chlorobenzene	5.8	U
124-48-1	Chlorodibromomethane	5.8	U
75-00-3	Chloroethane	5.8	U
67-66-3	Chloroform	5.8	U
74-87-3	Chloromethane	5.8	U
156-59-2	cis-1,2-Dichloroethene	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
75-27-4	Dichlorobromomethane	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U
75-35-4	1,1-Dichloroethene	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U
100-41-4	Ethylbenzene	5.8	U
591-78-6	2-Hexanone	29	U
75-09-2	Methylene Chloride	5.8	U
78-93-3	Methyl Ethyl Ketone	9.0	J
108-10-1	methyl isobutyl ketone	7.4	J
100-42-5	Styrene	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
127-18-4	Tetrachloroethene	5.8	U
108-88-3	Toluene	5.8	U
156-60-5	trans-1,2-Dichloroethene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U
79-01-6	Trichloroethene	5.8	U
75-01-4	Vinyl chloride	5.8	U
1330-20-7	Xylenes, Total	12	U

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW6-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-5

Sample wt/vol: 5.5 (g) | Lab File ID: m0346.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 12.9 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	31	J
71-43-2	Benzene	5.2	U
75-25-2	Bromoform	5.2	U
74-83-9	Bromomethane	5.2	U
75-15-0	Carbon disulfide	5.2	U
56-23-5	Carbon tetrachloride	5.2	U
108-90-7	Chlorobenzene	5.2	U
124-48-1	Chlorodibromomethane	5.2	U
75-00-3	Chloroethane	5.2	U
67-66-3	Chloroform	5.2	U
74-87-3	Chloromethane	5.2	U
156-59-2	cis-1,2-Dichloroethene	5.2	U
10061-01-5	cis-1,3-Dichloropropene	5.2	U
75-27-4	Dichlorobromomethane	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U
75-35-4	1,1-Dichloroethene	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U
100-41-4	Ethylbenzene	5.2	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.2	U
78-93-3	Methyl Ethyl Ketone	26	U
108-10-1	methyl isobutyl ketone	26	U
100-42-5	Styrene	5.2	U
79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
127-18-4	Tetrachloroethene	5.2	U
108-88-3	Toluene	5.2	U
156-60-5	trans-1,2-Dichloroethene	5.2	U
10061-02-6	trans-1,3-Dichloropropene	5.2	U
79-00-5	1,1,2-Trichloroethane	5.2	U
71-55-6	1,1,1-Trichloroethane	5.2	U
79-01-6	Trichloroethene	5.2	U
75-01-4	Vinyl chloride	5.2	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW6-2-4

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-6

Sample wt/vol: 6.2 (g) | Lab File ID: m0347.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 17.3 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	9.5	J
71-43-2	Benzene	4.9	U
75-25-2	Bromoform	4.9	U
74-83-9	Bromomethane	4.9	U
75-15-0	Carbon disulfide	4.9	U
56-23-5	Carbon tetrachloride	4.9	U
108-90-7	Chlorobenzene	4.9	U
124-48-1	Chlorodibromomethane	4.9	U
75-00-3	Chloroethane	4.9	U
67-66-3	Chloroform	4.9	U
74-87-3	Chloromethane	4.9	U
156-59-2	cis-1,2-Dichloroethene	4.9	U
10061-01-5	cis-1,3-Dichloropropene	4.9	U
75-27-4	Dichlorobromomethane	4.9	U
107-06-2	1,2-Dichloroethane	4.9	U
75-34-3	1,1-Dichloroethane	4.9	U
75-35-4	1,1-Dichloroethene	4.9	U
78-87-5	1,2-Dichloropropane	4.9	U
100-41-4	Ethylbenzene	4.9	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.9	U
78-93-3	Methyl Ethyl Ketone	24	U
108-10-1	methyl isobutyl ketone	280	
100-42-5	Styrene	4.9	U
79-34-5	1,1,2,2-Tetrachloroethane	4.9	U
127-18-4	Tetrachloroethene	4.9	U
108-88-3	Toluene	4.9	U
156-60-5	trans-1,2-Dichloroethene	4.9	U
10061-02-6	trans-1,3-Dichloropropene	4.9	U
79-00-5	1,1,2-Trichloroethane	4.9	U
71-55-6	1,1,1-Trichloroethane	4.9	U
79-01-6	Trichloroethene	4.9	U
75-01-4	Vinyl chloride	4.9	U
1330-20-7	Xylenes, Total	9.7	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW7-0.-0.5

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-7

Sample wt/vol: 6.3 (g) | Lab File ID: m0348.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 25.4 | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	160	
71-43-2	Benzene	5.3	U
75-25-2	Bromoform	5.3	U
74-83-9	Bromomethane	5.3	U
75-15-0	Carbon disulfide	5.3	U
56-23-5	Carbon tetrachloride	5.3	U
108-90-7	Chlorobenzene	5.3	U
124-48-1	Chlorodibromomethane	5.3	U
75-00-3	Chloroethane	5.3	U
67-66-3	Chloroform	5.3	U
74-87-3	Chloromethane	5.3	U
156-59-2	cis-1,2-Dichloroethene	5.3	U
10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-27-4	Dichlorobromomethane	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U
75-35-4	1,1-Dichloroethene	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U
100-41-4	Ethylbenzene	5.3	U
591-78-6	2-Hexanone	27	U
75-09-2	Methylene Chloride	5.3	U
78-93-3	Methyl Ethyl Ketone	14	J
108-10-1	methyl isobutyl ketone	24	J
100-42-5	Styrene	5.3	U
79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
127-18-4	Tetrachloroethene	5.3	U
108-88-3	Toluene	5.3	U
156-60-5	trans-1,2-Dichloroethene	5.3	U
10061-02-6	trans-1,3-Dichloropropene	5.3	U
79-00-5	1,1,2-Trichloroethane	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U
79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl chloride	5.3	U
1330-20-7	Xylenes, Total	11	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW7-0.5-2

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-8

Sample wt/vol: 6.1 (g) | Lab File ID: m0364.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 19.3 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	58	
71-43-2	Benzene	5.1	U
75-25-2	Bromoform	5.1	U
74-83-9	Bromomethane	5.1	U
75-15-0	Carbon disulfide	5.1	U
56-23-5	Carbon tetrachloride	5.1	U
108-90-7	Chlorobenzene	5.1	U
124-48-1	Chlorodibromomethane	5.1	U
75-00-3	Chloroethane	5.1	U
67-66-3	Chloroform	5.1	U
74-87-3	Chloromethane	5.1	U
156-59-2	cis-1,2-Dichloroethene	5.1	U
10061-01-5	cis-1,3-Dichloropropene	5.1	U
75-27-4	Dichlorobromomethane	5.1	U
107-06-2	1,2-Dichloroethane	5.1	U
75-34-3	1,1-Dichloroethane	5.1	U
75-35-4	1,1-Dichloroethene	5.1	U
78-87-5	1,2-Dichloropropane	5.1	U
100-41-4	Ethylbenzene	5.1	U
591-78-6	2-Hexanone	25	U
75-09-2	Methylene Chloride	5.1	U
78-93-3	Methyl Ethyl Ketone	25	U
108-10-1	methyl isobutyl ketone	25	U
100-42-5	Styrene	5.1	U
79-34-5	1,1,2,2-Tetrachloroethane	5.1	U
127-18-4	Tetrachloroethene	5.1	U
108-88-3	Toluene	5.1	U
156-60-5	trans-1,2-Dichloroethene	5.1	U
10061-02-6	trans-1,3-Dichloropropene	5.1	U
79-00-5	1,1,2-Trichloroethane	5.1	U
71-55-6	1,1,1-Trichloroethane	5.1	U
79-01-6	Trichloroethene	5.1	U
75-01-4	Vinyl chloride	5.1	U
1330-20-7	Xylenes, Total	10	U

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS1

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-17

Sample wt/vol: 5.9 (g) | Lab File ID: m0359.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 19.0 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	210	
71-43-2	Benzene	5.2	U
75-25-2	Bromoform	5.2	U
74-83-9	Bromomethane	5.2	U
75-15-0	Carbon disulfide	5.2	U
56-23-5	Carbon tetrachloride	5.2	U
108-90-7	Chlorobenzene	5.2	U
124-48-1	Chlorodibromomethane	5.2	U
75-00-3	Chloroethane	5.2	U
67-66-3	Chloroform	5.2	U
74-87-3	Chloromethane	5.2	U
156-59-2	cis-1,2-Dichloroethene	5.2	U
10061-01-5	cis-1,3-Dichloropropene	5.2	U
75-27-4	Dichlorobromomethane	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U
75-35-4	1,1-Dichloroethene	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U
100-41-4	Ethylbenzene	5.2	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.2	U
78-93-3	Methyl Ethyl Ketone	19	J
108-10-1	methyl isobutyl ketone	26	U
100-42-5	Styrene	5.2	U
79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
127-18-4	Tetrachloroethene	5.2	U
108-88-3	Toluene	5.2	U
156-60-5	trans-1,2-Dichloroethene	5.2	U
10061-02-6	trans-1,3-Dichloropropene	5.2	U
79-00-5	1,1,2-Trichloroethane	5.2	U
71-55-6	1,1,1-Trichloroethane	5.2	U
79-01-6	Trichloroethene	5.2	U
75-01-4	Vinyl chloride	5.2	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS1-D

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-18

Sample wt/vol: 6.0 (g) | Lab File ID: m0365.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 18.5 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	180	
71-43-2	Benzene	5.1	U
75-25-2	Bromoform	5.1	U
74-83-9	Bromomethane	5.1	U
75-15-0	Carbon disulfide	5.1	U
56-23-5	Carbon tetrachloride	5.1	U
108-90-7	Chlorobenzene	5.1	U
124-48-1	Chlorodibromomethane	5.1	U
75-00-3	Chloroethane	5.1	U
67-66-3	Chloroform	5.1	U
74-87-3	Chloromethane	5.1	U
156-59-2	cis-1,2-Dichloroethene	5.1	U
10061-01-5	cis-1,3-Dichloropropene	5.1	U
75-27-4	Dichlorobromomethane	5.1	U
107-06-2	1,2-Dichloroethane	5.1	U
75-34-3	1,1-Dichloroethane	5.1	U
75-35-4	1,1-Dichloroethene	5.1	U
78-87-5	1,2-Dichloropropane	5.1	U
100-41-4	Ethylbenzene	5.1	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.1	U
78-93-3	Methyl Ethyl Ketone	26	U
108-10-1	methyl isobutyl ketone	26	U
100-42-5	Styrene	5.1	U
79-34-5	1,1,2,2-Tetrachloroethane	5.1	U
127-18-4	Tetrachloroethene	5.1	U
108-88-3	Toluene	5.1	U
156-60-5	trans-1,2-Dichloroethene	5.1	U
10061-02-6	trans-1,3-Dichloropropene	5.1	U
79-00-5	1,1,2-Trichloroethane	5.1	U
71-55-6	1,1,1-Trichloroethane	5.1	U
79-01-6	Trichloroethene	5.1	U
75-01-4	Vinyl chloride	5.1	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS2

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-15

Sample wt/vol: 5.6 (g) | Lab File ID: m0357.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.2 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	50	
71-43-2	Benzene	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Chlorodibromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-27-4	Dichlorobromomethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	25	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	7.3	J
108-10-1	methyl isobutyl ketone	25	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	5.0	U
1330-20-7	Xylenes, Total	9.9	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS3

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-16

Sample wt/vol: 5.1 (g) | Lab File ID: m0358.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.4 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	57	
71-43-2	Benzene	5.5	U
75-25-2	Bromoform	5.5	U
74-83-9	Bromomethane	5.5	U
75-15-0	Carbon disulfide	5.5	U
56-23-5	Carbon tetrachloride	5.5	U
108-90-7	Chlorobenzene	5.5	U
124-48-1	Chlorodibromomethane	5.5	U
75-00-3	Chloroethane	5.5	U
67-66-3	Chloroform	5.5	U
74-87-3	Chloromethane	5.5	U
156-59-2	cis-1,2-Dichloroethene	5.5	U
10061-01-5	cis-1,3-Dichloropropene	5.5	U
75-27-4	Dichlorobromomethane	5.5	U
107-06-2	1,2-Dichloroethane	5.5	U
75-34-3	1,1-Dichloroethane	5.5	U
75-35-4	1,1-Dichloroethene	5.5	U
78-87-5	1,2-Dichloropropane	5.5	U
100-41-4	Ethylbenzene	5.5	U
591-78-6	2-Hexanone	27	U
75-09-2	Methylene Chloride	5.5	U
78-93-3	Methyl Ethyl Ketone	7.1	J
108-10-1	methyl isobutyl ketone	27	U
100-42-5	Styrene	5.5	U
79-34-5	1,1,2,2-Tetrachloroethane	5.5	U
127-18-4	Tetrachloroethene	5.5	U
108-88-3	Toluene	5.5	U
156-60-5	trans-1,2-Dichloroethene	5.5	U
10061-02-6	trans-1,3-Dichloropropene	5.5	U
79-00-5	1,1,2-Trichloroethane	5.5	U
71-55-6	1,1,1-Trichloroethane	5.5	U
79-01-6	Trichloroethene	5.5	U
75-01-4	Vinyl chloride	5.5	U
1330-20-7	Xylenes, Total	11	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS6

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-19

Sample wt/vol: 5.3 (g) | Lab File ID: m0362.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 18.1 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	210	
71-43-2	Benzene	5.8	U
75-25-2	Bromoform	5.8	U
74-83-9	Bromomethane	5.8	U
75-15-0	Carbon disulfide	5.8	U
56-23-5	Carbon tetrachloride	5.8	U
108-90-7	Chlorobenzene	5.8	U
124-48-1	Chlorodibromomethane	5.8	U
75-00-3	Chloroethane	5.8	U
67-66-3	Chloroform	5.8	U
74-87-3	Chloromethane	5.8	U
156-59-2	cis-1,2-Dichloroethene	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
75-27-4	Dichlorobromomethane	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U
75-35-4	1,1-Dichloroethene	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U
100-41-4	Ethylbenzene	5.8	U
591-78-6	2-Hexanone	29	U
75-09-2	Methylene Chloride	5.8	U
78-93-3	Methyl Ethyl Ketone	23	J
108-10-1	methyl isobutyl ketone	13	J
100-42-5	Styrene	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
127-18-4	Tetrachloroethene	5.8	U
108-88-3	Toluene	5.8	U
156-60-5	trans-1,2-Dichloroethene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U
79-01-6	Trichloroethene	5.8	U
75-01-4	Vinyl chloride	5.8	U
1330-20-7	Xylenes, Total	12	U

FORM I 8260B

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: TB-1

Lab Name: STL Savannah | Job No.:680-24460-1

SDG No.: 68024460

Matrix: Water | Lab Sample ID: 680-24460-20

Sample wt/vol: 5 (mL) | Lab File ID: p2482.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	0.55	J
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

FORM I 8260B

1

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: TB-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Water | Lab Sample ID: 680-24460-21

Sample wt/vol: 5 (mL) | Lab File ID: p2483.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	0.47	J
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

FORM I 8260B

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2-0-0.5RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-1 RE

Sample wt/vol: 30.22 (g) | Lab File ID: n6007.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 16.6 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	400 ~~390~~	U H
208-96-8	Acenaphthylene	390	U H
120-12-7	Anthracene	390	U H
56-55-3	Benzo[a]anthracene	~~390~~	U H
50-32-8	Benzo[a]pyrene	34	J H
205-99-2	Benzo[b]fluoranthene	400 ~~390~~	U H
191-24-2	Benzo[g,h,i]perylene	52	J H
207-08-9	Benzo[k]fluoranthene	400 ~~390~~	U H
111-91-1	Bis(2-chloroethoxy)methane	390	U H
111-44-4	Bis(2-chloroethyl)ether	390	U H
108-60-1	bis(chloroisopropyl) ether	390	U H
117-81-7	Bis(2-ethylhexyl) phthalate	390	U H
101-55-3	4-Bromophenyl phenyl ether	390	U H
85-68-7	Butyl benzyl phthalate	390	U H
86-74-8	Carbazole	~~390~~	U H
106-47-8	4-Chloroaniline	790	U H
59-50-7	4-Chloro-3-methylphenol	400 ~~390~~	U H
91-58-7	2-Chloronaphthalene	390	U H
95-57-8	2-Chlorophenol	390	U H
7005-72-3	4-Chlorophenyl phenyl ether	390	U H
218-01-9	Chrysene	~~390~~	U H
53-70-3	Dibenz(a,h)anthracene	50	J H
132-64-9	Dibenzofuran	400 ~~390~~	U H
541-73-1	1,3-Dichlorobenzene	390	U H
106-46-7	1,4-Dichlorobenzene	390	U H
95-50-1	1,2-Dichlorobenzene	~~390~~	U H
91-94-1	3,3'-Dichlorobenzidine	790	U H
120-83-2	2,4-Dichlorophenol	400 ~~390~~	U H
84-66-2	Diethyl phthalate	27	J H B
105-67-9	2,4-Dimethylphenol	400 ~~390~~	U H
131-11-3	Dimethyl phthalate	390	U H
84-74-2	Di-n-butyl phthalate	~~390~~	U H
534-52-1	4,6-Dinitro-2-methylphenol	2000	U H

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2-0-0.5RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-1 RE

Sample wt/vol: 30.22 (g) | Lab File ID: n6007.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 16.6 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2000	U H
121-14-2	2,4-Dinitrotoluene	400 ~~390~~	U H
606-20-2	2,6-Dinitrotoluene	~~390~~	U H
117-84-0	Di-n-octyl phthalate	~~390~~	U H
206-44-0	Fluoranthene	~~390~~	U H
86-73-7	Fluorene	~~390~~	U H
118-74-1	Hexachlorobenzene	~~390~~	U H
87-68-3	Hexachlorobutadiene	~~390~~	U H
77-47-4	Hexachlorocyclopentadiene	~~390~~	U H
67-72-1	Hexachloroethane	~~390~~	U H
193-39-5	Indeno[1,2,3-cd]pyrene	52 ~~43~~	J H
78-59-1	Isophorone	400 ~~390~~	U H
91-57-6	2-Methylnaphthalene	~~390~~	U H
95-48-7	2-Methylphenol	~~390~~	U H
15831-10-4	3 & 4 Methylphenol	~~390~~	U H
91-20-3	Naphthalene	~~390~~	U H
88-74-4	2-Nitroaniline	2000	U H
99-09-2	3-Nitroaniline	2000	U H
100-01-6	4-Nitroaniline	2000	U H
98-95-3	Nitrobenzene	400 ~~390~~	U H
88-75-5	2-Nitrophenol	~~390~~	U H
100-02-7	4-Nitrophenol	2000	U H
621-64-7	N-Nitrosodi-n-propylamine	400 ~~390~~	U H
86-30-6	N-Nitrosodiphenylamine	~~390~~	U H
87-86-5	Pentachlorophenol	2000	U H
85-01-8	Phenanthrene	400 ~~390~~	U H
108-95-2	Phenol	~~390~~	U H
129-00-0	Pyrene	~~390~~	U H
120-82-1	1,2,4-Trichlorobenzene	~~390~~	U H
88-06-2	2,4,6-Trichlorophenol	~~390~~	U H
95-95-4	2,4,5-Trichlorophenol	~~390~~	U H

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2-0.5-2RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-2 RE

Sample wt/vol: 30.29 (g) | Lab File ID: n6008.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 8.5 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	360	U H
208-96-8	Acenaphthylene	360	U H
120-12-7	Anthracene	360	U H
56-55-3	Benzo[a]anthracene	360	U H
50-32-8	Benzo[a]pyrene	360	U H
205-99-2	Benzo[b]fluoranthene	360	U H
191-24-2	Benzo[g,h,i]perylene	31	J H
207-08-9	Benzo[k]fluoranthene	360	U H
111-91-1	Bis(2-chloroethoxy)methane	360	U H
111-44-4	Bis(2-chloroethyl)ether	360	U H
108-60-1	bis(chloroisopropyl) ether	360	U H
117-81-7	Bis(2-ethylhexyl) phthalate	360	U H
101-55-3	4-Bromophenyl phenyl ether	360	U H
85-68-7	Butyl benzyl phthalate	360	U H
86-74-8	Carbazole	360	U H
106-47-8	4-Chloroaniline	720 710	U H
59-50-7	4-Chloro-3-methylphenol	360	U H
91-58-7	2-Chloronaphthalene	360	U H
95-57-8	2-Chlorophenol	360	U H
7005-72-3	4-Chlorophenyl phenyl ether	360	U H
218-01-9	Chrysene	360	U H
53-70-3	Dibenz(a,h)anthracene	360	U H
132-64-9	Dibenzofuran	360	U H
541-73-1	1,3-Dichlorobenzene	360	U H
106-46-7	1,4-Dichlorobenzene	360	U H
95-50-1	1,2-Dichlorobenzene	360	U H
91-94-1	3,3'-Dichlorobenzidine	720 710	U H
120-83-2	2,4-Dichlorophenol	360	U H
84-66-2	Diethyl phthalate	360	U H
105-67-9	2,4-Dimethylphenol	360	U H
131-11-3	Dimethyl phthalate	360	U H
84-74-2	Di-n-butyl phthalate	360	U H
534-52-1	4,6-Dinitro-2-methylphenol	1900 1800	U H

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2-0.5-2RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-2 RE

Sample wt/vol: 30.29 (g) | Lab File ID: n6008.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 8.5 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1900 ~~1800~~	U H
121-14-2	2,4-Dinitrotoluene	360	U H
606-20-2	2,6-Dinitrotoluene	360	U H
117-84-0	Di-n-octyl phthalate	360	U H
206-44-0	Fluoranthene	360	U H
86-73-7	Fluorene	360	U H
118-74-1	Hexachlorobenzene	360	U H
87-68-3	Hexachlorobutadiene	360	U H
77-47-4	Hexachlorocyclopentadiene	360	U H
67-72-1	Hexachloroethane	360	U H
193-39-5	Indeno[1,2,3-cd]pyrene	360	U H
78-59-1	Isophorone	360	U H
91-57-6	2-Methylnaphthalene	360	U H
95-48-7	2-Methylphenol	360	U H
15831-10-4	3 & 4 Methylphenol	360	U H
91-20-3	Naphthalene	360	U H
88-74-4	2-Nitroaniline	1900 ~~1800~~	U H
99-09-2	3-Nitroaniline	1800	U H
100-01-6	4-Nitroaniline	~~1800~~	U H
98-95-3	Nitrobenzene	360	U H
88-75-5	2-Nitrophenol	360	U H
100-02-7	4-Nitrophenol	1900 ~~1800~~	U H
621-64-7	N-Nitrosodi-n-propylamine	360	U H
86-30-6	N-Nitrosodiphenylamine	360	U H
87-86-5	Pentachlorophenol	1900 ~~1800~~	U H
85-01-8	Phenanthrene	360	U H
108-95-2	Phenol	360	U H
129-00-0	Pyrene	360	U H
120-82-1	1,2,4-Trichlorobenzene	360	U H
88-06-2	2,4,6-Trichlorophenol	360	U H
95-95-4	2,4,5-Trichlorophenol	360	U H

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2-19-21RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-3 RE

Sample wt/vol: 30.27 (g) | Lab File ID: n6009.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 16.2 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	390	U H
208-96-8	Acenaphthylene	390	U H
120-12-7	Anthracene	390	U H
56-55-3	Benzo[a]anthracene	390	U H
50-32-8	Benzo[a]pyrene	30	J H
205-99-2	Benzo[b]fluoranthene	390	U H
191-24-2	Benzo[g,h,i]perylene	46	J H
207-08-9	Benzo[k]fluoranthene	390	U H
111-91-1	Bis(2-chloroethoxy)methane	390	U H
111-44-4	Bis(2-chloroethyl)ether	390	U H
108-60-1	bis(chloroisopropyl) ether	390	U H
117-81-7	Bis(2-ethylhexyl) phthalate	390	U H
101-55-3	4-Bromophenyl phenyl ether	390	U H
85-68-7	Butyl benzyl phthalate	390	U H
86-74-8	Carbazole	390	U H
106-47-8	4-Chloroaniline	780 ~~780~~	U H
59-50-7	4-Chloro-3-methylphenol	390	U H
91-58-7	2-Chloronaphthalene	390	U H
95-57-8	2-Chlorophenol	390	U H
7005-72-3	4-Chlorophenyl phenyl ether	390	U H
218-01-9	Chrysene	390	U H
53-70-3	Dibenz(a,h)anthracene	44	J H
132-64-9	Dibenzofuran	390	U H
541-73-1	1,3-Dichlorobenzene	390	U H
106-46-7	1,4-Dichlorobenzene	390	U H
95-50-1	1,2-Dichlorobenzene	390	U H
91-94-1	3,3'-Dichlorobenzidine	780 ~~780~~	U H
120-83-2	2,4-Dichlorophenol	390	U H
84-66-2	Diethyl phthalate	390	U H
105-67-9	2,4-Dimethylphenol	390	U H
131-11-3	Dimethyl phthalate	390	U H
84-74-2	Di-n-butyl phthalate	390	U H
534-52-1	4,6-Dinitro-2-methylphenol	2000	U H

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2-19-21RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-3 RE

Sample wt/vol: 30.27 (g) | Lab File ID: n6009.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 16.2 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2000	U H
121-14-2	2,4-Dinitrotoluene	390	U H
606-20-2	2,6-Dinitrotoluene	390	U H
117-84-0	Di-n-octyl phthalate	390	U H
206-44-0	Fluoranthene	390	U H
86-73-7	Fluorene	390	U H
118-74-1	Hexachlorobenzene	390	U H
87-68-3	Hexachlorobutadiene	390	U H
77-47-4	Hexachlorocyclopentadiene	390	U H
67-72-1	Hexachloroethane	390	U H
193-39-5	Indeno[1,2,3-cd]pyrene	40	J H
78-59-1	Isophorone	390	U H
91-57-6	2-Methylnaphthalene	390	U H
95-48-7	2-Methylphenol	390	U H
15831-10-4	3 & 4 Methylphenol	390	U H
91-20-3	Naphthalene	390	U H
88-74-4	2-Nitroaniline	2000	U H
99-09-2	3-Nitroaniline	2000	U H
100-01-6	4-Nitroaniline	2000	U H
98-95-3	Nitrobenzene	390	U H
88-75-5	2-Nitrophenol	390	U H
100-02-7	4-Nitrophenol	2000	U H
621-64-7	N-Nitrosodi-n-propylamine	390	U H
86-30-6	N-Nitrosodiphenylamine	390	U H
87-86-5	Pentachlorophenol	2000	U H
85-01-8	Phenanthrene	390	U H
108-95-2	Phenol	390	U H
129-00-0	Pyrene	390	U H
120-82-1	1,2,4-Trichlorobenzene	390	U H
88-06-2	2,4,6-Trichlorophenol	390	U H
95-95-4	2,4,5-Trichlorophenol	390	U H

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yes

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-12

Sample wt/vol: 30.09 (g) | Lab File ID: n5966.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 15.0 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	390	U
208-96-8	Acenaphthylene	390	U
120-12-7	Anthracene	390	U
56-55-3	Benzo[a]anthracene	390	U
50-32-8	Benzo[a]pyrene	390	U
205-99-2	Benzo[b]fluoranthene	390	U
191-24-2	Benzo[g,h,i]perylene	390	U
207-08-9	Benzo[k]fluoranthene	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
111-44-4	Bis(2-chloroethyl)ether	390	U
108-60-1	bis(chloroisopropyl) ether	390	U
117-81-7	Bis(2-ethylhexyl) phthalate	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
85-68-7	Butyl benzyl phthalate	390	U
86-74-8	Carbazole	390	U
106-47-8	4-Chloroaniline	780 770	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-58-7	2-Chloronaphthalene	390	U
95-57-8	2-Chlorophenol	390	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
218-01-9	Chrysene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
132-64-9	Dibenzofuran	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
91-94-1	3,3'-Dichlorobenzidine	780 770	U
120-83-2	2,4-Dichlorophenol	390	U
84-66-2	Diethyl phthalate	390	U
105-67-9	2,4-Dimethylphenol	390	U
131-11-3	Dimethyl phthalate	390	U
84-74-2	Di-n-butyl phthalate	390	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-12

Sample wt/vol: 30.09 (g) | Lab File ID: n5966.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 15.0 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2000	U
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
117-84-0	Di-n-octyl phthalate	390	U
206-44-0	Fluoranthene	390	U
86-73-7	Fluorene	390	U
118-74-1	Hexachlorobenzene	390	U
87-68-3	Hexachlorobutadiene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
67-72-1	Hexachloroethane	390	U
193-39-5	Indeno[1,2,3-cd]pyrene	390	U
78-59-1	Isophorone	390	U
91-57-6	2-Methylnaphthalene	390	U
95-48-7	2-Methylphenol	390	U
15831-10-4	3 & 4 Methylphenol	390	U
91-20-3	Naphthalene	390	U
88-74-4	2-Nitroaniline	2000	U
99-09-2	3-Nitroaniline	2000	U
100-01-6	4-Nitroaniline	2000	U
98-95-3	Nitrobenzene	390	U
88-75-5	2-Nitrophenol	390	U
100-02-7	4-Nitrophenol	2000	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
86-30-6	N-Nitrosodiphenylamine	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390	U
108-95-2	Phenol	390	U
129-00-0	Pyrene	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4-0.5-2RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-13 RE

Sample wt/vol: 30.09 (g) | Lab File ID: n6045.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 9.1 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/09/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	360	U H
208-96-8	Acenaphthylene	360	U H
120-12-7	Anthracene	360	U H
56-55-3	Benzo[a]anthracene	360	U H
50-32-8	Benzo[a]pyrene	360	U H
205-99-2	Benzo[b]fluoranthene	360	U H
191-24-2	Benzo[g,h,i]perylene	63	J H
207-08-9	Benzo[k]fluoranthene	360	U H
111-91-1	Bis(2-chloroethoxy)methane	360	U H
111-44-4	Bis(2-chloroethyl)ether	360	U H
108-60-1	bis(chloroisopropyl) ether	360	U H
117-81-7	Bis(2-ethylhexyl) phthalate	59	J H
101-55-3	4-Bromophenyl phenyl ether	360	U H
85-68-7	Butyl benzyl phthalate	360	U H
86-74-8	Carbazole	360	U H
106-47-8	4-Chloroaniline	730 720	U H
59-50-7	4-Chloro-3-methylphenol	360	U H
91-58-7	2-Chloronaphthalene	360	U H
95-57-8	2-Chlorophenol	360	U H
7005-72-3	4-Chlorophenyl phenyl ether	360	U H
218-01-9	Chrysene	360	U H
53-70-3	Dibenz(a,h)anthracene	46	J H
132-64-9	Dibenzofuran	360	U H
541-73-1	1,3-Dichlorobenzene	360	U H
106-46-7	1,4-Dichlorobenzene	360	U H
95-50-1	1,2-Dichlorobenzene	360	U H
91-94-1	3,3'-Dichlorobenzidine	730 720	U H
120-83-2	2,4-Dichlorophenol	360	U H
84-66-2	Diethyl phthalate	360	U H
105-67-9	2,4-Dimethylphenol	360	U H
131-11-3	Dimethyl phthalate	360	U H
84-74-2	Di-n-butyl phthalate	58	J H
534-52-1	4,6-Dinitro-2-methylphenol	1900	U H

J

yes

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4-0.5-2RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-13 RE

Sample wt/vol: 30.09 (g) | Lab File ID: n6045.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 9.1 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/09/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1900	U H
121-14-2	2,4-Dinitrotoluene	360	U H
606-20-2	2,6-Dinitrotoluene	360	U H
117-84-0	Di-n-octyl phthalate	360	U H
206-44-0	Fluoranthene	360	U H
86-73-7	Fluorene	360	U H
118-74-1	Hexachlorobenzene	360	U H
87-68-3	Hexachlorobutadiene	360	U H
77-47-4	Hexachlorocyclopentadiene	360	U H
67-72-1	Hexachloroethane	360	U H
193-39-5	Indeno[1,2,3-cd]pyrene	43	J H
78-59-1	Isophorone	360	U H
91-57-6	2-Methylnaphthalene	360	U H
95-48-7	2-Methylphenol	360	U H
15831-10-4	3 & 4 Methylphenol	360	U H
91-20-3	Naphthalene	360	U H
88-74-4	2-Nitroaniline	1900	U H
99-09-2	3-Nitroaniline	1900	U H
100-01-6	4-Nitroaniline	1900	U H
98-95-3	Nitrobenzene	360	U H
88-75-5	2-Nitrophenol	360	U H
100-02-7	4-Nitrophenol	1900	U H
621-64-7	N-Nitrosodi-n-propylamine	360	U H
86-30-6	N-Nitrosodiphenylamine	360	U H
87-86-5	Pentachlorophenol	1900	U H
85-01-8	Phenanthrene	360	U H
108-95-2	Phenol	360	U H
129-00-0	Pyrene	360	U H
120-82-1	1,2,4-Trichlorobenzene	360	U H
88-06-2	2,4,6-Trichlorophenol	360	U H
95-95-4	2,4,5-Trichlorophenol	360	U H

J

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4-3-5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-14

Sample wt/vol: 30.08 (g) | Lab File ID: e5475.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 12.8 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	380	U
208-96-8	Acenaphthylene	380	U
120-12-7	Anthracene	380	U
56-55-3	Benzo[a]anthracene	380	U
50-32-8	Benzo[a]pyrene	380	U
205-99-2	Benzo[b]fluoranthene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
108-60-1	bis(chloroisopropyl) ether	380	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
85-68-7	Butyl benzyl phthalate	380	U
86-74-8	Carbazole	380	U
106-47-8	4-Chloroaniline	760 750	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-58-7	2-Chloronaphthalene	380	U
95-57-8	2-Chlorophenol	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
218-01-9	Chrysene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
132-64-9	Dibenzofuran	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
91-94-1	3,3'-Dichlorobenzidine	760 750	U
120-83-2	2,4-Dichlorophenol	380	U
84-66-2	Diethyl phthalate	380	U
105-67-9	2,4-Dimethylphenol	380	U
131-11-3	Dimethyl phthalate	380	U
84-74-2	Di-n-butyl phthalate	380	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4-3-5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-14

Sample wt/vol: 30.08 (g) | Lab File ID: e5475.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 12.8 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1900	U
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
117-84-0	Di-n-octyl phthalate	380	U
206-44-0	Fluoranthene	380	U
86-73-7	Fluorene	380	U
118-74-1	Hexachlorobenzene	380	U
87-68-3	Hexachlorobutadiene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
67-72-1	Hexachloroethane	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
78-59-1	Isophorone	380	U
91-57-6	2-Methylnaphthalene	380	U
95-48-7	2-Methylphenol	380	U
15831-10-4	3 & 4 Methylphenol	380	U
91-20-3	Naphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
99-09-2	3-Nitroaniline	1900	U
100-01-6	4-Nitroaniline	1900	U
98-95-3	Nitrobenzene	380	U
88-75-5	2-Nitrophenol	380	U
100-02-7	4-Nitrophenol	1900	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
86-30-6	N-Nitrosodiphenylamine	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
108-95-2	Phenol	380	U
129-00-0	Pyrene	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U

J

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW5-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-9

Sample wt/vol: 30.05 (g) | Lab File ID: n5963.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.6 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	370	U
208-96-8	Acenaphthylene	370	U
120-12-7	Anthracene	370	U
56-55-3	Benzo[a]anthracene	370	U
50-32-8	Benzo[a]pyrene	370	U
205-99-2	Benzo[b]fluoranthene	370	U
191-24-2	Benzo[g,h,i]perylene	370	U
207-08-9	Benzo[k]fluoranthene	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
111-44-4	Bis(2-chloroethyl)ether	370	U
108-60-1	bis(chloroisopropyl) ether	370	U
117-81-7	Bis(2-ethylhexyl) phthalate	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
85-68-7	Butyl benzyl phthalate	370	U
86-74-8	Carbazole	370	U
106-47-8	4-Chloroaniline	740	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-58-7	2-Chloronaphthalene	370	U
95-57-8	2-Chlorophenol	370	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
218-01-9	Chrysene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
132-64-9	Dibenzofuran	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
91-94-1	3,3'-Dichlorobenzidine	740	U
120-83-2	2,4-Dichlorophenol	370	U
84-66-2	Diethyl phthalate	370	U
105-67-9	2,4-Dimethylphenol	370	U
131-11-3	Dimethyl phthalate	370	U
84-74-2	Di-n-butyl phthalate	370	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW5-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-9

Sample wt/vol: 30.05 (g) | Lab File ID: n5963.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.6 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1900	U
121-14-2	2,4-Dinitrotoluene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
117-84-0	Di-n-octyl phthalate	370	U
206-44-0	Fluoranthene	370	U
86-73-7	Fluorene	370	U
118-74-1	Hexachlorobenzene	370	U
87-68-3	Hexachlorobutadiene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
67-72-1	Hexachloroethane	370	U
193-39-5	Indeno[1,2,3-cd]pyrene	370	U
78-59-1	Isophorone	370	U
91-57-6	2-Methylnaphthalene	370	U
95-48-7	2-Methylphenol	370	U
15831-10-4	3 & 4 Methylphenol	370	U
91-20-3	Naphthalene	370	U
88-74-4	2-Nitroaniline	1900	U
99-09-2	3-Nitroaniline	1900	U
100-01-6	4-Nitroaniline	1900	U
98-95-3	Nitrobenzene	370	U
88-75-5	2-Nitrophenol	370	U
100-02-7	4-Nitrophenol	1900	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
86-30-6	N-Nitrosodiphenylamine	370	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	370	U
108-95-2	Phenol	370	U
129-00-0	Pyrene	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1MW5-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-10

Sample wt/vol: 30.13 (g) | Lab File ID: n5964.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.1 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	370	U
208-96-8	Acenaphthylene	370	U
120-12-7	Anthracene	370	U
56-55-3	Benzo[a]anthracene	370	U
50-32-8	Benzo[a]pyrene	370	U
205-99-2	Benzo[b]fluoranthene	370	U
191-24-2	Benzo[g,h,i]perylene	370	U
207-08-9	Benzo[k]fluoranthene	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
111-44-4	Bis(2-chloroethyl)ether	370	U
108-60-1	bis(chloroisopropyl) ether	370	U
117-81-7	Bis(2-ethylhexyl) phthalate	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
85-68-7	Butyl benzyl phthalate	370	U
86-74-8	Carbazole	370	U
106-47-8	4-Chloroaniline	730	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-58-7	2-Chloronaphthalene	370	U
95-57-8	2-Chlorophenol	370	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
218-01-9	Chrysene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
132-64-9	Dibenzofuran	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
91-94-1	3,3'-Dichlorobenzidine	730	U
120-83-2	2,4-Dichlorophenol	370	U
84-66-2	Diethyl phthalate	370	U
105-67-9	2,4-Dimethylphenol	370	U
131-11-3	Dimethyl phthalate	370	U
84-74-2	Di-n-butyl phthalate	370	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U

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ORGANIC ANALYSIS DATA SHEET

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1MW5-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-10

Sample wt/vol: 30.13 (g) | Lab File ID: n5964.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 10.1 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1900	U
121-14-2	2,4-Dinitrotoluene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
117-84-0	Di-n-octyl phthalate	370	U
206-44-0	Fluoranthene	370	U
86-73-7	Fluorene	370	U
118-74-1	Hexachlorobenzene	370	U
87-68-3	Hexachlorobutadiene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
67-72-1	Hexachloroethane	370	U
193-39-5	Indeno[1,2,3-cd]pyrene	370	U
78-59-1	Isophorone	370	U
91-57-6	2-Methylnaphthalene	370	U
95-48-7	2-Methylphenol	370	U
15831-10-4	3 & 4 Methylphenol	370	U
91-20-3	Naphthalene	370	U
88-74-4	2-Nitroaniline	1900	U
99-09-2	3-Nitroaniline	1900	U
100-01-6	4-Nitroaniline	1900	U
98-95-3	Nitrobenzene	370	U
88-75-5	2-Nitrophenol	370	U
100-02-7	4-Nitrophenol	1900	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
86-30-6	N-Nitrosodiphenylamine	370	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	370	U
108-95-2	Phenol	370	U
129-00-0	Pyrene	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW5-2-4

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-11

Sample wt/vol: 30.02 (g) | Lab File ID: e5474.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 13.1 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	380	U
208-96-8	Acenaphthylene	380	U
120-12-7	Anthracene	380	U
56-55-3	Benzo[a]anthracene	380	U
50-32-8	Benzo[a]pyrene	380	U
205-99-2	Benzo[b]fluoranthene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
108-60-1	bis(chloroisopropyl) ether	380	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
85-68-7	Butyl benzyl phthalate	380	U
86-74-8	Carbazole	380	U
106-47-8	4-Chloroaniline	760	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-58-7	2-Chloronaphthalene	380	U
95-57-8	2-Chlorophenol	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
218-01-9	Chrysene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
132-64-9	Dibenzofuran	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
120-83-2	2,4-Dichlorophenol	380	U
84-66-2	Diethyl phthalate	380	U
105-67-9	2,4-Dimethylphenol	380	U
131-11-3	Dimethyl phthalate	380	U
84-74-2	Di-n-butyl phthalate	380	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW5-2-4

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-11

Sample wt/vol: 30.02 (g) | Lab File ID: e5474.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 13.1 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2000	U
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
117-84-0	Di-n-octyl phthalate	380	U
206-44-0	Fluoranthene	380	U
86-73-7	Fluorene	380	U
118-74-1	Hexachlorobenzene	380	U
87-68-3	Hexachlorobutadiene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
67-72-1	Hexachloroethane	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
78-59-1	Isophorone	380	U
91-57-6	2-Methylnaphthalene	380	U
95-48-7	2-Methylphenol	380	U
15831-10-4	3 & 4 Methylphenol	380	U
91-20-3	Naphthalene	380	U
88-74-4	2-Nitroaniline	2000	U
99-09-2	3-Nitroaniline	2000	U
100-01-6	4-Nitroaniline	2000	U
98-95-3	Nitrobenzene	380	U
88-75-5	2-Nitrophenol	380	U
100-02-7	4-Nitrophenol	2000	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
86-30-6	N-Nitrosodiphenylamine	380	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	380	U
108-95-2	Phenol	380	U
129-00-0	Pyrene	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U

J

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6-0-0.5RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-4 RE

Sample wt/vol: 30.07 (g) | Lab File ID: n6010.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 13.6 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	380	U H
208-96-8	Acenaphthylene	380	U H
120-12-7	Anthracene	380	U H
56-55-3	Benzo[a]anthracene	380	U H
50-32-8	Benzo[a]pyrene	380	U H
205-99-2	Benzo[b]fluoranthene	380	U H
191-24-2	Benzo[g,h,i]perylene	35	J H
207-08-9	Benzo[k]fluoranthene	380	U H
111-91-1	Bis(2-chloroethoxy)methane	380	U H
111-44-4	Bis(2-chloroethyl)ether	380	U H
108-60-1	bis(chloroisopropyl) ether	380	U H
117-81-7	Bis(2-ethylhexyl) phthalate	380	U H
101-55-3	4-Bromophenyl phenyl ether	380	U H
85-68-7	Butyl benzyl phthalate	380	U H
86-74-8	Carbazole	380	U H
106-47-8	4-Chloroaniline	760	U H
59-50-7	4-Chloro-3-methylphenol	380	U H
91-58-7	2-Chloronaphthalene	380	U H
95-57-8	2-Chlorophenol	380	U H
7005-72-3	4-Chlorophenyl phenyl ether	380	U H
218-01-9	Chrysene	380	U H
53-70-3	Dibenz(a,h)anthracene	33	J H
132-64-9	Dibenzofuran	380	U H
541-73-1	1,3-Dichlorobenzene	380	U H
106-46-7	1,4-Dichlorobenzene	380	U H
95-50-1	1,2-Dichlorobenzene	380	U H
91-94-1	3,3'-Dichlorobenzidine	760	U H
120-83-2	2,4-Dichlorophenol	380	U H
84-66-2	Diethyl phthalate	380	U H
105-67-9	2,4-Dimethylphenol	380	U H
131-11-3	Dimethyl phthalate	380	U H
84-74-2	Di-n-butyl phthalate	380	U H
534-52-1	4,6-Dinitro-2-methylphenol	2000	U H

J

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6-0-0.5RE

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-4 RE

Sample wt/vol: 30.07 (g) | Lab File ID: n6010.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 13.6 | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
51-28-5	2,4-Dinitrophenol	2000	U	H
121-14-2	2,4-Dinitrotoluene	380	U	H
606-20-2	2,6-Dinitrotoluene	380	U	H
117-84-0	Di-n-octyl phthalate	380	U	H
206-44-0	Fluoranthene	380	U	H
86-73-7	Fluorene	380	U	H
118-74-1	Hexachlorobenzene	380	U	H
87-68-3	Hexachlorobutadiene	380	U	H
77-47-4	Hexachlorocyclopentadiene	380	U	H
67-72-1	Hexachloroethane	380	U	H
193-39-5	Indeno[1,2,3-cd]pyrene	30	J	H
78-59-1	Isophorone	380	U	H
91-57-6	2-Methylnaphthalene	380	U	H
95-48-7	2-Methylphenol	380	U	H
15831-10-4	3 & 4 Methylphenol	380	U	H
91-20-3	Naphthalene	380	U	H
88-74-4	2-Nitroaniline	2000	U	H
99-09-2	3-Nitroaniline	2000	U	H
100-01-6	4-Nitroaniline	2000	U	H
98-95-3	Nitrobenzene	380	U	H
88-75-5	2-Nitrophenol	380	U	H
100-02-7	4-Nitrophenol	2000	U	H
621-64-7	N-Nitrosodi-n-propylamine	380	U	H
86-30-6	N-Nitrosodiphenylamine	380	U	H
87-86-5	Pentachlorophenol	2000	U	H
85-01-8	Phenanthrene	380	U	H
108-95-2	Phenol	380	U	H
129-00-0	Pyrene	380	U	H
120-82-1	1,2,4-Trichlorobenzene	380	U	H
88-06-2	2,4,6-Trichlorophenol	380	U	H
95-95-4	2,4,5-Trichlorophenol	380	U	H

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-5

Sample wt/vol: 30.03 (g) | Lab File ID: n5959.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 12.9 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	380	U
208-96-8	Acenaphthylene	380	U
120-12-7	Anthracene	380	U
56-55-3	Benzo[a]anthracene	380	U
50-32-8	Benzo[a]pyrene	380	U
205-99-2	Benzo[b]fluoranthene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
108-60-1	bis(chloroisopropyl) ether	380	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
85-68-7	Butyl benzyl phthalate	380	U
86-74-8	Carbazole	380	U
106-47-8	4-Chloroaniline	760	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-58-7	2-Chloronaphthalene	380	U
95-57-8	2-Chlorophenol	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
218-01-9	Chrysene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
132-64-9	Dibenzofuran	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
120-83-2	2,4-Dichlorophenol	380	U
84-66-2	Diethyl phthalate	380	U
105-67-9	2,4-Dimethylphenol	380	U
131-11-3	Dimethyl phthalate	380	U
84-74-2	Di-n-butyl phthalate	380	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-5

Sample wt/vol: 30.03 (g) | Lab File ID: n5959.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 12.9 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2000	U
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
117-84-0	Di-n-octyl phthalate	380	U
206-44-0	Fluoranthene	380	U
86-73-7	Fluorene	380	U
118-74-1	Hexachlorobenzene	380	U
87-68-3	Hexachlorobutadiene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
67-72-1	Hexachloroethane	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
78-59-1	Isophorone	380	U
91-57-6	2-Methylnaphthalene	380	U
95-48-7	2-Methylphenol	380	U
15831-10-4	3 & 4 Methylphenol	380	U
91-20-3	Naphthalene	380	U
88-74-4	2-Nitroaniline	2000	U
99-09-2	3-Nitroaniline	2000	U
100-01-6	4-Nitroaniline	2000	U
98-95-3	Nitrobenzene	380	U
88-75-5	2-Nitrophenol	380	U
100-02-7	4-Nitrophenol	2000	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
86-30-6	N-Nitrosodiphenylamine	380	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	380	U
108-95-2	Phenol	380	U
129-00-0	Pyrene	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6-2-4

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-6

Sample wt/vol: 30.00 (g) | Lab File ID: n5960.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 17.3 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	400	U
208-96-8	Acenaphthylene	400	U
120-12-7	Anthracene	400	U
56-55-3	Benzo[a]anthracene	400	U
50-32-8	Benzo[a]pyrene	400	U
205-99-2	Benzo[b]fluoranthene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U
207-08-9	Benzo[k]fluoranthene	400	U
111-91-1	Bis(2-chloroethoxy)methane	400	U
111-44-4	Bis(2-chloroethyl)ether	400	U
108-60-1	bis(chloroisopropyl) ether	400	U
117-81-7	Bis(2-ethylhexyl) phthalate	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
85-68-7	Butyl benzyl phthalate	400	U
86-74-8	Carbazole	400	U
106-47-8	4-Chloroaniline	800	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-58-7	2-Chloronaphthalene	400	U
95-57-8	2-Chlorophenol	400	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
218-01-9	Chrysene	400	U
53-70-3	Dibenz(a,h)anthracene	400	U
132-64-9	Dibenzofuran	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
91-94-1	3,3'-Dichlorobenzidine	800	U
120-83-2	2,4-Dichlorophenol	400	U
84-66-2	Diethyl phthalate	400	U
105-67-9	2,4-Dimethylphenol	400	U
131-11-3	Dimethyl phthalate	400	U
84-74-2	Di-n-butyl phthalate	400	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U

CompuChem
A Division Of
Liberty Analytical Corp.
8/15/2012

TONY PACE
WESTON SOLUTIONS
2551 ELTHAM AVE., SUITE I

NORFOLK, VA 23513

Subject:

Report of Data - Project: WFF PROJECT11/12767.105.001.0400/TC WorkOrder: 1208050

Attn.: TONY PACE

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Joan Purdee

Compuchem
a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER
OF PAGES _____

CompuChem, a division of Liberty Analytical

Client: WESTON SOLUTIONS **Work:** 1208050

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DA **Sdg:** 1208050

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1208050-01	WWTP-01	Soil	08/10/2012 15:10	08/11/2012 12:28
1208050-02	WWTP-02	Soil	08/10/2012 15:15	08/11/2012 12:28

CompuChem, a Division of Liberty Analytical Corporation

Analysis Data Package

EPA SW-846

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field and analytical samples, reanalyses, blanks, spikes, duplicates, and laboratory control samples. The sample data package consists of the following:

A. Cover Documentation

B. Sample Data

Client: **WESTON SOLUTIONS** SDG#: **1208050**

Project: **WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY**

CompuChem
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Liberty Analytical Corp.

A. Cover Documentation

1. Cover Page

2. SDG Narrative

3. Chain-Of-Custody Records

1. Cover Page

Inorganic Analyses Data Package

The Cover Page includes laboratory information, SDG numbers, project name and the Client Identification in alphanumeric order showing the Client Identification cross-referenced with Lab ID numbers.

ANALYSES DATA PACKAGE COVER PAGE

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Laboratory: COMPUCHEM

SDG: 1208050

Client Sample Id:	Lab Sample Id:
WWTP-01	1208050-01
WWTP-02	1208050-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Patricia A Murphy for Name: Susan Bass

Date: 08/15/2012 Title: Senior Chemist

Environmental Testing Laboratories

CompuChem

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Liberty Analytical Corp.

LABORATORY ACCREDITATION BUREAU ACCREDITED

DoD ELAP

2. SDG Narrative

The SDG Narrative contains laboratory information, SDG number, and detailed documentation of any QC, sample, shipment, and/or analytical problems encountered in processing the samples. This will include any technical and administrative problems encountered and the resolution or corrective actions taken. The SDG Narrative will also document the alternative means of determining the cooler temperature when a cooler's temperature indicator bottle is absent. The SDG Narrative also provides equations or curves and utilizes raw data from the SDG being reported to demonstrate how sample results are obtained from raw instrument output. Finally, the SDG Narrative will identify and explain any differences between results being provided in the data package and those provided previously as Preliminary Results.

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1208050
Client: WESTON SOLUTIONS
Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

The indicated Sample Delivery Group (SDG) consisting of two (2) solid samples was received into the laboratory information management system (LIMS) on August 11, 2012 intact and in good condition with the Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The cooler temperature indicator bottle was found with the samples and the samples temperature was 1.7 degrees Celsius. Temperature was recorded by IR temperature gun.

The samples were prepared and analyzed in accordance with SW846 and DoD methodology for the requested metal lead.

EQUATIONS FOR SOLID SAMPLE CALCULATIONS:

Client sample WWTP-01 used for illustration.

ICP Equation:

Equation for obtaining metals sample results in mg/Kg as presented on FORM I data sheets from ICP instrument acquired results in µg/L (ppb).

$$\text{Concentration (\% solids) (mg/Kg)} = \frac{C \times V}{W \times S} \times DF$$

Where
C = concentration (µg/L)
DF = dilution factor
V = final volume in liters after sample preparation
W = weight in grams of wet sample
S = % solids/100

Example: **Lead** result µg/L to mg/Kg.

$$\frac{1304.284\ \mu g/L \times 0.1\ L\ (V)}{1.02\ g\ (W) \times 0.895} \times 1 = 142.87\ mg/Kg \text{ reported as } 143\ mg/Kg$$

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (LLICV, LLCCV, ICV & CCV), blanks (ICB, & CCB), and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW-846 methodology and DoD QSM 4.2 allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSS & PBS) were found to be within acceptable ranges and the field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The ICP sample matrix spike, CCN = 2081403-MS1 (WWTP-01S) was found to be inside control limits.

The ICP sample matrix duplicate spike, CCN = 2081403-MSD1 (WWTP-01SD) was found to be inside control limits.

The ICP sample duplicate spike, CCN = 2081403-DUP1 (WWTP-01D) was found to be inside control limits.

A five-fold serial dilution of sample, CCN = SDI1208050-01 (WWTP-01L) was performed in accordance with SW-846 requirements for ICP analysis.

The adjusted sample concentration was inside control limits.

The ICP sample post digestion spike, CCN =2081403-PS1 (WWTP-01A) was performed and passed criteria.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Patricia A Murphy for
Susan W. Bass
Senior Chemist
August 15, 2012

DoD INORGANIC DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. The qualifiers used are:

U : This flag indicates the compound was analyzed for, not detected and is reported as less than the Limit of Detection (LOD) (or as defined by the client). The reporting limit (RL), or Limit of Quantitation (LOQ), and the LOD will be adjusted to reflect any dilution or concentration of the sample and, for soils, the percent moisture.

J : This flag indicates the reported result is an estimated value. The flag is used as detailed below:

1. When an analyte fails quality control acceptance criteria in an MS, and/or MSD, or sample duplicate. The J flag is applied to the specific analyte(s) in the parent sample,

2. When dilution test and resulting post-digestion spike fail quality control acceptance criteria for ICP-AES or ICP-MS analyses. The J flag is applied to the specific analyte(s) in the parent sample, and

3. When an analyte is detected and the result is less than the adjusted RL/LOQ but equal to or greater than the Detection Limit (DL).

Q : This flag denotes that one or more quality control criteria have failed (e.g., LCS recovery, Continuing Calibration Verification, CCV, and interference check standards for ICP-AES/ICP-MS) and reanalyses can't be performed. The Q flag is applied to all specific analyte(s) in all samples associated with the failed quality control criteria.

B : This flag is used when the analyte is found in the associated method or calibration blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

D: This flag is applied to an analyte when the reported result is based on a dilution.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

The extensions: D, S, SD, L, and A are added to the end of the Client ID and represent the following:

D – Matrix Duplicate
S – Matrix Spike
SD – Matrix Spike Duplicate
L – Serial Dilution
A – Post Digestion Spike

3. Chain-Of-Custody Records

№ 03530

CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.
501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page 1 of 2

Courier: FedEx
Airbill No.: 8739 6167 6943
Sampling Complete? Y or N

Client/Reporting Information

Company Name: Weston Solutions, Inc.
Address: 2551 Eltham Av Suite I
City: Norfolk State: VA Zip: 23513
Project Contact: Tony Pace
Phone #: 757-819-5310
Sampler's Name: Craig LaCosse

Project Information

Project Name: Project 11 WFF
Sampling Location: Wallops Flight Facility
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch QC
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Matrices

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	Number of Preserved Bottles: HCl	NaOH	HNO3	H2SO4	MEOH	Other	Requested Analysis: VOC list (1)+Naphthalene	Pb, Cr, Zn	pH Sample Info (Lab Use)
1208033-10	AI86-SB01-00-1	8-10-12	0750	SO	54							X		
-11	AI86-SB01-00-8		0755		54							X		
-12	AI84-SB02-00-1		0815		5							X	X	
-13	AI84-SB02-01-1		0815		5		(Rec. 6 Encores)					X	X	
-14	AI84-SB02-00-8		0900		5							X	X	
-15	AI84-SB01-00-1		0935		5							X	X	
-16	AI84-SB01-00-7		0950		5							X	X	
-17	AI83-SB01-00-2 MS/MSD		1030		11		(Rec 6 Encored)					X	X	
-18	AI83-SB01-00-7		1045		5							X	X	
-19	AI83-SB02-00-1		1250		5							X	X	

Requested Analysis (include method and bottle type)

Sixteen Encores, 4oz and 8oz in 8415
9/8-10/2
Joan spike to Craig about issue w/ encore bag. Should be 08'45 per Craig.

Lab Use Only

Sample Unpacked By: Joan Riedel
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N/A
625 & Phenol samples checked for chlorine? Y or N/A
608 samples checked for pH between 5.0-9.0? Y or N/A

Comments

VOC list(1) - PCE, TCE, 1,1-DCE, cis 1,2-DCE, trans 1,2-DCE, VC, cyclohexane, methyl cyclohexane, isopropyl benzene, CT, acetone, BTEX

Sample Custody

Relinquished by: C. LaCosse — Date/Time: 8-10-12/1530 — Received by: Joan Riedel — Date/Time: 8.11.12 1228
Relinquished by: — Date/Time: — Received by: — Date/Time:
Subcontact? Y or N If yes, where? — Custody Seal(s) intact? Y or N — On Ice? Y or N — Cooler Temp: 1.7 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

IR GUN SN001

10

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

№ 03531

Page 2 of 2

Courier FedEx
Airbill No. 8739 6167 6943
Sampling Complete? Y or N

Client/Reporting Information	Project Information
Company Name: Weston Solutions, Inc.	Project Name: Project 11 WFF
Address: 2551 Eltham Av Suite I	Sampling Location: Wallops Flight Facility
City: Norfolk State: VA Zip: 23513	Turnaround time: Standard
Project Contact: Tony Pace	Batch QC or Project Specific? If Specific, which Sample ID? Batch QC
Phone #: 757-819-5310	Are aqueous samples field filtered for metals? Y or N
Sampler's Name: Craig J. LaCosse	Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No. (Lab Use)	Field ID	Collection: Date	Collection: Time	Matrix	# of bottles	Number of Preserved Bottles: HCl	NaOH	HNO3	H2SO4	MEOH	Other	VOC list(1)+Naphthalene	Pb, Cr, Zn Total Lead	pH / Sample Info (Lab Use)
1208033-20	AI83-SB02-00-7	8-10-12	1300	SO	5							X	X	
1208049-01	AI83-SB02-00-7		1300		5							X	X	
1208050-01	WWTP-01		1510		1								X	
-02	WWTP-02		1515		1								X	

> 7 day TAT

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N/A
625 & Phenol samples checked for chlorine? Y or N/A
608 samples checked for pH between 5.0-9.0? Y or N/A

Comments

VOC list(1) - PCE, TCE, 1,1-DCE, cis 1,2-DCE, trans 1,2-DCE, VC, cyclohexane, methyl cyclohexane, isopropyl benzene, CT, acetone, BTEX

Sample Custody

Relinquished by: C. LaCosse	Date/Time: 8-10-12/1530	Received by:	Date/Time: 8.11.12 1228		
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: .1		

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

WORK ORDER

Printed: 8/13/2012 2:06:19PM

1208050

COMPUCHEM

Client:	**WESTON SOLUTIONS**	**Project Manager:**	**Cathy Dover**
Project:	**WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DA'**	**Project Number:**	**WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 D**
SDG:	**1208050** **CASE:**	**Status:**	**Received**

Report To:

WESTON SOLUTIONS
TONY PACE
2551 ELTHAM AVE., SUITE I
NORFOLK, VA 23513
Phone: (757) 819-5310
Fax: -

Invoice To:

WESTON SOLUTIONS
TONY PACE
2551 ELTHAM AVE., SUITE I
NORFOLK, VA 23513
Phone :(757) 819-5310
Fax: -

Date Due: 08/17/2012 00:00 (6 day TAT)

Received By: Cathy Dover — Date Received: 08/11/2012 12:28

Logged In By: Cathy Dover — Date Logged In: 08/13/2012 13:13

J & B Flags?: **YES**	TICS?: **NO**	Deliverable: **Style 9 CD Only**	EDD : **22) SEDD**
Metals ND to? **LOD**	Spike Level: **FULL Spike**		

USE 1208050-01 FOR QC*TOTAL Pb ONLY*RESULTS DUE BY FRIDAY 8-17-12

Analysis	Due	TAT	Expires	Received	Comments
1208050-01 WWTP-01 [Soil] Sampled 08/10/2012 15:10 Eastern					
6010 METALS DOD	08/17/2012 16:00	6	02/06/2013 15:10	08/11/2012 12:28	
Solids, Dry Weight	08/17/2012 16:00	6	02/06/2013 15:10	08/11/2012 12:28	
1208050-02 WWTP-02 [Soil] Sampled 08/10/2012 15:15 Eastern					
6010 METALS DOD	08/17/2012 16:00	6	02/06/2013 15:15	08/11/2012 12:28	
Solids, Dry Weight	08/17/2012 16:00	6	02/06/2013 15:15	08/11/2012 12:28	

B. Sample Data

1. Results
2. Quality Control Data
3. Raw Data
4. Digestion and Distillation Logs

1. Results

a. **Analysis Data Sheet**

ANALYSIS DATA SHEET

WWTP-01

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1208050-01 % Solid: 89.5 Matrix: Soil Sampled: 08/10/12 Received: 08/11/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	143	0.199	0.548	1.10	1	J	EPA 6010C	2H15001	8/14/12 19:30

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ANALYSIS DATA SHEET

WWTP-02

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1208050-02 % Solid: 81.7 Matrix: Soil Sampled: 08/10/12 Received: 08/11/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	497	0.216	0.594	1.19	1		EPA 6010C	2H15001	8/14/12 20:13

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2. Quality Control (QC) Data

a. Low Level Initial and Continuing Calibration Check

b. Initial and Continuing Calibration Check

c. Low Range Standard

d. High Range Standard

e. Blank

f. ICP Interference Check Sample

g. Duplicates

h. Matrix Spike / Matrix Spike Duplicate Recovery

i. Serial Dilution

j. Post Digestion Spike Sample Recovery

k. LCS / LCS Duplicate Recovery

l. Method Detection and Reporting Limits

m. ICP-AES and ICP-MS Linear Ranges

n. ICP-AES Interelement Correction Factors

o. Preparation Batch Summary

p. Analysis Sequence Summary

LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2H15001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	QC Limts
LLICV	2H15001-CRL1	Lead	10.00	10.5	105	ug/L		70 - 130
LLCCV	2H15001-CRL2	Lead	10.00	10.1	101	ug/L		70 - 130
LLCCV	2H15001-CRL3	Lead	10.00	12.2	122	ug/L		70 - 130
LLCCV	2H15001-CRL4	Lead	10.00	8.87	89	ug/L	J	70 - 130

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2H15001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
ICV	2H15001-ICV1	Lead	1100	1070	98	ug/L		+/-10 %
CCV1	2H15001-CCV1	Lead	1000	988	99	ug/L		+/-10 %
CCV1	2H15001-CCV2	Lead	1000	984	98	ug/L		+/-10 %
CCV1	2H15001-CCV3	Lead	1000	960	96	ug/L		+/-10 %
CCV1	2H15001-CCV4	Lead	1000	964	96	ug/L		+/-10 %
CCV1	2H15001-CCV5	Lead	1000	965	97	ug/L		+/-10 %

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LOW RANGE STANDARD

EPA 6010C

Client: WESTON SOLUTIONS **SDG:** 1208050 **Project:** WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2H15001-LCV1 **Sequence:** 2H15001 **Standard ID:** 2E21006

ANALYTE	TRUE (ug/L)	FOUND (ug/L)	% Rec	Q	QC LIMIT
Lead	10.00	10.1	101		80-120

* Values outside of QC limits

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BLANKS

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2H15001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	Q	Method
ICB	2H15001-ICB1	Lead	-0.339	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2H15001-CCB1	Lead	0.242	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2H15001-CCB2	Lead	0.535	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2H15001-CCB3	Lead	0.917	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
PBS	2081403-BLK1	Lead		0.182	0.500	1.00	mg/kg wet	*U*	EPA 6010C
CCB1	2H15001-CCB4	Lead	0.186	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2H15001-CCB5	Lead	0.588	1.82	5.00	10.0	ug/L	*U*	EPA 6010C

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ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2H15001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units
ICSA	2H15001-IFA1	Lead		4.11	5.00	ug/L
ICSAB	2H15001-IFB1	Lead	50.00	52.53	105	ug/L

*The absence of an entry in the "True" column denotes the lack of a true value for that analyte.The entry in the "%R" column represents a Control Limit, established as +/- the analyte's Limit of Detection (LOD).

DUPLICATES
EPA 6010C

WWTP-01D

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2081403-DUP1 % Solid: 89.0 Matrix: Soil Lab Source ID:1208050-01 Source Sample: WWTP-01

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg dry)	DUPLICATE CONCENTRATION (mg/kg dry)	RPD %	Q	METHOD
Lead	20	*143*	137	4.04		EPA 6010C

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6010C

WWTP-01S

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2081403-MS1 % Solid: 89.0 Matrix: Soil Lab Source ID: 1208050-01 Source Sample: WWTP-01

ANALYTE	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	MS CONCENTRATION (mg/kg dry)	MS % REC.	Q	QC LIMITS REC.
Lead	2.213	143	158	674		80 - 120

ANALYTE	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Lead	2.149	164	999	38.8	*	20	80 - 120

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SERIAL DILUTION

EPA 6010C

WWTP-01L

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2H15001-SRD3 Matrix: Soil Lab Source ID: 1208050-01 Source Sample: WWTP-01

Sequence: 2H15001 Dilution: 5 Report to MDL: YES

Analyte	Initial Sample Result (I)	Serial Dilution Result (S)	RL	% Difference	Q	Method	QC Limits % Difference
Lead	1304.30	1302.95	10.0	0.102		EPA 6010C	10

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POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6010C

WWTP-01A

Laboratory: COMPUCHEM
Client: WESTON SOLUTIONS
Matrix: Soil

SDG: 1208050
Project: WFF PROJECT11/12767.105.001.0400/TOTA
Laboratory ID: 2081403-PS1
Lab Source ID: 1208050-01

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Lead	1490	1300	200.0	91.1	75 - 125

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LCS / LCS DUPLICATE RECOVERY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2081403-BS1 Matrix: Soil Client ID: LCSS Batch: 2081403

ANALYTE	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC.	Q	QC LIMITS REC.
Lead	92.40	88.8	96.1		80 - 120

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METHOD DETECTION AND REPORTING LIMITS

Laboratory: COMPUCHEM **SDG:** 1208050

Client: WESTON SOLUTIONS **Project:** WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 D

Matrix: Soil **Instrument:** P4

Analyte	DL	LOQ	Units	Method
Lead	0.182	1.00	mg/kg	EPA 6010C

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ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG: 1208050 Instrument: P4

Analyte	Concentration ug/L	LR Date
Lead	60000	07/26/2012

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1208050 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Ag
Lead	220.35					

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1208050 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: As	B	Ba	Be	Cd
Lead	220.35					

Comments:

ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1208050 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	K	Mn
Lead	220.35					

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1208050 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mo	Na	Ni	Pb	Sb
Lead	220.35					

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1208050 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Se	Sn	Ti	Tl	V
Lead	220.35					

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1208050 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Zn				
Lead	220.35					

Comments:

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PREPARATION BATCH SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Batch: 2081403 Matrix: Soil Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (g)	FINAL VOL/WT (mL)
WWTP-01	1208050-01	08/14/12 10:45	1.02	100
WWTP-02	1208050-02	08/14/12 10:45	1.03	100
PBS	2081403-BLK1	08/14/12 10:45	1.00	100
LCSS	2081403-BS1	08/14/12 10:45	1.00	100
WWTP-01D	2081403-DUP1	08/14/12 10:45	1.01	100
WWTP-01S	2081403-MS1	08/14/12 10:45	1.01	100
WWTP-01SD	2081403-MSD1	08/14/12 10:45	1.04	100
WWTP-01A	2081403-PS1	08/14/12 10:45	1.02	100

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ANALYSIS SEQUENCE SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2H15001 Calibration: UNASSIC Instrument: P4

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
S0	2H15001-CAL1	P40814_P-001	08/14/12 14:36:11
S RSTD-1	2H15001-CAL2	P40814_P-002	08/14/12 14:43:24
LLICV	2H15001-CRL1	P40814_P-006	08/14/12 15:08:27
ICV	2H15001-ICV1	P40814_P-007	08/14/12 15:15:41
ICB	2H15001-ICB1	P40814_P-008	08/14/12 15:22:54
ICSA	2H15001-IFA1	P40814_P-009	08/14/12 15:30:07
ICSAB	2H15001-IFB1	P40814_P-010	08/14/12 15:37:21
LLCCV	2H15001-CRL2	P40814_P-011	08/14/12 15:44:34
CCV1	2H15001-CCV1	P40814_P-012	08/14/12 15:51:48
CCB1	2H15001-CCB1	P40814_P-013	08/14/12 15:59:02
LRS DOD	2H15001-LCV1	P40814_P-014	08/14/12 16:21:31
CCV1	2H15001-CCV2	P40814_P-024	08/14/12 17:33:43
CCB1	2H15001-CCB2	P40814_P-025	08/14/12 17:40:57
LLCCV	2H15001-CRL3	P40814_P-035	08/14/12 18:54:10
CCV1	2H15001-CCV3	P40814_P-036	08/14/12 19:01:24
CCB1	2H15001-CCB3	P40814_P-037	08/14/12 19:08:38
PBS	2081403-BLK1	P40814_P-038	08/14/12 19:15:57
LCSS	2081403-BS1	P40814_P-039	08/14/12 19:23:10
WWTP-01	1208050-01	P40814_P-040	08/14/12 19:30:22
WWTP-01D	2081403-DUP1	P40814_P-041	08/14/12 19:37:35
WWTP-01S	2081403-MS1	P40814_P-042	08/14/12 19:44:48
WWTP-01SD	2081403-MSD1	P40814_P-043	08/14/12 19:52:01
WWTP-01L	2H15001-SRD3	P40814_P-044	08/14/12 19:59:14
WWTP-01A	2081403-PS1	P40814_P-045	08/14/12 20:06:27
WWTP-02	1208050-02	P40814_P-046	08/14/12 20:13:40

Environmental Testing Laboratories

CompuChem

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LABORATORY ACCREDITATION BUREAU ACCREDITED

DoD ELAP

ANALYSIS SEQUENCE SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1208050 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2H15001 Calibration: UNASSIC Instrument: P4

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
CCV1	2H15001-CCV4	P40814_P-048	08/14/12 20:28:07
CCB1	2H15001-CCB4	P40814_P-049	08/14/12 20:35:22
LLCCV	2H15001-CRL4	P40814_P-059	08/14/12 21:47:39
CCV1	2H15001-CCV5	P40814_P-060	08/14/12 21:54:53
CCB1	2H15001-CCB5	P40814_P-061	08/14/12 22:02:08

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HOLDING TIME SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG: 1208050

Sample Name	Date Collected	Date Received	Date Prepared	Date Analyzed	Days to Analysis	Max Days to Analysis*	Q
WWTP-01	08/10/12	08/11/12	08/14/12	08/14/12	4	180	
WWTP-02	08/10/12	08/11/12	08/14/12	08/14/12	4	180	

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3. Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the quarterly verification of method and instrument parameters submitted as a part of each data package.

The order of the raw data in the data package shall be: ICP-AES, ICP-MS, mercury, and cyanide (if a target analyte).

Raw data shall be labeled with Client Identification numbers and appropriate codes in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, interference check samples, serial dilution samples, LRS check standard, Laboratory Control Sample, and post digestion spike
- diluted and undiluted sample and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes (indicating standard solutions used, final spike concentrations, and volumes involved).
- instrument used, any instrument adjustments, data corrections or other apparent anomalies on the measurement record, including all data voided or data not used and a brief written explanation
- time and date of each analysis (instrument run logs can be submitted if they contain this information)

Daily Instrument Profile

Nebulizer pressure: 16
Peak position: -0.097321
Peak intensity: 1208
Vernier position: 471

Maintenance: NONE

Printed: 8/15/2012 9:52:49 AM

Method(s) (circle one): ILM05.4 6010B (6010C) Other _____

Operator(s): JLC **Date/Time** 08/14/12/1436 to 08/14/12/2208

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)
L	Matrix = leachate
W	Matrix = water
S	Matrix = solid
B	Matrix = biological tissue

SDG	Matrix	Comments
1208018	L	RCRA
1208022	L	Fe
1208034	L	Pb
1208041	W	Ca, Fe, K, Mg, Mn, Na
1208042	L	Fe
1208050	S	Pb
1208051	W	Ca, Fe, K, Mg, Mn, Na

complete

ICP Run Log (P4)

File Name: P40814

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
1	2H15001-CAL1	S0 BLANK	CALIB STD	1	08/14/12	14:36:11		
2	2H15001-CAL2	S RSTD-1	CALIB STD	1	08/14/12	14:43:24		
3	2H15001-CAL4	S RSTD-3	CALIB STD	1	08/14/12	14:50:38		
4	2H15001-CAL3	S RSTD-2	CALIB STD	1	08/14/12	14:56:19		
5	2H15001-CAL5	S RSTD-4	CALIB STD -	1	08/14/12	15:02:47		
6	2H15001-CRL1	LLICV	ICV	1	08/14/12	15:08:27		(Q) (BI)
7	2H15001-ICV1	ICV1	ICV	1	08/14/12	15:15:41		(Q) (BI)
8	2H15001-ICB1	ICB	ICB	1	08/14/12	15:22:54		
9	2H15001-IFA1	ICSA	ICS	1	08/14/12	15:30:07		
10	2H15001-IFB1	ICSAB	ICS	1	08/14/12	15:37:21		
11	2H15001-CRL2	LLCCV	CCV	1	08/14/12	15:44:34		(Q) (BI)
12	2H15001-CCV1	CCV	CCV	1	08/14/12	15:51:48		
13	2H15001-CCB1	CCB	CCB	1	08/14/12	15:59:02		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 8.15.12

ICP Run Log (P4)

File Name: P40814

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
14	2H15001-LCV1	LRS DOD	LRS	1	08/14/12	16:21:31		(Q) (BI)
15	2081412-BLK1	PBW	PBW	1	08/14/12	16:28:45	1208034	
16	2081412-BLK2	TCLPBLKVV	SAMPLE	1	08/14/12	16:35:58	1208018	(H) (NA)
17	2081412-BLK3	TCLPBLKWB	SAMPLE	1	08/14/12	16:43:12	1208018	(H) (NA)
18	2081412-BLK4	TCLPBLKWC	SAMPLE	1	08/14/12	16:50:25	1208018	
19	2081412-BS1	LCSW	LCS	1	08/14/12	16:57:38	1208034	
20	2081412-BS2	LCSW	LCS	2	08/14/12	17:04:51	1208034	
21	2081412-BSD1	LCSWD	LCS	1	08/14/12	17:12:04	1208034	
22	2081412-BSD2	LCSWD	LCS	2	08/14/12	17:19:17	1208034	
23	1208018-01	TANK1S	SAMPLE	1	08/14/12	17:26:29	1208018	(H) (NA)
24	2H15001-CCV2	CCV	CCV	1	08/14/12	17:33:43		
25	2H15001-CCB2	CCB	CCB	1	08/14/12	17:40:57		(Q) (CO)
26	2H15001-SRD1	TANK1SL	SAMPLE	5	08/14/12	17:48:16	1208018	
27	2081412-PS1	TANK1SA	SAMPLE	1	08/14/12	17:55:29	1208018	(H) (NA)
28	1208034-01	ASR2.82-WS08	SAMPLE	1	08/14/12	18:02:42	1208034	(H) (NA)
29	2H15001-SRD2	ASR2.82-WS08L	SAMPLE	5	08/14/12	18:09:55	1208034	
30	2081412-PS2	ASR2.82-WS08A	SAMPLE	1	08/14/12	18:17:08	1208034	(H) (NA)
31	1208034-02	ASR2.82-WS09	SAMPLE	1	08/14/12	18:24:22	1208034	
32	1208034-03	ASR2.82-WS13	SAMPLE	1	08/14/12	18:32:30	1208034	(H) (NA)
33	1208034-04	ASR2.82-WS18	SAMPLE	1	08/14/12	18:39:44	1208034	(H) (NA)
34	1208034-05	ASR2.82-WS57	SAMPLE	1	08/14/12	18:46:57	1208034	(H) (NA)
35	2H15001-CRL3	LLCCV	CCV	1	08/14/12	18:54:10		(Q) (CO)
36	2H15001-CCV3	CCV	CCV	1	08/14/12	19:01:24		
37	2H15001-CCB3	CCB	CCB	1	08/14/12	19:08:38		(Q) (CO)
38	2081403-BLK1	PBS	PBS	1	08/14/12	19:15:57	1208050	(H) (CU)
39	2081403-BS1	LCSS	LCS	1	08/14/12	19:23:10	1208050	
40	1208050-01	WWTP-01	SAMPLE	1	08/14/12	19:30:22	1208050	
41	2081403-DUP1	WWTP-01D	SAMPLE	1	08/14/12	19:37:35	1208050	
42	2081403-MS1	WWTP-01S	SAMPLE	1	08/14/12	19:44:48	1208050	
43	2081403-MSD1	WWTP-01SD	SAMPLE	1	08/14/12	19:52:01	1208050	
44	2H15001-SRD3	WWTP-01L	SAMPLE	5	08/14/12	19:59:14	1208050	
45	2081403-PS1	WWTP-01A	SAMPLE	1	08/14/12	20:06:27	1208050	

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Reviewed By: _____ Date: 8/16/12

ICP Run Log (P4)

File Name: P40814

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
46	1208050-02	WWTP-02	SAMPLE	1	08/14/12	20:13:40	1208050	
47	2081414-BLK1	PBW	PBW	1	08/14/12	20:20:53	1208051	(L) (CO)
48	2H15001-CCV4	CCV	CCV	1	08/14/12	20:28:07		
49	2H15001-CCB4	CCB	CCB	1	08/14/12	20:35:22		(Q) (CO)
50	2081414-BS1	LCSW	LCS	1	08/14/12	20:42:40	1208051	
51	1208022-01	WEEK2	SAMPLE	1	08/14/12	20:49:54	1208022	(H) (CA)
52	2H15001-SRD4	WEEK2L	SAMPLE	5	08/14/12	20:57:07	1208022	
53	1208041-01	PORT7 8-10-12	SAMPLE	1	08/14/12	21:04:21	1208041	
54	2H15001-SRD5	PORT7 8-10-12L	SAMPLE	5	08/14/12	21:11:34	1208041	
55	1208042-01	WEEK3	SAMPLE	1	08/14/12	21:18:47	1208042	(H) (CA)
56	2H15001-SRD6	WEEK3L	SAMPLE	5	08/14/12	21:26:00	1208042	
57	1208051-01	PORT3 8-13	SAMPLE	1	08/14/12	21:33:13	1208051	
58	2H15001-SRD7	PORT3 8-13L	SAMPLE	5	08/14/12	21:40:26	1208051	
59	2H15001-CRL4	LLCCV	CCV	1	08/14/12	21:47:39		(Q) (CD)
60	2H15001-CCV5	CCV	CCV	1	08/14/12	21:54:53		
61	2H15001-CCB5	CCB	CCB	1	08/14/12	22:02:08		(Q) (CO)

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 8.15.12

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 1 of 3 CompuChem a division of Liberty Analytical Corp. Worksheet 1 P(6) R5

STANDARDS and REAGENTS TRACEABILITY

Seq. File Name: P40814

	Ref #*	Manufacturer	Lot #	Expiration Date
HNO_3 [Baker Instra-analyzed Trace-Metals grade]	2F03016	JT Baker	51332	06/17
HCl [Baker Instra-analyzed Trace-Metals grade]	2F29005	Caledon	72690	06/17
SM-770-027 multi-element standard mix (RSTD-1)	2E21003	High Purity	1213220	05/15/13
SM-770-028 part A multi-element standard mix (RSTD-2A)	1J13004	High Purity	1128306	10/11/12
SM-770-028 part B multi-element standard mix (RSTD-2B)	1J13005	High Purity	1128307	10/11/12
SM-770-029 part A multi-element standard mix (RSTD-3A)	2D09003	High Purity	1124423	03/30/13
SM-770-029 part B multi-element standard mix (RSTD-3B)	2A17003	High Purity	1136115	01/17/13
SM-770-030 multi-element standard mix (RSTD-4)	2E21004	High Purity	1213221	05/15/13
SPEX-R multi-element standard mix	2E21005	High Purity	1213510	05/15/13
ICP-AES-CRQL multi-element standard mix	1K29023	High Purity	1132642	11/28/12
ICCV-3 multi-element standard mix	1J06006	Inorganic Venture	E2-MEB395052	11/01/12
ICCV-4 multi-element standard mix	1J06007	Inorganic Venture	E2-MEB395053	11/01/12
ICSA multi-element standard mix	1K15001	Inorganic Venture	D2-MEB348015	12/01/12
ICSB multi-element standard mix	2F02001	Inorganic Venture	D2-MEB399019	07/10/13
ARSENIC (As) 1,000 PPM single-element standard	2E18003	High Purity	1211132	11/15/13
SM-770-020 Internal Standard Mix	2E21002	High Purity	1213533	05/15/13
SM-770-040 multi-element CCV mix (Soln A)	2D09008	High Purity	1208725	03/30/13
SM-770-040 multi-element CCV mix (Soln B)	2D09009	High Purity	1208726	03/30/13
SM-770-045 LRS 6010C (Soln A)	2A17001	High Purity	1201204	01/13/13
SM-770-045 LRS 6010C (Soln B)	2A17002	High Purity	1201205	01/13/13

Multi-Element Stock Standard Concentrations:

Stock Standard	Analyte Concentrations (µg/mL)
RSTD-1 multi-element standard mix	Cd:1,000 Cr:1,000 Cu:1,000 Pb:1,000 Ni:1,000 Se:1,000 Ag:100 Tl:1,000 Zn:1,000
RSTD-2A/2B multi-element standard mix	Part A: As:1,000 Ba:1,000 Be:1,000 Co:1,000 Mn:1,000 Mo:1,000 V:1,000 Part B: Fe:25,000
RSTD-3A/3B multi-element standard mix	Part A: Ca:10,000 Mg:10,000 K:10,000 Na:10,000 Part B: Al:10,000
RSTD-4 multi-element standard mix	Sb:1,000 Bi:1,000 B:1,000 Sn:1,000 Ti:1,000
SPEX-R multi-element standard mix	Mo:1,000 Sn:1,000 Bi:1,000 Ti:1,000 B:1,000
ICP-AES-CRQL-R multi-element standard mix	Ag:10 Be:5 Cd:5 Co:50 Cr:10 Cu:25 Mn:15 Ni:40 Tl:25 V:50 Zn:60 Pb:10 Se:35 As:10 Sb:60
LRS 6010C multi-element standard mix	Al:200 Ba:200 K:5000 Mg:5000 Na:5000 Ca:5000 Ag:5 Be:5 Cd:5 Co:20 Cr:10 Cu:5 Fe:200 Mn:10 Ni:10 Tl:30 V:20 Zn:30 Pb:10 Se:5 As:10 Mo:50 Sn:50 Bi:20 Ti:50 Sb:30 B:50
SM-770-020 Internal Standard Mix	Li:50,000 Y:250
IICCV-3 multi-element standard mix	Ca: 1,100 K:1,100 Na:1,100 Mg:600 Fe:510 Al:260 As:110 B:110 Bi:110 Pb:110 Se:110 Tl:110 Zn:110 Ag:55 Ba:55 Cd:55 Co:55 Cr:55 Cu:55 Mn:55 Ni:55 V:55
IICCV-4 multi-element standard mix	Mo:110 Sb:110 Sn:110 Ti:110
IICSA multi-element standard mix	Al:5,000 Ca:5,000 Mg:5,000 Fe:2,000
IICSB multi-element standard mix	Cd:100 Ni:100 Zn:100 Sb:60 Ba:50 Be:50 Co:50 Cr:50 Cu:50 Mn:50 V:50 Ag:20 As:10 Tl:10 Pb:5 Se:5

Entered By: _____

Reviewed By: _____ Date: 8-15-12

*Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

**High Purity is abbreviated "HP" on reporting forms

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 2 of 3 CompuChem a division of Liberty Analytical Corp. **Worksheet 1 P(6) R5**

Standard Lot Number*	LIMS ID Number	Preparation instructions	Resultant Analyte Conc. (µg/L)
S0/ICB/CCB- 080612 - JCF	2H06001	Place in a 500 mL volumetric flask: 100 mL deionized water, 20 mL concentrated HNO_3, and 100 mL concentrated HCl. Bring up to volume with deionized water. Transfer to a 2L Teflon bottle and add 1.5L deionized water. Final volume 2 L. Prepare as needed.	N/A
RSTD-1- 080612 - JCF	2H06002	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL RSTD-1 into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	Cd:2,000 Cr:2,000 Cu:2,000 Pb:2,000 Ni:2,000 Se:2,000 Ag:200 Tl:2,000 Zn:2,000
RSTD-2- 080612 - JCF	2H06003	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL each RSTD-2A and RSTD-2B into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	As:2,000 Ba:2,000 Be:2,000 Co:2,000 Fe:50,000 Mn:2,000 Mo:2,000 V:2,000
RSTD-3- 080612 - JCF	2H06004	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 2.0 mL each RSTD-3A and RSTD-3B into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	K:100,000 Na:100,000 Al:100,000 Mg:100,000 Ca:100,000
RSTD-4- 080612 - JCF	2H06005	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL RSTD-4 into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	Sn:2,000 Bi:2,000 Ti:2,000 Sb:2,000 B:2,000
ICV1- 062211 - JCF	2F22001	Place in a 500 mL volumetric flask: 300 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 5.0 mL ICCV-3 into flask and 5.0 mL ICCV-4. Bring up to volume with deionized water. Transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Al:2,600 Ba:550 K:11,000 Mg:6,100 Na:11,000 Ca:11,000 Ag:550 Be:550 Cd:550 Co:550 Cr:550 Cu:550 Fe:5,100 Mn:550 Ni:550 Tl:1,100 V:550 Zn:1,100 Pb:1100 Se:1,100 As:1,100 Sb:1,100 Mo:1,100 Sn:1,100 Bi:1,100 Ti:1,100 B:1,100
CCV- 052112 - JCF	2E21007	Place in a 500-mL volumetric flask: 300 mL deionized water, 20 mL concentrated HNO_3, and 100 mL concentrated HCl. Add 20 ml of SM-770-40 Soln A and Soln B. Bring up to volume with deionized water. Transfer to a 2000mL Teflon bottle and add 1.5 L of deionized water. Prepare as needed.	Al:50,000 Ba:1,000 K:50,000 Mg:50,000 Na:50,000 Ca:50,000 Ag:100 Be:1,000 Cd:1,000 Co:1,000 Cr:1,000 Cu:1,000 Fe:25,000 Mn:1,000 Ni:1,000 Tl:1,000 V:1,000 Zn:1,100 Pb:1,000 Se:1,000 As:1,000 Mo:1,000 Sn:1,000 Bi:1,000 Ti:1,000 Sb:1,000 B:1,000
LLICV/LLCCV/LRS 6010C- 020612 - JCF	2H06006	In a 500 mL volumetric flask, combine 200 mL deionized water, 5 mL concentrated HNO_3 and 25 mL concentrated HCl. Pipet 0.5 mL of each LRS 6010C Soln A and Soln B. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Al:200 Ba:200 K:5000 Mg:5000 Na:5000 Ca:5000 Ag:5 Be:5 Cd:5 Co:20 Cr:10 Cu:5 Fe:200 Mn:10 Ni:10 Tl:30 V:20 Zn:30 Pb:10 Se:5 As:10 Mo:50 Sn:50 Bi:20 Ti:50 Sb:30 B:50

Standard Solutions Prepared By: _____

Entered By: _____

Reviewed By: _____ Date: 6.15.12

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 3 of 3 CompuChem a division of Liberty Analytical Corp. **Worksheet 1 P(6) R5**

Standard Lot Number*	LIMS ID Number	Preparation instructions	Resultant Analyte Conc. (µg/L)
As- 062212-JCF	2F22003	In a 100 mL volumetric flask, combine 50 mL deionized water, 1 mL concentrated HNO_3, 5 mL concentrated HCl, and 0.1 mL 1000-ppm As standard. Bring to final 100 mL volume	As:1,000
ICSA- 062212-JCF	2F22006	In a 500-mL volumetric flask, combine 350 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 25.0 mL ICSA into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL.	Al:250,000 Ca:250,000 Fe:100,000 Mg:250,000
ICSAB- 062212-JCF	2F22007	In a 500-mL volumetric flask, combine 350 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 25.0 mL ICSA and 5.0 mL ICSB and 0.5 mL of Compuchem SPEX into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL.	Ag:200 Al:250,000 Ba:500 Be:500 Ca:250,000 Cd:1000 Co:500 Cr:500 Cu:50 Fe:100,000 Mg:250,000 Mn:500 Ni:1000 Tl:100 V:500 Zn:1000 Pb:60 Se:50 Sb:600 As:100 Sn:1,000 Bi:1,000 Mo:1,000 Ti:1,000 B:1,000
EPA-CRI- NA	NA	In a 500 mL volumetric flask, combine 300 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 0.50 mL ICP-AES-CRQL-R and 25 µL Compuchem SPEX-R into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Ag:10 Be:5 Cd:5 Co:50 Cr:10 Cu:25 Mn:15 Ni:40 Tl:25 V:50 Zn:60 Pb:10 Se:35 As:10 Sb:60 Sn:50 B:50 Mo:50 Bi:50 Ti:50
P3RINSE- NA	NA	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P4RINSE- 080612-JCF	2H06007	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P5RINSE- NA	NA	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P3INTSTD- NA	NA	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000
P4INTSTD- 053012-JCF	2E30002	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000
P5INTSTD- NA	NA	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000

Standard Solutions Prepared By: _____

Entered By: _____

Reviewed By: _____ Date: 8.15.12

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

METHOD: P42012S2 STANDARD: S0 BLANK
RUN TIME: 08/14/12 14:36:11

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
AVGE	.03100	.02303	.00356	-.00560	.04604	.12799	.08300
SDEV	.02081	.00101	.00027	.00006	.00308	.00081	.00063
%RSD	67.125	4.3693	7.5558	1.0958	6.6963	.63343	.76212
#1	.02000	.02209	.00363	-.00558	.04858	.12716	.08234
#2	.05500	.02409	.00379	-.00567	.04261	.12878	.08360
#3	.01800	.02292	.00327	-.00555	.04692	.12803	.08307

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
AVGE	.00006	.54631	.00027	.02851	-.00100	.00009	.00064
SDEV	.00016	.00635	.00042	.00483	.00028	.00005	.00059
%RSD	298.42	1.1625	152.66	16.950	28.272	57.387	91.707
#1	-.00010	.53897	.00003	.03370	-.00076	.00003	.00091
#2	.00023	.54997	.00076	.02771	-.00131	.00010	.00105
#3	.00003	.54997	.00003	.02413	-.00093	.00013	-.00003

ELEM	NI2316	TL1908	V_2924	ZN2062	SB2068	AS1890	22031
AVGE	-.00040	-.00249	-.00021	.00079	.00326	.00069	-.02180
SDEV	.00069	.00257	.00021	.00013	.00079	.00160	.00055
%RSD	171.47	103.45	101.62	16.897	24.207	230.02	2.5075
#1	.00016	-.00529	-.00036	.00075	.00240	-.00052	-.02163
#2	-.00020	-.00194	.00003	.00069	.00343	.00250	-.02241
#3	-.00118	-.00023	-.00029	.00095	.00395	.00010	-.02135

ELEM	22032	19601	19602	SN1899	BI2230	MO2020	TI3349
AVGE	.00036	-.00311	.00468	-.00273	.00130	.00019	-.00091
SDEV	.00220	.00433	.00614	.00089	.00052	.00031	.00101
%RSD	611.74	139.26	131.13	32.629	39.573	158.90	110.73
#1	.00272	-.00204	-.00013	-.00175	.00178	.00055	-.00195
#2	-.00161	-.00788	.01160	-.00293	.00076	.00000	.00007
#3	-.00003	.00059	.00258	-.00349	.00137	.00003	-.00085

METHOD: P42012S2 STANDARD: S RSTD-1
RUN TIME: 08/14/12 14:43:24

ELEM	AG3280	CD2265	CR2677	CU3247	NI2316	TL1908	ZN2062
AVGE	6.0647	9.9397	1.4934	80.476	2.4449	1.1493	1.2292
SDEV	.0165	.0335	.0097	.033	.0089	.0074	.0020
%RSD	.27143	.33702	.64667	.04111	.36389	.64409	.16106
#1	6.0547	9.9010	1.4823	80.450	2.4349	1.1465	1.2271
#2	6.0837	9.9605	1.4979	80.464	2.4520	1.1577	1.2294
#3	6.0557	9.9575	1.5000	80.513	2.4478	1.1437	1.2311

ELEM	22031	22032	19601	19602
AVGE	11.221	4.3328	1.4407	3.1094
SDEV	.108	.0186	.0292	.0075
%RSD	.96368	.42884	2.0237	.24062
#1	11.257	4.3119	1.4145	3.1022
#2	11.308	4.3473	1.4721	3.1089
#3	11.100	4.3392	1.4355	3.1172

METHOD: P42012S2 STANDARD: S RSTD-3
RUN TIME: 08/14/12 14:50:38

ELEM	AL3082	CA3179	K_7664	MG2790	NA3302
AVGE	8.0499	29.139	40.267	18.935	.43970
SDEV	.0404	.149	.177	.085	.00352
%RSD	.50192	.50984	.43912	.45036	.80100
#1	8.0720	29.213	40.253	18.970	.44010
#2	8.0743	29.235	40.450	18.997	.44300
#3	8.0032	28.968	40.097	18.837	.43599

METHOD: P42012S2 STANDARD: S RSTD-2
RUN TIME: 08/14/12 14:56:19

ELEM	BA4934	BE3130	CO2286	FE2714	MN2576	V_2924	AS1890
AVGE	3.9232	2.8300	1.4714	1.6578	1.3494	.82497	2.5494
SDEV	.0425	.0093	.0073	.0079	.0062	.00392	.0017
%RSD	1.0832	.32807	.49856	.47709	.46106	.47524	.06593
#1	3.9723	2.8232	1.4798	1.6669	1.3536	.82256	2.5491
#2	3.8974	2.8406	1.4669	1.6528	1.3523	.82286	2.5512
#3	3.9000	2.8262	1.4674	1.6536	1.3422	.82950	2.5479

ELEM	MO2020
AVGE	.83963
SDEV	.00821
%RSD	.97821
#1	.84899
#2	.83626
#3	.83363

METHOD: P42012S2 STANDARD: S RSTD-4
RUN TIME: 08/14/12 15:02:47

ELEM	SB2068	SN1899	BI2230	TI3349
AVGE	.97296	2.5502	.65508	7.8748
SDEV	.00362	.0227	.00315	.0666
%RSD	.37205	.88914	.48026	.84524
#1	.97153	2.5241	.65271	7.9162
#2	.97708	2.5650	.65865	7.7980
#3	.97027	2.5615	.65387	7.9102

METHOD: P42012S2 SAMPLE NAME: LLICV OPERATOR:
RUN TIME: 08/14/12 15:08:27
COMMENT: LICV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.844658	237.7644	198.7727	5.131263	4872.593	4.786421	17.38673
SDEV	.658198	18.3225	1.7050	.097563	26.335	.417044	1.10407
%RSD	11.26153	7.706147	.8577501	1.901345	.5404691	8.713068	6.350091
#1	5.568446	256.9308	199.3256	5.230846	4853.161	5.263364	18.64460
#2	5.369573	220.4223	196.8599	5.127089	4902.565	4.490333	16.57805
#3	Q6.595956	235.9400	200.1326	5.035854	4862.053	4.605565	16.93754
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.62997	5.981346	175.7293	4847.565	4844.448	9.583837	4768.004
SDEV	.40411	.312055	13.2641	11.655	22.107	.250252	150.596
%RSD	3.801653	5.217136	7.548045	.2404295	.4563441	2.611184	3.158467
#1	10.98925	6.231293	190.7094	4847.030	4869.973	9.868519	4604.964
#2	10.19246	6.081146	165.4761	4836.187	4831.388	9.398568	4797.154
#3	10.70821	5.631599	171.0024	4859.479	4831.983	9.484422	4901.894
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.26127	27.94501	20.91089	33.21984	10.48098	10.63806	32.03789
SDEV	.63108	2.69871	1.01705	.46812	1.02399	4.64283	3.48541
%RSD	6.150110	9.657197	4.863726	1.409159	9.770013	43.64360	10.87902
#1	10.79828	25.56193	20.34835	33.61023	11.64084	10.88714	35.92550
#2	9.566177	30.87543	20.29939	32.70087	9.702057	Q5.875701	29.19244
#3	10.41935	27.39768	22.08494	33.34843	10.10003	Q15.15134	30.99575
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.23626	9.551552	10.94460	15.87432	8.023469	52.73850	Q16.66274
SDEV	1.40167	1.231651	2.14855	5.81538	5.251774	1.55174	1.62195
%RSD	13.69321	12.89478	19.63115	36.63388	65.45515	2.942330	9.734017
#1	11.13009	8.184797	13.36588	11.47996	10.59078	53.84317	Q15.02856
#2	8.620808	10.57545	9.265629	13.67424	1.981893	50.96441	Q18.27219
#3	10.95789	9.894411	10.20230	22.46875	11.49773	53.40791	Q16.68747
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	51.82402	50.89003	31269.69
SDEV	1.26510	.35052	155.26
%RSD	2.441142	.6887887	.4965132
#1	53.15356	50.76953	31105.73
#2	50.63511	51.28491	31414.47
#3	51.68339	50.61565	31288.87
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: ICV1 OPERATOR:
RUN TIME: 08/14/12 15:15:41
COMMENT: ICV1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	547.7737	2433.550	529.8126	551.5234	10443.96	544.7118	534.8157
SDEV	.9424	20.000	3.0504	2.0840	35.91	5.8101	7.4355
%RSD	.1720412	.8218292	.5757590	.3778569	.3438358	1.066632	1.390290
#1	547.4975	2449.103	528.5649	553.0289	10482.14	548.4760	541.0379
#2	548.8234	2440.559	533.2891	549.1449	10438.87	547.6390	536.8281
#3	547.0003	2410.990	527.5837	552.3963	10410.86	538.0203	526.5812
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	2600.000	550.0000	550.0000	11000.00	550.0000	550.0000
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	544.8279	551.5367	4926.166	10582.26	5618.991	510.9373	10125.81
SDEV	5.2956	4.2343	49.545	71.17	65.632	6.2999	66.65
%RSD	.9719746	.7677202	1.005743	.6725450	1.168044	1.233001	.6582496
#1	549.2165	553.9572	4962.864	10643.02	5670.464	515.9409	10072.31
#2	546.3212	554.0054	4945.824	10599.80	5641.426	513.0083	10200.47
#3	538.9460	546.6475	4869.809	10503.96	5545.083	503.8626	10104.64
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	550.0000	5100.000	11000.00	6100.000	550.0000	11000.00
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	540.6226	1070.819	543.7051	1046.844	1072.907	1093.564	1056.894
SDEV	3.9867	4.858	3.9110	8.498	13.336	6.901	6.879
%RSD	.7374219	.4536297	.7193244	.8117415	1.243010	.6310366	.6508871
#1	543.1928	1068.452	547.6712	1053.015	1085.515	1100.344	1060.910
#2	542.6449	1076.406	543.5927	1050.366	1074.259	1093.800	1060.821
#3	536.0300	1067.599	539.8516	1037.152	1058.945	1086.548	1048.951
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	1100.000	550.0000	1100.000	1100.000	1100.000	1100.000
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1065.474	1073.966	1072.377	1105.742	1087.483	1086.079	Q-4.82498
SDEV	10.748	14.655	13.373	11.321	12.410	5.805	3.77222
%RSD	1.008776	1.364585	1.247058	1.023846	1.141140	.5345298	78.18091
#1	1077.785	1083.598	1086.471	1097.503	1101.762	1090.963	Q-.548925
#2	1060.681	1081.199	1070.794	1118.651	1081.392	1087.613	Q-6.24460
#3	1057.956	1057.100	1059.866	1101.073	1079.296	1079.660	Q-7.68142
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	1100.000					1100.000	1100.000
RANGE	10.40000					10.40000	10.40000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1084.864	1067.244	31496.55
SDEV	3.768	4.934	197.20
%RSD	.3473566	.4623089	.6261159
#1	1086.140	1070.981	31338.06
#2	1087.829	1061.651	31434.20
#3	1080.623	1069.099	31717.40
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1100.000	1100.000	
RANGE	10.40000	10.40000	

METHOD: P42012S2 SAMPLE NAME: ICB OPERATOR:
RUN TIME: 08/14/12 15:22:54
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3314551	-18.6328	-.170085	-.058215	7.369491	-.151108	-1.57439
SDEV	.9815773	8.5104	.119033	.157470	8.885474	.075591	.19679
%RSD	296.1418	45.67444	69.98410	270.4987	120.5711	50.02468	12.49944
#1	.4308917	-9.54830	-.235284	-.037593	-2.47176	-.235329	-1.62204
#2	1.259529	-19.9298	-.032697	.0879282	9.777363	-.089144	-1.35815
#3	-.696056	-26.4202	-.242274	-.224979	14.80287	-.128852	-1.74299
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4002595	-.299816	-.276500	-289.750	-1.56916	-.361135	-56.4834
SDEV	.3009317	.903444	7.890520	12.144	3.81202	.096047	169.0088
%RSD	75.18417	301.3331	2853.714	4.191058	242.9332	26.59594	299.2182
#1	.2719350	-1.15882	7.268127	-293.021	-.780478	-.437949	8.579306
#2	.1847621	-.382957	-8.47253	-276.306	1.786824	-.253447	70.32472
#3	.7440814	.6423250	.3749029	-299.923	-5.71384	-.392008	-248.354
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4785968	.0646875	.9351647	-.794662	-.339342	-.052132	-2.32350
SDEV	.3817019	1.312404	.6252203	.178722	.528333	1.033780	.47525
%RSD	79.75436	2028.836	66.85670	22.49030	155.6932	1983.024	20.45412
#1	.4875172	-1.34814	1.041572	-.775719	-.945560	1.140962	-2.71336
#2	.8557603	1.245809	1.500353	-.626165	.0230202	-.681807	-1.79410
#3	.0925129	.2963914	.2635691	-.982100	-.095487	-.615549	-2.46305
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.64226	1.000807	-1.00891	3.412816	-1.78239	.0824469	-4.38548
SDEV	2.72626	2.139184	.89510	3.593649	.40259	.7929437	1.65752
%RSD	103.1792	213.7459	88.71929	105.2986	22.58716	961.7627	37.79572
#1	Q-5.75804	-.174518	-1.33099	7.509291	-2.03882	-.823661	-5.66861
#2	-.695216	3.469976	-1.69840	1.937716	-1.98999	.42i5430	-2.51405
#3	-1.47353	-.293037	.0026572	.7914425	-1.31838	.6494585	-4.97377
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					10.00000	10.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.6361275	.1055586	31281.04
SDEV	.2717284	.2089928	64.11
%RSD	42.71603	197.9874	.2049393
#1	.9203109	-.096414	31207.53
#2	.6092145	.3209268	31310.27
#3	.3788569	.0921633	31325.33
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	10.00000	

METHOD: P42012S2 SAMPLE NAME: ICSA OPERATOR:
RUN TIME: 08/14/12 15:30:07
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4640372	240608.5	.9013311	.2889067	242000.6	.8925540	-2.71671
SDEV	.6469746	1608.2	.0696251	.1388173	1673.6	.4629003	1.35057
%RSD	139.4230	.6684078	7.724693	48.04918	.6915891	51.86245	49.71354
#1	.4308917	241743.8	.8482315	.3914914	243268.3	1.346272	-1.24236
#2	-.165727	238768.2	.8756031	.3442798	240103.5	.4209881	-3.89407
#3	1.126947	241313.7	.9801588	.1309488	242630.0	.9104013	-3.01368
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	250000.0	.0000000	.0000000	250000.0	.0000000	.0000000
RANGE	2.500000	50000.00	100.0000	2.500000	50000.00	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.804699	.6166244	95374.55	-300.047	242010.4	.5887464	166.6855
SDEV	.293604	.7701358	418.48	7.364	1656.6	.1011395	85.0429
%RSD	10.46831	124.8954	.4387712	2.454234	.6845022	17.17880	51.01997
#1	2.567047	-.233767	95852.65	-306.165	243914.8	.4720524	116.1175
#2	3.132916	1.267065	95074.73	-302.103	240903.2	.6430812	119.0692
#3	2.714133	.8165751	95196.29	-291.874	241213.0	.6511055	264.8697
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	100000.0	.0000000	250000.0	.0000000	.0000000
RANGE	5.000000	2.500000	20000.00	2500.000	50000.00	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.838784	10.68768	-1.20174	2.425266	4.105062	3.470852	-.049359
SDEV	.445301	4.46757	.60552	.177769	1.978128	1.417516	2.846549
%RSD	53.08891	41.80112	50.38719	7.329862	38.74836	40.84057	5767.013
#1	-.397792	Q15.46927	-.517487	2.220773	3.215685	2.293995	-2.48866
#2	-1.28827	9.973629	-1.41934	2.512063	3.293481	Q5.044474	3.078221
#3	-.830286	6.620140	-1.66839	2.542963	4.806021	3.074087	-.737636
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.767259	5.182253	5.065929	9.327357	.5465921	.0636030	3.512649
SDEV	1.533868	5.239267	2.292524	6.311102	5.084608	1.569156	5.589656
%RSD	86.79359	101.1002	45.25377	67.66228	930.2382	2467.111	159.1294
#1	.9777436	7.204086	7.220875	11.13861	-2.12209	-1.46981	2.963547
#2	.7889734	-.766685	5.319931	2.308668	6.409933	1.666211	-1.78219
#3	3.535061	9.109360	2.656982	14.53479	-2.64807	-.005589	9.356591
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					25.00000	25.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.1156196	-12.4042	30438.82
SDEV	.2819276	.2950	284.06
%RSD	243.8407	2.378511	.9332309
#1	.4122860	-12.7416	30137.60
#2	.0833678	-12.2764	30701.87
#3	-.148795	-12.1946	30477.00
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	25.00000	25.00000	

METHOD: P42012S2 SAMPLE NAME: ICSAB OPERATOR:
RUN TIME: 08/14/12 15:37:21
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	200.3867	241644.3	498.7303	497.8071	241889.5	945.6727	469.4018
SDEV	.3080	3563.1	4.4190	7.4014	3249.9	5.9094	1.3282
%RSD	.1536887	1.474522	.8860499	1.486808	1.343557	.6248881	.2829485
#1	200.2983	243632.2	499.9349	498.2006	243002.3	952.2855	468.5887
#2	200.7292	237530.8	502.4221	490.2167	238229.4	940.9089	470.9345
#3	200.1326	243770.0	493.8339	505.0039	244436.9	943.8238	468.6821
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	200.0000	250000.0	500.0000	500.0000	250000.0	1000.000	500.0000
RANGE	40.00000	50000.00	100.0000	100.0000	50000.00	2000.000	100.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	490.0283	498.2990	95816.67	-311.051	241676.5	462.4113	-68.9182
SDEV	6.1101	4.5811	618.21	5.554	1566.9	3.5831	124.9731
%RSD	1.246882	.9193486	.6452012	1.785465	.6483656	.7748734	181.3353
#1	495.5163	503.5386	96530.31	-311.754	243437.0	466.5383	-175.302
#2	483.4445	495.0495	95444.96	-305.180	240434.3	460.0937	-100.167
#3	491.1242	496.3090	95474.74	-316.220	241158.3	460.6019	68.71400
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	500.0000	500.0000	100000.0	.0000000	250000.0	500.0000	.0000000
RANGE	100.0000	100.0000	20000.00	2500.000	50000.00	100.0000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	936.9770	109.9451	486.3812	899.5311	52.53215	49.93486	590.4359
SDEV	3.3784	.9691	9.7377	5.2850	.79289	1.71365	5.4315
%RSD	.3605620	.8814672	2.002069	.5875320	1.509336	3.431772	.9199068
#1	940.2998	108.9947	490.4411	905.2790	52.97684	51.04434	596.6978
#2	933.5457	110.9320	475.2705	894.8815	51.61672	50.79906	587.0001
#3	937.0855	109.9087	493.4320	898.4327	53.00287	47.96118	587.6099
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	100.0000	500.0000	1000.000	50.00000	50.00000	600.0000
RANGE	200.0000	20.00000	100.0000	200.0000	10.00000	10.00000	120.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	96.69190	53.96085	51.82077	66.55662	41.63605	1044.805	1061.089
SDEV	2.78686	2.93222	2.45962	1.86895	1.65321	3.867	13.013
%RSD	2.882210	5.433978	4.746400	2.808066	3.970617	.3701311	1.226428
#1	93.81692	50.71792	54.10650	67.47960	42.83863	1048.124	1074.723
#2	96.87740	56.42520	49.21800	67.78453	42.31867	1040.558	1048.801
#3	99.38139	54.73944	52.13781	64.40573	39.75084	1045.731	1059.743
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	100.0000					1000.000	1000.000
RANGE	20.00000					200.0000	200.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1061.464	1052.366	30621.78
SDEV	9.261	20.091	69.66
%RSD	.8724582	1.909118	.2274750
#1	1061.537	1052.988	30559.27
#2	1070.689	1031.971	30696.87
#3	1052.168	1072.138	30609.20
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	200.0000	200.0000	

METHOD: P42012S2 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 08/14/12 15:44:34
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.170700	236.1702	202.9425	5.312757	4837.894	4.890106	17.82007
SDEV	.344458	.3633	3.1419	.120157	46.678	.284990	.99065
%RSD	6.661733	.1538348	1.548196	2.261662	.9648365	5.827892	5.559184
#1	4.971827	236.5807	199.4047	5.175311	4834.791	5.144088	17.93352
#2	5.568446	235.8901	205.4077	5.365080	4886.045	4.944330	18.74911
#3	4.971827	236.0397	204.0152	5.397881	4792.845	4.581899	16.77758
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.996775	5.139099	174.9251	4829.126	4763.396	9.507487	4714.554
SDEV	.439974	.765490	1.9047	28.410	46.303	.104635	96.417
%RSD	4.401157	14.89541	1.088860	.5883068	.9720592	1.100558	2.045101
#1	10.49047	5.581052	176.6924	4819.591	4749.201	9.390163	4614.491
#2	9.646106	4.255187	172.9077	4861.077	4815.135	9.591147	4722.315
#3	9.853754	5.581056	175.1752	4806.709	4725.852	9.541153	4806.857
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.32382	32.45555	21.17293	33.13773	10.06318	11.78482	28.46912
SDEV	.49676	1.07807	.29622	.23381	.86227	3.16207	3.47752
%RSD	4.811813	3.321682	1.399046	.7055787	8.568531	26.83170	12.21507
#1	10.31269	31.30929	20.99776	32.98541	10.70910	Q14.49043	24.45594
#2	10.82605	32.60820	21.51494	33.40693	9.084025	12.55532	30.35755
#3	9.832712	33.44916	21.00608	33.02083	10.39642	8.308707	30.59388
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.754183	9.979363	10.10464	13.87140	10.74270	52.42808	Q17.64783
SDEV	3.566083	2.755666	1.41960	6.26370	5.14259	1.12660	2.68666
%RSD	40.73576	27.61365	14.04899	45.15548	47.87058	2.148852	15.22375
#1	11.25753	8.698155	11.71269	10.15850	16.65276	53.72680	Q17.17594
#2	Q4.671098	8.097551	9.576134	21.10323	8.287378	51.71369	Q15.22837
#3	10.33392	13.14238	9.025103	10.35248	7.287970	51.84375	Q20.53917
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	53.36178	50.56056	31268.26
SDEV	.86279	.42535	150.71
%RSD	1.616860	.8412684	.4819997
#1	54.28077	50.49477	31297.53
#2	53.23546	51.01498	31105.06
#3	52.56912	50.17194	31402.20
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 08/14/12 15:51:48
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	102.3754	48158.23	1017.638	1035.457	48470.31	998.6734	984.9258
SDEV	.2207	405.27	12.465	5.647	317.17	1.3332	3.8161
%RSD	.2155721	.8415366	1.224925	.5453619	.6543506	.1334935	.3874494
#1	102.4859	48233.65	1003.347	1032.396	48419.04	999.2917	986.7013
#2	102.1213	48520.48	1023.297	1041.974	48809.98	997.1434	987.5306
#3	102.5191	47720.54	1026.270	1032.002	48181.89	999.5852	980.5454
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1018.335	1020.590	24430.95	49356.05	47947.21	945.9191	48048.21
SDEV	2.710	3.686	53.48	54.06	99.44	6.0715	450.98
%RSD	.2660853	.3612126	.2188982	.1095335	.2073897	.6418614	.9386091
#1	1016.174	1022.130	24486.44	49418.34	48048.79	951.3185	48453.71
#2	1021.375	1016.383	24379.74	49328.46	47850.07	947.0921	48128.42
#3	1017.457	1023.257	24426.68	49321.34	47942.77	939.3467	47562.51
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	997.5687	985.7499	1001.266	1054.188	988.3572	1008.653	1025.214
SDEV	2.2420	4.8948	9.491	2.441	4.4371	1.855	6.446
%RSD	.2247444	.4965512	.9479059	.2315352	.4489340	.1839306	.6287379
#1	998.5680	991.0719	994.6238	1054.937	986.9741	1010.302	1018.587
#2	995.0008	984.7369	1012.136	1051.460	993.3210	1006.644	1025.593
#3	999.1372	981.4409	997.0373	1056.166	984.7764	1009.014	1031.462
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1003.107	993.5946	985.7421	1015.203	1005.383	999.3790	983.5860
SDEV	2.385	11.3896	3.2903	13.053	4.024	2.7517	10.6266
%RSD	.2377264	1.146303	.3337929	1.285708	.4002391	.2753426	1.080397
#1	1003.006	996.7694	982.0835	1022.750	1004.086	1001.042	987.7459
#2	1000.774	1003.060	988.4586	1000.131	1009.895	996.2028	971.5087
#3	1005.540	980.9545	986.6843	1022.728	1002.167	1000.892	991.5034
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1012.486	1003.385	31448.26
SDEV	7.171	6.592	232.63
%RSD	.7082606	.6569279	.7397329
#1	1005.172	1002.314	31215.40
#2	1012.781	1010.446	31448.73
#3	1019.505	997.3944	31680.66
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 08/14/12 15:59:02
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8175893	-21.5768	-.146516	.1696916	13.98576	-.529223	-3.86269
SDEV	.3884299	7.8558	.110361	.1851090	8.75961	.145393	.76233
%RSD	47.50917	36.40873	75.32336	109.0855	62.63236	27.47300	19.73573
#1	.6629103	-12.5252	-.184681	.3008889	6.310916	-.671791	-4.63694
#2	1.259529	-26.6181	-.022138	-.042043	23.52873	-.534718	-3.83825
#3	.5303283	-25.5870	-.232729	.2502292	12.11762	-.381160	-3.11287
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.244010	-.249721	-8.94381	-291.554	-.128429	-.272230	18.03075
SDEV	.278764	.416607	10.36583	8.722	2.933417	.182544	36.08450
%RSD	114.2426	166.8294	115.8995	2.991698	2284.086	67.05507	200.1275
#1	.0106525	-.383001	-2.46457	-297.053	2.549683	-.076574	-10.5283
#2	-.200844	.2172181	-3.46763	-281.497	.3285457	-.302151	58.58529
#3	-.541839	-.583379	-20.8992	-296.112	-3.26351	-.437966	6.035273
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3700722	.9501015	1.051224	-.644923	.2423226	-.159157	-2.03346
SDEV	.4632637	.8947613	.315862	.216807	1.594489	1.227408	1.71601
%RSD	125.1820	94.17534	30.04707	33.61752	658.0025	771.1958	84.38885
#1	.6369069	-.065752	1.405515	-.747863	-.252783	.0953326	-1.89303
#2	.6381679	1.294842	.7990641	-.395822	2.025632	.9210582	-.391975
#3	-.164858	1.621214	.9490922	-.791084	-1.04588	-1.49386	-3.81537
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.733669	1.896230	-.583881	3.491210	-1.98198	-.049018	-2.14524
SDEV	1.224781	1.087295	2.041727	2.051838	1.61309	1.515742	5.24826
%RSD	166.9392	57.33981	349.6818	58.77156	81.38787	3092.244	244.6471
#1	-2.12669	.8042571	-.780984	5.734642	-2.72047	.8526491	-7.84618
#2	-.248627	2.978785	1.549249	3.029266	-.131844	.7992722	2.485319
#3	.1743050	1.905648	-2.51991	1.709721	-3.09363	-1.79897	-1.07485
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					10.00000	10.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.1388853	-.033706	31846.15
SDEV	.5266790	.103433	130.56
%RSD	379.2187	306.8683	.4099675
#1	-.238553	-.153065	31958.66
#2	.7405766	.0223146	31876.80
#3	-.085368	.0296328	31703.00
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	10.00000	

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METHOD: P42012S2 SAMPLE NAME: LRS DOD OPERATOR:
RUN TIME: 08/14/12 16:21:31
COMMENT: LRS
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.474423	178.5101	199.0983	5.041020	5729.328	4.571800	16.17170
SDEV	.452449	6.0987	.2014	.143378	57.033	.069695	.29243
%RSD	6.988253	3.416448	.1011441	2.844231	.9954581	1.524453	1.808293
#1	5.993702	177.6662	198.9224	4.959783	5710.140	4.596708	16.49407
#2	5.165065	172.8772	199.0547	4.956707	5793.480	4.625619	Q15.92348
#3	5.264502	184.9868	199.3180	5.206569	5684.363	4.493074	16.09756
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.000000	40.00000	40.00000	1.000000	1000.000	1.000000	4.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.25123	4.997092	170.8537	5885.775	5716.161	9.045155	5663.690
SDEV	.29524	.300713	8.5683	36.034	16.089	.157930	9.078
%RSD	2.880027	6.017761	5.679903	.6122148	.2814630	1.746018	.1602913
#1	10.34087	5.305796	178.5078	5853.462	5698.469	8.971050	5653.804
#2	9.921563	4.980418	161.5973	5924.632	5729.917	8.937906	5671.652
#3	10.49126	4.705063	172.4560	5879.232	5720.095	9.226511	5665.613
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	2.000000	1.000000	40.00000	1000.000	1000.000	2.000000	1000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.22860	29.37534	20.69628	27.85970	10.12388	8.976461	28.51137
SDEV	1.15164	3.60974	.25014	.31696	.68607	1.260272	2.88677
%RSD	11.25897	12.28834	1.208612	1.137688	6.776730	18.06463	10.12496
#1	10.26329	31.25908	20.93922	27.49371	10.88042	9.862299	31.77211
#2	9.060012	25.21340	20.71009	28.04339	9.949126	Q7.533666	27.48027
#3	11.36250	31.65354	20.43951	28.04200	9.542089	9.533420	26.28174
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	2.000000	6.000000	4.000000	6.000000	2.000000	2.000000	6.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.18690	11.29536	9.538442	8.355866	6.287412	51.19167	Q16.11558
SDEV	1.98117	3.15911	.842205	7.258459	3.458527	1.17230	2.26653
%RSD	19.44823	27.96822	8.829591	86.86662	55.00716	2.290027	14.06424
#1	Q12.43682	13.81501	9.414754	16.36049	3.619196	51.30603	Q18.71571
#2	8.703565	12.31995	8.764919	6.505251	5.048221	52.30260	Q14.55730
#3	9.420311	7.751129	10.43565	2.201863	10.19482	49.96637	Q15.07374
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	2.000000					10.00000	10.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	50.52061	48.40595	31673.15
SDEV	1.56961	.34054	56.09
%RSD	3.106880	.7035174	.1770865
#1	49.47620	48.51303	31615.33
#2	52.32562	48.68007	31727.33
#3	49.76001	48.02473	31676.80
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	10.00000	10.00000	

METHOD: P42012S2 SAMPLE NAME: 2081412-BLK1 OPERATOR:
RUN TIME: 08/14/12 16:28:45
COMMENT: SDG:1208018 CLIENTID:PBW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2430671	-8.65707	-.096115	.3620194	18.04589	-1.04767	-6.16791
SDEV	.3995833	10.49042	.131481	.3093483	1.56006	1.22677	5.83166
%RSD	164.3922	121.1775	136.7953	85.45074	8.644943	117.0948	94.54849
#1	.6629103	-20.7320	-.004970	.5697793	18.22391	-2.46312	L-12.8990
#2	.1988731	-1.78514	-.246838	.5097805	16.40446	-.291693	-2.63587
#3	-.132582	-3.45408	-.036536	.0064984	19.50930	-.388193	-2.96887
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5989857	.0670811	8.478439	-295.350	3.206082	-.232375	210.4530
SDEV	.3650185	.7256166	10.36151	4.999	4.581373	.103640	149.7843
%RSD	60.93943	1081.700	122.2102	1.692620	142.8963	44.60026	71.17231
#1	.8706806	.7926904	14.77621	-290.993	8.491342	-.143155	313.4681
#2	.7421989	.0670956	-3.48036	-300.808	.3672360	-.346057	38.62819
#3	.1840775	-.658543	14.13947	-294.248	.7596679	-.207912	279.2629
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6302983	-1.04190	.7725617	-.420064	.2168566	1.130886	-.101486
SDEV	.5400984	1.90483	.0371952	.191966	1.030432	.985482	3.067914
%RSD	85.68933	182.8229	4.814523	45.69922	475.1675	87.14243	3022.988
#1	.6832877	-1.83114	.7826441	-.206399	1.321711	1.532706	3.380254
#2	1.141949	-2.42525	.8036762	-.577999	.0468711	.0079787	-2.40823
#3	.0656583	1.130696	.7313647	-.475794	-.718013	1.851975	-1.27648
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.215916	.5314904	.0593079	-3.95750	3.670892	.8190708	-4.70162
SDEV	2.263214	1.608427	1.636462	2.62301	2.775324	.9179066	3.29350
%RSD	1048.192	302.6258	2759.264	66.27934	75.60355	112.0668	70.05037
#1	2.272926	.0949477	1.933733	-5.52661	5.056718	.8234824	-2.10220
#2	-2.15054	2.313127	-1.08504	-.929382	.4755719	-.101034	-8.40537
#3	-.770132	-.813603	-.670771	-5.41651	5.480386	1.734764	-3.59728
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.0098238	.1620560	32337.75
SDEV	.3242781	.0413594	1653.84
%RSD	3300.930	25.52166	5.114270
#1	-.113693	.1707418	34247.33
#2	-.234545	.1983826	31400.87
#3	.3777097	.1170435	31365.06
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

METHOD: P42012S2 SAMPLE NAME: 2081412-BLK2 OPERATOR:
RUN TIME: 08/14/12 16:35:58
COMMENT: SDG:1208018 CLIENTID:TCLPBLKVV 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.811955	3.646811	4.126338	.2682781	52.30106	-.907056	-5.58535
SDEV	.116403	3.261581	.105280	.1287373	12.07190	.365074	2.29044
%RSD	6.424176	89.43652	2.551407	47.98649	23.08155	40.24823	41.00805
#1	1.922440	2.434420	4.157348	.2318221	43.81002	-.689458	-3.99816
#2	1.690421	7.340965	4.009036	.4113120	46.97278	-.703177	-4.54679
#3	1.823003	1.165047	4.212630	.1617003	66.12036	-1.32853	-8.21108
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.271690	.4009837	22.62469	45.35883	10.96919	-.000319	H994701.6
SDEV	1.105557	1.645146	34.39525	11.61845	1.87411	.195488	7368.4
%RSD	86.93608	410.2776	152.0252	25.61453	17.08522	61223.27	.7407601
#1	.2744917	-.683347	-9.21758	40.88485	10.26406	-.204959	H1001364.
#2	1.080032	-.407657	17.98895	36.64246	9.549919	.0194920	H995953.8
#3	2.460545	2.293955	59.10271	58.54918	13.09358	.1845086	H986787.4
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1413806	-1.68994	1.399378	-.711895	-.106040	6.712370	-3.97241
SDEV	1.313803	1.25112	.711863	.556393	1.121736	1.951060	5.65997
%RSD	929.2665	74.03374	50.86999	78.15661	1057.838	29.06663	142.4818
#1	-1.16088	-2.35869	1.197721	-.974723	.5414506	8.274076	-9.50118
#2	.1185858	-.246558	2.190315	-1.08819	-1.40131	4.525303	-4.22628
#3	1.466433	-2.46457	.8100974	-.072776	.5417380	7.337732	1.810215
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.847856	3.107219	-1.71075	9.426187	5.357115	10.25993	1.768739
SDEV	1.759565	4.535948	2.26268	3.059401	3.495631	1.50108	5.241278
%RSD	30.08906	145.9809	132.2622	32.45639	65.25213	14.63055	296.3285
#1	3.893636	8.292283	-3.32864	11.57948	6.623464	10.78095	-3.99018
#2	6.343469	1.155903	-2.67848	10.77492	1.404797	8.567753	3.036634
#3	7.306461	-.126529	.8748590	5.924169	8.043082	11.43107	6.259762
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.559575	.4713900	31667.09
SDEV	1.205256	.6008994	742.95
%RSD	77.28106	127.4740	2.346137
#1	2.556913	-.066304	30978.93
#2	.2202933	.3604429	31567.53
#3	1.901518	1.120031	32454.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081412-BLK3 OPERATOR:
RUN TIME: 08/14/12 16:43:12
COMMENT: SDG:1208018 CLIENTID:TCLPBLKWB 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4529887	-5.88214	4.808522	.2046641	62.83509	-1.41909	-7.44206
SDEV	.5019475	4.12037	.144316	.0849457	2.01736	.19242	1.23881
%RSD	110.8080	70.04889	3.001249	41.50491	3.210565	13.55958	16.64608
#1	.0994365	-9.68051	4.673946	.1334857	64.71157	-1.63966	-8.74899
#2	1.027511	-6.46424	4.790699	.1818068	63.09220	-1.28561	-6.28501
#3	.2320186	-1.50167	4.960922	.2986998	60.70150	-1.33200	-7.29219
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.376782	.6176963	17.63538	39.81794	7.347355	-.015378	H1081216.
SDEV	.458614	.1522711	7.29705	9.46613	4.214954	.053851	6022.
%RSD	33.31055	24.65146	41.37734	23.77353	57.36696	350.1879	.5569856
#1	1.526132	.5423856	16.05331	30.70171	4.064251	-.077529	H1076696.
#2	.8621094	.5177555	11.25914	49.59893	5.877354	.0173610	H1088053.
#3	1.742103	.7929479	25.59368	39.15319	12.10046	.0140354	H1078900.
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1641577	.0213651	1.109884	2.319763	1.385048	4.610459	-3.25883
SDEV	.7742636	3.625195	.464336	.122302	1.075900	1.262596	2.55852
%RSD	471.6583	16967.86	41.83642	5.272172	77.67960	27.38547	78.51034
#1	-.729328	-3.89935	.5756494	2.186084	2.599426	3.232088	-1.04550
#2	.6382264	.7116587	1.416407	2.426039	.5508686	4.888283	-2.67084
#3	.5835746	3.251782	1.337595	2.347167	1.004849	5.711006	-6.06016
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.321029	2.187201	.9840519	-.070745	6.947173	9.922259	-1.01999
SDEV	3.289976	3.083636	1.826045	6.774787	3.317932	1.125484	3.42521
%RSD	99.06496	140.9855	185.5640	9576.315	47.75946	11.34302	335.8076
#1	-.387566	4.043996	1.877706	-4.80976	7.246607	8.967984	-4.95203
#2	5.888549	3.889971	-1.11670	7.688942	3.489673	9.635372	.5767873
#3	4.462103	-1.37236	2.191153	-3.09141	10.10524	11.16342	1.315270
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.9415474	.4208600	31888.02
SDEV	.2712997	.3265732	165.20
%RSD	28.81424	77.59663	.5180611
#1	.6598791	.0630047	32024.06
#2	1.201128	.4968083	31704.20
#3	.9636351	.7027670	31935.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081412-BLK4 OPERATOR:
RUN TIME: 08/14/12 16:50:25
COMMENT: SDG:1208018 CLIENTID:TCLPBLKWC 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0220971	2.111487	-.099631	.1339382	24.05057	-1.34737	-7.73947
SDEV	.6714182	14.52735	.085070	.0731102	9.30071	.20671	.67821
%RSD	3038.498	688.0148	85.38560	54.58500	38.67147	15.34162	8.762988
#1	-.729201	18.49523	-.194196	.1203262	13.31146	-1.14469	-7.43099
#2	.5634738	-2.96213	-.029327	.2128978	29.50238	-1.33954	-7.27033
#3	.2320186	-9.19864	-.075369	.0685907	29.33788	-1.55788	-8.51709
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.532725	1.518243	23.54197	-303.566	3.762895	-.187952	102.1408
SDEV	1.050430	.933609	20.73528	5.665	5.373673	.179001	174.5214
%RSD	68.53349	61.49274	88.07797	1.866177	142.8069	95.23763	170.8635
#1	2.734852	2.543811	47.39086	-309.506	8.698269	.0039433	-72.9134
#2	.7917660	.7177369	9.780514	-298.223	4.552190	-.217390	276.1244
#3	1.071556	1.293181	13.45452	-302.969	-1.96177	-.350409	103.2114
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.239898	-2.37627	.6733993	-.008038	.5034122	3.178149	-2.25321
SDEV	.742152	1.67423	.5303192	.191982	2.128728	2.710423	2.90789
%RSD	59.85593	70.45609	78.75256	2388.358	422.8599	85.28307	129.0554
#1	2.091150	-4.07105	.0626343	.2109061	1.507829	2.362985	.6538266
#2	.7287314	-.723386	1.017031	-.087431	1.944100	.9688578	-2.25150
#3	.8998119	-2.33437	.9405324	-.147590	-1.94169	6.202604	-5.16196
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.087771	-5.37761	3.439039	-10.5964	10.05471	4.135350	-4.18363
SDEV	1.781404	8.36544	5.052741	13.6151	4.56924	.631298	2.61792
%RSD	57.69225	155.5605	146.9230	128.4886	45.44378	15.26588	62.57549
#1	4.697998	-13.8560	9.177700	-23.6093	15.32931	3.927294	-7.19835
#2	1.174155	2.870142	1.481311	-11.7298	7.308277	3.634341	-2.48368
#3	3.391159	-5.14701	-.341894	3.550021	7.526540	4.844417	-2.86885
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.655352	.4236456	32775.91
SDEV	1.203730	.4939180	165.82
%RSD	183.6767	116.5875	.5059111
#1	-.316812	.9817864	32649.53
#2	.3428569	.0430167	32714.53
#3	-1.99210	.2461338	32963.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081412-BS1 OPERATOR:
RUN TIME: 08/14/12 16:57:38
COMMENT: SDG:1208018 CLIENTID:LCSW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2670.832	-8.91037	53557.71	.2409253	27.01416	503.0127	-9.82607
SDEV	12.456	14.70112	438.09	.1895610	10.72109	3.5507	1.47870
%RSD	.4663839	164.9889	.8179743	78.68037	39.68692	.7058889	15.04870
#1	2660.093	-24.2180	53877.06	.3265398	28.89257	498.9396	-11.5196
#2	2684.488	5.098067	53737.80	.0236590	36.67191	505.4554	-9.16747
#3	2667.915	-7.61124	53058.28	.3725772	15.47800	504.6431	-8.79111
ERRORS	LC PASS	NOCHECK	LC PASS	NOCHECK	NOCHECK	LC PASS	NOCHECK
HIGH	3000.000		60000.00			600.0000	
LOW	2000.000		40000.00			400.0000	

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2590.759	-.243605	-.070577	-307.319	-1.63751	-.308840	152.1729
SDEV	11.725	1.416679	38.00886	34.075	10.39973	.302516	646.6310
%RSD	.4525562	581.5467	53854.19	11.08777	635.0941	97.95235	424.9319
#1	2577.244	-1.71138	-38.7867	-345.914	-13.3236	-.611472	-592.050
#2	2598.199	1.115743	37.18913	-294.648	6.599384	-.006440	472.0272
#3	2596.835	-.135176	1.385856	-281.395	1.811714	-.308609	576.5415
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	3000.000						
LOW	2000.000						

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.119369	-5.31618	-3.74519	2.977424	2484.875	486.5972	-.807287
SDEV	1.137292	3.73994	.24747	.802057	10.640	1.9278	6.787766
%RSD	952.7549	70.35008	6.607748	26.93793	.4281716	.3961873	840.8121
#1	-1.20322	-6.87716	-3.50414	2.211581	2483.828	486.4693	-6.33307
#2	1.064730	-8.02276	-3.99862	3.811353	2495.999	488.5858	6.769446
#3	-.219620	-1.04862	-3.73281	2.909339	2474.798	484.7364	-2.85824
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS	NOCHECK
HIGH					3000.000	600.0000	
LOW					2000.000	400.0000	

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2482.713	2493.734	2480.452	485.9569	486.9164	-.769372	-2.93327
SDEV	17.054	5.625	14.128	5.1637	5.2978	3.668720	6.03044
%RSD	.6868905	.2255813	.5695882	1.062580	1.088038	476.8459	205.5873
#1	2463.285	2497.968	2476.768	483.3956	488.0034	-4.54855	-9.24318
#2	2495.210	2495.883	2496.057	482.5746	491.5865	-.537452	-2.32883
#3	2489.644	2487.351	2468.530	491.9005	481.1594	2.777886	2.772179
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	3000.000						
LOW	2000.000						

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.679195	.7379385	33348.33
SDEV	.789959	.9220402	87.04
%RSD	116.3080	124.9481	.2609912
#1	-1.46864	-.272888	33421.46
#2	.1112793	1.532887	33371.46
#3	-.680229	.9538163	33252.07
ERRORS	NOCHECK	NOCHECK	NOCHECK
HIGH			
LOW			

METHOD: P42012S2 SAMPLE NAME: 2081412-BS2 OPERATOR:
RUN TIME: 08/14/12 17:04:51
COMMENT: SDG:1208018 CLIENTID:LCSW 1:2
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1303.977	-26.4654	25945.99	-.050328	20.77289	250.2288	-6.56019
SDEV	8.066	10.1822	18.69	.086013	6.94791	1.0692	1.94939
%RSD	.6185825	38.47360	.0720402	170.9058	33.44699	.4272785	29.71550
#1	1308.684	-37.4268	25964.80	.0356286	12.76056	249.3381	-8.76170
#2	1308.585	-17.3020	25927.42	-.136398	24.42491	251.4145	-5.86579
#3	1294.664	-24.6674	25945.76	-.050214	25.13318	249.9338	-5.05307
ERRORS	NOCHECK	NOCHECK	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH			30000.00				
LOW			20000.00				

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1293.487	-1.60215	-32.0025	-333.357	-13.1145	-.585122	-303.646
SDEV	1.284	2.08761	30.8692	59.128	17.4372	.257546	703.443
%RSD	.0992474	130.3007	96.45879	17.73704	132.9607	44.01583	231.6658
#1	1294.850	-4.01231	-67.6422	-396.720	-33.1217	-.878178	-1038.37
#2	1293.308	-.434761	-13.6668	-323.697	-5.07012	-.394792	-236.230
#3	1292.301	-.359363	-14.6984	-279.654	-1.15172	-.482396	363.6626
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH							
LOW							

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.09201	-4.45524	-1.74923	.7560520	1247.784	243.9571	-10.0527
SDEV	1.52989	3.49465	.48941	.8489723	6.692	1.4435	10.0931
%RSD	140.0982	78.43909	27.97834	112.2902	.5362827	.5916944	100.4018
#1	-2.75673	-.803282	-1.36936	-.210426	1253.668	244.7103	-21.1526
#2	-.771631	-7.76782	-2.30151	1.381398	1249.180	244.8682	-1.42616
#3	.2523167	-4.79463	-1.57683	1.097184	1240.505	242.2928	-7.57940
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH							
LOW							

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1239.331	1250.083	1246.636	238.9119	246.4756	-1.08411	-8.49005
SDEV	6.789	34.944	9.145	22.3147	9.9899	5.05233	12.87716
%RSD	.5477586	2.795307	.7335514	9.340147	4.053109	466.0347	151.6736
#1	1233.030	1288.658	1236.198	264.2790	234.9402	-6.74095	-21.7321
#2	1238.445	1241.043	1253.241	230.1438	252.2190	.5089247	-7.72626
#3	1246.520	1220.547	1250.468	222.3129	252.2674	2.979696	3.988222
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH							
LOW							

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-1.04798	-.651236	32873.95
SDEV	1.97806	1.262520	94.78
%RSD	188.7493	193.8653	.2883177
#1	-3.09576	-2.08869	32819.07
#2	-.900253	.2778322	32983.40
#3	.8520701	-.142845	32819.40
ERRORS	NOCHECK	NOCHECK	NOCHECK
HIGH			
LOW			

METHOD: P42012S2 SAMPLE NAME: 2081412-BSD1 OPERATOR:
RUN TIME: 08/14/12 17:12:04
COMMENT: SDG:1208018 CLIENTID:LCSWD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2528.572	-11.7127	53558.30	.2534466	20.41724	500.0169	-4.48832
SDEV	24.233	6.0535	325.75	.0209411	17.16538	.8603	2.24825
%RSD	.9583550	51.68321	.6082243	8.262525	84.07295	.1720630	50.09103
#1	2519.887	-13.3724	53211.04	.2498054	39.48159	500.3042	-4.57935
#2	2509.877	-5.00250	53857.13	.2345648	15.58222	500.6968	-2.19595
#3	2555.950	-16.7633	53606.71	.2759695	6.187921	499.0496	-6.68968
ERRORS	LC PASS	NOCHECK	LC PASS	NOCHECK	NOCHECK	LC PASS	NOCHECK
HIGH	3000.000		60000.00			600.0000	
LOW	2000.000		40000.00			400.0000	

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2576.700	-.460294	2.134107	-316.736	-2.91096	-.347058	-68.7885
SDEV	19.023	2.139811	16.42536	37.250	6.78889	.238999	428.3549
%RSD	.7382674	464.8797	769.6597	11.76068	233.2181	68.86446	622.7130
#1	2556.387	1.640945	16.80436	-323.262	.0947777	-.258244	-215.715
#2	2579.619	-.385128	5.209567	-276.653	1.856190	-.165180	413.6948
#3	2594.095	-2.63670	-15.6116	-350.291	-10.6839	-.617750	-404.345
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	3000.000						
LOW	2000.000						

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.093814	-4.13012	-3.40227	-.016239	2481.823	479.4610	1.214650
SDEV	.500608	4.57751	1.01385	.653716	8.121	1.1036	6.920345
%RSD	533.6145	110.8324	29.79930	4025.478	.3272091	.2301661	569.7399
#1	.4820134	-6.78996	-4.50905	.6913402	2478.435	479.4923	8.854135
#2	-.425601	-6.75590	-3.17928	-.142339	2491.089	480.5487	-.575346
#3	-.337856	1.155498	-2.51847	-.597719	2475.944	478.3422	-4.63484
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS	NOCHECK
HIGH					3000.000	600.0000	
LOW					2000.000	400.0000	

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2448.688	2511.412	2467.050	465.6181	486.3718	-.128893	-7.47153
SDEV	20.233	43.020	23.830	30.8813	15.8539	1.564908	9.37407
%RSD	.8262702	1.712995	.9659170	6.632320	3.259628	1214.117	125.4640
#1	2471.083	2463.809	2485.737	430.6080	503.8974	-.583169	-6.30441
#2	2443.252	2522.918	2475.198	477.2602	482.1900	1.612894	1.264340
#3	2431.728	2547.510	2440.215	488.9860	473.0279	-1.41640	-17.3745
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	3000.000						
LOW	2000.000						

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.705176	.8021386	31946.64
SDEV	1.671977	.6725156	281.64
%RSD	237.1008	83.84032	.8816028
#1	.0619062	1.399084	31949.20
#2	.4456225	.9338049	31663.73
#3	-2.62306	.0735270	32227.00
ERRORS	NOCHECK	NOCHECK	NOCHECK
HIGH			
LOW			

METHOD: P42012S2 SAMPLE NAME: 2081412-BSD2 OPERATOR:
RUN TIME: 08/14/12 17:19:17
COMMENT: SDG:1208018 CLIENTID:LCSWD 1:2
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1285.051	-10.0540	25753.53	.0949368	7.827799	250.6278	-4.29650
SDEV	30.370	8.1245	334.50	.1323829	10.18872	2.7602	2.59199
%RSD	2.363313	80.80823	1.298835	139.4432	130.1608	1.101329	60.32787
#1	1302.552	-1.00376	25649.19	.2265802	1.307764	252.9958	-4.25705
#2	1302.619	-12.4398	26127.76	.0964038	2.606840	247.5963	-6.90798
#3	1249.983	-16.7185	25483.64	-.038174	19.56879	251.2913	-1.72446
ERRORS	NOCHECK	NOCHECK	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH			30000.00				
LOW			20000.00				

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1282.478	-.967854	-8.86168	-273.151	.1116792	-.319447	342.1055
SDEV	7.597	1.059731	20.90498	28.174	4.163749	.142150	257.6639
%RSD	.5924042	109.4929	235.9032	10.31437	3728.314	44.49880	75.31711
#1	1290.465	-.133796	14.18403	-280.507	2.767095	-.218219	386.4335
#2	1275.342	-2.16031	-26.6047	-242.029	2.255049	-.481959	574.7296
#3	1281.628	-.609455	-14.1644	-296.917	-4.68711	-.258162	65.15334
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH							
LOW							

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2432613	-1.80233	-.825229	-.335825	1239.487	244.1577	-1.62403
SDEV	.2048797	1.52705	.469263	.329733	13.189	.8481	4.51588
%RSD	84.22205	84.72639	56.86453	98.18595	1.064035	.3473654	278.0662
#1	.4782473	-1.62440	-.757587	-.118107	1243.959	244.6078	3.266689
#2	.1020652	-.372044	-.393459	-.715189	1224.644	244.6859	-5.63585
#3	.1494712	-3.41056	-1.32464	-.174179	1249.858	243.1794	-2.50293
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH							
LOW							

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1230.897	1248.896	1234.789	244.4633	244.0048	3.305134	5.257902
SDEV	6.998	13.493	13.216	3.6588	2.3836	1.884803	7.462336
%RSD	.5685415	1.080394	1.070313	1.496657	.9768634	57.02651	141.9261
#1	1234.599	1250.601	1240.643	247.8646	242.9815	4.112361	5.779504
#2	1222.825	1234.631	1219.657	240.5924	246.7292	4.651884	12.44575
#3	1235.267	1261.455	1244.067	244.9327	242.3037	1.151158	-2.45155
ERRORS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH							
LOW							

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.354257	-.001501	32607.00
SDEV	1.300893	.396530	499.70
%RSD	367.2169	26420.09	1.532492
#1	-.171140	.2543445	32793.20
#2	.8453751	-.458275	32986.86
#3	-1.73701	.1994279	32040.93
ERRORS	NOCHECK	NOCHECK	NOCHECK
HIGH			
LOW			

METHOD: P42012S2 SAMPLE NAME: 1208018-01 OPERATOR:
RUN TIME: 08/14/12 17:26:29
COMMENT: SDG:1208018 CLIENTID:TANK1S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.204287	1343.360	121.6408	.4144955	41961.41	-1.50646	-8.43382
SDEV	.563798	22.230	.4613	.0507683	111.19	.43336	1.85246
%RSD	46.81596	1.654826	.3792693	12.24821	.2649918	28.76642	21.96467
#1	.5634738	1317.975	121.5926	.4128451	41836.32	-1.97595	-10.3652
#2	1.624130	1352.755	121.2055	.3645726	41998.91	-1.42166	-8.26438
#3	1.425257	1359.350	122.1244	.4660689	42049.01	-1.12177	-6.67190
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.509047	7.032630	1121.953	6983.237	17263.05	92.97051	H913555.4
SDEV	1.205469	.867050	33.120	40.400	179.10	1.77941	9766.4
%RSD	26.73446	12.32896	2.952022	.5785211	1.037502	1.913948	1.069059
#1	3.130196	6.123379	1083.732	6937.055	17060.64	90.95494	H902901.6
#2	5.363498	7.850193	1139.916	7000.620	17327.52	93.63277	H915679.6
#3	5.033445	7.124320	1142.211	7012.035	17401.00	94.32383	H922084.9
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	16.15315	-3.17822	3.820245	18.53459	5.998345	5.013598	.2405441
SDEV	.75216	2.84252	.416006	.49611	1.044168	2.270404	3.049466
%RSD	4.656413	89.43745	10.88952	2.676668	17.40760	45.28493	1267.737
#1	15.60119	.1040018	3.474389	17.96458	7.202669	5.834773	-2.63642
#2	17.00986	-4.83269	4.281876	18.77013	5.346291	6.759162	-.079256
#3	15.84840	-4.80597	3.704472	18.86905	5.446075	2.446859	3.437308
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.282571	9.039411	4.479531	5.167331	4.936469	6.542621	-4.15920
SDEV	1.233841	2.896335	.155863	4.640378	2.274600	.166969	3.15483
%RSD	14.89683	32.04120	3.479440	89.80222	46.07747	2.552027	75.85196
#1	8.092380	12.38322	4.615716	9.804499	3.852513	6.359665	-7.03116
#2	9.600464	7.421803	4.309540	5.173747	7.550303	6.686769	-4.66404
#3	7.154870	7.313206	4.513337	.5237483	3.406592	6.581430	-.782383
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-1.41207	43.53222	32034.44
SDEV	.23820	.37381	360.68
%RSD	16.86886	.8586931	1.125924
#1	-1.57397	43.21883	32410.80
#2	-1.13856	43.43187	32000.73
#3	-1.52368	43.94596	31691.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 08/14/12 17:33:43
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	107.0710	48042.62	1037.293	1034.640	48280.49	990.8012	971.4146
SDEV	.9699	442.31	6.115	1.460	266.78	3.6081	3.5723
%RSD	.9058862	.9206520	.5894778	.1411537	.5525708	.3641602	.3677402
#1	108.1869	47755.78	1035.749	1033.645	48258.92	988.0462	967.5864
#2	106.4302	48552.00	1044.032	1036.317	48557.41	994.8853	974.6590
#3	106.5960	47820.09	1032.099	1033.959	48025.15	989.4720	971.9985
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1019.580	1045.602	24272.93	49557.79	47661.50	932.9197	48179.44
SDEV	2.467	7.327	79.17	234.43	121.67	2.8888	693.98
%RSD	.2419981	.7007051	.3261612	.4730451	.2552695	.3096523	1.440411
#1	1022.153	1037.144	24186.79	49343.61	47534.35	929.8172	47965.94
#2	1019.355	1049.682	24342.52	49808.24	47776.81	935.5321	48955.09
#3	1017.233	1049.981	24289.47	49521.51	47673.34	933.4099	47617.30
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	989.8205	964.0487	1001.288	1047.072	984.2756	1012.694	1030.523
SDEV	1.2923	13.9855	2.647	3.961	6.1860	4.825	.614
%RSD	.1305549	1.450704	.2643916	.3783262	.6284802	.4764676	.0595359
#1	990.4709	950.2072	998.6792	1044.941	982.3143	1007.298	1030.934
#2	990.6584	978.1739	1003.972	1051.642	991.2045	1016.595	1030.817
#3	988.3323	963.7649	1001.212	1044.632	979.3081	1014.190	1029.818
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	989.0724	995.5245	978.6595	1014.565	1011.760	985.9851	976.3970
SDEV	9.1674	11.7613	4.0072	5.708	4.527	3.2269	8.7923
%RSD	.9268640	1.181420	.4094572	.5625623	.4474245	.3272795	.9004796
#1	978.4914	995.6561	975.6533	1008.782	1006.557	989.3969	972.5408
#2	994.0945	1007.220	983.2089	1020.194	1014.797	985.5764	986.4585
#3	994.6313	983.6980	977.1163	1014.718	1013.927	982.9820	970.1919
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1018.632	1001.308	32663.73
SDEV	2.481	7.296	156.09
%RSD	.2436013	.7286638	.4778686
#1	1021.487	1004.913	32745.73
#2	1017.415	1006.100	32483.73
#3	1016.994	992.9113	32761.73
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 08/14/12 17:40:57
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.005193	-4.00330	-.139994	.1899639	11.26940	-1.80083	Q-7.70453
SDEV	3.977507	8.96379	.320876	.0544351	9.03370	.25248	1.63561
%RSD	132.3545	223.9098	229.2068	28.65551	80.16132	14.02016	16.85414
#1	3.993702	1.466248	.1027895	.2332448	19.84937	-1.91485	Q-7.47080
#2	-.961220	-14.3481	-.503778	.1288487	12.11708	-1.97618	Q-7.81640
#3	2.983096	.8719483	-.018995	.2077982	1.841733	-1.51145	Q-7.82645
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.033654	-.832923	-24.6281	-302.106	.9362696	-.266125	-118.913
SDEV	1.105562	1.497638	19.0774	30.422	9.469766	.113534	408.093
%RSD	106.9567	179.8051	77.46199	10.06990	1011.436	42.66197	343.1875
#1	2.032192	.8446860	-5.12966	-283.075	10.32225	-.182213	95.63035
#2	-.154425	-2.03524	-43.2545	-337.192	-8.61512	-.395311	-589.528
#3	1.223195	-1.30822	-25.5000	-286.051	1.101676	-.220852	137.1595
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5530496	5.537754	2.380525	-1.09599	.5354125	.6647134	-7.07122
SDEV	1.471916	6.066575	2.729490	.52675	1.760463	3.004408	4.17167
%RSD	266.1454	109.5494	114.6591	48.06112	328.8050	451.9855	58.99507
#1	2.240632	Q12.02755	4.992790	-.519923	2.531767	-2.32570	-3.38486
#2	-.115856	.0091720	-.452751	-1.55305	-.794662	.6369238	Q-11.5997
#3	-.465628	4.576534	2.601538	-1.21500	-.130867	3.682920	-6.22909
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.31070	19.34526	-8.85588	20.74327	-9.35987	.8147308	-3.30604
SDEV	3.13529	8.18277	1.50079	6.08488	6.77784	2.960744	7.89638
%RSD	135.6859	42.29857	16.94688	29.33424	72.41383	363.4015	238.8472
#1	.8163018	28.77265	-10.5695	27.22668	-17.0801	1.393617	-.451965
#2	-5.45422	14.08290	-8.22274	15.15640	-6.61229	-2.39270	-12.2326
#3	-2.29418	15.18024	-7.77540	19.84672	-4.38723	3.443280	2.766491
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.587502	-.449094	33622.57
SDEV	1.154229	.546547	333.40
%RSD	196.4639	121.6999	.9915985
#1	.6667341	.0119673	33950.40
#2	-1.60502	-1.05283	33633.46
#3	-.824218	-.306422	33283.86
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: SDI1208018-01 OPERATOR:
RUN TIME: 08/14/12 17:48:16
COMMENT: SDG:1208018 CLIENTID:TANK1SL 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.077339	251.7225	24.48836	.1605328	8559.357	-1.98949	-10.3942
SDEV	.669780	6.2718	.46303	.1451440	98.405	.26928	.6555
%RSD	866.0260	2.491562	1.890826	90.41394	1.149680	13.53496	6.306689
#1	-.464037	257.7971	25.01606	.3102306	8606.898	-1.74315	-9.77693
#2	.6960558	245.2705	24.15005	.1509502	8624.966	-2.27697	-11.0822
#3	-.464037	252.0999	24.29895	.0204175	8446.209	-1.94836	-10.3234
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6992246	1.459787	211.7484	986.2678	3562.861	18.52898	227108.3
SDEV	.7273151	.797971	8.5669	35.5094	24.087	.18848	1549.8
%RSD	104.0174	54.66352	4.045774	3.600378	.6760588	1.017199	.6824124
#1	-.074032	1.317894	221.2362	1023.647	3590.161	18.74445	228243.9
#2	.8020527	2.319186	209.4287	982.1733	3553.814	18.39475	227738.3
#3	1.369653	.7422812	204.5802	952.9832	3544.606	18.44774	225342.7
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.053100	-2.16184	.5488829	3.006059	1.398491	-1.00200	-5.49380
SDEV	.546018	1.89571	.6383436	.257978	.057776	2.70758	2.86168
%RSD	17.88406	87.68978	116.2987	8.581933	4.131291	270.2188	52.08933
#1	3.299474	-1.51701	.3349132	3.297414	1.450360	-3.97597	-6.41166
#2	3.432517	-.672656	1.266724	2.914110	1.336222	-.350264	-2.28580
#3	2.427309	-4.29584	.0450115	2.806653	1.408892	1.320239	-7.78394
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2896145	-2.12378	3.156495	-6.30480	1.645071	2.515134	-3.24206
SDEV	.4689921	3.54798	1.684717	4.13548	2.639987	1.767423	5.14982
%RSD	161.9367	167.0595	53.37303	65.59251	160.4786	70.27151	158.8440
#1	.7199565	1.045751	1.651861	-9.19693	-1.36976	4.538324	.8373588
#2	-.210263	-5.95660	4.976674	-8.14947	3.543137	1.271567	-1.53485
#3	.3591503	-1.46050	2.840949	-1.56801	2.761840	1.735512	-9.02869
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.581223	8.339429	33557.38
SDEV	.298401	.230100	351.70
%RSD	51.34025	2.759176	1.048048
#1	-.246877	8.442814	33176.73
#2	-.676263	8.499702	33870.27
#3	-.820527	8.075770	33625.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081412-PS1 OPERATOR:
RUN TIME: 08/14/12 17:55:29
COMMENT: SDG:1208018 CLIENTID:TANK1SA 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	118.4510	5602.855	4771.336	116.1339	41361.16	110.1818	431.2867
SDEV	.7204	90.196	47.248	1.1051	555.83	.9718	4.9829
%RSD	.6081511	1.609824	.9902416	.9515604	1.343851	.8819725	1.155364
#1	117.6334	5513.208	4735.365	114.8691	40763.57	109.1170	425.6671
#2	118.9924	5693.591	4824.845	116.6203	41862.72	111.0208	435.1666
#3	118.7272	5601.764	4753.798	116.9124	41457.18	110.4076	433.0264
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	231.9997	126.2490	5514.005	6925.341	16998.85	302.9366	H900582.4
SDEV	2.6825	2.0589	51.327	75.513	135.16	2.0091	9993.3
%RSD	1.156247	1.630847	.9308561	1.090393	.7951295	.6631964	1.109649
#1	228.9094	124.7021	5455.985	6839.797	16844.71	300.6727	H890270.9
#2	233.3630	128.5859	5553.492	6982.741	17097.14	304.5072	H910223.8
#3	233.7267	125.4590	5532.537	6953.484	17054.69	303.6299	H901252.7
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	235.6567	634.4526	454.0071	665.5212	223.4227	233.9415	682.8405
SDEV	1.4365	9.6718	7.4844	4.3514	2.1062	4.0107	4.4488
%RSD	.6095529	1.524439	1.648524	.6538377	.9426861	1.714386	.6515074
#1	234.9945	624.1718	445.4084	660.9280	221.4358	229.8922	678.2176
#2	237.3049	643.3710	457.5565	669.5819	223.2018	234.0199	687.0918
#3	234.6709	635.8150	459.0566	666.0535	225.6307	237.9124	683.2120
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	228.0432	226.4480	221.9119	230.5806	235.6191	1133.059	434.3264
SDEV	2.8485	2.8278	2.1217	1.3604	6.5014	9.132	4.6488
%RSD	1.249085	1.248777	.9561006	.5899714	2.759283	.8059288	1.070337
#1	224.8275	223.1848	220.5620	232.0813	228.7990	1123.367	430.6050
#2	230.2494	227.9792	220.8162	229.4282	236.3119	1141.502	432.8368
#3	229.0527	228.1800	224.3574	230.2324	241.7463	1134.308	439.5374
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1169.572	1162.799	32269.24
SDEV	8.894	13.019	125.37
%RSD	.7604066	1.119618	.3885230
#1	1161.212	1148.122	32413.60
#2	1178.917	1172.955	32206.53
#3	1168.588	1167.319	32187.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208034-01 OPERATOR:
RUN TIME: 08/14/12 18:02:42
COMMENT: SDG:1208034 CLIENTID:ASR2.82-WS08 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.977682	1213.191	140.3180	.4096194	15939.91	-1.44761	-10.6343
SDEV	1.144521	10.013	1.0663	.1218020	161.01	.37717	1.2506
%RSD	57.87181	.8253174	.7599505	29.73540	1.010107	26.05460	11.75988
#1	1.027511	1203.195	141.5464	.5409622	15762.67	-1.46192	-10.0851
#2	1.657276	1213.158	139.7781	.3003875	15979.91	-1.81742	-12.0655
#3	3.248260	1223.220	139.6296	.3875085	16077.15	-1.06349	-9.75237
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.099840	1.101736	-38.3610	962.1780	9289.125	47.35157	H1051848.
SDEV	.244816	.451146	14.6026	35.5671	14.472	.09220	8834.
%RSD	7.897684	40.94864	38.06634	3.696516	.1557908	.1947180	.8398954
#1	3.222881	1.117960	-37.3808	940.3561	9281.652	47.42154	H1041774.
#2	2.817910	.6426967	-53.4290	942.9579	9279.918	47.38609	H1055494.
#3	3.258729	1.544551	-24.2731	1003.220	9305.806	47.24709	H1058276.
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7298055	.6837026	1.765669	18.27298	1314.531	4.507930	2.263577
SDEV	.9596584	1.045350	1.463411	.14169	2.861	3.129443	4.219244
%RSD	131.4951	152.8954	82.88140	.7754029	.2176131	69.42083	186.3972
#1	1.382224	1.288557	.7821911	18.41193	1316.456	7.815791	2.051318
#2	-.372101	-.523363	1.067387	18.12870	1311.244	4.113744	-1.84553
#3	1.179294	1.285914	3.447429	18.27831	1315.893	1.594256	6.584943
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.991993	1327.487	1308.063	-1.63722	7.575532	10.76429	-.829470
SDEV	.805878	2.364	3.764	6.82646	4.733512	.94604	5.186400
%RSD	16.14341	.1780491	.2877603	416.9543	62.48423	8.788670	625.2667
#1	5.845629	1330.215	1309.587	-2.07648	12.75414	9.790321	-4.36671
#2	4.885985	1326.203	1303.775	5.398263	3.472083	10.82287	-3.24590
#3	4.244366	1326.043	1310.825	-8.23344	6.500369	11.67967	5.124206
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.121361	-.111195	32869.69
SDEV	.914030	.291212	206.84
%RSD	753.1521	261.8925	.6292720
#1	-.537103	-.083494	32722.26
#2	-.753620	-.415268	33106.13
#3	.9266411	.1651760	32780.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1208034-01 OPERATOR:
RUN TIME: 08/14/12 18:09:55
COMMENT: SDG:1208034 CLIENTID:ASR2.82-WS08L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-3.15987	221.8838	27.60177	-.125447	3186.753	-1.73136	-9.52182
SDEV	4.62096	23.5906	.97943	.159700	29.239	.17749	2.51206
%RSD	146.2387	10.63196	3.548434	127.3046	.9175284	10.25167	26.38219
#1	-5.40272	216.6292	26.92631	-.136735	3157.468	-1.86489	-11.0215
#2	-6.23136	201.3636	27.15395	-.279204	3186.843	-1.79925	-10.9222
#3	2.154458	247.6587	28.72506	.0395972	3215.947	-1.52994	-6.62170
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2256331	-.668204	-38.3967	-135.280	1864.136	8.999151	266977.8
SDEV	3.116922	3.912204	56.8760	104.029	28.202	.320862	1371.6
%RSD	1381.411	585.4805	148.1272	76.89936	1.512871	3.565465	.5137338
#1	-2.15247	-3.61326	-74.1693	-206.181	1849.590	8.845915	268511.8
#2	-.924904	-2.16221	-68.2086	-183.804	1846.177	8.783638	265869.8
#3	3.754273	3.770857	27.18776	-15.8538	1896.641	9.367902	266551.9
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.126839	-5.51571	-2.11517	2.690161	261.7576	2.587940	-5.62857
SDEV	2.779389	9.18027	3.79255	1.300285	1.2126	2.005664	14.43705
%RSD	2191.275	166.4386	179.3021	48.33484	.4632612	77.50040	256.4960
#1	-2.03781	-9.91930	-4.13711	1.766466	260.5160	4.746975	-14.2375
#2	-1.40432	-11.6646	-4.46831	2.126908	261.8177	2.234103	-13.6871
#3	3.061615	5.036757	2.259907	4.177110	262.9390	.7827417	11.03888
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.14059	257.0897	264.0877	-.367577	4.063119	1.646428	-11.6231
SDEV	4.87927	11.7129	5.2531	8.536041	5.900793	4.944263	17.7788
%RSD	427.7855	4.555963	1.989166	2322.248	145.2282	300.3024	152.9614
#1	-3.70759	257.0360	262.2533	.3070839	6.963228	-2.48232	-26.4126
#2	-4.20049	245.4038	270.0121	-9.22093	7.952669	.2960106	-16.5587
#3	4.486312	268.8294	259.9977	7.811114	-2.72654	7.125595	8.102079
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-2.12387	-.745513	33187.56
SDEV	2.77145	1.982138	126.23
%RSD	130.4903	265.8757	.3803491
#1	-4.01438	-2.16895	33111.60
#2	-3.41478	-1.58596	33333.27
#3	1.057541	1.518377	33117.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081412-PS2 OPERATOR:
RUN TIME: 08/14/12 18:17:08
COMMENT: SDG:1208034 CLIENTID:ASR2.82-WS08A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	119.6111	5490.190	4780.579	116.8488	15765.49	111.4601	433.5846
SDEV	.8671	36.528	46.789	.6735	108.17	.6472	3.2473
%RSD	.7249141	.6653348	.9787409	.5763744	.6860909	.5806299	.7489436
#1	118.6941	5519.955	4764.641	117.3763	15843.52	112.1444	437.3251
#2	120.4176	5501.190	4743.840	117.0800	15810.93	111.3780	431.9412
#3	119.7216	5449.426	4833.255	116.0902	15642.01	110.8579	431.4874
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	232.6956	120.8454	4403.497	913.9231	9076.825	257.6670	H1038873.
SDEV	1.2965	.1444	14.354	16.1159	59.435	1.6516	3114.
%RSD	.5571541	.1194583	.3259648	1.763377	.6548034	.6409717	.2997260
#1	234.0591	121.0055	4418.605	898.7965	9145.309	259.5606	H1040740.
#2	232.5490	120.8056	4390.040	912.0997	9046.472	256.9154	H1040601.
#3	231.4786	120.7251	4401.846	930.8732	9038.696	256.5248	H1035279.
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	223.0803	640.8052	455.8792	674.6522	1496.708	235.1634	694.5974
SDEV	.7960	7.1044	6.5591	5.8116	9.960	2.9790	3.0097
%RSD	.3568355	1.108675	1.438777	.8614234	.6654715	1.266772	.4333046
#1	223.8733	645.8604	459.3702	680.3948	1507.838	238.5315	697.4324
#2	223.0863	643.8727	459.9545	668.7740	1493.652	232.8742	691.4390
#3	222.2813	632.6823	448.3130	674.7878	1488.634	234.0844	694.9206
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	228.8360	1505.639	1492.249	229.0499	238.2152	1140.285	435.9154
SDEV	1.6664	6.346	12.385	3.2219	5.8604	10.963	2.3008
%RSD	.7282057	.4214607	.8299609	1.406635	2.460129	.9614347	.5278086
#1	230.4518	1510.610	1506.454	225.6253	244.9745	1143.594	434.8106
#2	228.9331	1507.815	1486.581	229.5031	234.5569	1128.049	434.3753
#3	227.1232	1498.492	1483.712	232.0212	235.1141	1149.213	438.5602
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1173.838	1127.952	32271.02
SDEV	11.678	9.584	155.90
%RSD	.9948881	.8496593	.4830961
#1	1178.324	1128.347	32114.87
#2	1160.582	1137.332	32426.66
#3	1182.608	1118.177	32271.53
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208034-02 OPERATOR:
RUN TIME: 08/14/12 18:24:22
COMMENT: SDG:1208034 CLIENTID:ASR2.82-WS09 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.259088	2126.940	114.5585	.4238393	42521.30	1.357474	-10.9174
SDEV	.235154	11.509	.5867	.1049542	254.70	.039660	.6417
%RSD	4.471384	.5410852	.5121068	24.76273	.5990019	2.921597	5.877354
#1	5.004973	2124.521	114.4759	.4678732	42553.95	1.371610	-11.4884
#2	5.303282	2139.466	115.1821	.4996034	42758.10	1.388129	-10.2230
#3	5.469009	2116.834	114.0176	.3040412	42251.84	1.312682	-11.0409
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.310819	5.622795	-259.521	702.2824	125516.2	320.1017	6106.138
SDEV	.731197	.451232	10.250	9.0095	343.8	.9150	125.042
%RSD	22.08509	8.025042	3.949442	1.282890	.2738854	.2858318	2.047803
#1	4.083207	5.998215	-247.903	702.4968	125286.0	319.7632	6158.324
#2	2.629309	5.747983	-267.285	711.1829	125911.3	321.1376	5963.456
#3	3.219941	5.122188	-263.374	693.1677	125351.2	319.4041	6196.633
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.959599	-1.14151	3.146255	4814.976	46663.92	1.837033	775.6295
SDEV	.847271	2.23988	.355537	20.520	383.72	.374962	6.7637
%RSD	8.507084	196.2214	11.30032	.4261706	.8223126	20.41131	.8720285
#1	10.33741	1.444838	3.376157	4792.994	46242.38	2.065090	781.4994
#2	10.55224	-2.44826	3.325863	4833.627	46992.90	2.041735	777.1561
#3	8.989147	-2.42110	2.736745	4818.308	46756.48	1.404273	768.2329
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	473.7042	46945.98	46523.10	16.94676	-5.70687	2.149642	-1.11961
SDEV	.5661	698.41	259.14	.78053	.21265	.713536	2.29277
%RSD	.1194961	1.487690	.5570191	4.605773	3.726283	33.19325	204.7835
#1	473.1090	46139.92	46293.54	17.60652	-5.69433	2.258345	-1.06884
#2	474.2358	47371.05	46804.11	17.14864	-5.50075	2.802590	-3.43735
#3	473.7679	47326.96	46471.66	16.08513	-5.92551	1.387992	1.147359
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.0838093	-3.18700	33580.98
SDEV	.7836388	.16143	152.99
%RSD	935.0256	5.065257	.4555753
#1	.5316163	-3.29165	33737.33
#2	.5408548	-3.26826	33431.60
#3	-.821043	-3.00109	33574.00
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208034-03 OPERATOR:
RUN TIME: 08/14/12 18:32:30
COMMENT: SDG:1208034 CLIENTID:ASR2.82-WS13 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.005414	627.5815	85.13237	.2165852	12849.91	-.971176	-8.04238
SDEV	.019137	9.3237	.56278	.0224623	61.68	.026276	.42391
%RSD	1.903355	1.485653	.6610670	10.37113	.4800398	2.705566	5.270977
#1	.9943653	636.0758	84.48291	.1940938	12910.96	-1.00010	-7.79411
#2	.9943653	617.6058	85.43767	.2166436	12787.61	-.948771	-8.53185
#3	1.027511	629.0630	85.47652	.2390183	12851.15	-.964659	-7.80118
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.046215	3.262302	59.47358	1020.037	21455.82	78.37052	H1068114.
SDEV	1.193665	1.909324	23.17554	6.019	88.54	.62687	494.
%RSD	23.65465	58.52690	38.96780	.5901109	.4126654	.7998794	.0462399
#1	6.420746	5.397575	81.28613	1015.417	21556.89	79.08950	H1068246.
#2	4.270440	1.719297	35.14102	1017.850	21391.92	78.08361	H1067568.
#3	4.447461	2.670034	61.99358	1026.844	21418.65	77.93845	H1068529.
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.547748	-1.89805	2.700605	8.693981	3932.752	3.309018	44.31194
SDEV	.462725	2.26056	.304563	.472224	20.989	1.363813	5.49830
%RSD	18.16210	119.0987	11.27757	5.431625	.5336907	41.21505	12.40816
#1	3.052664	-3.73815	3.045536	9.109483	3951.095	4.802437	50.58839
#2	2.143932	.6253217	2.587514	8.180428	3909.863	2.995044	40.34554
#3	2.446649	-2.58133	2.468764	8.792032	3937.300	2.129572	42.00189
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	45.92519	3942.414	3927.928	-.052402	4.986835	10.13345	-2.34553
SDEV	1.91209	15.139	24.259	4.070850	2.748352	1.80927	.38386
%RSD	4.163492	.3839970	.6175934	7768.528	55.11215	17.85440	16.36568
#1	48.11688	3952.165	3950.560	1.839384	6.281372	9.235429	-2.76188
#2	44.59809	3924.974	3902.317	-4.72491	6.848865	8.948868	-2.00568
#3	45.06060	3950.104	3930.906	2.728324	1.830270	12.21605	-2.26903
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.367745	10.53142	32472.42
SDEV	.768401	1.30335	221.28
%RSD	208.9498	12.37587	.6814287
#1	.4928392	12.01206	32602.87
#2	-.610987	9.557632	32597.47
#3	-.985086	10.02456	32216.93
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208034-04 OPERATOR:
RUN TIME: 08/14/12 18:39:44
COMMENT: SDG:1208034 CLIENTID:ASR2.82-WS18 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2651641	717.2216	143.1550	.2296397	22432.36	.6262236	-4.37605
SDEV	.4139873	19.7470	1.5815	.0934957	174.25	.2312239	.17486
%RSD	156.1249	2.753265	1.104772	40.71407	.7767774	36.92353	3.995943
#1	-.066291	720.5816	144.1719	.2425343	22508.10	.6740341	-4.47939
#2	.1325821	735.0729	143.9603	.3160188	22555.92	.8298048	-4.17416
#3	.7292013	696.0101	141.3329	.1303660	22233.06	.3748319	-4.47462
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.879749	3.371047	79.56920	1677.102	32438.05	147.7172	H1069768.
SDEV	1.517444	1.197024	25.70398	25.863	350.73	1.9424	8344.
%RSD	31.09676	35.50895	32.30393	1.542108	1.081227	1.314956	.7799976
#1	5.206167	3.946150	81.09442	1655.444	32667.77	148.9228	H1068050.
#2	6.207421	4.171985	104.4766	1705.737	32612.03	148.7523	H1078837.
#3	3.225660	1.995007	53.13657	1670.123	32034.34	145.4765	H1062416.
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.282122	-2.81748	3.396926	18.67576	25787.16	5.563985	216.5680
SDEV	.972270	.55100	.725866	.81707	375.62	.886367	6.2802
%RSD	29.62322	19.55646	21.36834	4.375033	1.456602	15.93043	2.899870
#1	3.446615	-2.21784	2.583868	19.03102	26021.71	5.191504	217.0918
#2	4.161654	-3.30148	3.979765	19.25506	25985.85	6.575810	222.5699
#3	2.238099	-2.93312	3.627143	17.74119	25353.93	4.924642	210.0423
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	252.5459	25900.98	25730.34	-.712302	8.697043	8.130362	-.981621
SDEV	4.3286	293.40	438.92	7.377742	3.621940	.251979	4.291654
%RSD	1.713998	1.132782	1.705842	1035.760	41.64565	3.099239	437.2008
#1	253.9000	26195.95	25934.72	-9.14284	12.34755	8.245632	-5.93533
#2	256.0357	25897.81	26029.80	2.442032	8.639218	7.841365	1.377445
#3	247.7021	25609.17	25226.50	4.563902	5.104362	8.304089	1.613021
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.4693559	15.52971	31711.78
SDEV	.0866883	.54202	163.50
%RSD	18.46964	3.490244	.5155735
#1	.3694230	15.66987	31676.80
#2	.5243152	15.98789	31568.60
#3	.5143295	14.93137	31889.93
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208034-05 OPERATOR:
RUN TIME: 08/14/12 18:46:57
COMMENT: SDG:1208034 CLIENTID:ASR2.82-WS57 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.342504	955.2563	98.42021	.3936748	23837.17	-.067397	-5.07023
SDEV	2.357374	3.3250	1.73553	.2373022	193.71	.359030	1.40080
%RSD	688.2772	.3480751	1.763385	60.27873	.8126558	532.7071	27.62800
#1	.7623468	958.7396	98.02268	.5447372	23847.32	.3267612	-3.48221
#2	-3.04939	952.1162	96.91794	.1201602	24025.61	-.153203	-5.59795
#3	1.259529	954.9133	100.3200	.5161271	23638.58	-.375750	-6.13052
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.756008	2.044738	183.8325	951.0967	27472.38	211.6765	H1064639.
SDEV	.534091	.577817	24.5451	36.1869	101.98	2.0892	6353.
%RSD	30.41504	28.25873	13.35187	3.804757	.3712246	.9869636	.5967642
#1	2.205427	2.495288	197.2035	959.2737	27454.12	210.1923	H1063076.
#2	1.165553	1.393287	155.5051	911.5210	27380.77	210.7717	H1071628.
#3	1.897045	2.245641	198.7890	982.4955	27582.27	214.0656	H1059212.
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.367803	-3.44404	2.956707	19.14334	6317.365	6.227970	184.7479
SDEV	.994318	4.66397	1.801399	.30730	43.675	3.176985	3.2274
%RSD	72.69456	135.4214	60.92584	1.605276	.6913436	51.01157	1.746940
#1	1.716493	-.732066	3.330386	19.23032	6268.799	4.363505	185.1709
#2	.2461034	-8.82949	.9977758	18.80193	6353.417	4.424135	181.3299
#3	2.140812	-.770575	4.541960	19.39778	6329.880	9.896269	187.7430
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	69.01527	6313.779	6319.155	2.645125	8.016325	8.972702	-4.01433
SDEV	1.88088	49.703	42.990	9.932854	2.569092	3.529079	8.77280
%RSD	2.725315	.7872194	.6803167	375.5154	32.04825	39.33129	218.5368
#1	67.05827	6256.548	6274.915	2.647809	5.219682	10.26037	.9202474
#2	69.17808	6338.673	6360.776	-7.28907	10.27157	4.980609	-14.1432
#3	70.80946	6346.117	6321.773	12.57664	8.557718	11.67713	1.179929
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-1.09295	28.63691	31703.06
SDEV	1.49323	.73951	421.77
%RSD	136.6241	2.582373	1.330361
#1	.3010837	28.80319	31370.93
#2	-2.66874	29.27913	31560.66
#3	-.911190	27.82842	32177.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 08/14/12 18:54:10
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	6.352889	172.3323	201.4242	4.997531	5706.684	4.391224	Q11.08907
SDEV	1.146439	2.1100	2.7051	.228016	14.038	.348130	1.05497
%RSD	18.04594	1.224357	1.342984	4.562566	.2459993	10.26561	9.513566
#1	5.104409	174.7107	204.5138	5.203978	5722.003	4.377569	Q10.83725
#2	Q7.358303	171.6006	199.4816	4.752795	5694.434	4.050122	Q10.18280
#3	Q6.595956	170.6855	200.2773	5.035820	5703.616	4.745980	Q12.24716
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.94483	5.514793	166.8099	5888.812	5663.198	8.841645	5832.282
SDEV	.53491	1.210937	16.1978	56.674	45.654	.088627	343.417
%RSD	4.887333	18.58749	9.710310	.9623998	.8061576	1.002385	5.888217
#1	10.80879	5.080918	158.4414	5879.718	5692.977	8.912611	5508.592
#2	11.53463	5.882897	185.4802	5837.235	5610.636	8.742306	5795.748
#3	10.49108	5.580566	156.5083	5949.483	5685.980	8.870020	6192.506
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.49077	26.94329	20.19923	28.56166	12.15334	9.717695	30.07958
SDEV	.64002	3.82821	.55900	.45971	1.32518	1.286123	.76757
%RSD	6.100789	14.20841	2.767416	1.609550	10.90384	13.23486	2.551798
#1	9.934577	22.52732	19.80812	28.42270	Q13.67964	9.480930	30.21233
#2	11.19031	28.97913	20.83948	29.07482	11.29584	11.10575	30.77211
#3	10.34742	29.32341	19.95009	28.18745	11.48453	8.566405	29.25429
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.778285	11.38304	12.53754	11.49741	8.828817	52.62858	Q20.06657
SDEV	4.618824	8.32499	3.33409	8.12171	5.981914	2.39376	2.93206
%RSD	47.23553	73.13503	26.59289	70.63947	67.75442	4.548412	14.61167
#1	10.68228	16.70892	12.16691	13.36725	7.540327	52.12112	Q20.49445
#2	Q13.87828	1.789608	16.04147	2.603852	15.34998	50.52924	Q16.94408
#3	Q4.774295	15.65060	9.404254	18.52114	3.596147	55.23539	Q22.76118
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	51.03233	47.79014	34074.57
SDEV	1.34841	.65136	181.77
%RSD	2.642256	1.362966	.5334494
#1	51.30568	47.33793	33969.00
#2	49.56819	48.53673	34284.46
#3	52.22311	47.49576	33970.27
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 08/14/12 19:01:24
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	108.7062	47645.63	1039.552	1014.631	47801.12	975.0958	956.6216
SDEV	2.0727	515.86	.721	1.600	206.88	6.1570	6.1665
%RSD	1.906681	1.082693	.0693806	.1576864	.4327953	.6314202	.6446142
#1	108.7836	47301.72	1038.748	1015.419	47616.06	969.3197	949.6727
#2	Q110.7391	48238.78	1040.141	1012.790	48024.47	981.5735	961.4414
#3	106.5960	47396.40	1039.768	1015.684	47762.84	974.3941	958.7509
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1009.381	1072.377	23962.44	48908.86	46973.39	926.7446	47147.69
SDEV	12.524	11.232	187.68	281.03	428.84	14.4997	479.29
%RSD	1.240787	1.047351	.7832125	.5746050	.9129470	1.564588	1.016573
#1	996.1207	1068.261	23760.24	48591.20	46504.54	910.3982	46658.96
#2	1021.009	1085.086	24131.06	49125.13	47345.81	938.0543	47616.95
#3	1011.013	1063.784	23996.04	49010.25	47069.82	931.7814	47167.16
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	973.0537	956.5281	988.5189	1028.998	960.3314	995.7355	1019.838
SDEV	3.1835	8.2172	12.6675	5.539	4.8334	5.9676	4.026
%RSD	.3271642	.8590606	1.281461	.5382560	.5033035	.5993147	.3947370
#1	970.3092	947.2786	979.1764	1024.199	960.3411	988.8661	1021.301
#2	976.5438	962.9850	1002.937	1027.737	955.4931	998.7011	1022.928
#3	972.3081	959.3208	983.4432	1035.059	965.1599	999.6395	1015.286
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	976.3420	973.1343	953.9393	992.7508	997.2253	976.9603	954.2240
SDEV	4.5311	.7438	7.2126	14.3491	4.5670	5.9673	2.5209
%RSD	.4640895	.0764336	.7560826	1.445383	.4579738	.6107999	.2641839
#1	971.1294	973.9875	953.5279	977.8510	994.3650	971.6182	953.0179
#2	978.5584	972.6223	946.9412	1006.477	994.8185	975.8626	957.1214
#3	979.3384	972.7931	961.3487	993.9244	1002.492	983.4003	952.5327
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1009.726	989.6840	33756.82
SDEV	3.098	4.1143	221.64
%RSD	.3067698	.4157167	.6565780
#1	1006.450	993.6420	34000.66
#2	1012.607	989.9805	33702.20
#3	1010.120	985.4295	33567.60
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 08/14/12 19:08:38
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.347917	-5.76126	-.183584	.0661503	15.69788	-1.82768	Q-9.17226
SDEV	.298923	13.75050	.224171	.0859561	1.48014	.38202	1.46617
%RSD	22.17665	238.6719	122.1084	129.9406	9.428940	20.90216	15.98478
#1	1.325820	-2.66078	.0721271	.0509255	14.18293	-1.39001	Q-7.70688
#2	1.657276	-20.7973	-.276630	.1587015	17.14057	-1.99883	Q-9.17069
#3	1.060656	6.174296	-.346248	-.011176	15.77012	-2.09420	Q-10.6392
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.972792	1.885444	16.79996	-298.354	3.231373	-.115457	2.923037
SDEV	1.123108	1.693214	19.21347	20.131	7.923908	.250168	158.6895
%RSD	56.92986	89.80452	114.3662	6.747424	245.2180	216.6754	5428.925
#1	1.924793	1.293377	13.78375	-275.108	4.075852	-.138458	183.8536
#2	.8744535	.5677657	-.727014	-309.920	-5.08095	-.353330	-62.4336
#3	3.119130	3.795189	37.34315	-310.033	10.69922	.1454166	-112.651
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9207240	.8177472	1.165048	-.282019	.9171659	1.201161	1.509515
SDEV	1.384365	.2931360	.328691	.574939	1.309547	1.191598	4.355379
%RSD	150.3562	35.84678	28.21266	203.8658	142.7819	99.20380	288.5284
#1	.9359160	.8797137	1.361674	-.370907	2.390905	2.521319	3.351175
#2	-.471175	1.074946	1.347878	-.807337	-.112931	.2052356	-3.46416
#3	2.297431	.4985820	.7855918	.3321881	.4735237	.8769297	4.641529
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8615209	2.967781	-.107061	6.873268	-1.63099	2.160012	-1.91502
SDEV	2.229754	2.690931	1.351812	1.989098	1.35574	1.094101	.51374
%RSD	258.8160	90.67150	1262.654	28.93962	83.12358	50.65255	26.82677
#1	-.018192	4.689462	1.242857	7.839741	-.134263	.8967972	-1.43367
#2	-.794185	-.133143	-.103283	4.585605	-1.98202	2.808165	-2.45595
#3	3.396940	4.347022	-1.46076	8.194459	-2.77670	2.775074	-1.85544
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.596304	.6401268	34166.60
SDEV	1.025637	.5999969	446.41
%RSD	171.9992	93.73094	1.306564
#1	-.037131	.4047427	33737.86
#2	.0282262	.1935121	34133.13
#3	-1.78001	1.322125	34628.80
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: 2081403-BLK1 OPERATOR:
RUN TIME: 08/14/12 19:15:57
COMMENT: SDG:1208050 CLIENTID:PBS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9943653	22.49189	.1485534	.1812066	137.0933	-1.82188	-9.84655
SDEV	.2713077	16.31292	.0265747	.3099232	10.0839	.22630	.81853
%RSD	27.28451	72.52803	17.88901	171.0331	7.355498	12.42097	8.312837
#1	1.226384	41.07560	.1775817	.5113717	125.8287	-2.03825	L-10.6919
#2	.6960558	10.53627	.1254233	-.103440	140.1727	-1.58682	-9.05784
#3	1.060656	15.86379	.1426552	.1356884	145.2784	-1.84058	-9.78987
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.587974	H2.902834	45.61839	-273.175	10.22992	.0826130	464.1691
SDEV	.569977	.815444	16.79220	6.501	3.54519	.1559137	186.1653
%RSD	35.89335	28.09129	36.81015	2.379819	34.65512	188.7277	40.10722
#1	2.195600	H3.570116	64.99786	-280.128	12.25293	.2559668	269.1932
#2	1.065148	1.993868	36.48103	-272.152	6.136375	-.046141	483.2618
#3	1.503174	H3.144518	35.37629	-267.247	12.30045	.0380130	640.0524
ERRORS	LC PASS	LC HIGH	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.719560	1.497453	.8971443	.8287674	1.579740	-1.06880	5.242599
SDEV	.535013	2.654821	.3467693	.4428340	1.349890	1.54042	3.175374
%RSD	31.11334	177.2891	38.65257	53.43285	85.45013	144.1262	60.56869
#1	2.129844	.9520579	1.022874	1.323072	.6749929	-1.13179	8.329855
#2	1.914404	-.842316	1.163510	.4682614	3.131330	-2.57676	5.412051
#3	1.114432	4.382617	.5050485	.6949685	.9328972	.5021498	1.985893
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.564879	3.574036	.5836187	-6.62195	1.703249	18.89601	-2.96710
SDEV	3.417001	4.565527	1.560052	2.46467	2.288001	1.40113	2.15895
%RSD	604.9086	127.7415	267.3066	37.21972	134.3316	7.414962	72.76323
#1	3.100777	-1.57220	1.796454	-9.37780	2.984671	18.25142	-3.34218
#2	-1.13354	7.137711	1.130688	-5.85929	-.938316	20.50343	-.645175
#3	-3.66188	5.156601	-1.17629	-4.62875	3.063392	17.93318	-4.91393
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.535670	.7981260	33255.62
SDEV	.360026	.4758753	97.75
%RSD	67.21035	59.62409	.2939422
#1	-.175402	1.305193	33270.20
#2	-.536155	.3612367	33151.40
#3	-.895453	.7279476	33345.27
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

METHOD: P42012S2 SAMPLE NAME: 2081403-BS1 OPERATOR:
RUN TIME: 08/14/12 19:23:10
COMMENT: SDG:1208050 CLIENTID:LCSS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	348.5913	81542.44	1816.232	620.7699	57808.61	596.3256	1009.165
SDEV	1.8553	822.93	32.104	4.7022	469.48	3.4450	3.231
%RSD	.5322162	1.009202	1.767616	.7574817	.8121255	.5777035	.3201230
#1	349.2211	82232.16	1844.445	624.0089	58166.98	599.0831	1011.576
#2	350.0497	81763.64	1822.949	622.9244	57981.68	597.4297	1010.425
#3	346.5032	80631.52	1781.300	615.3765	57277.16	592.4639	1005.494
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	718.0992	852.7730	121855.3	23777.37	23741.44	2656.115	2170.228
SDEV	8.6843	3.5000	638.1	46.90	160.22	12.772	194.198
%RSD	1.209341	.4104205	.5236877	.1972484	.6748371	.4808528	8.948254
#1	724.5081	855.3530	122496.0	23831.27	23899.09	2669.406	2351.251
#2	721.5740	854.1771	121850.1	23745.89	23746.45	2655.004	2194.327
#3	708.2156	848.7891	121219.7	23754.95	23578.77	2643.935	1965.106
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	577.6954	1160.760	583.9067	1322.071	887.8738	846.6488	716.0753
SDEV	2.3682	3.324	10.6595	4.424	1.1187	2.6163	3.9112
%RSD	.4099465	.2863380	1.825556	.3346405	.1259968	.3090153	.5461973
#1	578.0718	1161.208	590.0086	1326.623	888.8431	846.2424	718.1079
#2	579.8530	1163.838	590.1133	1321.803	886.6497	844.2595	718.5517
#3	575.1616	1157.236	571.5983	1317.787	888.1286	849.4445	711.5664
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	876.0792	898.7068	882.4673	839.5179	850.2085	1034.660	-.208513
SDEV	4.6997	7.4565	4.7365	5.3796	2.6318	7.078	2.050878
%RSD	.5364522	.8296961	.5367388	.6407916	.3095488	.6841280	983.5742
#1	876.5638	900.7740	882.8886	843.0103	847.8556	1042.207	.0832749
#2	880.5178	904.9116	877.5342	833.3229	849.7192	1033.605	-2.38966
#3	871.1559	890.4348	886.9791	842.2206	853.0506	1028.168	1.680844
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	NOCHECK
HIGH	1080.000					1310.000	
LOW	768.0000					82.90000	

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	431.6008	2278.794	32627.80
SDEV	3.1060	9.938	101.09
%RSD	.7196361	.4361280	.3098383
#1	434.6864	2277.021	32537.00
#2	431.6412	2289.499	32736.73
#3	428.4749	2269.861	32609.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	512.0000	3520.000	
LOW	340.0000	512.0000	

METHOD: P42012S2 SAMPLE NAME: 1208050-01 OPERATOR:
RUN TIME: 08/14/12 19:30:22
COMMENT: SDG:1208050 CLIENTID:WWTP-01 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.182190	67053.89	839.1840	2.464082	18395.34	1.665686	13.62956
SDEV	.253153	631.91	5.1710	.186084	190.42	.213954	.36977
%RSD	21.41390	.9423972	.6161897	7.551849	1.035140	12.84481	2.712965
#1	.9612198	67386.24	841.5338	2.656266	18387.58	1.803033	13.36201
#2	1.126947	66325.16	833.2554	2.451212	18208.93	1.774856	14.05150
#3	1.458402	67450.27	842.7628	2.284767	18589.53	1.419169	13.47517
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	84.97625	43.23862	57686.43	2903.530	6162.174	1181.208	1017.856
SDEV	.57854	.14457	23.09	14.255	17.251	1.455	63.160
%RSD	.6808312	.3343534	.0400303	.4909624	.2799448	.1231702	6.205238
#1	85.16698	43.40555	57659.86	2913.616	6148.604	1179.843	1029.938
#2	84.32642	43.15379	57697.75	2909.753	6156.332	1182.738	1074.103
#3	85.43534	43.15653	57701.68	2887.221	6181.587	1181.041	949.5280
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	47.71385	5.694694	167.3662	1077.034	1304.284	4.265776	11.52941
SDEV	.24817	2.954072	2.9623	1.044	7.628	3.706021	1.18142
%RSD	.5201244	51.87411	1.769932	.0969486	.5848358	86.87802	10.24705
#1	47.91302	3.021234	167.6260	1078.073	1311.627	7.523840	12.23775
#2	47.43584	8.866091	164.2826	1075.985	1304.823	.2339624	10.16556
#3	47.79270	5.196758	170.1900	1077.045	1296.400	5.039525	12.18491
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	24.90067	1313.604	1299.630	5.429360	3.684487	27.68078	.3933109
SDEV	1.03139	10.854	6.263	1.612225	5.886671	.77166	.2929355
%RSD	4.142022	.8263111	.4819440	29.69456	159.7691	2.787697	74.47938
#1	24.42749	1325.319	1304.792	3.802377	9.381412	28.05549	.0602953
#2	26.08376	1311.605	1301.437	5.459294	-2.37515	26.79332	.6111674
#3	24.19078	1303.888	1292.662	7.026410	4.047204	28.19353	.5084700
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.950838	1266.244	32800.40
SDEV	.736915	19.767	83.46
%RSD	18.65211	1.561111	.2544575
#1	4.524900	1265.989	32711.20
#2	3.119856	1246.606	32813.40
#3	4.207760	1286.138	32876.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081403-DUP1 OPERATOR:
RUN TIME: 08/14/12 19:37:35
COMMENT: SDG:1208050 CLIENTID:WWTP-01D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.624130	68748.33	873.8792	2.571872	18538.35	1.717084	13.27329
SDEV	.459278	675.33	3.5266	.054337	59.96	.028038	1.83394
%RSD	28.27839	.9823178	.4035559	2.112750	.3234348	1.632869	13.81678
#1	1.358966	69425.83	877.8872	2.600778	18607.46	1.737063	14.72945
#2	2.154458	68075.20	872.4989	2.605647	18500.07	1.729156	11.21365
#3	1.358966	68743.95	871.2516	2.509192	18507.54	1.685032	13.87676
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	86.28895	44.34833	58046.21	2986.285	6303.166	1189.759	831.1929
SDEV	.88515	.37607	412.08	22.544	43.208	6.116	5.0457
%RSD	1.025799	.8479968	.7099146	.7549138	.6855041	.5140750	.6070444
#1	86.86412	44.10699	58453.51	3007.424	6347.402	1195.195	825.5959
#2	85.26967	44.15637	57629.51	2962.560	6261.064	1183.136	835.3929
#3	86.73305	44.78165	58055.62	2988.873	6301.033	1190.947	832.5900
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	49.21622	6.195316	168.3429	1078.069	1240.300	3.451921	7.923406
SDEV	.54958	2.627856	.9982	6.096	15.456	1.652289	3.258668
%RSD	1.116668	42.41682	.5929549	.5654507	1.246137	47.86577	41.12711
#1	49.03653	3.366785	169.4566	1082.831	1240.721	3.339721	9.720297
#2	48.77898	8.560995	168.0433	1071.199	1224.638	5.157450	4.161867
#3	49.83316	6.658167	167.5288	1080.178	1255.541	1.858592	9.888054
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	26.68538	1248.254	1236.329	6.003859	2.177498	28.93840	3.295715
SDEV	1.33645	18.542	15.691	9.172049	3.174552	1.23523	1.015768
%RSD	5.008167	1.485408	1.269144	152.7692	145.7890	4.268495	30.82087
#1	25.16744	1258.964	1231.613	12.52311	-1.24546	29.95279	4.458087
#2	27.68516	1226.844	1223.536	9.972724	2.753060	29.29957	2.578687
#3	27.20354	1258.954	1253.836	-4.48425	5.024893	27.56284	2.850371
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.552551	1296.096	32881.13
SDEV	1.296702	8.868	420.07
%RSD	36.50057	.6841785	1.277534
#1	4.563415	1290.097	32460.47
#2	4.003703	1306.282	33300.60
#3	2.090536	1291.908	32882.33
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081403-MS1 OPERATOR:
RUN TIME: 08/14/12 19:44:48
COMMENT: SDG:1208050 CLIENTID:WWTP-01S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	50.72368	93458.62	3058.659	51.82612	19573.75	48.54269	483.0248
SDEV	.48299	1557.93	38.430	.73689	311.46	.59164	5.5594
%RSD	.9521888	1.666976	1.256444	1.421844	1.591218	1.218800	1.150954
#1	50.51376	94211.24	3102.546	52.40404	19784.28	48.90845	487.4968
#2	50.38118	91667.27	3031.032	50.99632	19215.96	47.86012	476.8003
#3	51.27610	94497.34	3042.399	52.07799	19720.99	48.85952	484.7772
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	300.3860	309.3252	62320.01	4250.540	7543.221	1675.129	760.7637
SDEV	3.5149	.6841	461.84	43.022	73.827	11.168	160.4713
%RSD	1.170114	.2211533	.7410751	1.012163	.9787139	.6666942	21.09344
#1	302.4972	310.0628	62743.57	4277.857	7603.064	1675.031	652.8837
#2	296.3285	309.2011	61827.62	4200.947	7460.721	1664.011	684.2336
#3	302.3324	308.7117	62388.84	4272.815	7565.879	1686.346	945.1739
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	530.8807	50.91082	666.6889	1660.334	1426.388	8.458796	230.6895
SDEV	6.8943	1.01080	13.7468	11.384	13.862	3.689698	4.8517
%RSD	1.298651	1.985431	2.061944	.6856455	.9718353	43.61966	2.103113
#1	537.0966	51.77171	674.6516	1672.768	1434.209	8.594012	235.4893
#2	523.4654	51.16291	650.8156	1650.423	1410.382	4.703348	225.7876
#3	532.0802	49.79783	674.5996	1657.812	1434.571	12.07903	230.7918
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	61.04072	1443.412	1417.887	12.11125	6.634942	892.5000	905.4533
SDEV	1.59989	25.342	8.584	4.52205	3.686104	12.1347	14.5935
%RSD	2.621027	1.755717	.6053851	37.33757	55.55593	1.359626	1.611738
#1	62.57095	1453.188	1424.733	9.830046	7.976558	898.2035	915.2639
#2	59.37925	1414.638	1408.257	9.184177	2.465933	878.5643	888.6827
#3	61.17195	1462.411	1420.672	17.31953	9.462336	900.7321	912.4133
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	977.8407	2332.210	33235.38
SDEV	12.9020	47.814	376.18
%RSD	1.319436	2.050146	1.131881
#1	992.5018	2367.320	33114.27
#2	968.2189	2277.755	33657.20
#3	972.8013	2351.555	32934.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081403-MSD1 OPERATOR:
RUN TIME: 08/14/12 19:52:01
COMMENT: SDG:1208050 CLIENTID:WWTP-01SD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	62.24727	97306.51	4013.110	52.49246	20689.34	50.00238	491.3935
SDEV	.46992	2113.18	38.213	.81167	357.55	.80065	7.1654
%RSD	.7549247	2.171673	.9521925	1.546253	1.728175	1.601230	1.458174
#1	62.41299	96616.58	4055.239	52.42039	20609.29	50.57825	491.6024
#2	62.61187	99678.42	4003.405	53.33776	21080.12	50.34080	498.4521
#3	61.71694	95624.52	3980.686	51.71923	20378.60	49.08808	484.1259
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	329.5369	307.7803	65979.68	4300.323	8015.318	1739.316	1013.830
SDEV	5.9834	2.2349	627.05	32.573	85.230	25.646	118.685
%RSD	1.815694	.7261224	.9503692	.7574590	1.063343	1.474468	11.70661
#1	326.5779	306.7087	65959.98	4307.018	7994.587	1733.194	1143.258
#2	336.4232	310.3492	66616.35	4329.028	8109.002	1767.468	910.0972
#3	325.6095	306.2831	65362.71	4264.922	7942.366	1717.285	988.1357
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	535.8141	47.85116	680.5630	1957.363	1529.620	10.22482	282.2195
SDEV	6.1564	1.91121	15.7127	15.293	12.867	1.21627	.3010
%RSD	1.148976	3.994064	2.308778	.7812884	.8412132	11.89527	.1066418
#1	537.3832	46.00457	671.8192	1965.944	1539.091	9.093827	282.1589
#2	541.0340	49.82101	698.7026	1966.438	1534.800	10.06924	281.9536
#3	529.0250	47.72789	671.1674	1939.707	1514.970	11.51140	282.5462
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	64.31210	1540.102	1524.387	15.13317	7.773954	901.3925	908.0526
SDEV	4.43856	10.599	15.250	2.35636	1.905770	7.1836	9.2421
%RSD	6.901601	.6882207	1.000428	15.57086	24.51481	.7969405	1.017794
#1	67.15135	1551.892	1532.700	13.02162	7.132503	904.1580	912.3159
#2	66.58771	1537.052	1533.676	17.67504	6.271670	906.7823	914.3936
#3	59.19722	1531.362	1506.787	14.70285	9.917689	893.2372	897.4484
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	977.6127	2642.453	32578.58
SDEV	9.8769	53.591	300.39
%RSD	1.010310	2.028076	.9220356
#1	988.9760	2623.694	32448.13
#2	971.0890	2702.902	32365.47
#3	972.7730	2600.764	32922.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1208050-01 OPERATOR:
RUN TIME: 08/14/12 19:59:14
COMMENT: SDG:1208050 CLIENTID:WWTP-01L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3535522	13374.45	165.8917	.5312933	3665.374	-1.32823	-5.73031
SDEV	.2206937	30.12	1.5742	.0564527	7.077	.08051	.31062
%RSD	62.42182	.2252050	.9489458	10.62552	.1930765	6.061094	5.420721
#1	.4971828	13363.65	167.5112	.5763513	3673.173	-1.24601	-5.65153
#2	.0994365	13408.48	164.3671	.5495593	3663.590	-1.33177	-5.46665
#3	.4640372	13351.22	165.7968	.4679692	3659.361	-1.40691	-6.07273
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	16.94488	9.014768	11385.61	353.3311	1232.796	231.2156	127.2768
SDEV	.70013	.164074	53.40	15.6780	.927	1.6375	257.6822
%RSD	4.131791	1.820057	.4690447	4.437195	.0751563	.7082182	202.4581
#1	16.28384	9.164882	11326.75	369.1019	1231.809	229.8536	424.8014
#2	17.67845	9.039809	11399.10	353.1440	1233.647	233.0324	-24.5536
#3	16.87237	8.839613	11430.97	337.7476	1232.932	230.7608	-18.4174
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.329644	2.179991	33.62497	215.8914	260.5902	-.627368	-.544665
SDEV	.781456	.945598	.03813	.8709	.3652	2.152354	3.384611
%RSD	8.376048	43.37622	.1133863	.4033877	.1401285	343.0767	621.4112
#1	8.573586	1.145457	33.60084	215.6885	261.0112	.1327160	-3.19783
#2	10.13423	2.999681	33.66892	215.1399	260.3594	-3.05664	3.267098
#3	9.281113	2.394836	33.60514	216.8459	260.4000	1.041817	-1.70326
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.251688	264.2844	258.7454	1.082987	-1.48162	6.142450	-4.51454
SDEV	2.526703	2.6962	1.0271	5.908143	.81043	.908444	2.06997
%RSD	59.42823	1.020199	.3969639	545.5411	54.69859	14.78960	45.85135
#1	1.661435	266.3926	258.3241	4.696817	-2.14627	5.126683	-4.72424
#2	4.383985	261.2463	259.9162	-5.73505	-1.71980	6.877122	-6.47167
#3	6.709643	265.2145	257.9959	4.287193	-.578796	6.423544	-2.34769
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.2496955	249.8800	33615.86
SDEV	.6818523	1.6938	126.60
%RSD	273.0735	.6778289	.3766205
#1	.9654784	251.3093	33569.73
#2	-.392209	250.3216	33518.80
#3	.1758178	248.0092	33759.07
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081403-PS1 OPERATOR:
RUN TIME: 08/14/12 20:06:27
COMMENT: SDG:1208050 CLIENTID:WWTP-01A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	115.9540	69589.69	5613.888	114.4625	17977.63	109.7968	445.2146
SDEV	.9957	383.51	13.877	.4652	56.55	.5195	4.8038
%RSD	.8586628	.5510998	.2471988	.4064424	.3145504	.4731700	1.078981
#1	117.1031	69860.28	5609.335	114.7131	18016.16	109.2035	440.4220
#2	115.3464	69150.80	5602.858	113.9257	17912.71	110.0165	445.1923
#3	115.4127	69757.97	5629.470	114.7486	18004.02	110.1703	450.0295
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	306.9855	162.6319	60980.18	2839.021	6029.670	1370.696	678.2701
SDEV	.5591	.3120	128.07	12.782	13.139	6.681	52.9637
%RSD	.1821150	.1918697	.2100158	.4502124	.2179000	.4874482	7.808651
#1	307.5883	162.8837	60836.16	2853.709	6018.742	1365.880	685.4855
#2	306.8842	162.7292	61023.12	2830.424	6026.021	1378.323	727.2563
#3	306.4840	162.2828	61081.26	2832.932	6044.248	1367.884	622.0686
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	264.0587	621.7826	603.3391	1685.242	1486.552	207.9686	660.6353
SDEV	1.6905	4.8866	5.3302	4.677	6.364	1.3089	3.2546
%RSD	.6401889	.7859021	.8834546	.2775228	.4281011	.6293588	.4926413
#1	262.1142	616.1414	606.8669	1679.893	1481.647	206.4612	657.0572
#2	265.1793	624.7100	597.2075	1687.267	1493.744	208.8168	661.4291
#3	264.8825	624.4964	605.9429	1688.564	1484.266	208.6279	663.4195
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	229.5962	1505.835	1476.925	210.5362	206.6864	1120.697	413.6108
SDEV	4.2130	11.991	7.174	5.7751	4.7166	7.829	2.6619
%RSD	1.834978	.7963001	.4857490	2.743037	2.282007	.6985560	.6435700
#1	224.8133	1507.480	1468.750	216.2442	201.5767	1116.803	416.4200
#2	231.2176	1516.919	1482.173	204.6963	210.8736	1115.578	411.1259
#3	232.7576	1493.107	1479.852	210.6680	207.6090	1129.709	413.2865
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1150.773	2316.500	33190.84
SDEV	2.959	10.512	55.31
%RSD	.2571273	.4537724	.1666302
#1	1147.620	2327.213	33254.53
#2	1151.212	2316.085	33163.07
#3	1153.488	2306.202	33154.93
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208050-02 OPERATOR:
RUN TIME: 08/14/12 20:13:40
COMMENT: SDG:1208050 CLIENTID:WWTP-02 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9612198	50702.49	793.8655	2.464528	34056.99	6.350391	8.729901
SDEV	.3585235	383.75	.8002	.083335	102.13	.214756	.722768
%RSD	37.29880	.7568637	.1007977	3.381357	.2998916	3.381781	8.279222
#1	1.060656	50725.73	793.3700	2.368517	34109.47	6.380365	7.992118
#2	.5634738	50307.65	794.7887	2.506968	33939.29	6.122223	8.760933
#3	1.259529	51074.09	793.4379	2.518101	34122.21	6.548586	9.436654
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	67.73479	94.23915	42270.42	3205.514	5832.683	1658.429	826.0469
SDEV	.47274	.69749	201.82	10.736	30.494	20.357	145.8060
%RSD	.6979240	.7401245	.4774468	.3349116	.5228057	1.227512	17.65106
#1	67.65972	94.03928	42156.84	3205.908	5815.182	1654.017	753.9480
#2	67.30407	93.66342	42150.98	3194.587	5814.974	1640.640	993.8564
#3	68.24056	95.01475	42503.43	3216.048	5867.894	1680.631	730.3364
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	43.68743	6.628832	148.7386	1823.783	4178.771	-.100148	19.00386
SDEV	.84946	4.979919	.5877	2.329	29.362	1.471757	3.46282
%RSD	1.944394	75.12515	.3951048	.1276777	.7026443	1469.582	18.22166
#1	44.13443	.9268017	149.3680	1823.512	4164.729	-.812215	20.51715
#2	42.70781	8.835847	148.2042	1821.602	4159.067	-1.08045	21.45245
#3	44.22005	10.12385	148.6436	1826.235	4212.517	1.592220	15.04197
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	21.71075	4213.023	4161.669	4.201465	-2.24810	23.04522	.1835634
SDEV	.58881	33.626	28.202	1.183932	1.63171	2.55001	.4618016
%RSD	2.712072	.7981478	.6776550	28.17903	72.58190	11.06524	251.5761
#1	22.19760	4188.087	4153.066	3.888718	-3.15952	20.14229	-.344098
#2	21.05631	4199.717	4138.771	3.205303	-3.22048	24.06973	.3807516
#3	21.87832	4251.267	4193.171	5.510373	-.364287	24.92364	.5140361
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.224841	1181.149	32971.71
SDEV	.499166	12.454	147.59
%RSD	15.47879	1.054403	.4476377
#1	3.468048	1194.066	32954.07
#2	2.650684	1169.217	33127.33
#3	3.555790	1180.164	32833.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2081414-BLK1 OPERATOR:
RUN TIME: 08/14/12 20:20:53
COMMENT: SDG:1208022 CLIENTID:PBW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5524253	-25.6496	-.173450	.1677912	35.29782	-2.35518	L-12.0982
SDEV	1.216189	8.1207	.054410	.1152562	9.87367	.01369	1.0345
%RSD	220.1545	31.66032	31.36926	68.69025	27.97245	.5814722	8.551112
#1	1.690421	-30.7008	-.116890	.1273318	40.94638	-2.36755	L-11.6739
#2	-.729201	-16.2822	-.225419	.2978219	23.89685	-2.35752	L-11.3432
#3	.6960558	-29.9657	-.178040	.0782198	41.05023	-2.34046	L-13.2774
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC LOW
HIGH	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000
LOW	-5.00000	-200.000	-200.000	-5.00000	-5000.00	-5.00000	-5.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5649005	1.076194	2.932453	-306.895	.3080268	-.180911	-49.5620
SDEV	.3433044	.530860	9.702007	6.077	2.321504	.043750	177.9663
%RSD	60.77254	49.32751	330.8496	1.980003	753.6694	24.18307	359.0782
#1	.4069268	.9179287	-3.12537	-306.818	.4031015	-.223567	119.6854
#2	.3290206	.6424659	-2.19988	-313.009	-2.05955	-.136144	-235.124
#3	.9587542	1.668187	14.12262	-300.857	2.580533	-.183021	-33.2476
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000
LOW	-5.00000	-5.00000	-100.000	-5000.00	-5000.00	-10.0000	-5000.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.043371	3.932444	.6412914	3.978303	.4103441	-.836598	.1737408
SDEV	.595286	2.261731	.3981055	.148642	1.077462	.771891	1.591963
%RSD	1372.531	57.51463	62.07873	3.736320	262.5754	92.26542	916.2864
#1	-.728380	3.939584	1.071102	3.984016	-.624344	-.673185	.3802394
#2	.3485041	6.190597	.5675787	3.826888	.3293642	-1.67711	1.652378
#3	.2497616	1.667152	.2851937	4.124007	1.526012	-.159498	-1.51140
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000
LOW	-40.0000	-10.0000	-20.0000	-20.0000	-3.00000	-5.00000	-10.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.08234	2.450566	-.608745	-2.58849	.0376776	1.480530	-1.38062
SDEV	1.40817	1.958363	1.557885	2.02357	.4709413	.026615	2.89862
%RSD	67.62413	79.91474	255.9174	78.17572	1249.923	1.797657	209.9510
#1	-.542428	.6014919	-1.23684	-3.12668	.5513626	1.456035	.2195388
#2	-3.30444	4.502436	-1.75454	-4.28857	-.373701	1.476704	-4.72661
#3	-2.40017	2.247769	1.165140	-.350235	-.064628	1.508850	.3652088
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	10.00000					100.0000	50.00000
LOW	-10.0000					-100.000	-50.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-1.12720	.3389973	33687.82
SDEV	.67752	.3553273	241.98
%RSD	60.10685	104.8172	.7182918
#1	-1.81801	.7244620	33657.00
#2	-.463789	.0245266	33462.73
#3	-1.09981	.2680032	33943.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	5.000000	40.00000	
LOW	-5.00000	-40.0000	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 08/14/12 20:28:07
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	107.5240	47602.38	1059.895	1023.427	47879.29	975.8426	959.2772
SDEV	1.0928	369.58	7.822	3.273	135.26	3.2392	1.9659
%RSD	1.016332	.7763848	.7380098	.3198030	.2824965	.3319415	.2049338
#1	106.9606	47175.85	1068.879	1026.942	47723.19	972.5168	960.5175
#2	108.7836	47827.58	1056.211	1022.872	47952.76	978.9877	957.0106
#3	106.8280	47803.70	1054.595	1020.467	47961.90	976.0233	960.3035
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1010.207	1079.124	23975.06	48239.14	47037.43	921.1675	46527.16
SDEV	11.328	7.457	85.07	132.08	209.63	7.3310	294.34
%RSD	1.121399	.6910475	.3548085	.2738023	.4456696	.7958432	.6326103
#1	998.1742	1074.790	23903.76	48094.00	46826.50	913.2701	46243.64
#2	1020.667	1087.735	24069.22	48352.27	47245.73	927.7559	46506.61
#3	1011.779	1074.848	23952.20	48271.17	47040.06	922.4763	46831.24
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	971.4701	946.4998	988.9497	1038.071	964.3867	1007.094	1036.446
SDEV	3.7138	10.0243	10.8126	4.009	4.2712	2.850	4.715
%RSD	.3822901	1.059097	1.093342	.3862301	.4428877	.2829997	.4548800
#1	969.1039	934.9348	976.6332	1036.347	959.5024	1003.803	1041.451
#2	975.7505	951.8646	996.8803	1042.653	967.4205	1008.709	1035.798
#3	969.5560	952.7001	993.3356	1035.211	966.2373	1008.770	1032.089
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	973.3665	973.1110	960.0309	995.1361	1013.064	978.5466	948.3555
SDEV	7.5398	2.6107	6.0436	2.5641	5.262	1.3906	1.7951
%RSD	.7746151	.2682885	.6295211	.2576661	.5194036	.1421124	.1892845
#1	967.6626	972.3938	953.0662	997.2667	1007.066	979.5204	946.7610
#2	981.9148	976.0053	963.1343	992.2903	1016.906	976.9540	950.2997
#3	970.5221	970.9337	963.8925	995.8513	1015.220	979.1654	948.0057
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1032.435	984.9149	33864.66
SDEV	4.587	2.2705	117.07
%RSD	.4442812	.2305283	.3456999
#1	1037.566	987.4714	33902.86
#2	1031.008	984.1404	33957.86
#3	1028.731	983.1331	33733.27
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 08/14/12 20:35:22
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7071043	-18.9170	-.061054	.2164597	22.12692	-1.69051	Q-10.0510
SDEV	.5839006	5.7239	.083182	.1956301	11.99512	.17052	.0855
%RSD	82.57631	30.25829	136.2430	90.37716	54.21052	10.08678	.8509042
#1	1.027511	-13.6384	.0221758	.0621331	21.46557	-1.51029	Q-10.0032
#2	1.060656	-25.0009	-.144187	.1507643	34.43903	-1.71194	Q-9.99995
#3	.0331455	-18.1116	-.061150	.4364817	10.47616	-1.84930	Q-10.1497
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4038220	.4841757	-12.0299	-291.980	4.503101	-.210800	91.53062
SDEV	.2873799	.8557595	7.6871	11.286	1.350960	.065363	116.8145
%RSD	71.16499	176.7457	63.89971	3.865273	30.00066	31.00689	127.6234
#1	.3248158	-.083008	-17.7767	-279.083	3.427718	-.139298	226.1418
#2	.7224410	1.468518	-3.29803	-300.045	6.019443	-.267477	31.67439
#3	.1642092	.0670170	-15.0148	-296.813	4.062142	-.225626	16.77568
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2356205	1.793101	.9458621	-.472199	.1858701	-.353751	-3.48336
SDEV	.1966116	4.986974	.3691845	.251025	1.122057	1.397307	1.13630
%RSD	83.44418	278.1201	39.03154	53.16081	603.6779	394.9973	32.62075
#1	.3492526	1.985206	.8494216	-.375982	.4017656	-1.70523	-3.62579
#2	.0085930	-3.28715	1.353695	-.283516	1.184292	1.085268	-2.28257
#3	.3490158	6.681247	.6344692	-.757098	-1.02845	-.441291	-4.54174
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2576984	1.183148	-.312512	-.993312	-.034806	1.653900	-1.74760
SDEV	1.744861	1.278320	1.093461	5.890874	.866988	1.344711	2.94611
%RSD	677.0944	108.0439	349.8947	593.0536	2490.896	81.30546	168.5803
#1	1.628641	.9661242	.1195183	-6.39153	.6340480	.1058544	-3.62588
#2	-1.70642	2.556088	.4989315	5.290047	-1.01433	2.323454	1.647884
#3	.8508698	.0272325	-1.55598	-1.87846	.2758591	2.532391	-3.26482
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.321014	.3062389	33888.82
SDEV	.816679	.0719374	75.89
%RSD	254.4065	23.49061	.2239343
#1	.5292611	.3518761	33822.53
#2	-.392965	.3435278	33872.33
#3	-1.09934	.2233127	33971.60
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: 2081414-BS1 OPERATOR:
RUN TIME: 08/14/12 20:42:40
COMMENT: SDG:1208022 CLIENTID:LCSW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	574.9531	2446.863	586.4781	572.6800	10618.39	532.2694	525.8216
SDEV	3.5489	33.074	4.9732	2.7199	87.96	3.0080	5.8045
%RSD	.6172565	1.351709	.8479824	.4749475	.8283638	.5651316	1.103891
#1	576.4667	2461.500	588.5242	575.0334	10667.57	535.7197	529.6928
#2	577.4942	2408.996	580.8082	569.7021	10516.84	530.1987	519.1476
#3	570.8982	2470.094	590.1018	573.3045	10670.76	530.8896	528.6244
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	3120.000	660.0000	660.0000	13200.00	660.0000	660.0000
LOW	440.0000	2080.000	440.0000	440.0000	8800.000	440.0000	440.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	570.5983	583.7530	4993.262	10443.91	5565.717	512.1856	10215.07
SDEV	6.0529	2.7505	44.441	33.02	37.952	6.4522	281.76
%RSD	1.060799	.4711833	.8900200	.3161645	.6818845	1.259735	2.758307
#1	574.8647	585.6911	5022.882	10471.60	5590.556	515.9710	9897.384
#2	563.6707	580.6049	4942.162	10407.36	5522.031	504.7355	10313.10
#3	573.2595	584.9629	5014.742	10452.77	5584.565	515.8501	10434.72
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	660.0000	6120.000	13200.00	7200.000	660.0000	13200.00
LOW	440.0000	440.0000	4080.000	8800.000	4800.000	440.0000	8800.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	540.1415	1034.803	556.9263	1044.760	1069.744	1098.812	1085.638
SDEV	2.8546	6.869	7.6283	5.423	8.661	10.197	.165
%RSD	.5284921	.6637593	1.369715	.5190362	.8096032	.9280342	.0151776
#1	543.4351	1027.544	563.7750	1049.896	1072.383	1106.624	1085.573
#2	538.3810	1035.663	548.7048	1039.090	1060.070	1087.276	1085.825
#3	538.6084	1041.201	558.2991	1045.295	1076.778	1102.537	1085.515
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	1320.000	660.0000	1320.000	1320.000	1320.000	1320.000
LOW	440.0000	880.0000	440.0000	880.0000	880.0000	880.0000	880.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1068.435	1079.705	1064.770	1079.911	1108.248	1073.148	1038.508
SDEV	9.321	9.733	8.127	14.713	8.144	6.364	5.431
%RSD	.8724089	.9014701	.7632262	1.362456	.7348903	.5930097	.5229951
#1	1077.227	1082.466	1067.348	1088.867	1115.489	1077.536	1044.449
#2	1069.417	1068.890	1055.667	1062.930	1099.431	1065.849	1037.277
#3	1058.662	1087.760	1071.294	1087.937	1109.826	1076.059	1033.798
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	1320.000						
LOW	880.0000						

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1139.507	1089.264	33305.69
SDEV	4.785	4.991	266.10
%RSD	.4199183	.4581684	.7989578
#1	1134.551	1093.589	33175.66
#2	1139.869	1083.803	33611.80
#3	1144.100	1090.399	33129.60
ERRORS	NOCHECK	NOCHECK	NOCHECK
HIGH			
LOW			

METHOD: P42012S2 SAMPLE NAME: 1208022-01 OPERATOR:
RUN TIME: 08/14/12 20:49:54
COMMENT: SDG:1208022 CLIENTID:WEEK2 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.292675	402.2290	165.4678	.4379660	H1213537.	-1.74481	137.4706
SDEV	.206994	6.7845	1.5595	.1869927	14695.	.28061	2.0140
%RSD	16.01281	1.686724	.9424576	42.69570	1.210889	16.08282	1.465063
#1	1.458402	405.1471	165.1348	.5931495	H1208537.	-1.73795	137.5120
#2	1.358966	407.0663	167.1669	.4903927	H1230079.	-1.46768	139.4636
#3	1.060656	394.4737	164.1018	.2303557	H1201995.	-2.02878	135.4361
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.353939	31.44147	93.24541	H472716.5	89141.60	7644.099	146562.8
SDEV	.728246	.30265	16.42657	8085.2	662.17	65.072	1888.1
%RSD	8.717395	.9625904	17.61649	1.710370	.7428269	.8512738	1.288223
#1	8.096663	31.67496	83.47402	H468122.7	88935.30	7597.020	145812.1
#2	9.175901	31.09953	112.2103	H482052.1	89882.36	7718.354	148710.8
#3	7.789253	31.54991	84.05197	H467974.7	88607.14	7616.922	145165.6
ERRORS	LC PASS	LC PASS	LC PASS	LC HIGH	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	124.5665	1.024797	14.96265	27.77592	1.710859	10.00795	-1.74087
SDEV	1.6446	3.106506	.07793	.23890	.224203	.83392	5.65431
%RSD	1.320292	303.1338	.5208626	.8600872	13.10470	8.332595	324.7972
#1	125.7974	4.191553	14.87288	27.75676	1.685423	10.36949	-7.90475
#2	125.2034	.9005701	15.01303	28.02381	1.500459	10.60010	3.205525
#3	122.6986	-2.01773	15.00203	27.54717	1.946695	9.054270	-.523400
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.77497	2.232113	1.450055	6.814083	11.60211	6.703952	-2.57961
SDEV	.70201	.731298	.243384	5.522807	1.75187	1.560686	1.86582
%RSD	6.515170	32.76260	16.78449	81.04990	15.09957	23.28009	72.32948
#1	10.41613	1.624774	1.715131	6.171075	12.46516	6.265193	-4.67032
#2	11.58387	2.027698	1.236665	12.63025	9.586163	8.437055	-1.08371
#3	10.32492	3.043869	1.398369	1.640926	12.75501	5.409608	-1.98480
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	14.82049	-6.80380	31941.33
SDEV	.32904	.96202	296.94
%RSD	2.220172	14.13943	.9296473
#1	15.20041	-7.86048	31725.27
#2	14.62708	-5.97873	31818.80
#3	14.63397	-6.57220	32279.93
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1208022-01 OPERATOR:
RUN TIME: 08/14/12 20:57:07
COMMENT: SDG:1208022 CLIENTID:WEEK2L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.381063	71.44128	32.41295	.3012350	204525.5	-1.91174	20.89524
SDEV	.220694	2.89540	.21438	.0871381	400.8	.07609	.33167
%RSD	15.97999	4.052841	.6613875	28.92696	.1959479	3.980207	1.587303
#1	1.193238	73.94581	32.58002	.3808223	204783.6	-1.94701	20.68076
#2	1.325820	72.10704	32.17123	.2081267	204063.9	-1.96380	20.72770
#3	1.624130	68.27098	32.48760	.3147558	204729.2	-1.82441	21.27726
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.979409	6.765807	-15.1829	80656.91	18143.70	1541.663	29182.15
SDEV	.408314	.472975	10.4764	65.93	36.96	7.435	335.41
%RSD	20.62808	6.990665	69.00105	.0817380	.2036826	.4822998	1.149369
#1	2.450577	6.598919	-18.2619	80610.77	18105.24	1535.291	29569.44
#2	1.758687	7.299603	-23.7747	80732.41	18146.91	1539.865	28990.70
#3	1.728963	6.398900	-3.51206	80627.54	18178.94	1549.832	28986.31
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	25.80189	2.333178	3.962903	5.420831	1.121710	1.898581	.0668161
SDEV	1.12904	1.589968	.162892	.223871	.984467	.595134	3.842706
%RSD	4.375810	68.14603	4.110415	4.129825	87.76485	31.34627	5751.168
#1	24.55471	4.150680	3.783979	5.471443	.8183543	2.416190	-1.92817
#2	26.09662	1.199674	4.002134	5.615062	2.222154	1.248310	-2.36810
#3	26.75434	1.649180	4.102597	5.175986	.3246216	2.031242	4.496715
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.117414	2.406497	.4797470	1.274651	2.209713	3.200126	-.327635
SDEV	.700144	1.990952	1.807994	1.126028	.483527	1.595109	3.737049
%RSD	33.06599	82.73239	376.8641	88.34013	21.88189	49.84519	1140.615
#1	1.781902	4.642149	-1.09118	1.718934	2.763930	4.333353	3.820145
#2	2.922175	1.752658	2.456003	-.005744	1.874033	1.376047	-3.43229
#3	1.648165	.8246826	.0744158	2.110761	1.991175	3.890978	-1.37076
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	2.558417	-.340010	33068.24
SDEV	.959569	.789341	115.28
%RSD	37.50635	232.1523	.3486090
#1	3.663878	-.808674	33134.00
#2	2.070795	.5713187	33135.60
#3	1.940578	-.782675	32935.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208041-01 OPERATOR:
RUN TIME: 08/14/12 21:04:21
COMMENT: SDG:1208041 CLIENTID:PORT7 8-10-12 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4087947	-17.6037	156.8802	.4525707	72511.35	-2.49588	-12.9703
SDEV	.4596762	12.1215	5.0675	.1024408	2152.02	.52277	2.8092
%RSD	112.4467	68.85751	3.230186	22.63531	2.967836	20.94546	21.65871
#1	-.099436	-21.3370	159.2691	.5196284	73925.55	-2.30420	-11.4389
#2	.7954923	-4.05470	160.3117	.3346524	73573.77	-2.09600	-11.2596
#3	.5303283	-27.4193	151.0598	.5034311	70034.73	-3.08744	-16.2124
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9992263	.0920348	-166.025	1139.521	62280.97	381.4052	84487.55
SDEV	.7331804	.8698351	5.603	39.673	1869.02	13.3600	2203.34
%RSD	73.37481	945.1158	3.374796	3.481588	3.000950	3.502838	2.607881
#1	.7862333	1.092672	-170.463	1169.640	63174.09	386.8379	86072.79
#2	1.815320	-.333067	-167.882	1154.355	63535.88	391.1930	85418.29
#3	.3961250	-.483500	-159.729	1094.568	60132.94	366.1847	81971.58
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	69.65564	-.403744	.6232641	-.610959	.2478348	-.422764	.4934921
SDEV	2.79125	2.890876	.5239099	.099380	.4243610	2.002179	3.484940
%RSD	4.007210	716.0170	84.05905	16.26627	171.2273	473.5925	706.1796
#1	71.58176	-2.40582	.1561054	-.532792	-.100736	1.126353	1.981648
#2	70.93057	2.910503	1.189715	-.577282	.1238650	.2889136	2.987292
#3	66.45459	-1.71592	.5239717	-.722801	.7203754	-2.68356	-3.48846
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.744439	-.371467	.5565694	-6.89472	2.808000	.3725943	-2.17819
SDEV	2.995341	1.955876	1.266536	2.98353	2.486571	3.106657	.27258
%RSD	402.3625	526.5269	227.5612	43.27268	88.55310	833.7908	12.51397
#1	-1.95853	-1.60958	.6520961	-7.70332	5.534206	1.853200	-2.49293
#2	-2.94213	1.883364	-.755025	-3.59023	2.225211	-3.19740	-2.02018
#3	2.667345	-1.38819	1.772637	-9.39060	.6645839	2.461986	-2.02145
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	5.647879	-3.43592	33389.73
SDEV	.401134	.12873	888.53
%RSD	7.102382	3.746681	2.661096
#1	6.095488	-3.43879	32916.27
#2	5.527237	-3.56319	32838.20
#3	5.320911	-3.30577	34414.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1208041-01 OPERATOR:
RUN TIME: 08/14/12 21:11:34
COMMENT: SDG:1208041 CLIENTID:PORT7 8-10-12L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5745223	-27.0987	31.17432	.0875598	14685.47	-2.20410	-11.0604
SDEV	.4986536	10.8999	.37775	.1229366	93.16	.30447	.6936
%RSD	86.79449	40.22277	1.211748	140.4032	.6343848	13.81385	6.271020
#1	.5303283	-14.7506	31.61050	.2159605	14582.55	-1.89706	-10.2595
#2	.0994365	-35.3821	30.95355	.0757841	14764.05	-2.50594	-11.4581
#3	1.093802	-31.1636	30.95890	-.029065	14709.81	-2.20930	-11.4635
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4694966	1.368218	-51.5904	-10.9923	12502.06	76.44621	16489.42
SDEV	.6742458	.487084	11.7177	7.0518	54.70	.62744	102.55
%RSD	143.6104	35.59986	22.71287	64.15219	.4375467	.8207542	.6219050
#1	-.275149	.8177710	-65.0475	-12.4078	12563.70	77.04034	16390.54
#2	1.038631	1.743475	-46.0795	-17.2291	12483.18	76.50822	16482.44
#3	.6450073	1.543409	-43.6442	-3.34013	12459.30	75.79008	16595.28
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.40034	-.277376	.8896029	-.404387	-.769154	.1214170	-.814619
SDEV	.57108	2.384385	.1105827	.209376	.720586	.5618991	2.317117
%RSD	3.965737	859.6205	12.43057	51.77603	93.68546	462.7844	284.4420
#1	13.87097	2.332380	.9127444	-.601734	-.070259	-.264152	1.093282
#2	15.00555	-2.34197	.7692806	-.426664	-.727574	.7661230	-3.39306
#3	14.32451	-.822537	.9867837	-.184764	-1.50963	-.137720	-.144079
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.65881	-.273805	-1.01692	3.061705	-1.34688	.0081020	-.574457
SDEV	.37224	3.568572	2.05477	5.221427	3.42728	1.417669	2.016217
%RSD	22.44040	1303.325	202.0586	170.5398	254.4606	17497.86	350.9779
#1	-1.49048	2.068427	-1.13845	5.261260	-3.02308	.7710130	.5153011
#2	-1.40047	-4.38093	1.095922	-2.89963	2.595897	.8809438	-2.90104
#3	-2.08549	1.491091	-3.00823	6.823488	-3.61346	-1.62765	.6623632
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.9124168	-.475781	33734.58
SDEV	.4700105	.154860	219.65
%RSD	51.51270	32.54866	.6511096
#1	1.398120	-.626584	33501.07
#2	.8792782	-.317160	33937.07
#3	.4598526	-.483598	33765.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208042-01 OPERATOR:
RUN TIME: 08/14/12 21:18:47
COMMENT: SDG:1208042 CLIENTID:WEEK3 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8175893	669.9279	129.0819	.2681602	H1009762.	-1.57589	123.1384
SDEV	.3320070	17.7204	1.1158	.2562113	14888.	.14716	1.7501
%RSD	40.60804	2.645120	.8644128	95.54411	1.474440	9.338388	1.421270
#1	1.193238	674.9071	130.2449	.0116191	H1008214.	-1.74574	123.7067
#2	.6960558	684.6259	128.9806	.5240405	H995708.5	-1.48626	124.5337
#3	.5634738	650.2505	128.0203	.2688212	H1025364.	-1.49569	121.1747
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.799005	23.30005	237.1361	H364263.2	83643.91	4765.634	132677.2
SDEV	.555743	.49381	14.2471	2812.9	533.04	61.823	640.5
%RSD	5.671420	2.119354	6.007996	.7722079	.6372672	1.297276	.4827720
#1	9.172248	22.96638	222.5389	H365163.1	83812.86	4773.797	132106.9
#2	9.993085	23.86732	251.0053	H366515.9	84072.01	4822.971	133370.2
#3	10.23168	23.06645	237.8642	H361110.4	83046.88	4700.135	132554.6
ERRORS	LC PASS	LC PASS	LC PASS	LC HIGH	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	99.02235	-2.85269	12.16914	25.01487	1.390745	7.173393	-3.09076
SDEV	.70597	3.13677	.23924	.23331	.501022	2.501218	1.21983
%RSD	.7129391	109.9583	1.965923	.9326736	36.02543	34.86800	39.46708
#1	98.72678	-.520020	12.04125	25.28336	.8829179	9.976596	-2.94424
#2	99.82806	-1.61938	12.44514	24.86154	1.884672	5.169602	-4.37724
#3	98.51221	-6.41868	12.02103	24.89970	1.404645	6.373980	-1.95081
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.564039	.7981107	1.686047	2.307636	9.602243	7.233979	-2.80711
SDEV	1.930483	2.358545	.511697	2.033332	3.778538	1.269000	4.99516
%RSD	25.52185	295.5161	30.34889	88.11321	39.35058	17.54221	177.9467
#1	9.741425	-1.09624	1.870439	1.989645	13.96370	6.885554	-7.97942
#2	6.061815	3.439783	1.107710	.4520349	7.524468	8.640795	-2.43164
#3	6.888877	.0507850	2.079992	4.481229	7.318559	6.175588	1.989717
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	13.26774	5.739279	31764.69
SDEV	.06014	1.007686	169.80
%RSD	.4532738	17.55772	.5345520
#1	13.32790	6.083409	31689.27
#2	13.26770	4.604607	31645.66
#3	13.20762	6.529821	31959.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1208042-01 OPERATOR:
RUN TIME: 08/14/12 21:26:00
COMMENT: SDG:1208042 CLIENTID:WEEK3L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5524252	111.5656	24.83687	.2018092	180028.7	-1.56900	18.06686
SDEV	.5358239	6.2202	.21132	.1274491	331.4	.05753	1.06461
%RSD	96.99483	5.575416	.8508477	63.15326	.1840665	3.666539	5.892631
#1	.0662911	115.5420	24.73994	.3038407	180023.7	-1.62870	17.59147
#2	1.126947	114.7575	25.07927	.0589488	180362.6	-1.51392	19.28634
#3	.4640372	104.3974	24.69140	.2426381	179699.9	-1.56437	17.32277
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.973321	5.530976	-1.95834	67628.40	16734.97	942.2261	26185.78
SDEV	.464643	.275526	4.31280	264.42	75.21	2.4439	228.20
%RSD	23.54627	4.981515	220.2277	.3909913	.4494354	.2593712	.8714572
#1	2.337875	5.247459	-2.86450	67473.65	16692.14	940.0546	26263.36
#2	1.450135	5.547719	-5.74605	67933.72	16821.82	944.8726	26365.08
#3	2.131951	5.797749	2.735544	67477.84	16690.96	941.7512	25928.91
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	20.82721	3.350519	2.950205	5.096669	.3807376	2.173558	1.159525
SDEV	.31045	1.744071	.217648	.153803	.8073646	2.896510	2.732115
%RSD	1.490581	52.05374	7.377403	3.017725	212.0528	133.2612	235.6236
#1	20.55635	4.409703	3.066485	4.920701	1.302630	-.877184	1.718851
#2	20.75929	4.304296	3.085016	5.163863	-.200307	2.511704	-1.80897
#3	21.16599	1.337560	2.699114	5.205442	.0398898	4.886154	3.568695
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3487549	3.035586	-.945216	3.424502	1.548657	1.724892	-3.85602
SDEV	1.777697	.094960	1.165508	4.565835	2.184483	2.547947	3.21329
%RSD	509.7270	3.128233	123.3060	133.3284	141.0567	147.7163	83.33180
#1	-1.70394	3.143696	.3829734	-1.74917	-.442209	3.741475	-4.64364
#2	1.368802	2.997389	-1.79731	5.132890	1.202707	2.571884	-.322148
#3	1.381403	2.965672	-1.42131	6.889789	3.885473	-1.13868	-6.60226
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	2.379616	1.891588	32930.46
SDEV	.768321	.398979	146.67
%RSD	32.28762	21.09228	.4453902
#1	2.735218	1.677666	33003.73
#2	2.905717	2.351908	32761.60
#3	1.497913	1.645191	33026.07
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208051-01 OPERATOR:
RUN TIME: 08/14/12 21:33:13
COMMENT: SDG:1208051 CLIENTID:PORT3 8-13 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9170258	-15.1504	33.98096	.3386393	79277.12	-2.25979	-11.8621
SDEV	.8809059	4.7169	.16420	.0706872	497.01	.16697	.1714
%RSD	96.06119	31.13353	.4832262	20.87388	.6269292	7.388790	1.444597
#1	1.392111	-17.4775	34.06041	.4025954	79212.63	-2.06998	-11.9970
#2	1.458402	-18.2515	33.79214	.2627422	79803.23	-2.38400	-11.6693
#3	-.099436	-9.72222	34.09033	.3505803	78815.51	-2.32538	-11.9201
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4799737	2.319077	-124.887	1096.237	61620.39	216.7801	86728.63
SDEV	.3894262	.638606	5.007	11.130	203.93	1.7011	348.81
%RSD	81.13490	27.53709	4.009598	1.015336	.3309437	.7847155	.4021812
#1	.8992351	2.794472	-126.632	1107.020	61418.24	214.8322	86460.49
#2	.1295678	2.569557	-128.788	1096.903	61616.89	217.5354	87122.98
#3	.4111182	1.593202	-119.240	1084.789	61826.06	217.9729	86602.44
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	127.7349	.7231107	1.046905	2.136251	.1155726	1.091519	2.077481
SDEV	1.0742	2.059088	.583419	.379174	.5580185	2.556804	3.403380
%RSD	.8409450	284.7541	55.72798	17.74951	482.8293	234.2428	163.8225
#1	128.0220	2.067494	1.045420	2.568203	.6921297	-.010152	-1.64626
#2	126.5463	1.749247	1.631064	1.858340	-.421847	-.729774	5.027158
#3	128.6363	-1.64741	.4642297	1.982209	.0764346	4.014481	2.851543
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.44724	.7033414	-.178370	.6981477	1.287546	.9702001	-.869014
SDEV	1.36406	1.430575	1.218481	3.748981	3.572815	.6135797	2.234634
%RSD	94.25241	203.3970	683.1182	536.9897	277.4902	63.24260	257.1458
#1	-.019070	1.081385	.4972945	3.803965	-1.91471	1.666270	.6405820
#2	-2.73657	1.906928	-1.58499	-3.46633	.6360879	.7365995	.1884870
#3	-1.58609	-.878289	.5525830	1.756807	5.141264	.5077310	-3.43611
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	19.65927	-3.39720	33264.35
SDEV	.37015	.04878	91.72
%RSD	1.882813	1.435927	.2757356
#1	19.94930	-3.41126	33260.66
#2	19.78613	-3.43741	33174.53
#3	19.24237	-3.34293	33357.86
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1208051-01 OPERATOR:
RUN TIME: 08/14/12 21:40:26
COMMENT: SDG:1208051 CLIENTID:PORT3 8-13L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9943653	-34.0556	6.597623	.1298225	15681.60	-1.57928	-8.68195
SDEV	.5209225	1.0705	.077851	.0658486	22.49	.04090	.24933
%RSD	52.38744	3.143394	1.179993	50.72200	.1434276	2.589628	2.871836
#1	1.093802	-34.1646	6.589857	.0696979	15655.62	-1.60072	-8.80895
#2	.4308917	-35.0674	6.523945	.2001937	15694.67	-1.60500	-8.84221
#3	1.458402	-32.9348	6.679066	.1195759	15694.50	-1.53212	-8.39469
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2755707	1.393285	-50.3866	-17.8765	12128.51	42.19700	16780.71
SDEV	.3482177	.125224	14.0463	6.3891	38.88	.40448	87.14
%RSD	126.3624	8.987696	27.87699	35.74029	.3206027	.9585574	.5192617
#1	.2077070	1.393251	-54.5793	-15.8829	12159.64	42.61916	16880.30
#2	-.033720	1.268078	-61.8591	-25.0248	12140.96	42.15897	16718.52
#3	.6527248	1.518527	-34.7214	-12.7219	12084.92	41.81288	16743.29
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	25.95538	1.054213	.9894706	.0330946	-.154539	-.000105	.0898012
SDEV	.78154	2.324857	.2660238	.1071243	.763527	.991351	2.025879
%RSD	3.011073	220.5301	26.88547	323.6906	494.0669	945677.7	2255.961
#1	25.36008	.7959148	.9152220	-.031761	.5002170	-.914519	2.377362
#2	26.84041	-1.13071	.7684593	.1567415	-.993234	-.139272	-.630323
#3	25.66567	3.497432	1.284731	-.025697	.0293991	1.053476	-1.47764
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.17941	.6190345	-.541227	.6605610	-.330303	2.397222	-5.00065
SDEV	1.95575	1.777734	.260843	2.874344	.396812	1.643242	3.23007
%RSD	165.8251	287.1785	48.19471	435.1368	120.1357	68.54773	64.59295
#1	-3.41905	2.201655	-.349722	-2.42753	-.159506	.5829926	-1.96864
#2	-.310513	-1.30445	-.838308	1.151228	-.783915	3.785659	-8.39775
#3	.1913427	.9598996	-.435651	3.257988	-.047489	2.823016	-4.63555
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	2.472645	-.556338	33495.44
SDEV	.617814	.136986	71.68
%RSD	24.98596	24.62275	.2140101
#1	3.186010	-.590271	33523.73
#2	2.110756	-.673168	33548.66
#3	2.121169	-.405575	33413.93
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 08/14/12 21:47:39
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.104409	157.4512	202.2606	5.131169	5672.481	Q2.864712	Q8.570612
SDEV	.455675	11.3706	1.7373	.178870	51.183	.224774	.215699
%RSD	8.927089	7.221662	.8589298	3.485948	.9023004	7.846318	2.516729
#1	5.203845	144.4237	200.5188	5.123678	5721.935	Q2.639144	Q8.801011
#2	5.502154	162.5492	202.2696	5.313667	5619.729	Q3.088685	Q8.537347
#3	4.607226	165.3807	203.9933	4.956163	5675.780	Q2.866307	Q8.373478
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL	QC FAIL
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.20999	6.389561	148.8220	5782.191	5575.274	8.803732	5538.357
SDEV	.36601	.614067	11.1525	28.134	20.673	.142753	198.930
%RSD	3.584797	9.610477	7.493831	.4865604	.3708006	1.621511	3.591867
#1	10.53478	Q6.756715	142.8346	5756.696	5559.901	8.865847	5696.792
#2	9.813407	5.680649	141.9420	5777.503	5598.776	8.904904	5315.101
#3	10.28178	Q6.731319	161.6895	5812.375	5567.146	8.640444	5603.179
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.310774	30.19446	19.92190	27.80729	8.865790	10.68348	26.94207
SDEV	.433067	1.20938	.40475	.19975	.883534	4.48773	1.53520
%RSD	4.651244	4.005298	2.031704	.7183334	9.965654	42.00623	5.698155
#1	9.802812	29.28192	20.31331	28.02832	9.824343	Q15.73237	25.47541
#2	9.142027	29.73528	19.94739	27.63969	8.689031	7.148456	26.81312
#3	8.987483	31.56618	19.50501	27.75386	8.083999	9.169628	28.53768
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.042213	6.941118	9.826324	13.51072	9.271628	49.32659	Q16.91008
SDEV	.696633	.780336	.982398	5.76339	4.627441	1.19896	2.09359
%RSD	8.662202	11.24222	9.997610	42.65786	49.90969	2.430662	12.38072
#1	7.597760	7.839767	10.81479	18.05620	14.57184	48.47288	Q14.49440
#2	7.683800	6.434822	9.814082	7.028400	7.208037	50.69732	Q18.03728
#3	8.845080	6.548764	8.850104	15.44758	6.035004	48.80959	Q18.19855
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	49.38593	48.24750	33848.66
SDEV	1.74826	.68629	23.32
%RSD	3.540001	1.422440	.0688968
#1	48.11471	48.97291	33828.93
#2	48.66343	47.60852	33842.66
#3	51.37963	48.16106	33874.40
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 08/14/12 21:54:53
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	105.4580	47329.48	1059.615	1016.418	47561.48	974.4687	961.0277
SDEV	.8189	315.75	3.751	6.990	289.76	3.5260	7.5581
%RSD	.7764812	.6671337	.3539666	.6876857	.6092291	.3618388	.7864572
#1	104.7067	47131.19	1061.591	1013.422	47399.68	970.5419	953.7960
#2	106.3308	47163.65	1055.289	1011.427	47388.76	977.3637	968.8745
#3	105.3364	47693.60	1061.965	1024.407	47896.01	975.5005	960.4126
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1009.492	1053.092	23958.95	48149.27	46976.48	919.3123	46534.60
SDEV	3.260	5.641	88.78	167.35	168.24	6.7661	39.29
%RSD	.3228866	.5356187	.3705583	.3475671	.3581443	.7359929	.0844355
#1	1006.090	1047.245	23862.16	47958.09	46793.21	913.7023	46574.40
#2	1009.797	1058.501	24036.61	48269.21	47123.93	926.8264	46495.84
#3	1012.588	1053.531	23978.09	48220.52	47012.30	917.4083	46533.55
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	966.9025	937.6216	984.6440	1035.757	964.7993	1003.407	1031.688
SDEV	3.5608	6.2957	10.3256	1.330	2.3375	2.773	2.778
%RSD	.3682642	.6714553	1.048666	.1283919	.2422749	.2763231	.2693121
#1	962.8577	930.4690	983.4185	1035.174	964.7275	1002.195	1029.003
#2	968.2855	940.0728	974.9859	1037.279	967.1719	1006.580	1031.509
#3	969.5642	942.3231	995.5278	1034.820	962.4986	1001.447	1034.551
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	964.6661	971.6343	961.3868	987.8362	1011.181	974.3152	935.2030
SDEV	2.7482	3.9696	3.5709	2.9544	2.704	8.8320	5.3669
%RSD	.2848841	.4085498	.3714283	.2990763	.2674507	.9064856	.5738783
#1	961.9587	967.1661	963.5098	986.1142	1010.222	975.7882	929.4741
#2	964.5865	974.7540	963.3863	991.2476	1014.234	982.3180	940.1140
#3	967.4533	972.9828	957.2641	986.1469	1009.086	964.8392	936.0209
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1027.146	980.5698	33363.40
SDEV	5.977	6.6750	45.87
%RSD	.5818679	.6807316	.1374890
#1	1021.912	979.5023	33403.13
#2	1025.868	974.4928	33373.86
#3	1033.659	987.7142	33313.20
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 08/14/12 22:02:08
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0662911	-25.3905	-.001479	.3151226	36.16659	-1.43136	Q-8.72358
SDEV	1.117648	6.2161	.084268	.0632037	10.33320	.16186	.91560
%RSD	1685.970	24.48207	5696.355	20.05686	28.57112	11.30836	10.49573
#1	1.027511	-32.4663	.0899065	.3225950	41.11592	-1.31876	Q-7.94541
#2	-1.16009	-20.8085	-.018232	.3742580	24.28963	-1.35846	Q-8.49283
#3	.3314552	-22.8967	-.076112	.2485149	43.09421	-1.61685	Q-9.73248
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5109751	.8591693	2.354626	-284.882	10.19091	-.125142	-100.191
SDEV	.1219553	.4939514	5.185877	11.111	2.07883	.048406	133.109
%RSD	23.86718	57.49174	220.2421	3.900206	20.39885	38.68082	132.8555
#1	.4063384	1.192957	-3.42458	-273.348	9.900694	-.181024	-111.704
#2	.6449113	.2917417	3.886315	-295.515	8.272444	-.096161	-227.169
#3	.4816755	1.092809	6.602140	-285.783	12.39960	-.098242	38.30087
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4398768	.3640558	.2570006	-.595142	.5879123	-1.01316	-2.19929
SDEV	.8668066	2.408341	.5434232	.022388	1.374292	3.65561	.70175
%RSD	197.0567	661.5308	211.4482	3.761774	233.7580	360.8112	31.90783
#1	1.376867	2.075083	.6387171	-.607203	2.042753	2.330963	-2.38307
#2	-.333397	1.407068	-.365167	-.608915	.4093625	-4.91594	-1.42395
#3	.2761598	-2.38998	.4974521	-.569310	-.688378	-.454514	-2.79087
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.131072	-.310859	1.036163	-2.77396	-.134443	1.118641	-2.56461
SDEV	2.393634	2.326857	1.735038	5.26116	2.862038	.861540	3.96842
%RSD	1826.204	748.5244	167.4485	189.6624	2128.813	77.01672	154.7376
#1	.1608274	1.922216	2.102437	1.822386	2.584511	2.113233	.3068035
#2	2.103227	-2.72134	1.971920	-8.51233	-3.12080	.6398336	-7.09299
#3	-2.65727	-.133452	-.965870	-1.63193	.1329567	.6028557	-.907655
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.0798989	.3815151	33807.98
SDEV	1.303467	.1241472	148.18
%RSD	1631.397	32.54058	.4382921
#1	1.102704	.4503522	33693.46
#2	-1.38776	.2381993	33755.13
#3	.5247542	.4559939	33975.33
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

4. Digestion and Distillation Logs

The following logs shall be submitted, as appropriate, for each preparation procedure: digestion logs for ICP-AES, ICP-MS, mercury preparations, and cyanide. The logs shall include: (1) date; (2) sample weights and volumes, with initial sample weight/volume and final volume clearly indicated; (3) sufficient information to unequivocally identify which QC samples (i.e., LCS, PB) correspond to each batch digested; (4) comments describing any significant sample changes or reactions which occur during preparation shall be entered in the log and noted in the SDG Narrative; (5) indication of pH less than 2 or greater than 12, as applicable; (6) identification of the sample preparer(s) [signature (s)].

METALS/MERCURY PREPARATION LOG

Metals Method: 3050B / 6010C
Mercury Method: 7471B
Prepared By: DDD

CompuChem
A Division Of
Liberty Analytical Corp.

Preparation Date: 8-14-12
Preparation Time: 1045
Batch Number: 2081403
Blue Soil

COMPUCHEM SAMPLE ID	CLIENT SAMPLE ID	SAMPLE TYPE	ICP Initial (g)	ICP Final (mL)	HG Initial (g)	HG Final (mL)	*Description Before	*Description After ICP	
2081403-BLK1	PBS	PBS	1.00	100			N/A	CS / CL	
2081403-BS1	LCSS	LCSS	1.00	↓			BR/F	Y / CL	
2081403-DUP1	WWTP-01D	DUP	1.01				BR/m	Y / CL	
2081403-MS1	WWTP-01S	MS	1.01				BR/m	Y / CL	
2081403-MSD1	WWTP-01SD	MSD	1.04				BR/m	Y / CL	
1208050-01	WWTP-01	SAMPLE	1.02				BR/m	Y / CL	
1208050-02	WWTP-02	SAMPLE	1.03	↓			BR/m	Y / CL	
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Mercury Standards and QC S0 S0.2 S0.5S1 S5 S10 ICV ICB CRI CCV CCB

NOTE: All standards and QC for mercury were prepared at the same day as the associated samples. Refer to the attached. Standard/QC Preparation Log, with date matching the above preparation date, for preparation method and instruction.

Record of Tempature/Time		
Hot Block Temp In:	95°	C
Hot Block Temp Out:	95°	C
Hot Block Identifier	#2	
Time Hg in water bath:		
Time Hg out water bath:		
Water Bath Temp In:		C
Water Bath Temp Out:		C
Water Bath Identifier		

MS Reference
ICAP: 1.0mL XCL-20
Ref #: I15002
HG: 1.0mL 100ppb Hg
Ref#

LCS Reference
ICAP: 1.0g ERA PPT (540)
Ref #: 2G13001
HG: 0.2g ERA PPT (540)
Ref#

* R=red, BL=blue, Y=yellow, G=green, O=orange, V=violet, W=white, CS=colorless, BR=brown, BK=black
GY= grey, F=fine, M=medium, C=coarse, CL=clear, CY=cloudy, OP=opaque

Shading has been applied to unused portions of this worksheet as a substitute for 'Z-out'.

"The presence of the Chemist's/analyst's employee ID number, or signature, on this log attests that strict compliance with the method's SOP has occurred. Any SOP deviations requires documentation by the chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation."

Sample Verification Signature: Dmitri Dickens
This signature corroborates that the sample idenification numbers appearing on the digestion cups are the same as those appearing on the field sample containers.

Reviewed By: JCF
Date: 08/15/12

Standards/QC Preparation Log for ICP Metals/Mercury Page 1 of 3 **Case/SDG:** 1208050
COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

REAGENTS	REF#[1]	MANUFACTURER	LOT#	EXPIRATION DATE
SULFURIC ACID (H_2SO_4)	2F29004	CALEDON	80286	06/17
NITRIC ACID (HNO_3)	2F03016	EMD	51332	06/17
POTASSIUM PERMANGANATE ($KMnO_4$)	2F29003	JT BAKER	K30649	06/17
HYDROCHLORIC ACID (HCL)	2H07015	CALEDON	81713	08/17
POTASSIUM PERSULFATE ($K_2S_2O_8$)	0F30016	JT BAKER	H44465	06/15
HYDROGEN PEROXIDE (H_2O_2)	2F29002	EMD	51283145	10/31/13
STANDARDS				
XCL 20R	1I15002	HIGH PURITY	1125538	09/13/12
ERA PPT (540)	2G13001	ERA	D071-540	04/30/14
EPA LCS (0405)	0E20016	EPA	0405	05/17/15
TCLP-1REV	2E09002	Inorganic Ventures	E2-MEB376083	05/01/13
ICCV-3	1J06006	Inorganic Ventures	E2-MEB395052	11/01/12
ILM 05.3 Matrix Spike	2D09007	HIGH PURITY	1208727	03/30/13
ICCV-4	2G09022	Inorganic Ventures	E2-MEB429094	08/01/13
ICCV-6	1J18007	Inorganic Ventures	E2-MEB398023	11/01/12
ARSENIC (As) 1000ppm	2E12003	HIGH PURITY	1211132	11/15/13
MERCURY (Hg) 20ppm	2F11003	HIGH PURITY	1215831	06/08/13
ICCV-5	2B17002	INORGANIC VENTURES	F2-MEB41203	03/01/13

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: D. Dicken DATE: 8-14-12

ENTERED BY: D. Dicken DATE: 8-14-12

REVIEWED BY: [signature] DATE: 081412

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

12/03/07:RM

Standards/QC Preparation Log for ICP Metals/Mercury Page 2 of 3 **Case/SDG:** 1208050

COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS
Hg 100ppb-08-14-12-DD	Place in a 100mL volumetric flask: 0.5mL of 20ppm Hg stock solution 2.5mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 100mL volume with reagent water **(PREPARE DAILY)**
$K_2S_2O_8$- 07-13-12-DD Potassium Persulfate	Place in a 2000mL volumetric flask: 100.0g of $K_2S_2O_8$ Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
$KmnO_4$- 07-18-12 -DD Potassium Permanganate	Place in a 2000mL volumetric flask: 100.0g of $KmnO_4$ Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREARE AS NEEDED)**
HNO_3- 08-02-12 – DD Nitric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
HCl- 06-20-12 –DD Hydrochloric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HCl Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
Aqua Regia- 08-14-12 DD	Place in a 1000mL container: 600mL of Concentrated HCL 200mL of Concentrated HNO3 **(PREPARE AS NEEDED)**

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log

[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: D. Dicken DATE: 8-14-12

ENTERED BY: D. Dicken DATE: 8-14-12

REVIEWED BY: [signature] DATE: 08/14/12

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Standards/QC Preparation Log for ICP Metals/Mercury Page 3 of 3 **Case/SDG:** 1208050
COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS	Resultant Analyte Concentration
ICV- 08-14-12-DD	Pipet into a 300mL BOD Bottle 1.0mL of ICV-5 and 99mL of reagent water. Digest according to sample preparation instructions	4.0µg/L
S0/ICB/CCB-08-14-12-DD	Pipet into a 300mL BOD Bottle 100mL of reagent water Digest according to sample preparation instructions	0.0µg/L
S0.2/CRI- 08-14-12-DD	Pipet into a 300mL BOD Bottle 0.2mL of Hg 100ppb and 99.8mL of reagent water Digest according to sample preparation instructions	0.2µg/L
S0.5- 08-14-12-DD	Pipet into a 300mL BOD Bottle 0.5mL of Hg 100ppb and 99.5mL of reagent water Digest according to sample preparation instructions	0.5µg/L
S1.0- 08-14-12-DD	Pipet into a 300mL BOD Bottle 1.0mL of Hg 100ppb and 99mL of reagent water Digest according to sample preparation instructions	1.0µg/L
S5.0/CCV-08-14-12-DD	Pipet into a 300mL BOD Bottle 5.0mL of Hg 100ppb and 95mL of reagent water Digest according to sample preparation instructions	5.0µg/L
S10.0- 08-14-12-DD	Pipet into a 300mL BOD Bottle 10mL of Hg 100ppb and 90mL of reagent water Digest according to sample preparation instructions	10.0µg/L

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: D. Dicken DATE: 8-14-12

ENTERED BY: D. Dicken DATE: 8-14-12

REVIEWED BY: [signature] DATE: 08/14/12

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

INTERNAL DIGESTION COC

2081403

COMPUCHEM

Printed: 8/14/2012 8:41:36AM

Matrix: Soil **Prepared using: METALS - EPA 3050B**

Lab Number	Client ID	Sample Type	
1208050-01	WWTP-01	Sample	
1208050-02	WWTP-02	Sample	
2081403-BLK1	PBS	Blank	
2081403-BS1	LCSS	LCS	
2081403-DUP1	WWTP-01D	Duplicate	
2081403-MS1	WWTP-01S	Matrix Spike	
2081403-MSD1	WWTP-01SD	Matrix Spike Dup	

D. Dickens	8-14-12 1600	ICP Stg.	8-14-12 1600
Relinquished By	Date	Received By	Date
ICP Stg.	081412/1615		081412/1615
Relinquished By	Date	Received By	Date
	081512/0552	ICP Stg.	081512/0552
Relinquished By	Date	Received By	Date
Relinquished By	Date	Received By	Date

Metals Internal Chain of Custody Sheet

Batch 2081403 **Status:** Batched **Analysis:** 6010 METALS DOD

Lab Id	Client_Id	Received	Container	Extraction	Preservative	Matrix	Due Date	Cust Date
1208050-01 A	WWTP-01	08/11/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	8/17/2012	
1208050-02 A	WWTP-02	08/11/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	8/17/2012	

Cooler #1	8-14-12 1004	J. Pinder	8-14-12 1004
Relinquished By	Date/Time	Received By	Date/Time
J. Pinder	8-14-12 1004	D. Dickens	8-14-12 1004
Relinquished By	Date/Time	Received By	Date/Time
D. Dickens	8-14-12 1600	Cooler #1	8-14-12 1600
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

CompuChem

A Division Of

Liberty Analytical Corp.

9/17/2012

TONY PACE

WESTON SOLUTIONS

2551 ELTHAM AVE., SUITE I

NORFOLK, VA 23513

Subject:

Report of Data - Project: WFF PROJECT11/12767.105.001.0400/TC WorkOrder: 1209047

Attn.: TONY PACE

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: WESTON SOLUTIONS **Work:** 1209047

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DA **Sdg:** 1209047

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1209047-01	WWTP03	Soil	09/07/2012 08:10	09/08/2012 11:07
1209047-02	WWTP04	Soil	09/07/2012 08:15	09/08/2012 11:07
1209047-03	WWTP08	Soil	09/07/2012 08:20	09/08/2012 11:07
1209047-04	WWTP05	Soil	09/07/2012 08:23	09/08/2012 11:07
1209047-05	WWTP06	Soil	09/07/2012 08:27	09/08/2012 11:07
1209047-06	WWTP07	Soil	09/07/2012 08:30	09/08/2012 11:07
1209047-07	WWTP09	Soil	09/07/2012 08:33	09/08/2012 11:07

CompuChem, a Division of Liberty Analytical Corporation

Analysis Data Package

EPA SW-846

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field and analytical samples, reanalyses, blanks, spikes, duplicates, and laboratory control samples. The sample data package consists of the following:

A. Cover Documentation

B. Sample Data

Client: **WESTON SOLUTIONS** SDG#: **1209047**

Project: **WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY**

Environmental Testing Laboratories

CompuChem

A Division Of

Liberty Analytical Corp.

A. Cover Documentation

1. Cover Page

2. SDG Narrative

3. Chain-Of-Custody Records

1. Cover Page

Inorganic Analyses Data Package

The Cover Page includes laboratory information, SDG numbers, project name and the Client Identification in alphanumeric order showing the Client Identification cross-referenced with Lab ID numbers.

ANALYSES DATA PACKAGE COVER PAGE

Client: WESTON SOLUTIONS
Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY
Laboratory: COMPUCHEM
SDG: 1209047

Client Sample Id:	Lab Sample Id:
WWTP03	1209047-01
WWTP04	1209047-02
WWTP08	1209047-03
WWTP05	1209047-04
WWTP06	1209047-05
WWTP07	1209047-06
WWTP09	1209047-07

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Patricia A Murphy for Name: Susan Bass

Date: 09/16/2012 Title: Senior Chemist

Environmental Testing Laboratories
CompuChem
A Division Of
Liberty Analytical Corp.

LABORATORY ACCREDITATION BUREAU ACCREDITED
DoD ELAP

2. SDG Narrative

The SDG Narrative contains laboratory information, SDG number, and detailed documentation of any QC, sample, shipment, and/or analytical problems encountered in processing the samples. This will include any technical and administrative problems encountered and the resolution or corrective actions taken. The SDG Narrative will also document the alternative means of determining the cooler temperature when a cooler's temperature indicator bottle is absent. The SDG Narrative also provides equations or curves and utilizes raw data from the SDG being reported to demonstrate how sample results are obtained from raw instrument output. Finally, the SDG Narrative will identify and explain any differences between results being provided in the data package and those provided previously as Preliminary Results.

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1209047
Client: WESTON SOLUTIONS
Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

The indicated Sample Delivery Group (SDG) consisting of seven (7) solid samples was received into the laboratory information management system (LIMS) on September 8, 2012 intact and in good condition with the Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The cooler temperature indicator bottle was found with the samples and the samples temperature was 1.1 degrees Celsius. Temperature was recorded by IR temperature gun.

The samples were prepared and analyzed in accordance with SW846 and DoD methodology for the requested metal lead.

EQUATIONS FOR SOLID SAMPLE CALCULATIONS:

Client sample WWTP03 used for illustration.

ICP Equation:

Equation for obtaining metals sample results in mg/Kg as presented on FORM I data sheets from ICP instrument acquired results in µg/L (ppb).

$$\text{Concentration (\% solids) (mg/Kg)} = \frac{C \times V}{W \times S} \times DF$$

Where
C = concentration (µg/L)
DF = dilution factor
V = final volume in liters after sample preparation
W = weight in grams of wet sample
S = % solids/100

Example: Lead result µg/L to mg/Kg.

$$\frac{3290.258\ \mu g/L \times 0.1\ L\ (V)}{1.00\ g\ (W) \times 0.775} \times 1 = 424.549\ mg/Kg \text{ reported as } 425\ mg/Kg$$

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (LLICV, LLCCV, ICV & CCV), blanks (ICB, & CCB), and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW-846 methodology and DoD QSM 4.2 allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSS & PBS) were found to be within acceptable ranges and the field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The ICP sample matrix spike, CCN = 2091301-MS1 (WWTP03S) was found to be inside control limits.

The ICP sample matrix duplicate spike, CCN = 2091301-MSD1 (WWTP03SD) was found to be inside control limits.

The ICP sample duplicate spike, CCN = 2091301-DUP1 (WWTP03D) was found to be inside control limits.

A five-fold serial dilution of sample, CCN = SDI1209047-01 (WWTP03L) was performed in accordance with SW-846 requirements for ICP analysis.

The adjusted sample concentration was inside control limits.

The ICP sample post digestion spike, CCN =2091301-PS1 (WWTP03A) was performed and failed the criteria.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Patricia A. Murphy for
Susan W. Bass
Senior Chemist
September 16, 2012

DoD INORGANIC DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. The qualifiers used are:

U : This flag indicates the compound was analyzed for, not detected and is reported as less than the Limit of Detection (LOD) (or as defined by the client). The reporting limit (RL), or Limit of Quantitation (LOQ), and the LOD will be adjusted to reflect any dilution or concentration of the sample and, for soils, the percent moisture.

J : This flag indicates the reported result is an estimated value. The flag is used as detailed below:

1. When an analyte fails quality control acceptance criteria in an MS, and/or MSD, or sample duplicate. The J flag is applied to the specific analyte(s) in the parent sample,

2. When dilution test and resulting post-digestion spike fail quality control acceptance criteria for ICP-AES or ICP-MS analyses. The J flag is applied to the specific analyte(s) in the parent sample, and

3. When an analyte is detected and the result is less than the adjusted RL/LOQ but equal to or greater than the Detection Limit (DL).

Q : This flag denotes that one or more quality control criteria have failed (e.g., LCS recovery, Continuing Calibration Verification, CCV, and interference check standards for ICP-AES/ICP-MS) and reanalyses can't be performed. The Q flag is applied to all specific analyte(s) in all samples associated with the failed quality control criteria.

B : This flag is used when the analyte is found in the associated method or calibration blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

D: This flag is applied to an analyte when the reported result is based on a dilution.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

The extensions: D, S, SD, L, and A are added to the end of the Client ID and represent the following:

D – Matrix Duplicate
S – Matrix Spike
SD – Matrix Spike Duplicate
L – Serial Dilution
A – Post Digestion Spike

3. Chain-Of-Custody Records

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

26006

Page 1 of 3

Courier FEDEX
Airbill No. 8009 0382 2300
Sampling Complete? Y or N

Client/Reporting Information	Project Information
Company Name: WESTON SOLUTIONS	Project Name: PROJECT 11
Address: 2551 ELTHAM AVE	Sampling Location: WALLOPS flight facility
City: NORFOLK State: VA Zip: 23513	Turnaround time: STANDARD
Project Contact: TONY PACE	Batch QC or Project Specific? If Specific, which Sample ID?: BATCH QC
Phone #: 757 819-5310	Are aqueous samples field filtered for metals? Y or N
Sampler's Name: CRAIG LACOSSE	Are high concentrations expected? Y or (N)? If yes, which ID(s)?

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	Number of Preserved Bottles: HCl	NaOH	HNO3	H2SO4	MEOH	Other	Pb	VOC List 1 + NAPHTHALENE	pH / Sample Info (Lab Use): metals
1209047-01	WWTP 03	9-7-12	0810	SO								X		
-02	WWTP 04		0815									X		
-03	WWTP 08		0820									X		
-04	WWTP 05		0823									X		
-05	WWTP 06		0827									X		
-06	WWTP 07		0830									X		
-07	WWTP 09		0833									X		
1209033-11	TB090712		1200	CW									X	<2
1209048-01	AI 45-5B01R-00-7		1205	SO									X	
-02	AI 45-5B01R-00-1		1200										X	

7 day TAT per Craig 9/10/12

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

VOC List 1 - PCE, TCE, 1,1-DCE, C-1,2-DCE, Trans 1,2-DCE, VC, CYCLOHEXANE, METHYLCYCLOHEXANE, ISOPROPYLBENZENE, CT, ACETONE, BTEX

Sample Custody

Relinquished by:		Date/Time: 9-7-12 1600	Received by:	Date/Time: 9/8/12 1107	
Relinquished by:		Date/Time:	Received by:	Date/Time:	
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 1 1 °C	

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

IRGUN : SNOW15

10

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

26050

Page 2 of 3

11

Courier FEDEX
Airbill No. 8009 0382 2300
Sampling Complete? (Y) or N

Client/Reporting Information	Project Information
Company Name: MASTON SOLUTIONS	Project Name: PROJECT 11
Address: 2551 ELIZABETH AVE	Sampling Location: NAVAL AIR STATION OCEANA
City: NORFOLK State: VA Zip: 23513	Turnaround time: STANDARD
Project Contact: TONY PACE	Batch QC or Project Specific? If Specific, which Sample ID? BATCH QC
Phone #: 757 855-5310	Are aqueous samples field filtered for metals? (Y) or N
Sampler's Name: CRAIG LACOSSE	Are high concentrations expected? Y or (N) If yes, which ID(s)?

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	Number of Preserved Bottles: HCl	NaOH	HNO3	H2SO4	MEOH	Other	VOC LIST 1 + NAPHTHALENE	Pb, Cr, Zn	Pb, Cr, Zn TOTAL	Pb, Cr, Zn DISSOLVED	pH / Sample Info (Lab Use)
1209033-12	AI45-TW01R-00	9-7-12	1745	GW	3	X						X				
-13 / 1209034-05	AI22-TW04R-00		1345	GW	5									AI22-TW04R-00 on labels		42
1209048-03	AI22-SB04R00-1		1255	SO	5							X	X			
-04	AI22-SB04R-00-7		1300	SO	5							X	X			
-05	AI77-SB02R-00-2		1355	SO	5							X	X			
-06	AI77-SB02R-00-7		1405	SO	5							X	X			
1209033-14 / 1209034-04	AI77-TW02R-00		~~1345~~ 1450	GW	5	X		X				X		X	Q	42
1209048-07	AI77-SB03R-00-2		1435	SO	5							X	X			
-08	AI77-SB03R-00-7		1445	SO	5							X	Q			
1209033-15 / 1209034-03	AI77-TW03R-00		1535	GW	5	X		X				X		X	Q	42

Some containers now "FROZEN" @ 1535 (8) 9/10/12

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

VOC LIST 1 - PCE, TCE, 1,1-DCE, C-1,2-DCE, TRANS 1,2-DCE, VC, CYCLOHEXANE, METHYLCYCLOHEXANE, ISOPROPYLBENZENE, CT, ACETONE, BTEX

Sample Custody

Relinquished by:	Date/Time: 9-7-12 1600	Received by:	Date/Time: 9/8/12 1107
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or (N) If yes, where?
Custody Seal(s) intact? (Y) or N
On Ice? (Y) or N
Cooler Temp: 1.1 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

IR GUN: SN005

WORK ORDER

Printed: 9/14/2012 6:17:46PM

1209047

COMPUCHEM

Client:	**WESTON SOLUTIONS**	**Project Manager:**	**Cathy Dover**
Project:	**WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DA'**	**Project Number:**	**WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 D**
SDG:	**1209047** **CASE:**	**Status:**	**Batched**

Report To:

WESTON SOLUTIONS
TONY PACE
2551 ELTHAM AVE., SUITE I
NORFOLK, VA 23513
Phone: (757) 819-5310
Fax: -

Invoice To:

WESTON SOLUTIONS
ACCT.PAYABLE-MYRIAM MISSAS
1400 WESTON WAY, BLDG.5-1
WEST CHESTER, PA 19380
Phone :(732)225-6116
Fax: -

Date Due: 09/17/2012 00:00 (9 day TAT)

Received By: Cathy Dover — Date Received: 09/08/2012 11:07

Logged In By: Cathy Dover — Date Logged In: 09/10/2012 18:45

J & B Flags?: **YES**	TICS?: **NO**	Deliverable: **Style 9 CD Only**	EDD : **22) SEDD**
Metals ND to? **LOD**	Spike Level: **FULL Spike**		

USE 1209047-01 FOR QC*TOTAL Pb ONLY*RESULTS DUE BY MONDAY 9-17-12

Analysis	Due	TAT	Expires	Received	Comments
1209047-01 WWTP03 [Soil] Sampled 09/07/2012 08:10 Eastern					
6010 METALS DOD	09/17/2012 16:00	9	03/06/2013 08:10	09/08/2012 11:07	
Solids, Dry Weight	09/14/2012 16:00	6	03/06/2013 08:10	09/08/2012 11:07	
1209047-02 WWTP04 [Soil] Sampled 09/07/2012 08:15 Eastern					
6010 METALS DOD	09/17/2012 16:00	9	03/06/2013 08:15	09/08/2012 11:07	
Solids, Dry Weight	09/14/2012 16:00	6	03/06/2013 08:15	09/08/2012 11:07	
1209047-03 WWTP08 [Soil] Sampled 09/07/2012 08:20 Eastern					
6010 METALS DOD	09/17/2012 16:00	9	03/06/2013 08:20	09/08/2012 11:07	
Solids, Dry Weight	09/14/2012 16:00	6	03/06/2013 08:20	09/08/2012 11:07	
1209047-04 WWTP05 [Soil] Sampled 09/07/2012 08:23 Eastern					
6010 METALS DOD	09/17/2012 16:00	9	03/06/2013 08:23	09/08/2012 11:07	
Solids, Dry Weight	09/14/2012 16:00	6	03/06/2013 08:23	09/08/2012 11:07	
1209047-05 WWTP06 [Soil] Sampled 09/07/2012 08:27 Eastern					
6010 METALS DOD	09/17/2012 16:00	9	03/06/2013 08:27	09/08/2012 11:07	
Solids, Dry Weight	09/14/2012 16:00	6	03/06/2013 08:27	09/08/2012 11:07	
1209047-06 WWTP07 [Soil] Sampled 09/07/2012 08:30 Eastern					
6010 METALS DOD	09/17/2012 16:00	9	03/06/2013 08:30	09/08/2012 11:07	
Solids, Dry Weight	09/14/2012 16:00	6	03/06/2013 08:30	09/08/2012 11:07	

1209047

COMPUCHEM

Client:	**WESTON SOLUTIONS**	**Project Manager:**	**Cathy Dover**
Project:	**WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DA'**	**Project Number:**	**WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 D**
SDG:	**1209047** **CASE:**	**Status:**	**Batched**

Analysis	Due	TAT	Expires	Comments
1209047-07 WWTP09 [Soil] Sampled 09/07/2012 08:33 Eastern				
6010 METALS DOD	09/17/2012 16:00	9	03/06/2013 08:33	09/08/2012 11:07
Solids, Dry Weight	09/14/2012 16:00	6	03/06/2013 08:33	09/08/2012 11:07

B. Sample Data

1. Results
2. Quality Control Data
3. Raw Data
4. Digestion and Distillation Logs

1. Results

a. Analysis Data Sheet

ANALYSIS DATA SHEET

WWTP03

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1209047-01 % Solid: 77.5 Matrix: Soil Sampled: 09/07/12 Received: 09/08/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	425	0.235	0.645	1.29	1	J	EPA 6010C	2I16001	9/14/12 13:08

Environmental Testing Laboratories

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ANALYSIS DATA SHEET

WWTP04

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1209047-02 % Solid: 74.8 Matrix: Soil Sampled: 09/07/12 Received: 09/08/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	25.1	0.243	0.668	1.34	1		EPA 6010C	2I16001	9/14/12 13:51

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ANALYSIS DATA SHEET

WWTP08

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1209047-03 % Solid: 79.3 Matrix: Soil Sampled: 09/07/12 Received: 09/08/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	13.5	0.213	0.584	1.17	1		EPA 6010C	2I16001	9/14/12 14:20

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ANALYSIS DATA SHEET

WWTP05

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1209047-04 % Solid: 76.8 Matrix: Soil Sampled: 09/07/12 Received: 09/08/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	44.6	0.228	0.626	1.25	1		EPA 6010C	2I16001	9/14/12 14:27

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ANALYSIS DATA SHEET

WWTP06

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1209047-05 % Solid: 79.5 Matrix: Soil Sampled: 09/07/12 Received: 09/08/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	58.7	0.220	0.605	1.21	1		EPA 6010C	2I16001	9/14/12 14:35

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ANALYSIS DATA SHEET

WWTP07

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1209047-06 % Solid: 56.7 Matrix: Soil Sampled: 09/07/12 Received: 09/08/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	2450	0.318	0.874	1.75	1		EPA 6010C	2I16001	9/14/12 14:42

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ANALYSIS DATA SHEET

WWTP09

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 1209047-07 % Solid: 80.6 Matrix: Soil Sampled: 09/07/12 Received: 09/08/12

CAS NO.	Analyte	Conc. (mg/kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Sequence	Analyzed
7439-92-1	Lead	14.0	0.209	0.575	1.15	1		EPA 6010C	2I16001	9/14/12 14:49

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2. Quality Control (QC) Data

a. Low Level Initial and Continuing Calibration Check

b. Initial and Continuing Calibration Check

c. Low Range Standard

d. High Range Standard

e. Blank

f. ICP Interference Check Sample

g. Duplicates

h. Matrix Spike / Matrix Spike Duplicate Recovery

i. Serial Dilution

j. Post Digestion Spike Sample Recovery

k. LCS / LCS Duplicate Recovery

l. Method Detection and Reporting Limits

m. ICP-AES and ICP-MS Linear Ranges

n. ICP-AES Interelement Correction Factors

o. Preparation Batch Summary

p. Analysis Sequence Summary

LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2I16001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	QC Limts
LLICV	2I16001-CRL1	Lead	10.00	9.42	94	ug/L	J	70 - 130
LLCCV	2I16001-CRL2	Lead	10.00	10.4	104	ug/L		70 - 130
LLCCV	2I16001-CRL3	Lead	10.00	10.2	102	ug/L		70 - 130
LLCCV	2I16001-CRL4	Lead	10.00	10.8	108	ug/L		70 - 130

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INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2I16001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
ICV	2I16001-ICV1	Lead	1100	1130	103	ug/L		+/-10 %
CCV1	2I16001-CCV1	Lead	1000	990	99	ug/L		+/-10 %
CCV1	2I16001-CCV2	Lead	1000	1000	100	ug/L		+/-10 %
CCV1	2I16001-CCV3	Lead	1000	991	99	ug/L		+/-10 %
CCV1	2I16001-CCV4	Lead	1000	999	100	ug/L		+/-10 %
CCV1	2I16001-CCV5	Lead	1000	997	100	ug/L		+/-10 %

LOW RANGE STANDARD

EPA 6010C

Client: WESTON SOLUTIONS **SDG:** 1209047 **Project:** WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2I16001-LCV1 **Sequence:** 2I16001 **Standard ID:** 2E21006

ANALYTE	TRUE (ug/L)	FOUND (ug/L)	% Rec	Q	QC LIMIT
Lead	10.00	11.0	110		80-120

* Values outside of QC limits

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BLANKS

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2I16001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	Found	DL	LOD	LOQ	Units	Q	Method
ICB	2I16001-ICB1	Lead	-0.356	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2I16001-CCB1	Lead	0.588	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2I16001-CCB2	Lead	0.293	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
PBS	2091301-BLK1	Lead		0.182	0.500	1.00	mg/kg wet	*U*	EPA 6010C
CCB1	2I16001-CCB3	Lead	-0.448	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2I16001-CCB4	Lead	0.126	1.82	5.00	10.0	ug/L	*U*	EPA 6010C
CCB1	2I16001-CCB5	Lead	0.356	1.82	5.00	10.0	ug/L	*U*	EPA 6010C

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2I16001 Instrument ID: P4

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units
ICSA	2I16001-IFA1	Lead		0.29	5.00	ug/L
ICSAB	2I16001-IFB1	Lead	50.00	48.75	98	ug/L

*The absence of an entry in the "True" column denotes the lack of a true value for that analyte.The entry in the "%R" column represents a Control Limit, established as +/- the analyte's Limit of Detection (LOD).

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DUPLICATES
EPA 6010C

WWTP03D

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2091301-DUP1 % Solid: 77.0 Matrix: Soil Lab Source ID:1209047-01 Source Sample: WWTP03

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg dry)	DUPLICATE CONCENTRATION (mg/kg dry)	RPD %	Q	METHOD
Lead	20	*425*	422	0.689		EPA 6010C

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6010C

WWTP03S

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2091301-MS1 % Solid: 77.0 Matrix: Soil Lab Source ID: 1209047-01 Source Sample: WWTP03

ANALYTE	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	MS CONCENTRATION (mg/kg dry)	MS % REC.	Q	QC LIMITS REC.
Lead	2.582	425	419	-218		80 - 120

ANALYTE	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Lead	2.582	439	552	461	*	20	80 - 120

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SERIAL DILUTION

EPA 6010C

WWTP03L

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2I16001-SRD3 Matrix: Soil Lab Source ID: 1209047-01 Source Sample: WWTP03

Sequence: 2I16001 Dilution: 5 Report to MDL: YES

Analyte	Initial Sample Result (I)	Serial Dilution Result (S)	RL	% Difference	Q	Method	QC Limits % Difference
Lead	3290.30	3351.86	10.0	1.87		EPA 6010C	10

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POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6010C

WWTP03A

Laboratory: COMPUCHEM
SDG: 1209047
Client: WESTON SOLUTIONS
Project: WFF PROJECT11/12767.105.001.0400/TOTA
Matrix: Soil
Laboratory ID: 2091301-PS1
Lab Source ID: 1209047-01

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Lead	3410	**3290**	**200.0**	**62.2**	**75 - 125**

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LCS / LCS DUPLICATE RECOVERY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Lab ID: 2091301-BS1 Matrix: Soil Client ID: LCSS Batch: 2091301

ANALYTE	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC.	Q	QC LIMITS REC.
Lead	92.40	93.1	101		80 - 120

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METHOD DETECTION AND REPORTING LIMITS

Laboratory: COMPUCHEM **SDG:** 1209047

Client: WESTON SOLUTIONS **Project:** WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 D

Matrix: Soil **Instrument:** P4

Analyte	DL	LOQ	Units	Method
Lead	0.182	1.00	mg/kg	EPA 6010C

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ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG: 1209047 Instrument: P4

Analyte	Concentration ug/L	LR Date
Lead	60000	07/26/2012

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1209047 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Ag
Lead	220.35					

Comments:

ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1209047 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: As	B	Ba	Be	Cd
Lead	220.35					

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1209047 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	K	Mn
Lead	220.35					

Comments:

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ICP--AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1209047 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Mo	Na	Ni	Pb	Sb
Lead	220.35					

Comments:

ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1209047 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Se	Sn	Ti	Tl	V
Lead	220.35					

Comments:

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ICP-AES INTERELEMENT CORRECTION FACTORS

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG No.: 1209047 Instrument: P4 Date: 7/26/12

Analyte	Wave-length (nm)	Interelement Correction Factors for: Zn				
Lead	220.35					

Comments:

PREPARATION BATCH SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Batch: 2091301 Matrix: Soil Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (g)	FINAL VOL/WT (mL)
WWTP03	1209047-01	09/13/12 08:50	1.00	100
WWTP04	1209047-02	09/13/12 08:50	1.00	100
WWTP08	1209047-03	09/13/12 08:50	1.08	100
WWTP05	1209047-04	09/13/12 08:50	1.04	100
WWTP06	1209047-05	09/13/12 08:50	1.04	100
WWTP07	1209047-06	09/13/12 08:50	1.01	100
WWTP09	1209047-07	09/13/12 08:50	1.08	100
PBS	2091301-BLK1	09/13/12 08:50	1.00	100
LCSS	2091301-BS1	09/13/12 08:50	1.00	100
WWTP03D	2091301-DUP1	09/13/12 08:50	1.00	100
WWTP03S	2091301-MS1	09/13/12 08:50	1.00	100
WWTP03SD	2091301-MSD1	09/13/12 08:50	1.00	100
WWTP03A	2091301-PS1	09/13/12 08:50	1.00	100

Environmental Testing Laboratories
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DoD ELAP

ANALYSIS SEQUENCE SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2I16001 Calibration: UNASSIC Instrument: P4

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
S0	2I16001-CAL1	P40914_P-001	09/14/12 09:41:58
S RSTD-1	2I16001-CAL2	P40914_P-002	09/14/12 09:49:12
LLICV	2I16001-CRL1	P40914_P-006	09/14/12 10:14:13
ICV	2I16001-ICV1	P40914_P-007	09/14/12 10:21:26
ICB	2I16001-ICB1	P40914_P-008	09/14/12 10:28:40
ICSA	2I16001-IFA1	P40914_P-009	09/14/12 10:35:53
ICSAB	2I16001-IFB1	P40914_P-010	09/14/12 10:43:05
LLCCV	2I16001-CRL2	P40914_P-011	09/14/12 10:50:18
CCV1	2I16001-CCV1	P40914_P-012	09/14/12 10:57:32
CCB1	2I16001-CCB1	P40914_P-013	09/14/12 11:04:45
LRS DOD	2I16001-LCV1	P40914_P-014	09/14/12 11:22:34
CCV1	2I16001-CCV2	P40914_P-024	09/14/12 12:39:33
CCB1	2I16001-CCB2	P40914_P-025	09/14/12 12:46:47
PBS	2091301-BLK1	P40914_P-026	09/14/12 12:54:06
LCSS	2091301-BS1	P40914_P-027	09/14/12 13:01:18
WWTP03	1209047-01	P40914_P-028	09/14/12 13:08:31
WWTP03D	2091301-DUP1	P40914_P-029	09/14/12 13:15:44
WWTP03S	2091301-MS1	P40914_P-030	09/14/12 13:22:57
WWTP03SD	2091301-MSD1	P40914_P-031	09/14/12 13:30:10
WWTP03L	2I16001-SRD3	P40914_P-032	09/14/12 13:37:24
WWTP03A	2091301-PS1	P40914_P-033	09/14/12 13:44:37
WWTP04	1209047-02	P40914_P-034	09/14/12 13:51:50
LLCCV	2I16001-CRL3	P40914_P-035	09/14/12 13:59:02
CCV1	2I16001-CCV3	P40914_P-036	09/14/12 14:06:16
CCB1	2I16001-CCB3	P40914_P-037	09/14/12 14:13:30

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ANALYSIS SEQUENCE SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS SDG: 1209047 Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

Sequence: 2I16001 Calibration: UNASSIC Instrument: P4

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
WWTP08	1209047-03	P40914_P-038	09/14/12 14:20:43
WWTP05	1209047-04	P40914_P-039	09/14/12 14:27:56
WWTP06	1209047-05	P40914_P-040	09/14/12 14:35:08
WWTP07	1209047-06	P40914_P-041	09/14/12 14:42:21
WWTP09	1209047-07	P40914_P-042	09/14/12 14:49:34
CCV1	2I16001-CCV4	P40914_P-048	09/14/12 15:33:34
CCB1	2I16001-CCB4	P40914_P-049	09/14/12 15:40:49
LLCCV	2I16001-CRL4	P40914_P-059	09/14/12 16:52:58
CCV1	2I16001-CCV5	P40914_P-060	09/14/12 17:00:12
CCB1	2I16001-CCB5	P40914_P-061	09/14/12 17:07:26

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HOLDING TIME SUMMARY

EPA 6010C

Client: WESTON SOLUTIONS

Project: WFF PROJECT11/12767.105.001.0400/TOTAL Pb-7 DAY

SDG: 1209047

Sample Name	Date Collected	Date Received	Date Prepared	Date Analyzed	Days to Analysis	Max Days to Analysis*	Q
WWTP03	09/07/12	09/08/12	09/13/12	09/14/12	7	180	
WWTP04	09/07/12	09/08/12	09/13/12	09/14/12	7	180	
WWTP08	09/07/12	09/08/12	09/13/12	09/14/12	7	180	
WWTP05	09/07/12	09/08/12	09/13/12	09/14/12	7	180	
WWTP06	09/07/12	09/08/12	09/13/12	09/14/12	7	180	
WWTP07	09/07/12	09/08/12	09/13/12	09/14/12	7	180	
WWTP09	09/07/12	09/08/12	09/13/12	09/14/12	7	180	

3. Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the quarterly verification of method and instrument parameters submitted as a part of each data package.

The order of the raw data in the data package shall be: ICP-AES, ICP-MS, mercury, and cyanide (if a target analyte).

Raw data shall be labeled with Client Identification numbers and appropriate codes in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, interference check samples, serial dilution samples, LRS check standard, Laboratory Control Sample, and post digestion spike
- diluted and undiluted sample and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes (indicating standard solutions used, final spike concentrations, and volumes involved).
- instrument used, any instrument adjustments, data corrections or other apparent anomalies on the measurement record, including all data voided or data not used and a brief written explanation
- time and date of each analysis (instrument run logs can be submitted if they contain this information)

Daily Instrument Profile

Nebulizer pressure: u
Peak position: +.09038
Peak intensity: 1521
Vernier position: 498

Maintenance: New tubing

Printed: 9/15/2012 9:55:13 AM

Method(s) (circle one): ILM05.4 6010B (6010C) Other _____

Operator(s): JCF **Date/Time** 09/14/0941 **to** 9HR/2000

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)
L	Matrix = leachate
W	Matrix = water
S	Matrix = solid
B	Matrix = biological tissue

SDG	Matrix	Comments
1208134	L	RCRA Complete
~~1209013~~		
1209031	L	RCRA Complete
1209038	W S	1+09151L Cd,Cr,Pb
1209047	S	Pb only DoD
1209063	S	
1209064	S	

ICP Run Log (P4)

File Name: P40914

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
1	CAL1	S0 BLANK	CALIB STD	1	09/14/12	09:41:58		
2	CAL2	S RSTD-1	CALIB STD	1	09/14/12	09:49:12		
3	CAL4	S RSTD-3	CALIB STD	1	09/14/12	09:56:25		
4	CAL3	S RSTD-2	CALIB STD	1	09/14/12	10:02:06		
5	CAL5	S RSTD-4	CALIB STD	1	09/14/12	10:08:33		
6	CRL1	LLICV	ICV	1	09/14/12	10:14:13		(Q) (BI)
7	ICV1	ICV1	ICV	1	09/14/12	10:21:26		(Q) (BI)
8	ICB1	ICB	ICB	1	09/14/12	10:28:40		
9	IFA1	ICSA	ICS	1	09/14/12	10:35:53		
10	IFB1	ICSAB	ICS	1	09/14/12	10:43:05		
11	CRL2	LLCCV	CCV	1	09/14/12	10:50:18		(Q) (BI)
12	CCV1	CCV	CCV	1	09/14/12	10:57:32		
13	CCB1	CCB	CCB	1	09/14/12	11:04:45		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 9/15/12

ICP Run Log (P4)

File Name: P40914

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
14	LCV1	LRS DOD	LRS	1	09/14/12	11:22:34		(Q) (SB)
15	2091043-BLK6	PBW	PBW	1	09/14/12	11:32:35	1209013	
16	2091043-BLK2	TCLPBLKAJ	SAMPLE	1	09/14/12	11:39:48	1208134	(H) (NA)
17	2091043-BLK5	TCLPBLKBZ	SAMPLE	1	09/14/12	11:47:01	1209031	
18	2091043-BS1	LCSW	LCS	1	09/14/12	11:54:14	1209013	
19	2091043-BSD2	LCSWD	LCS	1	09/14/12	12:01:26	1209013	
20	1208134-01	FAY-X-WFN	SAMPLE	100	09/14/12	12:10:42	1208134	
21	2I13006-SRD1	FAY-X-WFNL	SAMPLE	500	09/14/12	12:17:54	1208134	
22	1209031-01	IDW-BL-0905	SAMPLE	5	09/14/12	12:25:07	1209031	
23	2I13006-SRD2	IDW-BL-0905	SAMPLE	25	09/14/12	12:32:20	1209031	
24	2I13006-CCV2	CCV	CCV	1	09/14/12	12:39:33		
25	2I13006-CCB2	CCB	CCB	1	09/14/12	12:46:47		(Q) (CO)
26	2091301-BLK1	PBS	PBS	1	09/14/12	12:54:06	1209047	
27	2091301-BS1	LCSS	LCS	1	09/14/12	13:01:18	1209047	
28	1209047-01	WWTP03	SAMPLE	1	09/14/12	13:08:31	1209047	
29	2091301-DUP1	WWTP03D	SAMPLE	1	09/14/12	13:15:44	1209047	
30	2091301-MS1	WWTP03S	SAMPLE	1	09/14/12	13:22:57	1209047	
31	2091301-MSD1	WWTP03SD	SAMPLE	1	09/14/12	13:30:10	1209047	
32	2I13006-SRD3	WWTP03L	SAMPLE	5	09/14/12	13:37:24	1209047	
33	2091301-PS1	WWTP03A	SAMPLE	1	09/14/12	13:44:37	1209047	
34	1209047-02	WWTP04	SAMPLE	1	09/14/12	13:51:50	1209047	
35	2I13006-CRL3	LLCCV	CCV	1	09/14/12	13:59:02		(Q) (BI)
36	2I13006-CCV3	CCV	CCV	1	09/14/12	14:06:16		
37	2I13006-CCB3	CCB	CCB	1	09/14/12	14:13:30		
38	1209047-03	WWTP08	SAMPLE	1	09/14/12	14:20:43	1209047	
39	1209047-04	WWTP05	SAMPLE	1	09/14/12	14:27:56	1209047	
40	1209047-05	WWTP06	SAMPLE	1	09/14/12	14:35:08	1209047	
41	1209047-06	WWTP07	SAMPLE	1	09/14/12	14:42:21	1209047	
42	1209047-07	WWTP09	SAMPLE	1	09/14/12	14:49:34	1209047	
43	2091302-BLK1	PBS	PBS	1	09/14/12	14:57:30	1209063	
44	2091302-BS1	LCSS	LCS	1	09/14/12	15:04:42	1209063	
45	2091302-BSD1	LCSSD	LCS	1	09/14/12	15:11:55	1209063	(H) (MN)

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 9/15/12

ICP Run Log (P4)

File Name: P40914

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
46	1209063-01	ASR-2.82-SBHH0	SAMPLE	1	09/14/12	15:19:08	1209063	
47	2I13006-SRD4	ASR-2.82-SBHH0L	SAMPLE	5	09/14/12	15:26:21	1209063	
48	2I13006-CCV4	CCV	CCV	1	09/14/12	15:33:34		
49	2I13006-CCB4	CCB	CCB	1	09/14/12	15:40:49		
50	2091302-PS1	ASR-2.82-SBHH0A	SAMPLE	1	09/14/12	15:48:02	1209063	
51	1209063-02	ASR-2.82-SBEE03	SAMPLE	1	09/14/12	15:55:15	1209063	
52	1209063-03	ASR-2.82-SBFF03	SAMPLE	1	09/14/12	16:02:28	1209063	
53	1209063-04	ASR-2.82-SBGG03	SAMPLE	1	09/14/12	16:09:42	1209063	
54	2091303-BLK1	PBS	PBS	1	09/14/12	16:16:54	1209064	
55	2091303-BS1	LCSS	LCS	1	09/14/12	16:24:07	1209064	
56	1209064-01	ASR-2.82-SBGG	SAMPLE	1	09/14/12	16:31:20	1209064	
57	2091303-DUP1	ASR-2.82-SBGGD	SAMPLE	1	09/14/12	16:38:33	1209064	
58	2091303-MS1	ASR-2.82-SBGGS	SAMPLE	1	09/14/12	16:45:46	1209064	
59	2I13006-CRL4	LLCCV	CCV	1	09/14/12	16:52:58		(Q) (BI)
60	2I13006-CCV5	CCV	CCV	1	09/14/12	17:00:12		
61	2I13006-CCB5	CCB	CCB	1	09/14/12	17:07:26		
62	2091303-MSD1	ASR-2.82-SBGGDS	SAMPLE	1	09/14/12	17:14:39	1209064	
63	2I13006-SRD5	ASR-2.82-SBGGL	SAMPLE	5	09/14/12	17:21:52	1209064	
64	2091303-PS1	ASR-2.82-SBGGA	SAMPLE	1	09/14/12	17:29:05	1209064	
65	1209064-02	ASR-2.82-SBHH04	SAMPLE	1	09/14/12	17:36:18	1209064	
66	1209064-03	ASR-2.82-SBCC05	SAMPLE	1	09/14/12	17:43:30	1209064	
67	1209064-04	ASR-2.82-SBCC06	SAMPLE	1	09/14/12	17:50:43	1209064	
68	1209064-05	ASR-2.82-SBDD07	SAMPLE	1	09/14/12	17:57:56	1209064	
69	1209064-06	ASR-2.82-SBDD06	SAMPLE	1	09/14/12	18:05:09	1209064	
70	1209064-07	ASR-2.82-SBDD05	SAMPLE	1	09/14/12	18:12:23	1209064	
71	1209064-08	ASR-2.82-SBEE05	SAMPLE	1	09/14/12	18:19:36	1209064	
72	2I13006-CCV6	CCV1	CCV	1	09/14/12	18:26:49		
73	2I13006-CCB6	CCB1	CCB	1	09/14/12	18:34:03		
74	1209064-09	ASR-2.82-SBFF04	SAMPLE	1	09/14/12	18:41:16	1209064	
75	209005-BLK1	PBW	PBW	1	09/14/12	18:48:29	1209038	
76	209005-BS1	LCSW	LCS	1	09/14/12	18:55:42	1209038	
77	1209038-01	8-27-12	SAMPLE	1	09/14/12	19:02:55	1209038	

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 9/15/12

ICP Run Log (P4)

File Name: P40914

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
78	2I13006-SRD6	8-27-12L	SAMPLE	1	09/14/12	19:10:08	1209038	
79	1209038-02	8-28-12	SAMPLE	1	09/14/12	19:17:21	1209038	
80	1209038-03	8-30-12	SAMPLE	1	09/14/12	19:24:34	1209038	
81	1209038-04	8-31-12	SAMPLE	1	09/14/12	19:31:47	1209038	
82	1209038-05	8-29-12	SAMPLE	1	09/14/12	19:39:00	1209038	
83	2I13006-CRL5	LLCCV	CCV	1	09/14/12	19:46:13		(Q) (CU)
84	2I13006-CCV7	CCV1	CCV	1	09/14/12	19:53:26		
85	2I13006-CCB7	CCB1	CCB	1	09/14/12	20:00:40		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 9/15/12

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 1 of 3 CompuChem a division of Liberty Analytical Corp. Worksheet 1 P(6) R5

STANDARDS and REAGENTS TRACEABILITY

Seq. File Name: P 40914

	Ref #*	Manufacturer	Lot #	Expiration Date
HNO_3 [Baker Instra-analyzed Trace-Metals grade]	2H31012	EMD	51332	04/13
HCl [Baker Instra-analyzed Trace-Metals grade]	2 H29001	Caledon	81713	08/12
SM-770-027 multi-element standard mix (RSTD-1)	2E21003	High Purity	1213220	05/15/13
SM-770-028 part A multi-element standard mix (RSTD-2A)	1J13004	High Purity	1128306	10/11/12
SM-770-028 part B multi-element standard mix (RSTD-2B)	1J13005	High Purity	1128307	10/11/12
SM-770-029 part A multi-element standard mix (RSTD-3A)	2D09003	High Purity	1124423	03/30/13
SM-770-029 part B multi-element standard mix (RSTD-3B)	2A17003	High Purity	1136115	01/17/13
SM-770-030 multi-element standard mix (RSTD-4)	2E21004	High Purity	1213221	05/15/13
SPEX-R multi-element standard mix	2E21005	High Purity	1213510	05/15/13
ICP-AES-CRQL multi-element standard mix	1K29023	High Purity	1132642	11/28/12
ICCV-3 multi-element standard mix	1J06006	Inorganic Venture	E2-MEB395052	11/01/12
ICCV-4 multi-element standard mix	1J06007	Inorganic Venture	E2-MEB395053	11/01/12
ICSA multi-element standard mix	1K15001	Inorganic Venture	D2-MEB348015	12/01/12
ICSB multi-element standard mix	2F02001	Inorganic Venture	D2-MEB399019	07/10/13
ARSENIC (As) 1,000 PPM single-element standard	2E18003	High Purity	1211132	11/15/13
SM-770-020 Internal Standard Mix	2E21002	High Purity	1213533	05/15/13
SM-770-040 multi-element CCV mix (Soln A)	2D09008	High Purity	1208725	03/30/13
SM-770-040 multi-element CCV mix (Soln B)	2D09009	High Purity	1208726	03/30/13
SM-770-045 LRS 6010C (Soln A)	2A17001	High Purity	1201204	01/13/13
SM-770-045 LRS 6010C (Soln B)	2A17002	High Purity	1201205	01/13/13

Multi-Element Stock Standard Concentrations:

Stock Standard	Analyte Concentrations (µg/mL)
RSTD-1 multi-element standard mix	Cd:1,000 Cr:1,000 Cu:1,000 Pb:1,000 Ni:1,000 Se:1,000 Ag:100 Tl:1,000 Zn:1,000
RSTD-2A/2B multi-element standard mix	Part A: As:1,000 Ba:1,000 Be:1,000 Co:1,000 Mn:1,000 Mo:1,000 V:1,000 Part B: Fe:25,000
RSTD-3A/3B multi-element standard mix	Part A: Ca:10,000 Mg:10,000 K:10,000 Na:10,000 Part B: Al:10,000
RSTD-4 multi-element standard mix	Sb:1,000 Bi:1,000 B:1,000 Sn:1,000 Ti:1,000
SPEX-R multi-element standard mix	Mo:1,000 Sn:1,000 Bi:1,000 Ti:1,000 B:1,000
ICP-AES-CRQL-R multi-element standard mix	Ag:10 Be:5 Cd:5 Co:50 Cr:10 Cu:25 Mn:15 Ni:40 Tl:25 V:50 Zn:60 Pb:10 Se:35 As:10 Sb:60
LRS 6010C multi-element standard mix	Al:200 Ba:200 K:5000 Mg:5000 Na:5000 Ca:5000 Ag:5 Be:5 Cd:5 Co:20 Cr:10 Cu:5 Fe:200 Mn:10 Ni:10 Tl:30 V:20 Zn:30 Pb:10 Se:5 As:10 Mo:50 Sn:50 Bi:20 Tl:50 Sb:30 B:50
SM-770-020 Internal Standard Mix	Li:50,000 Y:250
IICCV-3 multi-element standard mix	Ca: 1,100 K:1,100 Na:1,100 Mg:600 Fe:510 Al:260 As:110 B:110 Bi:110 Pb:110 Se:110 Tl:110 Zn:110 Ag:55 Ba:55 Cd:55 Co:55 Cr:55 Cu:55 Mn:55 Ni:55 V:55
IICCV-4 multi-element standard mix	Mo:110 Sb:110 Sn:110 Tl:110
IICSA multi-element standard mix	Al:5,000 Ca:5,000 Mg:5,000 Fe:2,000
IICSB multi-element standard mix	Cd:100 Ni:100 Zn:100 Sb:60 Ba:50 Be:50 Co:50 Cr:50 Cu:50 Mn:50 V:50 Ag:20 As:10 Tl:10 Pb:5 Se:5

Entered By: JCF

Reviewed By: [signature]

Date: 9/15/11

*Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

**High Purity is abbreviated "HP" on reporting forms

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 2 of 3 CompuChem a division of Liberty Analytical Corp. Worksheet 1 P(6) R5

Standard Lot Number*	LIMS ID Number	Preparation instructions	Resultant Analyte Conc. (µg/L)
S0/ICB/CCB- 082012-JCF	2H20001	Place in a 500 mL volumetric flask: 100 mL deionized water, 20 mL concentrated HNO_3, and 100 mL concentrated HCl. Bring up to volume with deionized water. Transfer to a 2L Teflon bottle and add 1.5L deionized water. Final volume 2 L. Prepare as needed.	N/A
RSTD-1- 082012-JCF	2H20002	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL RSTD-1 into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	Cd:2,000 Cr:2,000 Cu:2,000 Pb:2,000 Ni:2,000 Se:2,000 Ag:200 Tl:2,000 Zn:2,000
RSTD-2- 082012-JCF	2H20003	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL each RSTD-2A and RSTD-2B into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	As:2,000 Ba:2,000 Be:2,000 Co:2,000 Fe:50,000 Mn:2,000 Mo:2,000 V:2,000
RSTD-3- 082012-JCF	2H20004	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 2.0 mL each RSTD-3A and RSTD-3B into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	K:100,000 Na:100,000 Al:100,000 Mg:100,000 Ca:100,000
RSTD-4- 082012-JCF	2H20005	In a 200 mL volumetric flask, combine 150 mL deionized water, 2 mL concentrated HNO_3, and 10 mL concentrated HCl. Pipet 0.4 mL RSTD-4 into flask. Bring up to 200 mL volume with deionized water. Prepare as needed.	Sn:2,000 Bi:2,000 Tl:2,000 Sb:2,000 B:2,000
ICV1- 090612-JCF	2I06001	Place in a 500 mL volumetric flask: 300 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 5.0 mL ICCV-3 into flask and 5.0 mL ICCV-4. Bring up to volume with deionized water. Transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Al:2,600 Ba:550 K:11,000 Mg:6,100 Na:11,000 Ca:11,000 Ag:550 Be:550 Cd:550 Co:550 Cr:550 Cu:550 Fe:5,100 Mn:550 Ni:550 Tl:1,100 V:550 Zn:1,100 Pb:1100 Se:1,100 As:1,100 Sb:1,100 Mo:1,100 Sn:1,100 Bi:1,100 Ti:1,100 B:1,100
CCV- 082712-JCF	2H27015	Place in a 500-mL volumetric flask: 300 mL deionized water, 20 mL concentrated HNO_3, and 100 mL concentrated HCl. Add 20 ml of SM-770-40 Soln A and Soln B. Bring up to volume with deionized water. Transfer to a 2000mL Teflon bottle and add 1.5 L of deionized water. Prepare as needed.	Al:50,000 Ba:1,000 K:50,000 Mg:50,000 Na:50,000 Ca:50,000 Ag:100 Be:1,000 Cd:1,000 Co:1,000 Cr:1,000 Cu:1,000 Fe:25,000 Mn:1,000 Ni:1,000 Tl:1,000 V:1,000 Zn:1,100 Pb:1,000 Se:1,000 As:1,000 Mo:1,000 Sn:1,000 Bi:1,000 Ti:1,000 Sb:1,000 B:1,000
LLICV/LLCCV/LRS 6010C- ~~090612~~ 091012-JCF JCF 091412	2I10003	In a 500 mL volumetric flask, combine 200 mL deionized water, 5 mL concentrated HNO_3 and 25 mL concentrated HCl. Pipet 0.5 mL of each LRS 6010C Soln A and Soln B. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Al:200 Ba:200 K:5000 Mg:5000 Na:5000 Ca:5000 Ag:5 Be:5 Cd:5 Co:20 Cr:10 Cu:5 Fe:200 Mn:10 Ni:10 Tl:30 V:20 Zn:30 Pb:10 Se:5 As:10 Mo:50 Sn:50 Bi:20 Ti:50 Sb:30 B:50

Standard Solutions Prepared By: JCF

Entered By: JCF

Reviewed By: WBerry Date: 9/15/12

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

10/17/11: jcf/v

Daily Standards/QC Preparation Log for Trace ICP (P3 & P4) 3 of 3 CompuChem a division of Liberty Analytical Corp. Worksheet 1 P(6) R5

Standard Lot Number*	LIMS ID Number	Preparation instructions	Resultant Analyte Conc. (µg/L)
As- 09/01L-JCF	2I/0004	In a 100 mL volumetric flask, combine 50 mL deionized water, 1 mL concentrated HNO_3, 5 mL concentrated HCl, and 0.1 mL 1000-ppm As standard. Bring to final 100 mL volume	As:1,000
ICSA- 09/01L-JCF	2I/0001	In a 500-mL volumetric flask, combine 350 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 25.0 mL ICSA into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL.	Al:250,000 Ca:250,000 Fe:100,000 Mg:250,000
ICSAB- 09/01L-JCF	2I/0002	In a 500-mL volumetric flask, combine 350 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 25.0 mL ICSA and 5.0 mL ICSB and 0.5 mL of Compuchem SPEX into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL.	Ag:200 Al:250,000 Ba:500 Be:500 Ca:250,000 Cd:1000 Co:500 Cr:500 Cu:50 Fe:100,000 Mg:250,000 Mn:500 Ni:1000 Tl:100 V:500 Zn:1000 Pb:60 Se:50 Sb:600 As:100 Sn:1,000 Bl:1,000 Mo:1,000 Ti:1,000 B:1,000
EPA-CRI- NA	NA	In a 500 mL volumetric flask, combine 300 mL deionized water, 5 mL concentrated HNO_3, and 25 mL concentrated HCl. Pipet 0.50 mL ICP-AES-CRQL-R and 25 µL Compuchem SPEX-R into flask. Bring up to volume with deionized water and transfer to a 500mL Teflon bottle. Final volume 500 mL. Prepare as needed.	Ag:10 Be:5 Cd:5 Co:50 Cr:10 Cu:25 Mn:15 Ni:40 Tl:25 V:50 Zn:60 Pb:10 Se:35 As:10 Sb:60 Sn:50 B:50 Mo:50 Bi:50 Tl:50
P3RINSE- NA	NA	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P4RINSE- 08061L-JCF	2H0600I	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P5RINSE- NA	NA	In a 10 L container, combine 8 L deionized water and 400 mL concentrated HNO_3 Fill with deionized water. Final volume 10 L.	N/A
P3INTSTD- NA	NA	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000
P4INTSTD- 05301L-JCF	2E3000I	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000
P5INTSTD- NA	NA	In a 10 L container, combine 8 L deionized water, 400 mL concentrated HNO_3, and 200 mL Internal Mix. Fill with deionized water. Final volume 10 L.	Li:1,000,000 Y:5,000

Standard Solutions Prepared By: JCF

Entered By: JCF

Reviewed By: URun Date: 9/15/11

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

10/17/11: jcf/v

METHOD: P42012S2 STANDARD: S0 BLANK
RUN TIME: 09/14/12 09:41:58

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
AVGE	.07000	.01893	.00171	-.00755	.03808	.12052	.07620
SDEV	.01735	.00130	.00003	.00019	.00084	.00071	.00052
%RSD	24.785	6.8452	1.4688	2.5792	2.1997	.59233	.68281
#1	.05900	.02042	.00172	-.00740	.03808	.12074	.07628
#2	.09000	.01806	.00168	-.00748	.03892	.11972	.07564
#3	.06100	.01832	.00173	-.00777	.03724	.12109	.07668

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
AVGE	-.00015	.45464	.00034	.01626	-.00068	.00014	.00024
SDEV	.00010	.01847	.00016	.00028	.00074	.00006	.00042
%RSD	62.480	4.0635	47.775	1.7051	108.89	39.201	173.41
#1	-.00016	.44398	.00038	.01656	-.00069	.00019	.00027
#2	-.00005	.47598	.00048	.01619	-.00142	.00008	.00064
#3	-.00024	.44398	.00016	.01602	.00007	.00016	-.00019

ELEM	NI2316	TL1908	V_2924	ZN2062	SB2068	AS1890	22031
AVGE	.00011	-.00304	.00009	.00058	.00343	.00067	-.03294
SDEV	.00061	.00134	.00015	.00011	.00154	.00032	.00841
%RSD	534.91	43.988	170.10	19.491	44.825	48.277	25.518
#1	.00080	-.00405	-.00008	.00067	.00373	.00032	-.03240
#2	-.00008	-.00152	.00021	.00045	.00176	.00096	-.02481
#3	-.00038	-.00355	.00014	.00062	.00479	.00073	-.04160

ELEM	22032	19601	19602	SN1899	BI2230	MO2020	TI3349
AVGE	.00532	-.00105	.00197	-.00017	.00016	-.00004	-.00071
SDEV	.00057	.00270	.00145	.00121	.00104	.00015	.00092
%RSD	10.808	258.37	73.712	696.26	640.94	418.99	129.37
#1	.00598	-.00013	.00086	-.00021	.00126	-.00019	-.00054
#2	.00505	-.00409	.00361	-.00136	-.00080	-.00003	-.00171
#3	.00493	.00108	.00143	.00106	.00003	.00011	.00011

METHOD: P42012S2 STANDARD: S RSTD-1
RUN TIME: 09/14/12 09:49:12

ELEM	AG3280	CD2265	CR2677	CU3247	NI2316	TL1908	ZN2062
AVGE	7.6386	10.483	1.4552	102.26	2.5969	1.1597	1.3063
SDEV	.0286	.014	.0110	.95	.0020	.0026	.0040
%RSD	.37463	.12907	.75814	.92751	.07598	.22139	.30549
#1	7.6536	10.491	1.4678	103.22	2.5960	1.1627	1.3099
#2	7.6566	10.467	1.4504	102.25	2.5992	1.1579	1.3068
#3	7.6056	10.491	1.4473	101.32	2.5956	1.1586	1.3020

ELEM	22031	22032	19601	19602
AVGE	11.106	4.4916	1.6151	3.0184
SDEV	.060	.0195	.0019	.0133
%RSD	.53610	.43311	.11733	.44161
#1	11.167	4.4700	1.6133	3.0041
#2	11.048	4.5077	1.6148	3.0304
#3	11.103	4.4973	1.6171	3.0206

METHOD: P42012S2 STANDARD: S RSTD-3
RUN TIME: 09/14/12 09:56:25

ELEM	AL3082	CA3179	K_7664	MG2790	NA3302
AVGE	8.5076	30.787	47.924	19.516	.49186
SDEV	.0576	.149	.181	.124	.00416
%RSD	.67663	.48459	.37766	.63768	.84615
#1	8.5657	30.948	48.044	19.637	.49561
#2	8.4506	30.654	47.716	19.388	.48738
#3	8.5065	30.760	48.012	19.524	.49260

METHOD: P42012S2 STANDARD: S RSTD-2
RUN TIME: 09/14/12 10:02:06

ELEM	BA4934	BE3130	CO2286	FE2714	MN2576	V_2924	AS1890
AVGE	4.4171	3.0239	1.4884	1.7254	1.3153	.81793	2.4550
SDEV	.0203	.0203	.0117	.0090	.0106	.00958	.0081
%RSD	.45881	.67174	.78382	.52106	.80501	1.1715	.32937
#1	4.4190	3.0304	1.4970	1.7263	1.3199	.81930	2.4564
#2	4.4363	3.0401	1.4931	1.7339	1.3227	.82676	2.4623
#3	4.3959	3.0011	1.4752	1.7160	1.3031	.80774	2.4463

ELEM	MO2020
AVGE	.86885
SDEV	.00427
%RSD	.49124
#1	.86486
#2	.87335
#3	.86835

METHOD: P42012S2 STANDARD: S RSTD-4
RUN TIME: 09/14/12 10:08:33

ELEM	SB2068	SN1899	BI2230	TI3349
AVGE	.95973	2.7055	.64315	8.0414
SDEV	.00484	.0078	.00155	.0463
%RSD	.50451	.28884	.24129	.57626
#1	.95435	2.6979	.64219	8.0653
#2	.96111	2.7051	.64231	7.9880
#3	.96374	2.7135	.64494	8.0710

METHOD: P42012S2 SAMPLE NAME: LLICV OPERATOR:
RUN TIME: 09/14/12 10:14:13
COMMENT: LICV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.628837	156.0626	185.0623	4.697390	4653.675	4.848891	19.73569
SDEV	.848988	3.2382	.7545	.090569	41.986	.135961	.59855
%RSD	23.39559	2.074937	.4076859	1.928073	.9022016	2.803963	3.032834
#1	3.937112	159.4135	184.1977	4.620174	4676.707	4.918343	19.99608
#2	Q2.668781	152.9503	185.5867	4.674914	4605.214	4.692232	19.05105
#3	4.280618	155.8241	185.4026	4.797080	4679.105	4.936100	20.15994
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.814195	3.682089	151.2265	5017.568	4694.335	8.854634	4486.678
SDEV	.221986	.534989	4.0020	19.725	15.492	.187071	126.379
%RSD	2.261884	14.52951	2.646353	.3931128	.3300107	2.112692	2.816764
#1	10.07001	3.865340	155.7660	5029.847	4696.923	8.994336	4535.541
#2	9.700257	Q3.079555	149.7053	4994.816	4677.712	8.642101	4581.332
#3	9.672313	4.101373	148.2081	5028.042	4708.370	8.927465	4343.163
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.332021	28.92028	18.75143	28.03901	9.422810	8.254980	25.23848
SDEV	.515527	2.18020	.40510	.20593	1.641882	1.684661	1.99835
%RSD	5.524279	7.538666	2.160369	.7344585	17.42455	20.40781	7.917857
#1	8.806895	27.16284	18.55498	27.95789	8.239534	9.934153	25.34728
#2	9.351788	28.23797	18.48201	27.88599	8.731609	8.265905	27.18020
#3	9.837380	31.36004	19.21730	28.27315	11.29729	Q6.564884	23.18796
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.701783	10.03985	9.114428	8.734077	8.015470	49.49918	Q17.45918
SDEV	1.503104	2.79120	1.534623	2.021225	2.817777	.66677	1.07267
%RSD	15.49307	27.80126	16.83730	23.14182	35.15424	1.347029	6.143899
#1	9.023773	9.814733	7.452790	9.691352	10.05505	49.57624	Q18.53263
#2	8.657117	7.368018	9.412058	6.412056	9.191121	50.12407	Q17.45763
#3	11.42446	12.93679	10.47843	10.09883	4.800240	48.79723	Q16.38728
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	48.33524	47.09249	37435.60
SDEV	.49825	.58271	72.72
%RSD	1.030825	1.237364	.1942579
#1	47.86474	47.61053	37353.80
#2	48.85724	46.46162	37492.93
#3	48.28375	47.20533	37460.06
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: ICV1 OPERATOR:
RUN TIME: 09/14/12 10:21:26
COMMENT: ICV1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	561.2983	2577.711	547.2485	577.3082	11069.06	571.9274	567.9901
SDEV	3.5021	56.099	1.7914	12.1325	241.73	2.8596	.4440
%RSD	.6239346	2.176310	.3273519	2.101570	2.183867	.4999946	.0781676
#1	561.3951	2535.737	548.9599	569.5510	10870.27	571.6098	568.4263
#2	564.7510	2641.427	545.3865	591.2896	11338.15	574.9326	568.0054
#3	557.7487	2555.970	547.3989	571.0838	10998.75	569.2399	567.5387
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	2600.000	550.0000	550.0000	11000.00	550.0000	550.0000
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	574.7996	562.7692	5190.810	11973.59	5958.486	542.8643	11012.79
SDEV	13.1806	3.8476	49.674	48.57	58.463	6.7146	62.24
%RSD	2.293078	.6836941	.9569517	.4056319	.9811667	1.236877	.5651287
#1	566.5203	560.1121	5175.168	11952.42	5957.508	538.6154	11021.77
#2	589.9990	567.1814	5246.421	12029.15	6017.432	550.6053	11070.05
#3	567.8796	561.0140	5150.839	11939.20	5900.519	539.3722	10946.56
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	550.0000	5100.000	11000.00	6100.000	550.0000	11000.00
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	567.4125	1141.130	566.0055	1105.543	1132.870	1136.139	1104.533
SDEV	2.0257	8.604	22.4877	4.848	7.537	9.919	1.606
%RSD	.3570136	.7539735	3.973058	.4385012	.6653062	.8730739	.1454437
#1	565.8307	1133.313	554.9357	1110.120	1133.971	1147.505	1104.105
#2	569.6957	1150.348	591.8823	1106.046	1139.796	1131.686	1106.310
#3	566.7111	1139.727	551.1985	1100.464	1124.843	1129.228	1103.183
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	550.0000	1100.000	550.0000	1100.000	1100.000	1100.000	1100.000
RANGE	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000	10.40000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1129.467	1128.705	1134.948	1137.580	1135.420	1121.993	Q-3.04685
SDEV	5.852	12.774	5.436	9.366	10.196	5.923	2.50607
%RSD	.5180984	1.131768	.4789737	.8233030	.8979740	.5278727	82.25108
#1	1132.601	1126.563	1137.668	1148.318	1147.099	1120.665	Q-1.08854
#2	1133.085	1142.415	1138.487	1133.319	1130.870	1128.466	Q-5.87105
#3	1122.716	1117.137	1128.689	1131.101	1128.292	1116.846	Q-2.18098
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	1100.000					1100.000	1100.000
RANGE	10.40000					10.40000	10.40000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1127.364	1107.069	37386.64
SDEV	6.213	28.387	68.53
%RSD	.5511410	2.564185	.1832909
#1	1126.048	1082.932	37465.66
#2	1121.915	1138.344	37350.66
#3	1134.130	1099.929	37343.60
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1100.000	1100.000	
RANGE	10.40000	10.40000	

METHOD: P42012S2 SAMPLE NAME: ICB OPERATOR:
RUN TIME: 09/14/12 10:28:40
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.273043	-20.3423	-.291540	-.281880	-7.09515	.5076025	2.579635
SDEV	.220020	2.8673	.083898	.134721	3.47321	.1242344	.674991
%RSD	80.58063	14.09544	28.77758	47.79382	48.95181	24.47475	26.16613
#1	-.343506	-17.1179	-.219699	-.377269	-4.54161	.6436776	3.221341
#2	-.449201	-22.6058	-.271174	-.340607	-11.0501	.4788952	2.641891
#3	-.026424	-21.3032	-.383746	-.127764	-5.69373	.4002347	1.875673
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2472563	-.752888	-6.89515	-293.465	-4.67739	-.390659	-32.6107
SDEV	.1349915	.884933	19.51000	4.050	3.60154	.099909	276.1028
%RSD	54.59577	117.5385	282.9525	1.379927	76.99886	25.57452	846.6631
#1	.3600020	-.700576	-18.5847	-289.614	-3.91857	-.403256	-116.313
#2	.0976686	-1.66282	-17.7284	-297.687	-8.59788	-.483673	-257.177
#3	.2840982	.1047286	15.62763	-293.095	-1.51573	-.285049	275.6580
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.123245	4.330932	.2658982	.0058572	-.355929	-.466049	-3.17344
SDEV	.398128	2.093075	.4469262	.4176905	.854799	1.320739	2.69974
%RSD	323.0384	48.32850	168.0817	7131.277	240.1601	283.3905	85.07291
#1	-.507479	5.617448	.1095782	.3641868	.3842832	-1.97808	-5.12970
#2	-.149711	1.915777	.7699878	-.452888	-1.29150	.4622151	-4.29732
#3	.2874560	5.459571	-.081871	.1062728	-.160574	.1177194	-.093317
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.986799	1.441765	-1.25392	3.822067	-2.60722	-.635264	1.073521
SDEV	1.777915	2.143751	2.18480	.446740	1.86928	1.502402	1.018230
%RSD	180.1700	148.6893	174.2382	11.68845	71.69622	236.5006	94.84960
#1	-2.08122	1.228065	-.037467	3.489552	-4.70813	.8561274	-.078211
#2	-1.94380	3.684362	-3.77618	3.646780	-1.12801	-2.14844	1.444624
#3	1.064627	-.587132	.0518980	4.329868	-1.98552	-.613478	1.854151
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					10.00000	10.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.8321843	.1070730	37013.40
SDEV	1.411162	.3244936	180.97
%RSD	169.5733	303.0583	.4889384
#1	1.591299	.1299573	36846.27
#2	-.796047	-.228257	36988.33
#3	1.701301	.4195186	37205.60
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	10.00000	

METHOD: P42012S2 SAMPLE NAME: ICSA OPERATOR:
RUN TIME: 09/14/12 10:35:53
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.775091	248263.7	.6193466	.0812888	249069.5	.9252923	.0340296
SDEV	.370244	3154.4	.1169535	.2306011	2199.4	.2825198	1.315813
%RSD	47.76785	1.270568	18.88338	283.6812	.8830643	30.53303	3866.666
#1	-.660589	251897.7	.6273394	.1598152	251603.1	1.089399	1.494872
#2	-.475624	246660.5	.7320988	-.178320	247954.5	.5990686	-1.05808
#3	-1.18906	246233.0	.4986017	.2623709	247650.8	1.087409	-.334704
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	250000.0	.0000000	.0000000	250000.0	.0000000	.0000000
RANGE	2.500000	50000.00	100.0000	2.500000	50000.00	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.615189	.3990511	97365.38	-294.727	251014.7	.7224291	-70.0708
SDEV	.107287	.5595393	1453.10	8.536	3552.8	.0943593	152.7935
%RSD	4.102453	140.2175	1.492422	2.896350	1.415394	13.06139	218.0558
#1	2.585093	-.210075	98893.12	-294.754	254866.7	.8094307	-207.729
#2	2.526165	.8901843	96000.67	-286.178	247866.3	.7357324	94.32752
#3	2.734310	.5170439	97202.34	-303.250	250311.0	.6221241	-96.8107
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	100000.0	.0000000	250000.0	.0000000	.0000000
RANGE	5.000000	2.500000	20000.00	2500.000	50000.00	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.42537	12.21262	-.802488	3.229779	.2890037	2.137477	-2.08198
SDEV	.66697	1.03456	.329436	.311404	1.242400	.902821	3.74928
%RSD	46.79264	5.384787	41.05181	9.641644	429.8906	42.23768	180.0825
#1	-2.13996	13.18795	-1.16546	3.085039	-1.09314	2.216683	-2.97475
#2	-1.31678	11.12758	-.719564	3.017087	1.312967	1.197663	-5.30428
#3	-.819356	12.32235	-.522436	3.587210	.6471839	2.998085	2.033102
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-2.09168	-5.18845	3.023290	8.378241	-.978563	-.520139	5.024321
SDEV	1.00307	2.38856	.671372	3.011744	2.628101	2.917698	4.477227
%RSD	47.95530	46.03617	22.20667	35.94720	268.5675	560.9456	89.11109
#1	-2.50424	-7.82491	2.267357	10.70112	-2.01952	1.909548	1.524104
#2	-2.82267	-3.16875	3.550133	9.458179	-2.92673	-3.75623	10.06941
#3	-.948115	-4.57170	3.252380	4.975424	2.010563	.2862611	3.479446
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					25.00000	25.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.288951	-12.6992	36057.64
SDEV	.982049	.2316	464.37
%RSD	339.8664	1.824123	1.287843
#1	-.831848	-12.9552	35543.33
#2	.8446844	-12.5042	36446.13
#3	-.879690	-12.6382	36183.46
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	25.00000	25.00000	

METHOD: P42012S2 SAMPLE NAME: ICSAB OPERATOR:
RUN TIME: 09/14/12 10:43:05
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	194.7769	240486.1	481.4037	497.2664	242126.0	950.1977	475.6960
SDEV	.4304	2281.2	2.7686	2.9236	1595.0	2.9971	4.7282
%RSD	.2209814	.9485903	.5751007	.5879394	.6587580	.3154183	.9939548
#1	195.2702	238377.0	484.5104	495.0546	240590.2	950.0150	470.9925
#2	194.4775	242907.3	479.1975	500.5810	243774.3	947.2961	475.6469
#3	194.5832	240173.9	480.5030	496.1636	242013.3	953.2819	480.4486
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	200.0000	250000.0	500.0000	500.0000	250000.0	1000.000	500.0000
RANGE	40.00000	50000.00	100.0000	100.0000	50000.00	2000.000	100.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	490.5369	478.4904	95082.75	-293.944	243795.6	469.0063	205.5718
SDEV	3.3884	.9998	320.26	9.606	665.4	5.4179	109.4623
%RSD	.6907484	.2089429	.3368239	3.268103	.2729511	1.155178	53.24774
#1	487.0236	478.6511	94747.48	-286.785	243291.6	463.5068	327.5207
#2	493.7847	477.4199	95115.23	-290.186	243545.2	469.1735	173.3781
#3	490.8023	479.4000	95385.53	-304.861	244549.9	474.3387	115.8164
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	500.0000	500.0000	100000.0	.0000000	250000.0	500.0000	.0000000
RANGE	100.0000	100.0000	20000.00	2500.000	50000.00	100.0000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	937.9828	112.3507	480.5694	906.9771	48.75310	46.32787	588.3546
SDEV	3.0543	3.0444	6.9909	.5113	1.41638	4.38393	4.4642
%RSD	.3256215	2.709753	1.454710	.0563785	2.905220	9.462845	.7587670
#1	937.0650	112.6798	474.1587	906.4122	49.73166	44.61803	591.7366
#2	935.4927	115.2173	488.0233	907.4084	49.39870	43.05651	583.2944
#3	941.3908	109.1551	479.5261	907.1107	47.12893	51.30908	590.0326
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	100.0000	500.0000	1000.000	50.00000	50.00000	600.0000
RANGE	200.0000	20.00000	100.0000	200.0000	10.00000	10.00000	120.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	100.8996	46.71239	49.77372	55.96434	41.51653	973.1528	1013.122
SDEV	1.8325	2.61159	2.65301	9.23516	2.86877	2.7695	3.105
%RSD	1.816195	5.590776	5.330147	16.50186	6.909938	.2845868	.3064937
#1	102.3399	48.83124	50.18299	56.36925	38.75088	970.2029	1009.662
#2	98.83695	43.79468	52.19832	46.53339	41.32035	973.5584	1015.665
#3	101.5220	47.51126	46.93986	64.99038	44.47835	975.6971	1014.038
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	100.0000					1000.000	1000.000
RANGE	20.00000					200.0000	200.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	978.9241	971.3677	35937.91
SDEV	10.9801	6.4915	111.19
%RSD	1.121650	.6682872	.3094057
#1	983.9979	968.5084	36062.86
#2	966.3246	978.7980	35849.86
#3	986.4497	966.7967	35901.00
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	200.0000	200.0000	

METHOD: P42012S2 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 09/14/12 10:50:18
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.263002	169.8631	185.2180	4.672201	4679.595	5.045783	20.21014
SDEV	.515316	2.3648	1.8999	.163958	84.507	.111701	.35937
%RSD	12.08810	1.392164	1.025790	3.509228	1.805860	2.213753	1.778150
#1	4.624125	168.5960	187.1497	4.709574	4606.013	5.076908	20.54649
#2	4.492007	168.4019	185.1529	4.814246	4660.882	4.921820	19.83150
#3	3.672876	172.5914	183.3515	4.492783	4771.890	5.138620	20.25241
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.705246	3.675587	151.8452	5082.541	4704.980	8.946030	4656.395
SDEV	.332595	.536459	8.9735	39.275	51.486	.125930	64.571
%RSD	3.426959	14.59518	5.909667	.7727463	1.094289	1.407666	1.386727
#1	9.643311	Q3.099125	141.7802	5059.365	4655.602	8.813846	4596.406
#2	9.407971	3.767461	159.0099	5060.369	4700.997	8.959642	4648.042
#3	10.06445	4.160176	154.7456	5127.888	4758.343	9.064600	4724.736
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.634194	30.12048	18.85129	28.38778	10.40469	10.56273	24.90032
SDEV	1.089291	1.54271	.48734	.41833	.26560	2.91887	.63097
%RSD	11.30651	5.121802	2.585156	1.473642	2.552687	27.63368	2.533968
#1	8.928423	28.46564	18.32457	28.25448	10.51922	Q13.49288	24.22568
#2	10.88873	30.37687	19.28617	28.05234	10.59381	7.655276	25.47588
#3	9.085432	31.51894	18.94311	28.85652	10.10104	10.54002	24.99941
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.09572	14.13870	8.540129	9.708933	10.98866	48.20319	Q20.61140
SDEV	1.64503	2.64544	1.037234	2.853871	3.32888	.16998	2.26256
%RSD	16.29432	18.71065	12.14541	29.39428	30.29379	.3526407	10.97721
#1	11.96552	13.28499	9.138041	11.07380	14.70029	48.15223	Q18.48495
#2	8.870970	17.10559	7.342434	6.428917	8.267214	48.06452	Q22.98909
#3	9.450677	12.02553	9.139910	11.62408	9.998476	48.39283	Q20.36015
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	48.96944	47.88553	37284.20
SDEV	.81252	.66466	49.42
%RSD	1.659243	1.388016	.1325580
#1	49.88337	47.26637	37282.46
#2	48.69619	47.80235	37334.46
#3	48.32877	48.58786	37235.66
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

ANALYSIS REPORT QC STANDARD 09/14/12 11:04:42 AM PAGE 1

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 09/14/12 10:57:32
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	96.88642	47874.27	973.6353	1006.476	48259.60	989.2125	986.0176
SDEV	.30853	714.90	8.2770	9.593	463.34	7.6734	9.9748
%RSD	.3184459	1.493296	.8501092	.9531532	.9601011	.7757060	1.011623
#1	96.94808	48430.48	983.1674	1010.222	48517.56	998.0110	996.2848
#2	96.55172	48124.43	968.2671	1013.631	48536.56	985.7196	985.4044
#3	97.15947	47067.90	969.4715	995.5751	47724.69	983.9070	976.3635
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	998.7101	971.3114	24247.04	51091.91	48120.67	945.9389	49021.26
SDEV	15.5963	5.6686	224.02	355.00	411.37	8.0382	357.50
%RSD	1.561642	.5835984	.9238992	.6948358	.8548640	.8497611	.7292675
#1	1010.531	976.8947	24493.77	51501.76	48558.99	953.9534	49372.34
#2	1004.566	965.5613	24190.95	50880.23	48060.02	945.9860	49033.77
#3	981.0334	971.4782	24056.40	50893.73	47742.99	937.8772	48657.68
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	987.3721	1002.141	969.1744	1052.113	990.3136	997.2190	994.6798
SDEV	6.3320	9.290	18.6671	6.950	11.0597	3.7875	3.5574
%RSD	.6412945	.9270064	1.926078	.6606156	1.116784	.3798092	.3576446
#1	994.3334	1012.868	978.8784	1059.920	1002.254	999.3982	997.9803
#2	985.8276	996.7156	980.9908	1049.823	988.2651	999.4131	995.1473
#3	981.9552	996.8400	947.6541	1046.597	980.4215	992.8455	990.9117
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1007.715	980.6848	995.1207	997.7481	996.9545	973.0947	991.6126
SDEV	4.915	16.6202	8.2837	7.5467	5.1316	3.7311	4.4256
%RSD	.4877059	1.694751	.8324284	.7563699	.5147321	.3834290	.4462986
#1	1013.172	998.6479	1004.055	1006.458	995.8735	977.2957	996.4840
#2	1006.335	977.5534	993.6127	993.1485	1002.540	970.1664	987.8400
#3	1003.637	965.8530	987.6945	993.6381	992.4494	971.8221	990.5137
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	980.9211	965.7203	36644.15
SDEV	5.8873	9.0193	229.71
%RSD	.6001808	.9339471	.6268641
#1	979.0341	963.4153	36404.33
#2	976.2087	975.6684	36665.93
#3	987.5206	958.0771	36862.20
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 09/14/12 11:04:45
COMMENT: SDG: CLIENTID: 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.713436	-13.7624	-.375451	-.182156	-15.7248	.2004487	1.872797
SDEV	1.275741	4.2207	.102553	.146866	.9418	.0712648	.205186
%RSD	178.8165	30.66832	27.31458	80.62641	5.989416	35.55265	10.95613
#1	-2.06104	-9.44552	-.343812	-.351284	-14.8001	.2792800	1.865245
#2	-.554895	-13.9619	-.292447	-.086793	-15.6914	.1814756	2.081655
#3	.4756244	-17.8799	-.490096	-.108392	-16.6828	.1405906	1.671491
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.238895	-1.80071	-13.9447	-301.311	-4.44128	-.430773	-47.1133
SDEV	.392478	.68036	10.8413	9.926	3.37563	.151526	200.3502
%RSD	164.2887	37.78306	77.74500	3.294428	76.00575	35.17532	425.2517
#1	.1346324	-1.01543	-2.51072	-307.786	-5.04880	-.363955	-63.1132
#2	-.203406	-2.21321	-24.0755	-289.883	-.803143	-.604223	160.7571
#3	-.647912	-2.17350	-15.2478	-306.264	-7.47189	-.324141	-238.984
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.109182	4.877849	-.067699	-.588167	.5880647	-.567944	-6.85280
SDEV	.780192	1.455314	.989228	.204810	.6660157	1.278525	3.32457
%RSD	714.5819	29.83515	1461.218	34.82168	113.2555	225.1148	48.51408
#1	.7090730	3.688869	-1.07773	-.372170	.5272657	-1.63159	-3.89415
#2	-.844721	4.443901	-.024699	-.612764	1.282395	.8505110	-6.21374
#3	-.191897	6.500776	.8993277	-.779568	-.045467	-.922747	-10.4505
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	15.00000	10.00000	15.00000	5.000000	5.000000	15.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2046688	7.239388	-2.73310	6.265786	-3.98001	-.327761	-.052053
SDEV	.7441612	4.885579	3.04323	6.058225	1.65709	1.766035	.950346
%RSD	363.5929	67.48607	111.3471	96.68739	41.63533	538.8174	1825.746
#1	.9614893	2.503230	-.459725	-.514413	-2.18967	1.638405	-1.09591
#2	-.526152	6.953136	-1.54922	11.14711	-4.29040	-.842312	.1767396
#3	.1786689	12.26180	-6.19036	8.164658	-5.45996	-1.77938	.7630130
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	5.000000					10.00000	10.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.3956473	-.031781	36985.13
SDEV	.4391522	.395808	129.12
%RSD	110.9959	1245.407	.3491168
#1	.5825647	.4010484	37000.86
#2	.7104176	-.121084	36848.86
#3	-.106041	-.375308	37105.66
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	10.00000	

METHOD: P42012S2 SAMPLE NAME: LRS DOD OPERATOR:
RUN TIME: 09/14/12 11:22:34
COMMENT: LRS
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.042806	177.8174	184.6802	4.604065	4694.905	5.076060	20.15527
SDEV	.355493	8.6475	1.4262	.099368	25.007	.309672	1.36629
%RSD	8.793219	4.863111	.7722536	2.158264	.5326321	6.100632	6.778822
#1	Q3.752147	187.6315	185.9616	4.593859	4676.020	5.352200	21.52726
#2	4.439160	171.3161	184.9355	4.510194	4685.429	5.134730	20.14381
#3	Q3.937112	174.5047	183.1437	4.708142	4723.264	4.741250	18.79475
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.000000	40.00000	40.00000	1.000000	1000.000	1.000000	4.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.957692	4.507127	162.0362	5116.935	4732.165	9.119060	4636.322
SDEV	.154589	.434635	9.9838	26.347	32.153	.144735	157.145
%RSD	1.552454	9.643277	6.161471	.5148892	.6794578	1.587176	3.389432
#1	9.786309	4.454870	171.2376	5141.973	4769.077	9.276201	4495.811
#2	10.00016	4.100984	163.4503	5119.381	4710.254	8.991212	4806.011
#3	10.08661	4.965528	Q151.4208	5089.451	4717.163	9.089765	4607.143
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	2.000000	1.000000	40.00000	1000.000	1000.000	2.000000	1000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.778756	30.01500	18.74902	28.65091	10.98772	8.881954	Q23.60660
SDEV	.130698	4.85543	.33270	.36165	1.16948	2.445774	2.77227
%RSD	1.336554	16.17668	1.774485	1.262248	10.64348	27.53645	11.74363
#1	9.737119	34.49856	19.02126	29.06664	Q12.21182	11.56092	26.75548
#2	9.925201	24.85800	18.37816	28.47721	10.86949	8.316542	Q21.53325
#3	9.673949	30.68846	18.84765	28.40889	9.881849	Q6.768403	Q22.53108
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	2.000000	6.000000	4.000000	6.000000	2.000000	2.000000	6.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.279455	11.61280	10.67529	8.272373	9.185962	46.87122	Q19.59246
SDEV	.353259	1.39416	1.22375	3.007240	2.541254	1.36424	2.93029
%RSD	4.266697	12.00536	11.46338	36.35281	27.66454	2.910608	14.95621
#1	8.684858	13.20919	11.71354	11.63458	11.52381	45.40660	Q22.27389
#2	8.037658	10.63483	10.98627	5.839494	9.552885	48.10583	Q20.03894
#3	8.115850	10.99437	9.326054	7.343045	6.481191	47.10123	Q16.46456
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	2.000000					10.00000	10.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	48.81189	47.76894	36975.02
SDEV	.76002	.25944	359.11
%RSD	1.557036	.5431113	.9712120
#1	48.36626	47.55801	36583.33
#2	49.68944	47.69019	37053.00
#3	48.37996	48.05863	37288.73
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	10.00000	10.00000	

METHOD: P42012S2 SAMPLE NAME: 2091043-BLK6 OPERATOR:
RUN TIME: 09/14/12 11:32:35
COMMENT: SDG:1208134 CLIENTID:PBW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.096886	32.39216	-.245984	-.177136	5.242192	.2135992	1.290061
SDEV	.447124	62.86272	.095899	.128150	4.787130	.3205579	.534484
%RSD	461.4929	194.0677	38.98588	72.34570	91.31925	150.0745	41.43095
#1	.3963537	-23.5267	-.251000	-.191959	5.521026	.1595249	1.141109
#2	-.211389	100.4331	-.147675	-.042219	.3217385	.5577552	1.883221
#3	-.475624	20.27007	-.339277	-.297229	9.883810	-.076482	.8458520
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1842739	-.523822	-6.42546	-288.868	.3030925	-.294411	128.8661
SDEV	.2274405	.274995	7.92855	6.457	1.776933	.062471	42.6238
%RSD	123.4252	52.49779	123.3928	2.235416	586.2675	21.21896	33.07608
#1	-.054826	-.641674	-8.80337	-285.570	-.055205	-.362081	132.4410
#2	.2097365	-.720249	-12.8929	-284.726	2.231872	-.238938	169.5898
#3	.3979116	-.209542	2.419940	-296.309	-1.26739	-.282214	84.56731
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.221173	2.072337	.0260599	.9762965	1.833813	-1.70178	-2.64389
SDEV	.322414	1.717662	.0375256	.2396934	.610444	2.40320	3.01913
%RSD	145.7743	82.88525	143.9975	24.55129	33.28822	141.2170	114.1928
#1	-.511406	3.812556	.0474041	.7014618	1.405564	-2.91842	-5.80060
#2	.1258699	.3781577	.0480450	1.085388	1.563072	-3.25336	-2.34676
#3	-.277984	2.026298	-.017269	1.142040	2.532801	1.066451	.2156906
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.077838	4.779088	.3628876	-4.15916	-.475258	-.059910	-1.89840
SDEV	1.091949	1.426045	.8819609	7.51814	.489295	1.386163	1.41669
%RSD	1402.849	29.83928	243.0397	180.7610	102.9535	2313.732	74.62554
#1	-.838515	3.166292	.5260252	-8.92066	.0778620	1.430549	-.759925
#2	-.568350	5.873188	-.589253	-8.06478	-.851582	-.299820	-1.45033
#3	1.173351	5.297784	1.151890	4.507963	-.652053	-1.31046	-3.48494
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.4193099	.2709050	36590.40
SDEV	.3707731	.3254787	192.45
%RSD	88.42459	120.1450	.5259653
#1	.8410065	-.103021	36618.27
#2	.2725061	.4251422	36385.53
#3	.1444172	.4905936	36767.40
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091043-BLK2 OPERATOR:
RUN TIME: 09/14/12 11:39:48
COMMENT: SDG:1208134 CLIENTID:TCLPBLKAJ 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.044039	100.5384	4.686523	-.100509	21.70188	.6978117	4.026614
SDEV	.473663	2.8571	.034378	.118008	4.15057	.1227607	.676493
%RSD	1075.549	2.841831	.7335512	117.4111	19.12539	17.59224	16.80054
#1	.5020480	101.5300	4.676867	-.189533	25.66604	.7753505	4.075992
#2	-.290659	97.31757	4.724697	.0333453	22.05245	.5562757	3.326785
#3	-.343506	102.7676	4.658006	-.145338	17.38714	.7618090	4.677065
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.502222	.2620005	5.916493	164.7412	1.606213	.1668572	H1233650.
SDEV	.342616	.3087305	4.586600	4.8039	1.819910	.1046524	4352.
%RSD	22.80729	117.8358	77.52228	2.916032	113.3044	62.71974	.3527721
#1	1.629328	.2031449	11.18603	170.1448	3.703339	.0668854	H1231892.
#2	1.114217	.5959222	2.822475	160.9539	.6743526	.2756338	H1230452.
#3	1.763120	-.013066	3.740977	163.1250	.4409476	.1580523	H1238606.
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.150588	-1.94019	.1796584	1.466150	1.250868	6.204145	-5.14095
SDEV	.582637	1.17695	.1452735	.148434	.921748	.311664	2.41990
%RSD	386.9086	60.66182	80.86095	10.12408	73.68866	5.023482	47.07116
#1	-.638947	-.803644	.3430617	1.558761	.1902727	6.404807	-7.92440
#2	-.307152	-1.86315	.1308038	1.294944	1.858446	5.845095	-3.53655
#3	.4943350	-3.15376	.0651098	1.544744	1.703886	6.362533	-3.96189
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	6.608422	3.718927	.0181720	1.606002	8.499425	7.761435	1.876089
SDEV	2.326931	1.566313	.7887178	.963151	.446513	2.432099	1.746363
%RSD	35.21160	42.11734	4340.296	59.97194	5.253449	31.33569	93.08531
#1	7.432612	2.207650	-.817420	2.718152	8.245028	9.662564	3.512805
#2	3.981572	5.335012	.1222553	1.050914	8.238248	5.020790	2.077857
#3	8.411082	3.614119	.7496804	1.048940	9.014998	8.600949	.0376058
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.316607	1.064194	35015.95
SDEV	.245266	.048800	233.55
%RSD	18.62862	4.585652	.6669927
#1	1.138071	1.061773	35101.93
#2	1.596267	1.016649	35194.33
#3	1.215483	1.114159	34751.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091043-BLK5 OPERATOR:
RUN TIME: 09/14/12 11:47:01
COMMENT: SDG:1209031 CLIENTID:TCLPBLKBZ 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.405161	-6.87874	-.198307	-.079334	3.645282	.4249232	2.929659
SDEV	.570610	5.61027	.163921	.132657	9.324655	.0927839	.580297
%RSD	140.8354	81.55959	82.66033	167.2138	255.8006	21.83545	19.80768
#1	-1.00410	-.586801	-.341951	.0660808	-6.17268	.5099516	2.905340
#2	.1321179	-8.68912	-.019738	-.110341	4.726090	.4388578	3.521733
#3	-.343506	-11.3603	-.233231	-.193741	12.38244	.3259601	2.361903
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.126249	-1.67635	19.08514	-292.962	-2.95178	-.192649	175.1974
SDEV	.474263	.90356	13.69282	14.040	4.61585	.041117	112.1881
%RSD	375.6567	53.90071	71.74601	4.792467	156.3752	21.34316	64.03526
#1	-.643988	-2.64581	6.800840	-304.682	-7.30270	-.233463	45.86300
#2	.2871705	-.857654	33.84793	-277.401	1.889801	-.151234	246.2389
#3	-.021930	-1.52558	16.60664	-296.802	-3.44244	-.193251	233.4902
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.59880	1.951893	-.167811	.8051494	1.067972	-.771480	-1.17659
SDEV	.39292	2.788309	.695731	.2842927	.124029	3.447897	5.45190
%RSD	24.57589	142.8516	414.5924	35.30931	11.61353	446.9198	463.3637
#1	-2.04374	3.825538	-.970044	.5857760	.9248131	.2932280	-4.02280
#2	-1.45315	3.282614	.2701524	1.126328	1.143074	-4.62615	5.109382
#3	-1.29950	-1.25247	.1964594	.7033443	1.136029	2.018483	-4.61636
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.944603	5.091205	-.941135	-4.50207	1.090679	-.956082	-1.43718
SDEV	2.610178	1.630719	.677425	7.62372	1.453506	1.672873	1.48050
%RSD	276.3255	32.03012	71.97958	169.3382	133.2661	174.9718	103.0137
#1	-1.97611	3.575673	-.399137	-3.12646	2.000170	-2.29404	-1.82035
#2	2.023706	4.881181	-.723684	-12.7199	-.585663	.9195060	.1972300
#3	-2.88140	6.816761	-1.70058	2.340194	1.857532	-1.49371	-2.68843
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.1898078	.0233050	35762.75
SDEV	.3794936	.4292413	82.51
%RSD	199.9358	1841.845	.2307153
#1	.3412785	-.439453	35675.46
#2	.4701732	.4084346	35773.33
#3	-.242028	.1009334	35839.46
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091043-BS1 OPERATOR:
RUN TIME: 09/14/12 11:54:14
COMMENT: SDG:1208134 CLIENTID:LCSW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2671.427	100.5410	49714.37	-.057622	1326.751	523.0385	14.63534
SDEV	.905	3.7491	300.18	.169117	3.806	1.1273	.15366
%RSD	.0326702	3.728974	.5918980	293.4916	.2868443	.2155249	1.049940
#1	2670.432	96.24094	49875.82	-.205297	1322.359	522.2804	14.77869
#2	2671.648	103.1249	49368.02	-.094441	1328.819	522.5012	14.47311
#3	2672.202	102.2571	49899.27	.1268708	1329.074	524.3339	14.65423
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2687.927	-.480484	19.14343	-287.635	35.95599	.2499156	640.6155
SDEV	19.713	.510738	3.37190	3.538	2.22718	.0232493	135.7845
%RSD	.7333930	106.2966	17.61389	1.230102	6.194173	9.302854	21.19595
#1	2672.007	-.467318	15.74616	-283.553	37.86861	.2615564	746.0040
#2	2681.798	.0235443	19.19476	-289.546	33.51081	.2231453	688.4568
#3	2709.977	-.997678	22.48938	-289.808	36.48854	.2650450	487.3858
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.179959	-3.69594	-5.35521	10.84826	2620.722	499.2690	-1.46877
SDEV	.489622	1.04745	.30372	.14389	8.932	3.0562	5.34708
%RSD	22.46016	28.34059	5.671553	1.326387	.3408335	.6121346	364.0528
#1	2.195437	-3.56993	-5.20460	10.83252	2610.731	495.8290	2.761223
#2	2.661659	-4.80069	-5.70481	10.71289	2627.935	500.3074	-7.47884
#3	1.682781	-2.71719	-5.15623	10.99937	2623.501	501.6708	.3113251
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2605.932	2588.388	2636.864	490.9070	503.4434	-.096924	2.892001
SDEV	5.335	17.638	12.641	2.7079	5.3748	1.941276	.373302
%RSD	.2047133	.6814430	.4793951	.5516129	1.067616	2002.882	12.90808
#1	2605.302	2584.873	2623.639	493.0077	497.2371	1.662758	2.473231
#2	2600.940	2607.519	2638.127	487.8509	506.5259	.2258121	3.012910
#3	2611.553	2572.771	2648.827	491.8626	506.5672	-2.17934	3.189862
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.525236	8.613505	35683.33
SDEV	.263602	.264676	87.12
%RSD	50.18738	3.072805	.2441547
#1	-.372113	8.463344	35783.80
#2	-.373979	8.919112	35637.60
#3	-.829616	8.458061	35628.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091043-BSD2 OPERATOR:
RUN TIME: 09/14/12 12:01:26
COMMENT: SDG:1208134 CLIENTID:LCSWD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2622.707	98.97120	49902.46	-.217714	1322.901	523.5413	16.75506
SDEV	2.863	6.64269	455.52	.355894	17.224	1.1834	.54841
%RSD	.1014311	6.711744	.8948858	163.4685	1.302010	.2260365	3.273104
#1	2625.340	99.95376	H50427.29	.1624706	1323.985	523.2938	17.14054
#2	2619.659	105.0679	49609.83	-.272695	1305.161	524.8289	16.12723
#3	2623.121	91.89195	49670.27	-.542919	1339.559	522.5012	16.99743
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2647.911	-1.29927	8.445708	-287.438	34.32158	.1455361	688.3655
SDEV	6.001	.38336	6.530149	25.140	5.40352	.0424568	186.0338
%RSD	.2266307	29.50557	77.31913	8.746320	15.74379	29.17267	27.02544
#1	2641.487	-.860288	12.57798	-264.639	39.08451	.1877304	860.5866
#2	2648.874	-1.46941	11.84181	-283.275	35.43066	.1460561	713.4462
#3	2653.373	-1.56810	.9173307	-314.400	28.44957	.1028217	491.0637
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.159100	-6.37801	-5.98363	10.56680	2609.472	487.8515	-2.11395
SDEV	.991941	2.73427	.71698	.06702	7.011	3.2385	2.30439
%RSD	45.94234	42.87024	11.98228	.6342195	.2686660	.6638370	109.0089
#1	1.018422	-3.94709	-5.40766	10.49158	2612.458	488.3001	-4.02525
#2	2.819371	-9.33823	-5.75659	10.58867	2614.495	490.8424	.4449520
#3	2.639505	-5.84870	-6.78664	10.62015	2601.462	484.4121	-2.76154
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2607.367	2590.164	2619.111	480.7038	491.4197	.2773992	3.103500
SDEV	16.740	11.948	16.340	7.5342	1.1159	1.810082	6.958246
%RSD	.6420267	.4612801	.6238921	1.567329	.2270799	652.5188	224.2064
#1	2621.873	2588.638	2624.349	481.3008	491.7942	1.872541	10.84553
#2	2611.179	2579.052	2632.189	487.9217	492.3001	.6494591	1.093355
#3	2589.050	2602.802	2600.793	472.8888	490.1647	-1.68980	-2.62839
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.246219	8.281337	35344.86
SDEV	.625093	.067390	32.44
%RSD	253.8771	.8137612	.0917790
#1	.1469871	8.285704	35333.46
#2	.0813758	8.346438	35319.66
#3	-.967019	8.211869	35381.46
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1208134-01 OPERATOR:
RUN TIME: 09/14/12 12:10:42
COMMENT: SDG:1208134 CLIENTID:FAY-X-WFN 1:100
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.713436	5010.039	.2908212	-.338279	-8.28083	.8154063	5.525594
SDEV	.436589	15.250	.1854808	.093123	1.23126	.3185131	.293969
%RSD	61.19524	.3043949	63.77828	27.52853	14.86878	39.06189	5.320129
#1	-.422777	5027.513	.4970716	-.441155	-9.41939	1.099344	5.656873
#2	-1.21548	4999.418	.2376833	-.313938	-8.44896	.8758851	5.731050
#3	-.502048	5003.184	.1377089	-.259744	-6.97415	.4709896	5.188861
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.499395	-2.61253	-4.59749	3083.127	-6.49313	-.385670	17851.08
SDEV	1.964098	3.26172	46.84977	13.504	12.69133	.297050	193.99
%RSD	393.2953	124.8490	1019.029	.4380080	195.4577	77.02189	1.086732
#1	.5565378	-.818242	24.45605	3098.651	2.940254	-.194029	17960.09
#2	.7108661	-.641890	20.39560	3074.095	-1.49756	-.235128	17966.04
#3	-2.76559	-6.37747	-58.6441	3076.634	-20.9221	-.727852	17627.10
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.545271	-.126951	.1875561	.2345333	.1144627	.6790048	-1.02079
SDEV	1.699846	1.453003	.5254421	.0776625	.7120378	2.269696	.85512
%RSD	311.7433	1144.540	280.1520	33.11362	622.0699	334.2680	83.77063
#1	.7128849	1.465809	.5379444	.3234720	.2593159	2.792321	-.247629
#2	.1303575	-.466654	-.416602	.2000086	.7429362	.9647117	-1.93925
#3	-2.47906	-1.38001	.4413262	.1801194	-.658864	-1.72002	-.875485
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4599823	-.037543	.1898486	2.094608	-.028071	-.438598	-1.40962
SDEV	2.154597	1.682037	.3963695	2.299249	2.423831	.555943	2.11580
%RSD	468.4085	4480.327	208.7819	109.7699	8634.678	126.7545	150.0972
#1	-1.70756	-.360802	.5684059	3.330747	2.523175	-.218642	-1.81104
#2	.4861034	1.782664	.2233469	3.511365	-.307042	-1.07087	-3.29595
#3	2.601400	-1.53449	-.222207	-.558287	-2.30034	-.026286	.8781368
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.928665	.2438059	36038.73
SDEV	.712142	1.932620	213.88
%RSD	76.68449	792.6881	.5934616
#1	-1.66057	1.390212	35933.20
#2	-.887340	1.328715	35898.13
#3	-.238085	-1.98751	36284.86
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1208134-01 OPERATOR:
RUN TIME: 09/14/12 12:17:54
COMMENT: SDG:1208134 CLIENTID:FAY-X-WFNL 1:500
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.810323	958.3130	-.335457	-.265683	-10.1489	.9331801	5.487173
SDEV	.159274	9.6922	.037774	.195656	2.9904	.2489223	1.230822
%RSD	19.65560	1.011383	11.26052	73.64262	29.46574	26.67462	22.43089
#1	-.792707	964.2612	-.325206	-.325059	-11.5317	.8499492	5.206694
#2	-.977672	947.1290	-.377299	-.047217	-12.1976	.7365378	4.420797
#3	-.660589	963.5489	-.303866	-.424773	-6.71728	1.213053	6.834028
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0198485	-1.38177	-8.84582	367.6289	-4.89121	-.358934	3405.628
SDEV	.4813912	.36968	6.01853	7.4807	1.14107	.083547	79.053
%RSD	2425.327	26.75395	68.03810	2.034846	23.32893	23.27631	2.321259
#1	-.020533	-1.62399	-15.6366	368.7061	-6.17465	-.441786	3394.846
#2	-.440080	-1.56506	-4.17128	359.6681	-3.99137	-.360307	3489.519
#3	.5201585	-.956259	-6.72953	374.5126	-4.50762	-.274710	3332.519
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.601431	.2192455	-.334224	-.512389	.3404044	-1.47659	-2.87912
SDEV	.343378	3.907673	.197632	.006989	.6749318	.22145	1.72692
%RSD	57.09351	1782.327	59.13151	1.364059	198.2735	14.99720	59.98096
#1	-.945467	-2.87491	-.221638	-.514563	.7333805	-1.23101	-1.50441
#2	-.600112	-1.07790	-.218611	-.518032	.7267630	-1.66107	-4.81743
#3	-.258714	4.610539	-.562423	-.504571	-.438930	-1.53771	-2.31551
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2098753	2.421505	-.699089	-.982996	-1.72336	-2.24164	2.757742
SDEV	1.127276	1.445384	.378716	3.247466	1.63376	.93428	2.772215
%RSD	537.1169	59.68951	54.17279	330.3640	94.80108	41.67827	100.5248
#1	-.933790	2.822914	-.310322	.2922807	-1.99185	-2.96948	-.069112
#2	.2434022	3.623757	-.720063	1.433262	-3.20625	-2.56733	2.870459
#3	1.320014	.8178428	-1.06688	-4.67453	.0280166	-1.18811	5.471880
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.042252	.0058040	35980.48
SDEV	1.010200	.1638396	291.36
%RSD	2390.921	2822.877	.8097845
#1	-.689747	-.148383	36074.73
#2	-.558781	.1778354	36213.06
#3	1.121774	-.012041	35653.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209031-01 OPERATOR:
RUN TIME: 09/14/12 12:25:07
COMMENT: SDG:1209031 CLIENTID:IDW-BL-0905 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.625358	588.5103	11.93991	-.386942	305.7932	1.720511	9.671354
SDEV	.740960	3.5980	.21380	.085187	10.9542	.684392	3.285968
%RSD	118.4858	.6113806	1.790602	22.01546	3.582215	39.77840	33.97630
#1	-.158541	584.3637	11.95906	-.427293	304.8416	.9505783	5.921077
#2	-.237812	590.8077	12.14349	-.444457	317.1922	1.951221	11.04734
#3	-1.47972	590.3594	11.71719	-.289077	295.3459	2.259733	12.04565
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.254149	.0788633	4524.627	-203.057	39.50607	17.48848	14428.93
SDEV	.518013	.7817903	21.388	23.249	2.24039	.16868	337.50
%RSD	41.30395	991.3231	.4727096	11.44938	5.671004	.9645183	2.339031
#1	1.806208	.9494768	4514.133	-207.235	37.60187	17.35112	14572.98
#2	1.177522	-.149755	4510.513	-178.003	41.97470	17.67675	14670.50
#3	.7787179	-.563132	4549.236	-223.934	38.94164	17.43756	14043.31
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.476127	1.003755	1.018482	25.73737	1.518066	-3.76076	-5.01971
SDEV	.376542	3.168765	.946677	.10118	1.014545	2.60413	.95912
%RSD	25.50882	315.6911	92.94979	.3931357	66.83143	69.24475	19.10709
#1	1.867426	4.605173	1.249548	25.68594	2.254621	-4.08564	-3.96929
#2	1.444636	-1.35679	1.828233	25.67224	1.938723	-1.00943	-5.84886
#3	1.116318	-.237119	-.022337	25.85394	.3608543	-6.18720	-5.24097
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.838934	2.713163	.9210648	-3.46387	-3.90933	-.440562	-.916570
SDEV	.829549	1.038790	1.003291	8.17731	2.50462	1.542653	2.588704
%RSD	98.88135	38.28705	108.9273	236.0740	64.06785	350.1556	282.4337
#1	-.302430	3.423327	1.670803	1.294820	-6.77218	-.316075	-2.08966
#2	-.419963	3.195239	1.311056	1.219673	-2.12267	1.036075	2.051000
#3	-1.79441	1.520922	-.218665	-12.9061	-2.83314	-2.04169	-2.71105
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.7959157	15.81388	34653.18
SDEV	.6292718	.22633	783.43
%RSD	79.06261	1.431192	2.260785
#1	.6031215	16.03677	35542.53
#2	1.499030	15.82060	34351.86
#3	.2855957	15.58427	34065.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1209031-01 OPERATOR:
RUN TIME: 09/14/12 12:32:20
COMMENT: SDG:1209031 CLIENTID:IDW-BL-0905 1:25
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.986480	113.8031	2.141056	-.131070	53.61640	1.036336	6.004498
SDEV	.373997	2.2544	.140135	.102052	1.65984	.201242	.677629
%RSD	37.91228	1.980930	6.545139	77.86081	3.095765	19.41863	11.28535
#1	-.554895	113.7009	2.136662	-.016864	55.53088	.8086426	5.595285
#2	-1.18906	111.6016	2.003171	-.213321	52.73748	1.109994	5.631533
#3	-1.21548	116.1068	2.283338	-.163025	52.58084	1.190372	6.786676
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0153246	-.635266	921.2157	-278.791	4.783552	3.403653	2866.227
SDEV	.6130147	.500762	7.5791	10.738	2.907279	.131862	125.975
%RSD	4000.202	78.82707	.8227243	3.851650	60.77658	3.874127	4.395143
#1	-.297098	-.386381	913.8669	-276.378	5.181076	3.480547	2895.673
#2	-.378538	-1.21171	920.7745	-290.530	1.697966	3.251395	2728.137
#3	.7216096	-.307708	929.0057	-269.465	7.471613	3.479017	2974.871
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0329276	2.202390	-.251155	4.750077	.4340016	-.419180	-3.59450
SDEV	.7648421	3.052244	.433620	.131330	.4671251	3.954882	4.06679
%RSD	2322.802	138.5878	172.6506	2.764794	107.6321	943.4796	113.1392
#1	-.363166	-.819518	-.114074	4.901483	.9642751	.7711155	-1.70461
#2	-.452631	2.142595	-.736748	4.681775	.2543825	-4.83251	-8.26234
#3	.9145794	5.284092	.0973575	4.666973	.0833471	2.803851	-.816537
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.746053	2.541669	-.618765	-.381811	-.438179	-.813490	.0602728
SDEV	3.443541	2.098713	.388958	7.985661	2.114861	1.047337	.8878810
%RSD	461.5679	82.57223	62.86031	2091.521	482.6474	128.7462	1473.103
#1	-3.23742	4.784387	-.943427	3.511522	-.597375	-.732850	-.856236
#2	-2.18417	2.215457	-.725198	-9.56742	-2.46894	-1.89882	.9164492
#3	3.183432	.6251632	-.187670	4.910461	1.751781	.1911968	.1206048
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.2334380	3.130036	35320.24
SDEV	.3297693	.121547	177.78
%RSD	141.2663	3.883232	.5033284
#1	.5384385	3.048328	35505.06
#2	.2783682	3.072064	35305.20
#3	-.116493	3.269715	35150.46
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 09/14/12 12:39:33
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	93.32805	48661.10	960.1894	1009.069	48904.02	1003.264	1000.313
SDEV	1.00826	87.26	3.9519	5.996	132.79	5.087	14.906
%RSD	1.080340	.1793183	.4115750	.5942315	.2715344	.5070381	1.490181
#1	93.43374	48706.83	961.0861	1003.698	48756.95	1007.729	1009.314
#2	94.27930	48560.48	963.6159	1015.538	49015.13	997.7259	983.1066
#3	92.27110	48715.98	955.8662	1007.970	48939.97	1004.337	1008.518
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1013.862	947.6071	24610.53	51922.24	48984.02	956.8345	49842.04
SDEV	11.617	1.0004	186.59	224.81	322.67	10.7165	207.25
%RSD	1.145803	.1055744	.7581624	.4329785	.6587203	1.119992	.4158204
#1	1020.003	948.6090	24742.00	52057.41	49231.03	963.1152	49756.59
#2	1000.463	947.6042	24396.97	51662.73	48618.95	944.4607	49691.18
#3	1021.119	946.6082	24692.61	52046.59	49102.09	962.9277	50078.36
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	999.8456	1019.464	981.7307	1065.796	1000.557	1009.048	995.1240
SDEV	5.7031	5.142	6.1334	8.230	9.254	8.966	7.5639
%RSD	.5704019	.5044047	.6247497	.7721993	.9248545	.8885698	.7600988
#1	1003.532	1014.915	981.8226	1073.064	1007.626	1016.705	1002.228
#2	993.2766	1018.433	975.5519	1056.860	990.0831	999.1844	995.9719
#3	1002.729	1025.043	987.8176	1067.466	1003.961	1011.255	987.1719
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1021.809	985.8746	1007.887	1020.705	1003.228	988.4683	1007.167
SDEV	3.900	7.7575	10.377	8.137	10.847	6.2756	7.988
%RSD	.3816300	.7868685	1.029594	.7971613	1.081227	.6348826	.7931064
#1	1026.282	993.8702	1014.493	1030.099	1010.017	993.8682	1011.981
#2	1019.124	978.3793	995.9260	1016.143	990.7178	981.5833	997.9467
#3	1020.021	985.3741	1013.240	1015.873	1008.949	989.9533	1011.574
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	978.1184	971.6185	35270.91
SDEV	2.7799	10.0021	272.38
%RSD	.2842072	1.029430	.7722548
#1	981.0343	960.8771	35035.40
#2	975.4982	980.6648	35569.20
#3	977.8228	973.3134	35208.13
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 09/14/12 12:46:47
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.554895	-4.02747	-.246947	-.346687	-9.17844	1.408386	Q7.388114
SDEV	.714903	2.83428	.106129	.172261	4.59163	.115289	.804003
%RSD	128.8357	70.37380	42.97651	49.68760	50.02626	8.185899	10.88238
#1	.1849650	-4.86194	-.136397	-.456492	-12.2398	1.305101	Q7.753679
#2	-.607742	-.869631	-.348020	-.435419	-11.3966	1.532766	Q7.944379
#3	-1.24191	-6.35084	-.256423	-.148150	-3.89888	1.387290	Q6.466283
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC FAIL
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.010559	-.949242	-3.45176	-288.141	-2.21543	-.343195	27.47669
SDEV	.135783	.787264	8.76602	10.884	1.66788	.047877	201.6815
%RSD	1285.946	82.93612	253.9582	3.777354	75.28500	13.95032	734.0095
#1	.1318505	-1.82001	-12.6105	-275.888	-4.00003	-.398459	132.2812
#2	-.024960	-.287792	4.860120	-291.849	-.696053	-.314309	-205.030
#3	-.138567	-.739922	-2.60493	-296.687	-1.95019	-.316816	155.1784
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.282197	3.041441	.4487610	-.460873	.2929046	-1.75712	-4.44615
SDEV	.399427	4.105627	.3998920	.188453	.8730239	2.39074	2.75440
%RSD	141.5420	134.9895	89.11023	40.89041	298.0574	136.0603	61.95020
#1	-.630807	7.198722	.6759571	-.627625	-.041274	.9787279	-7.29102
#2	-.369418	2.936108	.6833010	-.498574	-.363665	-3.44443	-1.79214
#3	.1536335	-1.01051	-.012975	-.256419	1.283653	-2.80566	-4.25531
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.047486	.1424224	.3675228	.9963685	-3.13214	.0672179	.6137216
SDEV	.460379	2.551707	1.885486	7.519688	2.32259	1.194161	4.769599
%RSD	969.5038	1791.647	513.0256	754.7095	74.15333	1776.553	777.1601
#1	-.569389	2.980405	-1.55036	8.580934	-2.81702	1.431415	5.944602
#2	.1259349	-1.96257	.4340777	.8648893	-5.59620	-.440968	-3.24979
#3	.3009958	-.590565	2.218850	-6.45672	-.983205	-.788794	-.853652
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.8198398	.1773418	35534.73
SDEV	.8506026	.3124525	209.35
%RSD	103.7523	176.1866	.5891552
#1	1.650092	-.182236	35470.80
#2	-.049749	.3827111	35364.80
#3	.8591766	.3315504	35768.60
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: 2091301-BLK1 OPERATOR:
RUN TIME: 09/14/12 12:54:06
COMMENT: SDG:1209047 CLIENTID:PBS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.449201	22.88174	-.036888	-.015263	65.32376	.9749038	5.569129
SDEV	1.180516	1.30465	.206299	.042797	3.74798	.2322831	1.096339
%RSD	262.8037	5.701712	559.2580	280.3911	5.737547	23.82626	19.68600
#1	.8719779	24.32399	.2007595	-.000467	69.32584	1.197221	6.832840
#2	-.819131	22.53754	-.141497	-.063496	61.89623	.7337964	5.002360
#3	-1.40045	21.78371	-.169927	.0181722	64.74922	.9936938	4.872189
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.518313	1.106556	35.33793	-259.081	3.082131	.0979156	323.5836
SDEV	.936454	.283562	6.21187	16.721	6.935846	.0894455	208.5454
%RSD	61.67724	25.62559	17.57846	6.454019	225.0341	91.34957	64.44871
#1	2.594076	1.421099	42.41407	-240.485	11.08997	.1990470	510.0408
#2	1.075277	1.028053	32.81645	-263.878	-1.03074	.0655111	362.3264
#3	.8855860	.8705167	30.78327	-272.878	-.812835	.0291888	98.38348
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0402085	-.460045	-.092185	.5705041	1.163431	1.856927	1.605398
SDEV	.1813137	3.905417	.614950	.2816864	.635954	2.903119	3.076329
%RSD	450.9335	848.9203	667.0838	49.37500	54.66189	156.3399	191.6240
#1	-.040952	1.072219	.4258830	.7644602	.7095248	.3453695	4.303780
#2	-.086347	2.446888	.0693380	.6996521	1.890298	H5.203939	-1.74451
#3	.2479246	-4.89924	-.771776	.2474000	.8904710	.0214717	2.256920
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.00361	.9756214	1.256677	-8.23130	6.893134	19.95604	-.372873
SDEV	.99826	2.249623	.722559	5.41020	2.401468	3.09324	4.838995
%RSD	99.46725	230.5836	57.49760	65.72720	34.83855	15.50030	1297.761
#1	-.012733	-1.56388	1.844002	-13.4262	7.220497	20.41236	5.162938
#2	-2.00909	2.718669	1.476219	-2.62886	9.114126	22.79577	-3.79802
#3	-.988992	1.772074	.4498101	-8.63882	4.344778	16.65998	-2.48353
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.9884835	.1987042	34937.66
SDEV	.4684872	.2795483	208.80
%RSD	47.39454	140.6857	.5976435
#1	.5472726	.5214820	34828.86
#2	.9380172	.0344644	35178.40
#3	1.480161	.0401661	34805.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

METHOD: P42012S2 SAMPLE NAME: 2091301-BS1 OPERATOR:
RUN TIME: 09/14/12 13:01:18
COMMENT: SDG:1209047 CLIENTID:LCSS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	326.1461	85775.02	1706.777	624.6109	60150.08	613.5779	1060.707
SDEV	.8443	360.55	2.645	4.0813	377.34	2.7222	6.235
%RSD	.2588723	.4203424	.1549811	.6534222	.6273381	.4436563	.5877878
#1	325.8555	86171.37	1707.631	629.2933	60585.69	616.0958	1066.592
#2	327.0974	85687.21	1708.889	621.8071	59940.72	613.9486	1061.355
#3	325.4855	85466.49	1703.810	622.7324	59923.83	610.6894	1054.173
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	731.3740	796.7547	127306.6	26804.79	25216.48	2812.451	2490.604
SDEV	1.2819	2.5580	161.0	140.36	50.48	11.057	350.390
%RSD	.1752777	.3210462	.1264745	.5236560	.2001680	.3931610	14.06848
#1	729.8938	796.0096	127196.5	26937.97	25258.42	2799.698	2579.921
#2	732.1263	799.6025	127491.4	26818.20	25230.56	2818.285	2787.692
#3	732.1018	794.6520	127231.9	26658.21	25160.46	2819.369	2104.200
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	598.7898	1282.877	583.9816	1384.055	930.8080	856.5600	806.6112
SDEV	2.1979	11.275	2.5750	3.499	5.7999	3.8426	3.5003
%RSD	.3670646	.8788771	.4409380	.2528037	.6231054	.4486036	.4339482
#1	601.0029	1275.688	586.9466	1383.130	934.1555	858.5952	809.9304
#2	598.7591	1295.872	582.6916	1387.924	934.1576	858.9569	802.9543
#3	596.6074	1277.071	582.3065	1381.112	924.1108	852.1279	806.9489
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	935.9520	922.5374	934.9393	859.7483	854.9679	1099.169	.9552106
SDEV	5.6584	17.4995	1.0201	6.3233	3.0108	4.070	3.767481
%RSD	.6045570	1.896887	.1091088	.7354777	.3521508	.3703198	394.4136
#1	942.3116	930.5254	935.9701	860.6245	857.5818	1102.863	-1.13143
#2	934.0698	934.6176	933.9302	865.5877	855.6461	1099.837	5.304338
#3	931.4747	902.4694	934.9176	853.0326	851.6759	1094.805	-1.30727
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	NOCHECK
HIGH	1080.000					1310.000	
LOW	768.0000					82.90000	

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	427.1354	2016.235	35031.60
SDEV	3.1155	17.028	88.77
%RSD	.7294024	.8445645	.2533962
#1	430.6447	2034.812	34929.27
#2	424.6950	2012.526	35077.66
#3	426.0664	2001.366	35087.86
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	512.0000	3520.000	
LOW	340.0000	512.0000	

METHOD: P42012S2 SAMPLE NAME: 1209047-01 OPERATOR:
RUN TIME: 09/14/12 13:08:31
COMMENT: SDG:1209047 CLIENTID:WWTP03 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.105694	44800.04	1332.035	1.496790	27295.04	3.583834	20.99653
SDEV	.115178	376.27	8.802	.182141	181.03	.140590	.73384
%RSD	108.9725	.8398898	.6607963	12.16875	.6632230	3.922892	3.495050
#1	-.052847	45211.36	1322.381	1.685304	27500.87	3.740132	21.54257
#2	-.026424	44715.57	1339.616	1.483293	27223.72	3.467688	21.28468
#3	-.237812	44473.18	1334.108	1.321774	27160.55	3.543682	20.16235
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	60.12029	191.6255	36280.35	2857.161	4227.996	1099.977	667.2625
SDEV	.55434	1.0499	68.49	4.399	9.339	3.606	94.7947
%RSD	.9220481	.5479094	.1887779	.1539670	.2208780	.3278286	14.20650
#1	59.59424	190.4344	36260.91	2861.683	4226.113	1098.691	662.1766
#2	60.69914	192.0255	36356.46	2852.896	4238.132	1104.050	575.1132
#3	60.06748	192.4167	36223.68	2856.904	4219.742	1097.190	764.4977
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	37.21135	4.703606	127.7338	1816.188	3290.258	3.712639	10.71409
SDEV	.53756	2.951028	2.0873	4.200	8.589	.978494	2.41970
%RSD	1.444607	62.73970	1.634105	.2312367	.2610508	26.35575	22.58426
#1	37.82866	6.359047	129.0257	1812.535	3289.839	4.765817	12.62206
#2	36.84644	1.296505	128.8500	1820.777	3299.050	2.831703	7.992429
#3	36.95895	6.455266	125.3257	1815.252	3281.887	3.540396	11.52778
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	16.00148	3246.086	3312.311	5.219566	2.959957	23.84767	1.227249
SDEV	2.33467	23.804	18.645	2.457822	.279035	.80592	1.475267
%RSD	14.59034	.7333122	.5629093	47.08863	9.426983	3.379456	120.2092
#1	14.44553	3273.459	3298.016	7.741112	3.280051	23.73994	-.322499
#2	18.68601	3230.244	3333.401	2.830855	2.831778	23.10102	1.389652
#3	14.87289	3234.553	3305.518	5.086733	2.768043	24.70203	2.614595
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.362017	902.0062	34866.24
SDEV	.424985	8.5955	270.60
%RSD	12.64078	.9529273	.7761113
#1	3.693752	910.1502	34662.73
#2	2.882978	893.0211	34762.66
#3	3.509322	902.8473	35173.33
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091301-DUP1 OPERATOR:
RUN TIME: 09/14/12 13:15:44
COMMENT: SDG:1209047 CLIENTID:WWTP03D 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8279386	46505.43	794.4441	1.567185	23603.19	3.796436	21.54623
SDEV	.2200201	981.21	10.3366	.159089	354.27	.370295	2.14104
%RSD	26.57445	2.109875	1.301110	10.15124	1.500935	9.753746	9.936976
#1	.8984014	45943.72	797.1573	1.568115	23399.19	3.727292	21.23838
#2	1.004096	47638.41	803.1534	1.407633	24012.27	4.196429	23.82453
#3	.5813187	45934.14	783.0215	1.725807	23398.12	3.465587	19.57577
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	59.03743	191.5234	37796.11	2903.338	4359.970	1141.861	796.9885
SDEV	1.73930	1.6926	762.36	57.996	92.408	30.256	156.1645
%RSD	2.946102	.8837641	2.017033	1.997557	2.119455	2.649734	19.59432
#1	57.76506	189.5710	37424.61	2899.799	4321.024	1123.270	799.6054
#2	61.01934	192.4225	38673.01	2963.023	4465.476	1176.773	951.8281
#3	58.32789	192.5768	37290.72	2847.193	4293.411	1125.539	639.5320
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	39.06524	7.382666	133.4816	1816.931	3267.659	1.959229	7.598458
SDEV	.54253	1.355994	3.7575	37.328	50.149	1.358460	1.519665
%RSD	1.388778	18.36727	2.815015	2.054480	1.534709	69.33645	19.99966
#1	39.45932	5.964528	131.0160	1794.953	3272.865	1.431500	6.915061
#2	39.28994	8.666525	137.8062	1860.031	3315.003	3.502366	6.540474
#3	38.44647	7.516946	131.6225	1795.809	3215.111	.9438202	9.339838
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	19.56511	3197.783	3302.545	7.148081	-.631655	23.54781	1.299949
SDEV	2.38070	70.445	41.019	9.277107	2.595119	2.94492	5.035072
%RSD	12.16807	2.202945	1.242047	129.7846	410.8445	12.50612	387.3283
#1	19.92101	3219.131	3299.690	3.646131	.3254967	20.46881	-3.21185
#2	17.02651	3255.085	3344.917	17.66644	-3.56940	26.33725	6.731493
#3	21.74783	3119.133	3263.028	.1316743	1.348944	23.83738	.3802018
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	5.047173	868.4325	34795.62
SDEV	1.285960	7.6454	626.30
%RSD	25.47883	.8803718	1.799939
#1	6.094441	863.3981	34704.73
#2	5.435194	877.2301	34219.73
#3	3.611883	864.6693	35462.40
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091301-MS1 OPERATOR:
RUN TIME: 09/14/12 13:22:57
COMMENT: SDG:1209047 CLIENTID:WWTP03S 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	46.43502	65735.47	2944.423	51.46314	24496.48	53.57628	517.7582
SDEV	.51667	283.73	26.835	.20360	64.10	.34112	3.3818
%RSD	1.112670	.4316310	.9113894	.3956291	.2616778	.6366938	.6531526
#1	45.89774	65803.00	2975.274	51.23194	24423.23	53.66737	515.1539
#2	46.47906	65424.07	2931.504	51.54178	24523.90	53.86261	516.5405
#3	46.92826	65979.35	2926.491	51.61569	24542.32	53.19887	521.5801
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	268.7083	431.5489	40802.25	3848.416	5243.908	1613.941	832.9927
SDEV	4.0370	3.0518	248.37	19.330	23.590	17.067	61.3089
%RSD	1.502363	.7071659	.6087269	.5022959	.4498562	1.057476	7.360075
#1	268.1538	429.4740	40781.55	3849.993	5249.096	1605.913	901.8568
#2	264.9771	430.1196	40564.87	3828.345	5218.155	1602.368	784.3450
#3	272.9938	435.0530	41060.32	3866.909	5264.472	1633.542	812.7764
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	545.0165	53.49677	622.9991	2304.615	3246.721	5.497380	291.7508
SDEV	1.4712	2.22179	3.4019	4.252	4.104	2.036820	4.3106
%RSD	.2699305	4.153129	.5460470	.1844825	.1264102	37.05073	1.477497
#1	544.4960	55.47507	624.8411	2301.145	3245.910	6.740473	289.7659
#2	543.8763	53.92223	619.0734	2303.342	3243.084	3.146767	288.7903
#3	546.6771	51.09302	625.0828	2309.357	3251.171	6.604901	296.6963
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	57.88107	3207.887	3266.109	8.542072	3.976973	982.1657	982.4881
SDEV	.62009	21.017	7.942	1.345531	2.427997	2.0091	5.8413
%RSD	1.071324	.6551546	.2431689	15.75181	61.05138	.2045611	.5945402
#1	57.22541	3223.174	3257.260	8.891407	5.666272	981.1521	980.1144
#2	57.95970	3183.921	3272.620	7.056326	1.194574	980.8653	978.2073
#3	58.45809	3216.566	3268.447	9.678483	5.070071	984.4797	989.1426
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	983.4239	1850.031	35116.55
SDEV	1.8173	5.311	144.73
%RSD	.1847909	.2870990	.4121435
#1	984.0673	1845.409	34953.00
#2	984.8320	1855.833	35168.60
#3	981.3725	1848.851	35228.06
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091301-MSD1 OPERATOR:
RUN TIME: 09/14/12 13:30:10
COMMENT: SDG:1209047 CLIENTID:WWTP03SD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	46.63760	64277.52	2838.410	51.37132	22893.57	52.34493	505.8978
SDEV	.43257	836.99	15.505	.57586	240.84	.34985	4.6213
%RSD	.9275187	1.302153	.5462499	1.120967	1.051988	.6683508	.9134839
#1	47.00753	65052.94	2837.470	51.61552	23085.07	52.42382	507.4525
#2	46.74329	63390.21	2854.364	50.71360	22623.19	52.64859	509.5413
#3	46.16198	64389.41	2823.397	51.78482	22972.47	51.96237	500.6997
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	266.1391	425.8164	40289.84	3701.607	5080.005	1569.197	800.1444
SDEV	2.4534	1.8255	127.28	24.213	15.269	10.312	76.6863
%RSD	.9218339	.4287147	.3159175	.6541205	.3005642	.6571306	9.584061
#1	267.9932	427.1567	40338.17	3702.932	5094.498	1578.782	842.4011
#2	263.3571	426.5554	40385.88	3725.131	5081.454	1570.522	711.6249
#3	267.0670	423.7373	40145.47	3676.759	5064.064	1558.286	846.4072
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	538.7370	55.74170	616.5401	2281.956	3400.561	10.44626	296.5244
SDEV	1.8378	3.91986	14.0440	17.047	18.965	.95053	7.5349
%RSD	.3411348	7.032192	2.277869	.7470530	.5576961	9.099256	2.541072
#1	538.5087	51.81676	626.0338	2283.599	3411.818	10.87193	297.9266
#2	540.6783	55.75188	600.4075	2298.122	3411.200	9.357291	303.2597
#3	537.0240	59.65646	623.1790	2264.146	3378.665	11.10957	288.3869
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	57.85960	3338.028	3431.780	11.65252	9.843694	971.4043	972.7086
SDEV	.91492	9.051	23.927	1.97679	1.926464	.7054	6.0422
%RSD	1.581282	.2711417	.6972235	16.96450	19.57054	.0726196	.6211703
#1	56.95116	3342.769	3446.290	9.393684	11.60960	972.2172	974.1007
#2	58.78087	3343.722	3444.887	12.49744	7.789227	970.9524	977.9333
#3	57.84678	3327.591	3404.163	13.06645	10.13225	971.0433	966.0919
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	973.4193	1988.831	35405.73
SDEV	10.4925	26.755	94.19
%RSD	1.077904	1.345254	.2660200
#1	979.0817	1993.461	35399.53
#2	979.8641	1960.064	35314.80
#3	961.3120	2012.969	35502.86
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1209047-01 OPERATOR:
RUN TIME: 09/14/12 13:37:24
COMMENT: SDG:1209047 CLIENTID:WWTP03L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.1761572	9106.109	263.3460	-.079988	5440.068	1.017866	5.777422
SDEV	.4533267	147.946	2.1299	.053703	85.284	.156586	.552347
%RSD	257.3421	1.624690	.8087939	67.13863	1.567694	15.38374	9.560439
#1	-.237812	9276.882	263.2511	-.098052	5535.528	.8441935	5.551180
#2	.6605894	9024.673	261.2650	-.122330	5413.288	1.148263	5.374116
#3	.1056943	9016.773	265.5217	-.019582	5371.389	1.061142	6.406972
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.07179	38.42858	7254.102	363.9639	855.2211	216.0967	118.3503
SDEV	.50513	.22938	71.788	7.7846	5.9265	2.2879	141.0296
%RSD	3.864305	.5969065	.9896244	2.138834	.6929763	1.058739	119.1629
#1	12.87833	38.22581	7278.244	358.2243	857.7452	217.2209	-21.7943
#2	13.64507	38.67754	7173.355	372.8247	848.4504	213.4642	260.2486
#3	12.69199	38.38238	7310.708	360.8426	859.4677	217.6050	116.5965
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.846945	4.396148	25.58240	365.9445	670.3719	-.092847	1.192703
SDEV	.575314	1.074781	.68903	3.1449	6.0447	.841822	2.853037
%RSD	7.331695	24.44824	2.693387	.8593917	.9016941	906.6733	239.2076
#1	7.189640	4.152579	26.06515	364.5093	666.7131	.7683308	-1.68856
#2	8.092240	5.571810	25.88874	363.7733	667.0538	-.132996	4.016651
#3	8.258955	3.464053	24.79332	369.5510	677.3490	-.913877	1.250018
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.286417	660.3076	675.3961	-.840919	.2802912	5.212722	1.027445
SDEV	.197765	3.0682	7.5362	4.400631	1.198403	.969525	3.528256
%RSD	4.613767	.4646666	1.115825	523.3118	427.5563	18.59921	343.4009
#1	4.175714	658.2228	670.9512	2.170711	.0678550	4.646497	.8946655
#2	4.514742	658.8693	671.1395	1.197714	-.797688	4.659460	4.620216
#3	4.168795	663.8308	684.0975	-5.89118	1.570706	6.332208	-2.43255
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.9209669	180.2588	35885.69
SDEV	.5591533	2.9284	175.99
%RSD	60.71373	1.624567	.4904163
#1	.2753456	183.5777	35857.33
#2	1.238090	179.1601	36074.13
#3	1.249465	178.0387	35725.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091301-PS1 OPERATOR:
RUN TIME: 09/14/12 13:44:37
COMMENT: SDG:1209047 CLIENTID:WWTP03A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	104.3907	47921.56	5685.133	115.3419	26699.97	115.7375	465.0705
SDEV	.7296	112.69	45.210	.4008	19.34	.2684	3.5782
%RSD	.6988794	.2351614	.7952344	.3475157	.0724359	.2319288	.7693989
#1	105.1922	47819.04	5723.246	115.7955	26721.32	115.7083	460.9782
#2	104.2146	47903.41	5635.181	115.1950	26694.95	115.4849	466.6229
#3	103.7654	48042.23	5696.972	115.0353	26683.62	116.0194	467.6103
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	285.0971	296.1526	39251.30	2791.505	4035.282	1255.434	669.4019
SDEV	2.1904	1.2889	166.10	7.695	11.886	11.529	191.2389
%RSD	.7683122	.4352180	.4231775	.2756410	.2945618	.9183207	28.56863
#1	285.1680	295.7337	39123.56	2799.368	4031.959	1245.193	885.1824
#2	282.8721	295.1252	39191.27	2783.991	4025.410	1253.189	520.8741
#3	287.2513	297.5988	39439.07	2791.156	4048.476	1267.921	602.1490
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	261.3864	678.8813	570.4547	2395.479	3414.651	214.2600	661.8346
SDEV	1.8659	2.9089	1.6365	6.089	21.980	3.5495	5.3823
%RSD	.7138534	.4284806	.2868722	.2541935	.6437082	1.656647	.8132420
#1	261.3498	678.2748	570.9255	2398.331	3389.580	210.1895	665.9343
#2	259.5390	676.3235	571.8041	2388.487	3430.609	215.8796	655.7396
#3	263.2703	682.0457	568.6344	2399.618	3423.764	216.7108	663.8300
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	238.6982	3360.856	3441.508	215.9377	213.4220	1155.264	446.5470
SDEV	1.2261	20.527	24.042	7.5170	3.1522	.726	7.0248
%RSD	.5136800	.6107562	.6985875	3.481118	1.476976	.0628027	1.573148
#1	239.4799	3341.157	3413.755	208.3388	211.1132	1154.430	438.5275
#2	239.3297	3382.120	3454.817	223.3701	212.1396	1155.751	449.5015
#3	237.2851	3359.290	3455.953	216.1043	217.0133	1155.612	451.6121
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1119.355	2014.168	35106.07
SDEV	.603	11.416	52.06
%RSD	.0538441	.5667814	.1482843
#1	1120.018	2027.123	35109.60
#2	1118.841	2005.582	35052.33
#3	1119.206	2009.799	35156.27
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209047-02 OPERATOR:
RUN TIME: 09/14/12 13:51:50
COMMENT: SDG:1209047 CLIENTID:WWTP04 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.528471	70546.19	517.5497	3.755987	24128.04	1.076569	25.42273
SDEV	.528471	657.56	5.3404	.097102	355.57	.201443	.98136
%RSD	100.0000	.9320922	1.031857	2.585255	1.473691	18.71156	3.860184
#1	.0000000	69788.49	518.8834	3.706178	23717.78	1.205656	25.88929
#2	-.528471	70967.49	522.0969	3.867886	24318.94	1.179601	26.08377
#3	-1.05694	70882.58	511.6689	3.693897	24347.38	.8444495	24.29512
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	81.89289	38.10057	58635.88	4170.987	7342.453	2339.239	791.7948
SDEV	1.54878	1.10549	503.81	33.758	48.567	37.112	154.5501
%RSD	1.891221	2.901502	.8592265	.8093415	.6614513	1.586511	19.51896
#1	80.25869	37.05844	58632.53	4199.348	7315.226	2341.963	941.1939
#2	83.33907	37.98322	59141.36	4179.966	7398.525	2374.914	632.5632
#3	82.08092	39.26006	58133.74	4133.648	7313.607	2300.840	801.6273
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	47.11874	5.835765	137.1614	228.4283	187.8159	.6266763	1.499298
SDEV	.75335	3.637049	1.8854	.9763	.7341	1.716422	4.436560
%RSD	1.598840	62.32343	1.374558	.4274075	.3908759	273.8929	295.9092
#1	46.31426	7.049816	134.9844	228.4265	187.0042	2.436586	-3.58252
#2	47.80759	1.746975	138.2594	229.4056	188.0100	-.977761	3.479512
#3	47.23438	8.710505	138.2404	227.4529	188.4334	.4212040	4.600905
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	29.04709	189.9985	186.7257	-.773363	1.325307	21.34749	4.583257
SDEV	2.74027	7.9357	5.0533	9.404880	2.553721	1.08940	2.905302
%RSD	9.433890	4.176707	2.706259	1216.102	192.6890	5.103188	63.38948
#1	27.99658	199.0651	180.9822	10.08610	-1.38278	22.31230	7.909657
#2	32.15719	186.6152	188.7059	-6.27952	1.668806	20.16605	3.296990
#3	26.98751	184.3152	190.4890	-6.12666	3.689893	21.56413	2.543124
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.724854	1128.415	35611.18
SDEV	.556896	25.086	337.25
%RSD	14.95083	2.223098	.9470370
#1	3.751245	1099.449	35379.80
#2	3.155231	1143.036	35455.60
#3	4.268085	1142.759	35998.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 09/14/12 13:59:02
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.998767	186.9088	185.4367	4.615588	4682.314	6.039614	24.56553
SDEV	.764154	4.8728	.9612	.078419	73.046	.282602	1.17778
%RSD	19.10975	2.607046	.5183646	1.699009	1.560037	4.679136	4.794451
#1	Q3.170829	191.6265	185.4571	4.700665	4633.783	5.716362	23.28034
#2	4.148500	181.8944	184.4654	4.599903	4766.322	6.239908	25.59333
#3	4.676972	187.2055	186.3875	4.546197	4646.835	6.162570	24.82292
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.20509	3.518359	162.9480	5218.669	4788.916	9.130017	4820.315
SDEV	.63366	.670907	11.2656	4.546	24.682	.173287	145.754
%RSD	6.209219	19.06874	6.913616	.0871124	.5153920	1.897987	3.023739
#1	10.45726	4.100998	166.1025	5213.673	4764.207	9.038584	4666.444
#2	10.67385	3.669209	172.3001	5219.771	4813.570	9.329871	4956.301
#3	9.484176	Q2.784869	150.4414	5222.563	4788.969	9.021598	4838.200
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.703524	32.13425	18.68209	29.00574	10.20956	10.17244	26.88458
SDEV	.402454	3.16484	.46307	.18265	1.01315	2.28226	.96840
%RSD	4.147504	9.848797	2.478683	.6297090	9.923519	22.43576	3.602079
#1	9.697271	29.28376	18.40890	28.85762	11.08028	8.060182	27.82316
#2	10.10907	35.53996	19.21675	29.20982	10.45085	12.59330	26.94171
#3	9.304233	31.57903	18.42061	28.94976	9.097549	9.863828	25.88888
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.02772	11.21679	9.706339	11.07790	9.720044	47.73011	Q20.24561
SDEV	1.51208	.38062	1.537460	3.37961	1.771877	.60669	2.99331
%RSD	15.07897	3.393349	15.83975	30.50767	18.22911	1.271078	14.78501
#1	11.77352	10.91184	11.16399	7.634616	8.272310	48.22660	Q17.88621
#2	9.177518	11.64336	9.855138	14.39002	11.69595	47.05386	Q23.61274
#3	9.132128	11.09517	8.099890	11.20907	9.191874	47.90989	Q19.23788
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	49.19608	46.94675	35556.51
SDEV	.65638	.87746	336.03
%RSD	1.334219	1.869064	.9450487
#1	49.80694	46.38448	35943.27
#2	48.50209	47.95784	35336.13
#3	49.27920	46.49794	35390.13
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 09/14/12 14:06:16
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	95.00154	48920.71	950.8810	999.0672	48888.59	998.1521	990.2216
SDEV	.59399	878.55	12.5675	18.7189	916.33	8.1880	11.6617
%RSD	.6252441	1.795869	1.321673	1.873639	1.874317	.8203112	1.177683
#1	94.49068	48547.79	958.2681	997.1001	48733.64	995.6000	986.3451
#2	95.65332	49924.21	958.0049	1018.692	49872.50	1007.312	1003.328
#3	94.86061	48290.13	936.3701	981.4095	48059.61	991.5442	980.9917
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1003.311	957.2180	24451.97	51909.72	48481.27	948.3197	50073.09
SDEV	21.063	6.7631	287.09	491.72	571.15	14.0884	624.49
%RSD	2.099369	.7065321	1.174082	.9472626	1.178091	1.485612	1.247155
#1	986.4827	949.5053	24219.82	51664.83	48107.08	936.8603	49999.77
#2	1026.932	960.0140	24772.98	52475.80	49138.69	964.0491	50731.01
#3	996.5176	962.1346	24363.09	51588.53	48198.05	944.0498	49488.50
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	996.6218	1016.505	978.4059	1056.322	991.4147	1003.620	988.6600
SDEV	7.1432	11.362	24.7703	8.653	.7936	7.974	4.0539
%RSD	.7167368	1.117717	2.531695	.8191429	.0800437	.7945505	.4100368
#1	993.2216	1003.988	965.8571	1050.524	991.9236	995.5989	989.1423
#2	1004.830	1026.166	1006.939	1066.268	991.8203	1011.547	992.4511
#3	991.8140	1019.362	962.4215	1052.174	990.5004	1003.715	984.3865
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1015.813	977.3646	998.4291	1026.235	992.3295	986.9138	1010.016
SDEV	2.244	6.8118	3.5906	14.200	5.1847	9.3291	7.220
%RSD	.2208857	.6969528	.3596274	1.383736	.5224795	.9452794	.7148170
#1	1015.389	983.9532	995.9026	1013.779	986.5222	977.7921	1002.091
#2	1018.239	970.3497	1002.539	1041.698	996.4931	996.4373	1016.220
#3	1013.812	977.7909	996.8454	1023.228	993.9732	986.5120	1011.737
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	968.4296	974.3312	35403.91
SDEV	3.6026	22.3993	329.59
%RSD	.3720095	2.298942	.9309500
#1	970.7976	969.7825	35335.13
#2	964.2836	998.6557	35114.13
#3	970.2076	954.5553	35762.46
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 09/14/12 14:13:30
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.440393	-.643519	-.305649	-.275944	-20.6240	.7112261	4.319439
SDEV	.392222	2.862719	.048678	.172160	1.9562	.1787392	.668375
%RSD	89.06178	444.8535	15.92595	62.38937	9.485298	25.13113	15.47366
#1	-.343506	1.367273	-.360735	-.373897	-19.4086	.5280544	3.554107
#2	-.105694	.6232401	-.287782	-.376778	-22.8806	.7204481	4.788280
#3	-.871978	-3.92107	-.268430	-.077158	-19.5827	.8851756	4.615928
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4041058	-1.30301	-8.18300	-285.210	-1.59694	-.316760	203.9376
SDEV	.2558031	.15872	1.60578	3.628	.55230	.040553	69.3523
%RSD	63.30102	12.18126	19.62335	1.272075	34.58467	12.80230	34.00664
#1	.3634713	-1.21147	-9.77757	-288.336	-1.40480	-.277032	232.2385
#2	.6777941	-1.48629	-8.20520	-281.232	-2.21964	-.315157	254.6643
#3	.1710521	-1.21128	-6.56624	-286.064	-1.16637	-.358090	124.9100
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.420242	1.391513	.0551111	-.479554	-.448009	1.316766	-3.13286
SDEV	.322711	1.782843	.2383359	.163360	.694890	2.852334	2.03010
%RSD	76.79167	128.1226	432.4640	34.06496	155.1062	216.6166	64.80042
#1	-.172624	.4703953	-.220092	-.304191	-.053401	4.092442	-1.19130
#2	-.785208	.2576484	.1939838	-.627421	-.040263	-1.60650	-5.24122
#3	-.302895	3.446495	.1914412	-.507051	-1.25036	1.464352	-2.96606
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.296683	.9209346	-1.13196	3.271955	.3402994	-.708851	-.014069
SDEV	1.069060	1.985181	.77994	5.610667	1.834253	.701442	3.708068
%RSD	82.44573	215.5615	68.90196	171.4775	539.0117	98.95484	26356.26
#1	2.372388	3.129785	-1.64311	9.545707	1.369562	.0664555	-.416266
#2	1.283267	.3472429	-.234237	-1.26478	-1.77744	-1.29947	-3.50464
#3	.2343946	-.714224	-1.51854	1.534939	1.428774	-.893535	3.878702
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.136192	.1146041	35742.27
SDEV	1.152080	.2002252	251.51
%RSD	101.3984	174.7104	.7036799
#1	2.464282	-.003283	35992.40
#2	.5386460	.0013065	35489.40
#3	.4056482	.3457890	35745.00
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: 1209047-03 OPERATOR:
RUN TIME: 09/14/12 14:20:43
COMMENT: SDG:1209047 CLIENTID:WWTP08 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.22429	73145.32	528.6808	3.862847	13626.11	1.390704	26.08155
SDEV	.44946	451.18	7.2326	.249145	92.94	.263883	1.17971
%RSD	36.71181	.6168255	1.368042	6.449786	.6820688	18.97477	4.523146
#1	-.713436	73043.31	529.0264	3.727323	13684.17	1.598473	27.16265
#2	-1.55899	73638.77	521.2816	3.710841	13675.23	1.093796	24.82328
#3	-1.40045	72753.88	535.7344	4.150378	13518.91	1.479844	26.25873
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	80.14670	36.66823	59845.78	3223.624	7139.888	2418.878	505.1013
SDEV	.49161	.24066	136.00	14.886	18.938	8.322	35.9381
%RSD	.6133922	.6563189	.2272559	.4617701	.2652485	.3440415	7.115026
#1	80.18577	36.84512	59901.54	3229.682	7160.975	2427.075	541.0134
#2	80.61762	36.39418	59690.76	3206.664	7124.327	2410.436	469.1373
#3	79.63672	36.76539	59945.04	3234.525	7134.361	2419.124	505.1533
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	48.39561	6.215030	140.7335	191.4760	115.8672	.6334060	4.607204
SDEV	.58899	3.753636	2.1831	1.3663	.7688	1.444930	1.508880
%RSD	1.217027	60.39611	1.551238	.7135820	.6634769	228.1206	32.75046
#1	48.85874	3.626669	140.9354	191.1883	115.4141	-1.02222	6.289309
#2	47.73272	10.52004	142.8087	190.2764	116.7548	1.640110	4.159358
#3	48.59537	4.498385	138.4565	192.9633	115.4327	1.282327	3.372944
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	27.51706	115.8688	115.8660	-6.84561	4.366969	20.10198	2.413394
SDEV	2.43759	.1834	1.1753	2.09591	1.171951	2.29980	2.918798
%RSD	8.858484	.1582869	1.014356	30.61686	26.83672	11.44066	120.9416
#1	30.27617	115.7136	115.2642	-9.11572	3.018123	18.36490	4.365208
#2	26.61952	115.8216	117.2203	-4.98406	4.946889	19.23098	-.942051
#3	25.65548	116.0712	115.1135	-6.43706	5.135894	22.71006	3.817024
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.865547	1165.516	35548.89
SDEV	.837733	14.966	153.99
%RSD	21.67179	1.284055	.4331897
#1	3.684118	1166.187	35399.13
#2	3.133395	1180.135	35706.80
#3	4.779128	1150.226	35540.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209047-04 OPERATOR:
RUN TIME: 09/14/12 14:27:56
COMMENT: SDG:1209047 CLIENTID:WWTP05 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.502048	57329.06	452.0014	2.272668	25859.37	1.338128	20.33414
SDEV	.493633	790.77	3.9707	.006932	374.09	.155656	.47356
%RSD	98.32391	1.379359	.8784666	.3050120	1.446620	11.63238	2.328888
#1	-.581318	56428.57	454.1468	2.279606	25427.72	1.384581	20.88096
#2	-.951248	57910.29	454.4379	2.272655	26060.90	1.164534	20.05991
#3	.0264236	57648.33	447.4196	2.265742	26089.47	1.465270	20.06155
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	64.09158	37.34572	46089.68	4191.523	5955.732	1509.502	717.1262
SDEV	1.24661	.22225	174.45	17.960	24.780	11.087	96.0474
%RSD	1.945051	.5951271	.3785015	.4284926	.4160652	.7344710	13.39337
#1	62.65973	37.15409	45913.79	4180.511	5928.371	1501.580	789.5156
#2	64.93561	37.29370	46262.65	4212.248	5962.162	1522.172	608.1652
#3	64.67938	37.58937	46092.61	4181.810	5976.663	1504.754	753.6978
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	41.56297	7.509337	133.2056	334.5085	356.3951	3.639173	4.811990
SDEV	.98190	2.010588	3.4241	1.2990	.4951	1.964917	1.676318
%RSD	2.362442	26.77451	2.570526	.3883385	.1389241	53.99350	34.83627
#1	41.58932	5.236933	129.4628	333.4898	356.3937	1.379629	6.747273
#2	42.53144	9.057362	133.9736	335.9713	356.8910	4.590775	3.811953
#3	40.56817	8.233717	136.1805	334.0643	355.9007	4.947115	3.876743
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	23.80469	352.0991	358.5396	.5546606	5.178775	22.03964	1.745541
SDEV	.64708	1.1437	.1796	4.184506	2.034821	1.21071	3.336811
%RSD	2.718296	.3248124	.0501020	754.4263	39.29155	5.493318	191.1620
#1	24.55178	351.9864	358.5937	-3.22815	3.679723	23.11540	.4752764
#2	23.44176	353.2949	358.6859	5.049495	4.361416	20.72854	5.530932
#3	23.42055	351.0159	358.3391	-.157361	7.495185	22.27497	-.769585
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.981607	995.1602	35276.00
SDEV	.711732	16.4462	48.08
%RSD	17.87549	1.652623	.1362969
#1	4.492131	978.2441	35220.73
#2	4.284096	996.1440	35308.20
#3	3.168594	1011.092	35299.06
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209047-05 OPERATOR:
RUN TIME: 09/14/12 14:35:08
COMMENT: SDG:1209047 CLIENTID:WWTP06 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.07456	33713.66	249.2286	1.120324	14361.09	1.406657	15.04692
SDEV	.11001	473.24	2.7850	.115646	201.91	.299585	1.49323
%RSD	10.23770	1.403698	1.117462	10.32254	1.405957	21.29766	9.923822
#1	-.951248	34237.80	248.7035	1.120958	14558.60	1.673795	15.78472
#2	-1.16264	33317.74	252.2389	1.235652	14155.05	1.463428	16.02763
#3	-1.10979	33585.46	246.7436	1.004363	14369.64	1.082748	13.32840
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	50.61017	37.61041	38792.06	2491.544	3535.365	782.7280	414.0519
SDEV	.75557	.48591	522.20	24.283	44.477	10.9625	96.4381
%RSD	1.492930	1.291949	1.346148	.9746233	1.258059	1.400544	23.29131
#1	50.45824	38.05636	38840.90	2500.173	3533.727	788.6235	467.4440
#2	51.43016	37.09256	39288.12	2510.334	3580.638	789.4811	471.9860
#3	49.94210	37.68230	38247.15	2464.125	3491.730	770.0793	302.7256
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	38.17860	3.319637	125.0546	302.6467	485.6877	1.340811	7.229424
SDEV	.76008	2.429942	1.3806	3.1586	4.9998	2.275605	1.510889
%RSD	1.990849	73.19904	1.103987	1.043663	1.029436	169.7185	20.89916
#1	37.32778	5.627787	126.5548	303.1964	486.0569	-1.10850	7.924605
#2	38.41742	.7839136	123.8375	305.4944	490.4927	3.389496	5.496074
#3	38.79058	3.547211	124.7715	299.2493	480.5135	1.741441	8.267591
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.92588	484.2554	486.4022	-2.01540	3.016058	22.78841	3.412635
SDEV	2.23065	7.1539	4.1856	3.21898	1.915299	1.19172	.523152
%RSD	14.94483	1.477296	.8605210	159.7193	63.50337	5.229495	15.32986
#1	12.73963	482.4673	487.8485	-5.71537	1.191134	23.52133	3.335817
#2	14.83960	492.1338	489.6728	.1419949	5.010467	21.41333	3.969949
#3	17.19842	478.1652	481.6853	-.472821	2.846573	23.43058	2.932139
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	4.202105	742.5859	35225.44
SDEV	.848775	17.3876	296.69
%RSD	20.19881	2.341500	.8422696
#1	4.441955	755.5373	35091.20
#2	3.259213	722.8238	35019.60
#3	4.905146	749.3964	35565.53
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209047-06 OPERATOR:
RUN TIME: 09/14/12 14:42:21
COMMENT: SDG:1209047 CLIENTID:WWTP07 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.264236	39346.77	2092.643	2.024167	84472.30	10.78546	35.90147
SDEV	.052847	570.48	21.402	.373670	1355.83	.17493	1.56296
%RSD	20.00000	1.449887	1.022707	18.46044	1.605059	1.621871	4.353473
#1	-.264236	39651.25	2084.029	1.729769	85331.35	10.66596	35.01784
#2	-.211389	39700.41	2076.891	1.898188	85176.27	10.70417	34.98048
#3	-.317083	38688.64	2117.009	2.444545	82909.29	10.98624	37.70609
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	99.85562	162.9715	55884.89	9101.025	16580.17	2500.956	1421.393
SDEV	.79839	.1247	472.42	90.062	86.10	23.012	196.761
%RSD	.7995439	.0764921	.8453361	.9895812	.5192746	.9201233	13.84283
#1	100.5555	163.0239	55675.46	9049.831	16566.35	2497.204	1587.532
#2	100.0253	163.0614	55553.39	9048.228	16501.81	2480.050	1204.110
#3	98.98604	162.8292	56425.81	9205.016	16672.33	2525.613	1472.537
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	235.0494	7.477345	691.6038	5384.066	14015.00	1.753017	61.62973
SDEV	1.0972	2.266258	21.2788	74.070	139.04	2.199295	2.95041
%RSD	.4667773	30.30832	3.076725	1.375731	.9920942	125.4577	4.787324
#1	234.7238	5.052189	705.7579	5335.440	13911.74	-.638649	60.87461
#2	234.1519	9.541327	701.9202	5347.444	13960.16	2.209356	64.88432
#3	236.2725	7.838520	667.1334	5469.314	14173.10	3.688343	59.13026
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	20.02069	13767.30	14138.67	16.12368	-5.42189	26.74098	6.049567
SDEV	1.03605	164.05	126.56	2.41035	4.48699	3.33698	.432410
%RSD	5.174887	1.191592	.8951256	14.94913	82.75694	12.47890	7.147780
#1	20.39557	13646.29	14044.27	18.54022	-10.2141	23.64286	5.861173
#2	20.81711	13701.59	14089.26	16.11125	-4.73151	26.30594	5.743316
#3	18.84938	13954.02	14282.48	13.71957	-1.32010	30.27414	6.544212
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.825382	2992.637	34919.11
SDEV	.797461	91.311	217.66
%RSD	20.84656	3.051177	.6233269
#1	4.127800	3071.301	34956.80
#2	2.920946	3014.104	35115.46
#3	4.427400	2892.505	34685.07
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209047-07 OPERATOR:
RUN TIME: 09/14/12 14:49:34
COMMENT: SDG:1209047 CLIENTID:WWTP09 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.775091	46999.21	290.0874	1.935215	14089.40	1.390472	20.11656
SDEV	.423877	270.48	2.0366	.162175	79.40	.221599	.52246
%RSD	54.68732	.5755026	.7020488	8.380182	.5635772	15.93700	2.597160
#1	-.369930	47185.61	287.9862	2.071973	14164.38	1.266669	20.09662
#2	-1.21548	47123.04	292.0525	1.756050	14097.62	1.646309	20.64870
#3	-.739860	46688.98	290.2235	1.977621	14006.21	1.258438	19.60435
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	54.80536	25.57998	42900.00	4201.802	5916.088	1246.481	498.0780
SDEV	.57322	.79136	286.44	35.169	46.182	10.858	248.7288
%RSD	1.045913	3.093688	.6676984	.8370087	.7806212	.8710549	49.93773
#1	55.09188	26.44468	42662.33	4183.292	5892.047	1236.117	458.1226
#2	55.17882	25.40352	43218.05	4242.361	5969.332	1257.772	764.3658
#3	54.14537	24.89174	42819.63	4179.753	5886.886	1245.554	271.7455
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	35.34661	8.490387	121.0067	203.7832	121.5934	-1.03395	4.119546
SDEV	1.09528	3.197481	1.3240	1.0054	1.6048	1.65616	2.442805
%RSD	3.098673	37.66002	1.094149	.4933805	1.319821	160.1771	59.29792
#1	36.08911	12.17381	121.8056	203.1828	122.4441	-1.57591	3.525799
#2	35.86202	6.429229	121.7360	204.9440	122.5938	.8252851	2.028345
#3	34.08871	6.868118	119.4784	203.2229	119.7423	-2.35123	6.804492
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	18.84784	123.7653	120.5087	-4.98470	.9381145	22.00342	-.791263
SDEV	1.19247	3.5303	.8322	2.53489	1.218137	.71106	4.158374
%RSD	6.326817	2.852400	.6905629	50.85345	129.8495	3.231590	525.5359
#1	20.19162	126.4955	120.4210	-5.87893	.5720243	21.48633	1.739226
#2	18.43609	125.0216	121.3812	-2.12389	2.297315	22.81430	1.477546
#3	17.91581	119.7787	119.7238	-6.95129	-.054996	21.70964	-5.59056
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.419196	1175.303	34945.91
SDEV	.788920	13.931	153.70
%RSD	23.07325	1.185290	.4398105
#1	2.802939	1191.309	34929.86
#2	3.146321	1165.920	34800.86
#3	4.308328	1168.678	35107.00
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091302-BLK1 OPERATOR:
RUN TIME: 09/14/12 14:57:30
COMMENT: SDG:1209063 CLIENTID:PBS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.04813	23.51419	.0089670	-.232158	43.82944	.2711556	1.835336
SDEV	.40621	6.39632	.0773622	.076967	6.50557	.2233346	1.123797
%RSD	38.75581	27.20197	862.7446	33.15270	14.84293	82.36398	61.23112
#1	-1.24191	19.36682	-.025314	-.302496	51.32332	.2117308	.9986057
#2	-.581318	30.88055	.0975464	-.149943	39.63094	.5181923	3.112672
#3	-1.32118	20.29519	-.045332	-.244035	40.53408	.0835437	1.394730
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5928668	1.276941	26.19598	-236.803	4.868427	4.370010	462.3818
SDEV	.4679730	.431028	2.12467	7.783	1.661248	.140972	31.0698
%RSD	78.93391	33.75472	8.110671	3.286811	34.12289	3.225906	6.719514
#1	.8405861	1.028250	27.36639	-241.050	3.307804	4.284860	437.5304
#2	.8849100	1.774649	27.47808	-227.820	4.682775	4.532732	497.2160
#3	.0531045	1.027924	23.74347	-241.539	6.614702	4.292439	452.3991
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3961121	-.485925	.2088826	1.017189	1.866379	-.227702	1.122222
SDEV	1.143687	.506446	.3700681	.225603	.919522	1.978273	2.971759
%RSD	288.7280	104.2232	177.1656	22.17909	49.26770	868.8000	264.8102
#1	.1324448	-1.06267	.4865607	.8741342	.8046714	-1.38497	-.541644
#2	1.648606	-.113813	.3513289	1.277258	2.407410	-1.35468	4.553196
#3	-.592714	-.281293	-.211242	.9001729	2.387054	2.056545	-.644886
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-3.38912	4.601338	.5004616	-4.57524	1.942467	21.97915	2.242267
SDEV	1.96015	1.343044	.7311888	2.18578	2.553855	.30406	2.487515
%RSD	57.83647	29.18812	146.1029	47.77396	131.4748	1.383394	110.9375
#1	L-5.37812	3.081729	-.332667	-7.09773	1.466785	21.67283	.3889438
#2	-1.45916	5.629208	.7984499	-3.38758	-.340103	22.28089	5.069356
#3	-3.33008	5.093079	1.035602	-3.24043	4.700718	21.98373	1.268501
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.5455145	.4460322	35105.93
SDEV	.3995608	.1845074	253.03
%RSD	73.24477	41.36639	.7207747
#1	.5435625	.5619259	35106.93
#2	.9460476	.5429061	34852.40
#3	.1469332	.2332646	35358.46
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

METHOD: P42012S2 SAMPLE NAME: 2091302-BS1 OPERATOR:
RUN TIME: 09/14/12 15:04:42
COMMENT: SDG:1209063 CLIENTID:LCSS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	330.6646	87732.81	1678.320	620.2009	60543.17	617.0674	1055.486
SDEV	.6669	141.10	21.540	7.2149	316.02	3.1846	2.639
%RSD	.2016856	.1608344	1.283400	1.163317	.5219671	.5160886	.2500207
#1	331.4309	87576.39	1702.809	612.2730	60181.57	620.6873	1058.393
#2	330.2154	87850.52	1662.309	621.9477	60681.53	615.8178	1053.242
#3	330.3475	87771.53	1669.842	626.3821	60766.41	614.6971	1054.823
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	720.1820	804.8753	134010.2	27464.31	25408.85	2773.603	2625.005
SDEV	4.4362	3.1725	567.3	127.55	97.65	26.191	266.920
%RSD	.6159808	.3941624	.4233086	.4644343	.3843109	.9443103	10.16834
#1	721.8838	808.4033	134647.9	27597.93	25504.65	2803.432	2928.100
#2	723.5153	802.2571	133820.7	27451.15	25412.43	2754.367	2521.897
#3	715.1468	803.9655	133561.9	27343.84	25309.45	2763.010	2425.019
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	598.3547	1297.982	586.4968	1387.752	930.8425	858.9520	807.3796
SDEV	2.2324	4.386	2.4892	4.883	8.0834	5.6932	4.0408
%RSD	.3730950	.3378893	.4244143	.3518422	.8683972	.6628077	.5004872
#1	600.8538	1302.431	583.6899	1392.910	922.6285	855.2125	810.4457
#2	597.6525	1293.663	588.4360	1387.146	938.7886	865.5041	802.8007
#3	596.5578	1297.851	587.3644	1383.201	931.1105	856.1393	808.8925
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	941.5710	925.9747	933.2752	862.0267	857.4165	1103.515	2.467490
SDEV	4.9843	3.2398	10.8317	16.1979	11.4093	9.973	8.108205
%RSD	.5293618	.3498759	1.160612	1.879047	1.330657	.9037908	328.6014
#1	945.6899	924.2899	921.8014	876.7604	844.4542	1114.431	11.80985
#2	942.9928	929.7097	943.3237	864.6378	865.9362	1101.236	-1.67151
#3	936.0303	923.9246	934.7006	844.6819	861.8591	1094.878	-2.73587
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	NOCHECK
HIGH	1080.000					1310.000	
LOW	768.0000					82.90000	

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	422.5158	2100.007	34951.82
SDEV	3.7187	26.849	128.54
%RSD	.8801321	1.278512	.3677625
#1	426.8088	2069.405	34872.66
#2	420.2893	2111.005	34882.66
#3	420.4493	2119.610	35100.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	512.0000	3520.000	
LOW	340.0000	512.0000	

METHOD: P42012S2 SAMPLE NAME: 2091302-BSD1 OPERATOR:
RUN TIME: 09/14/12 15:11:55
COMMENT: SDG:1209063 CLIENTID:LCSSD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	325.7410	87866.81	1692.302	609.9123	59459.68	609.5184	1035.781
SDEV	1.7348	986.41	16.531	6.2787	590.74	2.1952	8.333
%RSD	.5325673	1.122615	.9768608	1.029449	.9935156	.3601528	.8045055
#1	323.7944	88757.66	1681.426	615.5002	59966.68	612.0297	1044.374
#2	326.3047	86806.74	1711.325	603.1179	58810.97	608.5610	1027.735
#3	327.1238	88036.05	1684.153	611.1190	59601.37	607.9645	1035.236
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	724.0846	801.7748	130622.6	27147.24	25320.88	H3551.102	2368.519
SDEV	7.9527	2.3016	654.3	75.76	110.99	39.552	64.871
%RSD	1.098309	.2870606	.5008985	.2790597	.4383334	1.113793	2.738884
#1	730.5244	801.7505	131319.8	27226.88	25416.62	H3590.536	2387.515
#2	715.1953	799.4855	130021.9	27076.08	25199.22	H3511.433	2421.772
#3	726.5341	804.0884	130526.1	27138.76	25346.79	H3551.336	2296.271
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC HIGH	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	591.9830	1273.032	593.4838	1382.082	921.6962	849.5022	791.4580
SDEV	2.2652	6.392	7.5835	9.594	2.6158	4.4836	1.8223
%RSD	.3826460	.5021185	1.277788	.6941536	.2838077	.5277933	.2302456
#1	594.5244	1275.295	597.5129	1390.087	921.8138	845.0218	792.6646
#2	590.1766	1265.816	584.7362	1371.448	919.0236	849.4957	792.3476
#3	591.2478	1277.985	598.2023	1384.712	924.2513	853.9890	789.3618
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	922.9899	913.7009	925.6901	855.3144	846.6000	1071.084	2.747709
SDEV	4.9916	5.3125	4.5202	3.8550	7.0348	9.052	4.025827
%RSD	.5408072	.5814308	.4883072	.4507124	.8309423	.8451005	146.5158
#1	928.1419	919.8256	922.8088	853.1735	840.9517	1080.178	7.304749
#2	918.1759	910.3388	923.3618	859.7647	844.3685	1062.075	-.325999
#3	922.6518	910.9385	930.8998	853.0050	854.4799	1071.001	1.264376
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	NOCHECK
HIGH	1080.000					1310.000	
LOW	768.0000					82.90000	

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	420.3016	2162.096	35245.89
SDEV	1.9030	21.363	284.54
%RSD	.4527594	.9880906	.8073098
#1	419.4205	2177.451	34923.13
#2	422.4854	2137.698	35354.00
#3	418.9989	2171.139	35460.53
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	512.0000	3520.000	
LOW	340.0000	512.0000	

METHOD: P42012S2 SAMPLE NAME: 1209063-01 OPERATOR:
RUN TIME: 09/14/12 15:19:08
COMMENT: SDG:1209063 CLIENTID:ASR-2.82-SBHH0 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.54137	32056.08	88.54981	.3893694	2251.379	.6284785	4.440511
SDEV	.60506	457.93	.34550	.1564665	45.441	.3460519	.774961
%RSD	39.25427	1.428524	.3901724	40.18459	2.018373	55.06186	17.45206
#1	-1.34760	32406.06	88.15917	.2436659	2293.216	1.021352	5.294767
#2	-1.05694	31537.82	88.81527	.5547394	2203.035	.4952042	3.782627
#3	-2.21958	32224.37	88.67499	.3697027	2257.887	.3688788	4.244139
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	28.09600	13.15820	11172.11	622.2469	3540.714	71.13917	313.6455
SDEV	.13218	.25374	34.48	11.6295	13.298	.05117	101.0820
%RSD	.4704643	1.928351	.3086483	1.868949	.3755629	.0719324	32.22812
#1	28.22678	13.44023	11193.80	634.9924	3555.443	71.11323	207.8597
#2	27.96246	12.94844	11132.35	612.2122	3529.591	71.10616	323.8230
#3	28.09875	13.08594	11190.19	619.5362	3537.110	71.19811	409.2538
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.652524	4.760186	35.57001	45.15416	1289.003	2.469447	9.066746
SDEV	.434701	.712903	.87402	.25433	8.610	1.586636	1.308852
%RSD	5.023980	14.97637	2.457171	.5632409	.6679742	64.25068	14.43574
#1	8.797342	4.883435	36.57921	45.44177	1298.622	4.175980	8.282996
#2	8.996330	5.403429	35.07148	44.95895	1286.374	2.193436	10.57772
#3	8.163899	3.993694	35.05933	45.06176	1282.014	1.038925	8.339517
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.303978	1272.297	1297.344	-2.15144	4.776086	20.58250	-3.17227
SDEV	2.591181	3.401	11.740	6.33741	1.198718	2.30808	3.31809
%RSD	27.85025	.2673444	.9049493	294.5652	25.09833	11.21377	104.5967
#1	11.14543	1275.731	1310.050	3.426397	4.549866	21.55786	-1.39487
#2	6.340948	1268.929	1295.083	-.838112	3.706596	22.24278	-1.12152
#3	10.42555	1272.231	1286.898	-9.04262	6.071796	17.94687	-7.00042
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.679491	392.6863	35272.44
SDEV	.669359	9.8066	177.04
%RSD	39.85486	2.497314	.5019351
#1	1.862771	401.7504	35140.86
#2	2.238119	382.2762	35473.73
#3	.9375840	394.0322	35202.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1209063-01 OPERATOR:
RUN TIME: 09/14/12 15:26:21
COMMENT: SDG:1209063 CLIENTID:ASR-2.82-SBHH0L 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.739860	6420.843	17.13981	-.157025	437.1636	.1855668	1.887156
SDEV	.991148	62.501	.17138	.171137	1.7199	.4654844	1.328391
%RSD	133.9643	.9734052	.9998937	108.9870	.3934292	250.8447	70.39116
#1	-1.87607	6439.555	17.11825	-.309467	437.2609	.2081677	2.105474
#2	-.052847	6471.851	17.32095	-.189702	435.3971	.6393391	3.092865
#3	-.290659	6351.123	16.98023	.0280944	438.8328	-.290806	.4631300
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.694526	1.528754	2198.377	-102.818	709.2937	13.38053	56.33613
SDEV	.200566	.370014	33.079	13.805	13.7302	.35017	44.33007
%RSD	3.522077	24.20361	1.504709	13.42662	1.935751	2.617035	78.68852
#1	5.623631	1.345297	2209.419	-99.6454	710.0534	13.52433	10.57532
#2	5.920911	1.954650	2224.524	-90.8750	722.6282	13.63590	59.35158
#3	5.539037	1.286316	2161.190	-117.933	695.1995	12.98134	99.08149
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.423613	1.156613	6.653111	8.671459	257.3891	-1.61674	-1.40661
SDEV	.361354	1.673520	.525802	.201486	1.1105	3.48112	1.52444
%RSD	25.38288	144.6914	7.903106	2.323552	.4314353	215.3179	108.3765
#1	1.058183	1.714610	6.404662	8.761589	256.4835	-2.82641	-3.05489
#2	1.431907	-.724617	7.257099	8.812146	258.6280	-4.33165	-.047400
#3	1.780748	2.479847	6.297572	8.440641	257.0556	2.307851	-1.11755
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.6092663	256.2660	257.9491	-.320082	-2.26443	3.357835	-.124085
SDEV	2.511002	3.3252	1.1588	5.930326	3.38858	1.958841	3.928167
%RSD	412.1354	1.297562	.4492392	1852.753	149.6442	58.33642	3165.715
#1	-1.63874	255.9885	256.7299	-5.92956	-1.27750	2.896125	4.361890
#2	3.319141	259.7212	258.0813	-.916676	-6.03691	5.506286	-2.94804
#3	.1473942	253.0882	259.0361	5.885992	.5211324	1.671094	-1.78611
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.3446835	76.57017	36186.04
SDEV	1.114685	.36005	389.78
%RSD	323.3936	.4702274	1.077162
#1	.0813758	76.18510	36054.13
#2	1.567449	76.62694	35879.33
#3	-.614774	76.89847	36624.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 09/14/12 15:33:34
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	96.02325	49269.29	954.7155	1011.367	49128.59	1006.216	998.3704
SDEV	.57346	513.15	4.7513	10.305	518.91	3.809	5.4192
%RSD	.5972118	1.041513	.4976656	1.018933	1.056234	.3785028	.5428051
#1	96.68385	49836.45	949.7513	1021.430	49664.69	1002.423	992.1201
#2	95.73259	48837.18	955.1747	1000.835	48628.77	1006.187	1001.757
#3	95.65332	49134.23	959.2205	1011.835	49092.31	1010.039	1001.234
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1011.223	969.3922	24691.75	52495.12	48772.65	958.4292	50659.08
SDEV	9.597	7.8605	27.97	308.48	87.48	1.8468	257.55
%RSD	.9490460	.8108695	.1132934	.5876331	.1793583	.1926945	.5083935
#1	1022.136	976.5884	24703.33	52299.86	48825.18	958.4155	50874.27
#2	1007.430	970.5845	24659.84	52334.76	48671.66	960.2828	50373.72
#3	1004.102	961.0036	24712.07	52850.75	48821.09	956.5892	50729.25
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1005.775	1028.236	981.8408	1065.622	998.9433	1013.624	996.9587
SDEV	4.518	6.907	13.5500	2.531	8.5559	12.548	7.4331
%RSD	.4492470	.6717166	1.380064	.2375345	.8564913	1.237972	.7455824
#1	1000.909	1022.362	996.0001	1062.756	992.5395	1008.198	989.2872
#2	1006.579	1026.502	968.9958	1066.557	995.6301	1004.701	997.4610
#3	1009.838	1035.845	980.5264	1067.553	1008.660	1027.972	1004.128
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1025.919	978.2790	1009.260	1019.817	1010.532	986.1871	1023.619
SDEV	4.578	6.3281	9.840	22.355	9.096	1.5909	1.285
%RSD	.4462413	.6468576	.9749602	2.192097	.9001519	.1613139	.1255651
#1	1022.940	975.3221	1001.135	1018.713	1002.948	986.9968	1025.102
#2	1031.191	973.9708	1006.443	998.0334	1008.030	984.3542	1022.859
#3	1023.627	985.5443	1020.201	1042.703	1020.617	987.2102	1022.894
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	972.1503	980.5488	35388.04
SDEV	8.2385	14.2981	336.71
%RSD	.8474461	1.458174	.9514778
#1	962.6601	996.1998	35658.53
#2	976.3265	968.1713	35494.66
#3	977.4644	977.2752	35010.93
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 09/14/12 15:40:49
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.739860	.1594447	-.319797	-.411228	-13.8791	.6712652	4.205044
SDEV	.493633	5.306546	.085297	.119710	1.8506	.1722415	1.121118
%RSD	66.71980	3328.141	26.67230	29.11026	13.33353	25.65923	26.66126
#1	-.211389	5.458092	-.221578	-.547840	-15.5656	.8041385	Q5.197264
#2	-1.18906	-5.15496	-.375256	-.361178	-11.8995	.7329912	4.429024
#3	-.819131	.1752074	-.362558	-.324667	-14.1723	.4766660	2.988844
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0436440	-1.47328	.3519769	-286.622	-.950308	-.343816	-52.9582
SDEV	.4186211	.47483	8.830769	8.684	1.002203	.086712	71.7446
%RSD	959.1719	32.22961	2508.906	3.029764	105.4609	25.22056	135.4741
#1	.5229237	-1.03467	5.941725	-276.875	-.976154	-.272501	-8.37063
#2	-.141573	-1.97751	-9.82859	-293.536	-1.93934	-.440339	-14.7850
#3	-.250419	-1.40765	4.942799	-289.455	.0645681	-.318608	-135.719
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7676189	.5972728	.0093668	-.406449	.1262931	.1484092	-2.81984
SDEV	.7592161	1.991352	.2823914	.171702	.6052003	3.082881	.57844
%RSD	98.90534	333.4074	3014.810	42.24431	479.2030	2077.284	20.51317
#1	1.165063	1.997250	-.215942	-.243271	-.563735	1.098005	-3.33629
#2	-.107814	1.477009	-.082116	-.585563	.3755848	2.644782	-2.92842
#3	1.245608	-1.68244	.3261582	-.390513	.5670300	-3.29756	-2.19481
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.595973	2.466214	-1.04242	3.020736	-1.28594	-.527634	-.021151
SDEV	2.619111	.807949	.97831	4.569867	2.36781	.987930	2.149951
%RSD	164.1075	32.76069	93.84974	151.2832	184.1305	187.2378	10164.87
#1	4.098177	2.282395	-1.98518	3.859061	-.280795	-.419804	-1.47819
#2	-1.12617	3.350235	-1.11002	7.113403	.4134814	.4019580	-1.03334
#3	1.815916	1.766014	-.032065	-1.91025	-3.99051	-1.56506	2.448077
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.8198432	.0574309	35632.07
SDEV	1.245578	.3180533	396.61
%RSD	151.9289	553.8014	1.113069
#1	2.048920	.2554998	35349.13
#2	-.441606	-.309436	35461.66
#3	.8522157	.2262295	36085.40
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: 2091302-PS1 OPERATOR:
RUN TIME: 09/14/12 15:48:02
COMMENT: SDG:1209063 CLIENTID:ASR-2.82-SBHH0A 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	105.7031	35242.43	4496.476	111.7879	2223.069	114.8368	459.5954
SDEV	.6528	614.25	37.692	.5471	15.882	.8430	5.7404
%RSD	.6175676	1.742915	.8382601	.4893858	.7143958	.7340884	1.249003
#1	106.3020	34749.03	4459.504	111.8798	2214.090	114.2390	454.9150
#2	105.0073	35047.86	4495.074	111.2007	2213.710	114.4705	457.8709
#3	105.8000	35930.39	4534.850	112.2832	2241.406	115.8011	466.0003
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	254.8068	126.4054	15445.09	624.7893	3432.868	288.2859	478.5863
SDEV	4.7451	1.8278	208.05	7.6936	32.728	4.7075	75.2665
%RSD	1.862237	1.445992	1.347012	1.231398	.9533678	1.632926	15.72685
#1	253.2891	124.8244	15322.32	623.9198	3413.138	285.6840	422.3291
#2	251.0062	125.9851	15327.64	617.5673	3414.820	285.4537	449.3442
#3	260.1251	128.4068	15685.30	632.8807	3470.647	293.7200	564.0856
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	238.3325	688.5355	474.7168	705.9239	1479.586	215.2309	662.1649
SDEV	2.3425	6.6288	8.1508	8.4627	6.390	4.2718	6.1662
%RSD	.9828539	.9627441	1.716990	1.198806	.4319069	1.984742	.9312154
#1	236.1399	688.9189	468.3360	698.5951	1472.282	210.2984	657.7191
#2	238.0570	681.7233	471.9154	703.9906	1484.149	217.6724	659.5713
#3	240.8005	694.9643	483.8989	715.1859	1482.327	217.7219	669.2042
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	234.4634	1451.591	1493.562	213.3674	216.1609	1151.107	452.1129
SDEV	1.1304	7.250	11.806	2.9460	5.0144	13.227	4.3078
%RSD	.4821369	.4994490	.7904783	1.380727	2.319764	1.149053	.9528236
#1	235.5253	1456.747	1480.038	210.1051	210.3946	1143.397	450.1564
#2	233.2751	1454.724	1498.839	215.8334	218.5903	1143.545	449.1305
#3	234.5899	1443.301	1501.810	214.1637	219.4980	1166.380	457.0518
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1133.844	1465.374	35731.86
SDEV	5.547	8.996	96.72
%RSD	.4892561	.6139184	.2706756
#1	1128.622	1468.524	35806.73
#2	1133.243	1455.226	35766.20
#3	1139.668	1472.371	35622.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209063-02 OPERATOR:
RUN TIME: 09/14/12 15:55:15
COMMENT: SDG:1209063 CLIENTID:ASR-2.82-SBEE03 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5196637	46294.02	164.3683	.8676311	20504.99	1.229948	4.968926
SDEV	.2247298	530.85	1.6164	.1112964	209.40	.196368	.469871
%RSD	43.24524	1.146697	.9833916	12.82762	1.021213	15.96552	9.456197
#1	.6870129	45738.88	164.7780	.9160204	20322.62	1.456567	4.482326
#2	.6077423	46796.69	162.5865	.9465419	20733.66	1.110060	5.004393
#3	.2642359	46346.48	165.7405	.7403309	20458.68	1.123218	5.420058
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	52.16386	71.09438	23933.19	1509.725	2099.648	269.4851	400.8927
SDEV	.96261	.26207	135.07	10.062	14.676	1.6473	38.6362
%RSD	1.845357	.3686297	.5643439	.6665077	.6989862	.6112860	9.637532
#1	51.05261	70.79264	23777.76	1513.986	2082.744	267.8389	387.3777
#2	52.69801	71.26525	23999.74	1516.956	2107.052	269.4828	370.8296
#3	52.74096	71.22523	24022.07	1498.233	2109.147	271.1336	444.4709
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	14.23294	6.639471	63.98629	366.1251	771.0431	1.653798	4.391140
SDEV	1.09092	4.015883	1.25227	1.9413	2.8849	2.754342	2.073989
%RSD	7.664785	60.48499	1.957088	.5302193	.3741570	166.5464	47.23121
#1	13.74093	10.33545	62.84476	364.2618	767.9247	3.473765	2.143223
#2	13.47468	2.366175	65.32573	368.1359	773.6168	3.002618	4.799850
#3	15.48322	7.216785	63.78839	365.9775	771.5879	-1.51499	6.230347
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.31245	759.0147	777.0474	-6.66499	5.806616	25.89426	4.604342
SDEV	2.49292	3.9007	3.2101	2.56089	2.994666	1.16968	3.750582
%RSD	18.72624	.5139217	.4131196	38.42300	51.57335	4.517125	81.45750
#1	12.56440	757.0554	773.3504	-6.05551	8.230919	26.17395	8.884003
#2	11.27920	763.5067	778.6636	-4.46383	6.729903	24.61009	3.039175
#3	16.09375	756.4820	779.1283	-9.47564	2.459027	26.89873	1.889848
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	4.561078	368.3302	35365.75
SDEV	.783569	3.7840	17.34
%RSD	17.17947	1.027326	.0490368
#1	4.799887	364.0427	35376.06
#2	3.685890	371.2029	35375.46
#3	5.197456	369.7450	35345.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209063-03 OPERATOR:
RUN TIME: 09/14/12 16:02:28
COMMENT: SDG:1209063 CLIENTID:ASR-2.82-SBFF03 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.11860	76084.14	189.0273	1.319186	16567.22	1.281417	5.248377
SDEV	.52935	134.12	1.7193	.049664	36.93	.156773	.205728
%RSD	47.32277	.1762759	.9095553	3.764770	.2228851	12.23434	3.919832
#1	-.713436	76152.01	187.0663	1.299503	16532.92	1.246883	5.395963
#2	-1.71753	76170.77	190.2760	1.282380	16606.31	1.144791	5.013377
#3	-.924825	75929.66	189.7394	1.375675	16562.44	1.452578	5.335790
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	88.63518	33.61679	38493.10	2500.910	27111.15	190.0382	569.3668
SDEV	.63175	.36710	57.87	9.306	95.85	.1793	176.6767
%RSD	.7127551	1.092016	.1503375	.3720968	.3535492	.0943419	31.03038
#1	88.74602	33.19828	38525.86	2500.689	27107.42	190.0877	705.8568
#2	89.20417	33.76768	38527.17	2510.325	27208.81	190.1875	632.4326
#3	87.95534	33.88439	38426.29	2491.717	27017.22	189.8394	369.8110
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	17.38266	5.159820	112.2726	93.55600	2275.038	.6164275	14.28248
SDEV	.40635	1.005520	1.6319	.34069	4.205	1.204020	1.00715
%RSD	2.337680	19.48750	1.453497	.3641608	.1848299	195.3223	7.051652
#1	17.50363	4.348155	113.4948	93.26025	2277.499	-.302803	15.35281
#2	17.71478	6.284659	112.9035	93.47921	2270.183	1.979329	14.14121
#3	16.92956	4.846646	110.4194	93.92853	2277.432	.1727560	13.35342
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	26.62362	2253.365	2285.858	-2.70522	2.274420	21.83382	5.755186
SDEV	2.30905	24.719	9.817	1.18016	1.224438	1.03921	3.851579
%RSD	8.672928	1.096960	.4294543	43.62523	53.83520	4.759614	66.92361
#1	25.19766	2281.664	2275.419	-3.73989	1.412821	22.97875	9.858214
#2	29.28767	2235.994	2287.251	-1.41986	3.676036	21.57246	5.189784
#3	25.38554	2242.436	2294.904	-2.95591	1.734403	20.95024	2.217560
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	4.072055	547.1032	35612.89
SDEV	.520074	4.4783	209.06
%RSD	12.77178	.8185539	.5870473
#1	3.489209	549.4567	35375.33
#2	4.488757	549.9141	35768.86
#3	4.238200	541.9388	35694.46
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209063-04 OPERATOR:
RUN TIME: 09/14/12 16:09:42
COMMENT: SDG:1209063 CLIENTID:ASR-2.82-SBGG03 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.449201	32269.81	118.5443	.5673778	5226.066	.5027951	2.779585
SDEV	.873178	647.01	.9770	.1975631	106.174	.1894466	.842147
%RSD	194.3849	2.005011	.8241870	34.82039	2.031626	37.67868	30.29757
#1	.4492008	32117.72	119.6487	.5803360	5200.127	.7178649	3.632731
#2	-.502048	32979.32	118.1913	.3636545	5342.806	.4298832	2.757136
#3	-1.29475	31712.40	117.7928	.7581428	5135.265	.3606372	1.948887
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	27.48415	22.65300	11667.88	605.0879	2118.664	188.4118	542.7136
SDEV	.47008	.46983	78.23	18.8934	11.776	1.2612	67.2696
%RSD	1.710377	2.074031	.6704696	3.122417	.5557992	.6693829	12.39505
#1	27.97214	22.55498	11652.49	624.8455	2125.352	187.9577	504.5605
#2	27.44603	23.16411	11752.66	603.2206	2125.573	189.8372	620.3859
#3	27.03429	22.23991	11598.48	587.1975	2105.067	187.4406	503.1944
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.16597	.3933230	36.21512	558.0482	1208.268	-.558601	10.28274
SDEV	.43437	3.673762	1.07579	2.1754	3.869	1.262233	.36286
%RSD	4.272762	934.0319	2.970549	.3898196	.3201964	225.9630	3.528864
#1	10.60271	-3.68367	36.64712	558.1633	1209.698	-1.31831	10.00128
#2	10.16119	1.416883	37.00776	560.1637	1211.219	-1.25595	10.15466
#3	9.734016	3.446761	34.99048	555.8175	1203.888	.8984545	10.69227
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.90560	1187.933	1218.420	-2.37251	.3466541	19.72527	2.190562
SDEV	.46618	7.114	7.559	.72340	1.765324	1.14674	1.724109
%RSD	3.352460	.5988581	.6204257	30.49081	509.2465	5.813557	78.70624
#1	14.28435	1179.732	1224.658	-1.92040	-1.01806	18.44064	3.212504
#2	13.38496	1192.448	1220.590	-3.20684	-.282305	20.08959	.1999703
#3	14.04747	1191.618	1210.013	-1.99029	2.340323	20.64560	3.159213
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	2.463929	347.1204	35658.60
SDEV	.518110	7.5619	256.46
%RSD	21.02782	2.178476	.7191955
#1	1.914529	344.2229	35413.66
#2	2.943710	355.7026	35636.93
#3	2.533547	341.4357	35925.20
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091303-BLK1 OPERATOR:
RUN TIME: 09/14/12 16:16:54
COMMENT: SDG:1209064 CLIENTID:PBS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.783899	29.61822	-.106479	-.351953	77.24425	-.063788	.6371201
SDEV	.560113	6.63856	.056977	.155343	3.49120	.151870	.9965458
%RSD	71.45220	22.41378	53.50974	44.13741	4.519688	238.0868	156.4141
#1	-.871978	34.04617	-.047307	-.272112	81.21762	.0544503	1.223518
#2	-.184965	32.82325	-.111158	-.530979	74.66786	-.010749	1.201363
#3	-1.29475	21.98526	-.160972	-.252768	75.84729	-.235065	-.513521
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	2.500000	100.0000	100.0000	2.500000	2500.000	2.500000	10.00000
LOW	-2.50000	-100.000	-100.000	-2.50000	-2500.00	-2.50000	-10.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.4209049	.7202686	15.86167	-265.835	1.527607	-.010837	319.0850
SDEV	.7818553	.7312185	6.83219	7.978	2.418580	.026521	119.6927
%RSD	185.7558	101.5203	43.07359	3.001165	158.3247	244.7184	37.51122
#1	1.147283	1.401253	23.68138	-262.666	1.412654	.0195415	255.2987
#2	.5220199	.8120677	12.85614	-259.928	4.001614	-.022681	457.1611
#3	-.406589	-.052515	11.04748	-274.911	-.831447	-.029373	244.7952
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	2.500000	100.0000	2500.000	2500.000	5.000000	2500.000
LOW	-5.00000	-2.50000	-100.000	-2500.00	-2500.00	-5.00000	-2500.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3433376	-.296289	-.005984	1.139704	1.489643	-.083162	-.689533
SDEV	.7856838	2.815809	.275752	.436606	.399287	3.510889	6.045464
%RSD	228.8371	950.3599	4608.447	38.30872	26.80422	4221.749	876.7479
#1	.3276759	2.858720	-.004092	1.150948	1.577284	2.329246	5.062651
#2	1.136735	-1.19319	.2688173	1.570579	1.837829	-4.11099	-.140434
#3	-.434398	-2.55440	-.282677	.6975846	1.053815	1.532257	-6.99082
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	15.00000	15.00000	15.00000	5.000000	5.000000	15.00000
LOW	-5.00000	-15.0000	-15.0000	-15.0000	-5.00000	-5.00000	-15.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.9051859	5.159287	-.342924	-4.44427	2.093784	19.42828	-.886555
SDEV	.8769430	1.960188	1.528552	5.06577	3.441078	.72071	.985786
%RSD	96.87988	37.99338	445.7414	113.9842	164.3473	3.709572	111.1929
#1	-.099769	5.876439	-.569582	1.044797	2.970167	20.06941	-2.00641
#2	1.515265	2.941517	1.286302	-8.93941	-1.70074	19.56721	-.149955
#3	1.300062	6.659907	-1.74549	-5.43821	5.011928	18.64822	-.503296
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	5.000000					25.00000	25.00000
LOW	-5.00000					-25.0000	-25.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.1294607	.3567374	35603.93
SDEV	.8851216	.3189231	280.71
%RSD	683.6992	89.39997	.7884246
#1	.7356826	.5230379	35426.00
#2	.5389587	.5581396	35458.27
#3	-.886259	-.010965	35927.53
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	25.00000	25.00000	
LOW	-25.0000	-25.0000	

METHOD: P42012S2 SAMPLE NAME: 2091303-BS1 OPERATOR:
RUN TIME: 09/14/12 16:24:07
COMMENT: SDG:1209064 CLIENTID:LCSS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	334.6897	86448.88	1659.977	603.8889	59674.15	611.4183	1051.351
SDEV	3.3715	1752.56	25.387	8.8386	939.44	7.6139	9.530
%RSD	1.007349	2.027281	1.529343	1.463613	1.574277	1.245283	.9064426
#1	336.6363	88378.98	1687.276	613.4364	60730.18	619.7573	1062.153
#2	336.6363	86010.61	1655.579	602.2385	59360.94	609.6606	1047.765
#3	330.7967	84957.04	1637.077	595.9919	58931.33	604.8369	1044.133
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	460.0000	138000.0	1980.000	724.0000	71900.00	720.0000	1190.000
LOW	228.0000	41300.00	1400.000	523.0000	51100.00	515.0000	877.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	722.4307	817.5826	130519.2	27283.30	25304.66	2795.771	2457.480
SDEV	18.6850	12.9372	1870.1	266.79	369.46	44.617	195.055
%RSD	2.586410	1.582368	1.432839	.9778689	1.460046	1.595868	7.937190
#1	736.8701	827.2067	132231.4	27581.61	25633.43	2833.892	2464.632
#2	729.0947	822.6651	130802.6	27200.78	25375.72	2806.725	2258.948
#3	701.3273	802.8760	128523.5	27067.52	24904.84	2746.698	2648.861
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	843.0000	943.0000	192000.0	33600.00	33600.00	3360.000	2960.000
LOW	583.0000	681.0000	64900.00	17200.00	19400.00	2360.000	1460.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	594.5203	1277.758	581.6404	1381.843	927.4700	862.7643	808.2322
SDEV	8.1050	15.844	12.8271	17.484	4.2980	7.2662	12.2795
%RSD	1.363282	1.239989	2.205330	1.265236	.4634085	.8421954	1.519300
#1	602.7476	1285.510	592.8160	1401.353	931.6090	871.0189	820.8639
#2	594.2698	1288.234	584.4707	1376.579	923.0290	857.3358	807.4946
#3	586.5434	1259.531	567.6346	1367.596	927.7720	859.9382	796.3382
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	687.0000	1460.000	748.0000	1680.000	1080.000	1080.000	2690.000
LOW	495.0000	995.0000	435.0000	1140.000	770.0000	707.0000	.0000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	934.5684	924.8561	928.7774	870.6561	858.8240	1090.284	4.503112
SDEV	13.7695	9.9531	1.5985	7.2261	8.7299	17.562	2.536544
%RSD	1.473352	1.076183	.1721126	.8299560	1.016496	1.610777	56.32869
#1	948.1853	935.0746	929.8813	877.5086	867.7786	1110.554	5.312361
#2	934.8686	915.1914	926.9443	871.3527	850.3376	1079.652	1.660683
#3	920.6513	924.3024	929.5065	863.1069	858.3558	1080.645	6.536293
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	NOCHECK
HIGH	1080.000					1310.000	
LOW	768.0000					82.90000	

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	425.8279	2059.128	35794.60
SDEV	4.0279	27.366	354.86
%RSD	.9458937	1.329018	.9913842
#1	429.5983	2088.770	35565.13
#2	426.3012	2053.789	36203.33
#3	421.5843	2034.824	35615.33
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	512.0000	3520.000	
LOW	340.0000	512.0000	

METHOD: P42012S2 SAMPLE NAME: 1209064-01 OPERATOR:
RUN TIME: 09/14/12 16:31:20
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBGG 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.51495	78121.38	195.4071	1.389615	4535.738	.0629107	5.900751
SDEV	.58152	937.50	1.0094	.155097	42.054	.2530357	1.115254
%RSD	38.38531	1.200051	.5165469	11.16116	.9271614	402.2139	18.90021
#1	-1.53257	77570.16	195.5531	1.298333	4508.345	.2507110	5.521124
#2	-.924825	79203.84	194.3327	1.568695	4584.158	.1628542	7.156259
#3	-2.08746	77590.13	196.3355	1.301818	4514.710	-.224833	5.024870
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	73.97244	16.46191	30701.27	1976.189	12801.81	128.1022	608.3098
SDEV	1.74368	.32748	290.09	10.922	127.38	1.3220	15.0316
%RSD	2.357203	1.989326	.9448791	.5526963	.9950047	1.031951	2.471048
#1	73.40931	16.16015	30494.37	1968.421	12723.49	127.1371	618.6935
#2	75.92810	16.81014	31032.86	1988.678	12948.79	129.6090	591.0729
#3	72.57992	16.41543	30576.59	1971.468	12733.15	127.5607	615.1630
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	20.00768	6.333891	99.66624	50.25494	752.8388	.4989227	9.285597
SDEV	.40740	.696466	2.23547	.62758	6.8993	.6261250	1.854494
%RSD	2.036227	10.99587	2.242952	1.248793	.9164373	125.4954	19.97173
#1	19.77134	5.551274	98.47266	49.74088	748.3580	.7496297	11.04233
#2	20.47811	6.885506	102.2452	50.95431	760.7838	-.213706	9.467682
#3	19.77360	6.564895	98.28089	50.06963	749.3746	.9608444	7.346776
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	17.40121	741.9407	758.2792	-6.48014	3.982885	21.66304	1.909086
SDEV	.62041	5.8442	7.9097	1.19667	.896271	1.92403	3.721325
%RSD	3.565309	.7876970	1.043114	18.46673	22.50306	8.881613	194.9270
#1	16.83017	735.9316	754.5613	-5.09968	3.669564	21.53240	5.312461
#2	18.06135	747.6049	767.3628	-7.22297	3.285335	19.80767	2.479191
#3	17.31210	742.2855	752.9134	-7.11776	4.993754	23.64906	-2.06439
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.048258	685.7976	35974.84
SDEV	.818657	7.4036	225.35
%RSD	26.85655	1.079565	.6264167
#1	3.293107	677.4089	36088.86
#2	3.716552	691.4191	35715.27
#3	2.135115	688.5647	36120.40
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091303-DUP1 OPERATOR:
RUN TIME: 09/14/12 16:38:33
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBGGD 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.20668	78844.30	200.3713	1.363292	4492.463	.1047096	6.167574
SDEV	.86447	385.74	.9009	.114394	39.097	.1559069	.384896
%RSD	71.64077	.4892405	.4496086	8.390979	.8702736	148.8945	6.240646
#1	-2.19316	79056.95	199.4409	1.470448	4501.814	-.071476	5.872160
#2	-.845554	79076.91	200.4335	1.242826	4526.038	.1607723	6.602845
#3	-.581318	78399.04	201.2395	1.376602	4449.540	.2248325	6.027717
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	72.21101	16.32340	30038.83	2020.638	12606.28	160.5569	478.7718
SDEV	1.09452	.36529	167.98	14.458	48.97	.9965	32.0378
%RSD	1.515726	2.237844	.5592000	.7155004	.3884548	.6206290	6.691663
#1	71.43854	16.02222	29884.82	2004.454	12554.77	159.6784	469.4367
#2	71.73098	16.72974	30013.72	2032.277	12611.84	160.3527	514.4403
#3	73.46353	16.21824	30217.95	2025.183	12652.24	161.6397	452.4383
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	20.12301	4.351105	97.51150	45.48333	186.6346	-.505738	2.690892
SDEV	.11707	3.344731	.82398	.24274	.7715	2.103791	3.840004
%RSD	.5817807	76.87084	.8450030	.5336939	.4133593	415.9845	142.7038
#1	20.02807	.5010948	97.57659	45.34400	186.0836	-1.54661	-1.25250
#2	20.08714	6.010984	98.30100	45.34238	186.3038	1.915586	2.906767
#3	20.25382	6.541236	96.65691	45.76363	187.5163	-1.88619	6.418404
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.95423	185.4294	187.2358	-4.05537	1.266082	19.25196	.5425267
SDEV	.89819	2.3549	1.5626	4.47451	2.780476	1.00222	2.011886
%RSD	6.436696	1.269945	.8345794	110.3355	219.6127	5.205797	370.8363
#1	14.94441	187.3830	185.4345	-1.17612	-1.73191	19.64140	2.810576
#2	13.72639	182.8146	188.0454	-1.77966	3.760101	20.00100	-1.02699
#3	13.19191	186.0906	188.2276	-9.21033	1.770056	18.11347	-.156009
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	3.518568	720.8295	35970.49
SDEV	.315784	11.2859	101.74
%RSD	8.974781	1.565685	.2828541
#1	3.566222	722.2766	35927.53
#2	3.181666	731.3221	35897.27
#3	3.807816	708.8899	36086.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091303-MS1 OPERATOR:
RUN TIME: 09/14/12 16:45:46
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBGGS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	46.31171	103329.0	2155.251	50.85217	5436.595	49.71487	497.9022
SDEV	.24552	574.1	24.259	.15468	19.359	.35297	3.0253
%RSD	.5301435	.5555844	1.125562	.3041731	.3560930	.7099964	.6076103
#1	46.10913	103977.6	2148.855	51.01173	5458.310	50.09160	500.2491
#2	46.24124	103123.6	2182.067	50.70288	5421.144	49.66121	494.4878
#3	46.58476	102885.9	2134.831	50.84190	5430.330	49.39180	498.9694
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	288.3075	264.3270	36058.60	3240.665	24001.98	623.9481	521.0661
SDEV	4.9351	1.0616	268.48	20.196	151.98	5.5586	49.3124
%RSD	1.711747	.4016130	.7445766	.6232058	.6332033	.8908684	9.463759
#1	292.2924	265.5527	36368.62	3263.008	24176.95	630.0122	552.0483
#2	289.8430	263.7069	35903.93	3223.707	23926.24	622.7376	464.2012
#3	282.7872	263.7212	35903.25	3235.280	23902.76	619.0946	546.9488
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	522.6445	55.74873	592.9289	535.3519	232.6574	7.439175	307.0235
SDEV	1.6306	2.83533	6.2075	3.8110	.4651	2.241697	1.6701
%RSD	.3119984	5.085913	1.046914	.7118739	.1998900	30.13368	.5439809
#1	524.3356	52.93411	595.7554	539.7216	233.1764	9.785951	308.1266
#2	522.5158	55.70775	597.2201	532.7160	232.2787	7.211665	307.8418
#3	521.0820	58.60433	585.8112	533.6181	232.5170	5.319908	305.1020
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	53.99505	229.7135	234.1267	-.351731	11.32845	952.9969	986.6432
SDEV	1.58325	1.5349	.4852	1.434031	3.56878	5.9037	4.9598
%RSD	2.932211	.6681979	.2072329	407.7069	31.50283	.6194888	.5026926
#1	54.92307	230.7751	234.3749	.0442728	14.64915	959.8026	991.2133
#2	54.89514	227.9535	234.4376	-1.94215	11.78138	949.2535	981.3690
#3	52.16694	230.4118	233.5676	.8426864	7.554828	949.9347	987.3474
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	961.1365	1570.038	35934.57
SDEV	6.6448	8.608	115.44
%RSD	.6913493	.5482679	.3212577
#1	955.0585	1570.366	35803.73
#2	968.2310	1561.271	35977.93
#3	960.1201	1578.477	36022.06
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 09/14/12 16:52:58
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.699300	179.8968	181.4969	4.496618	4679.968	5.173679	20.21628
SDEV	.504130	1.9802	.4138	.226715	46.376	.079369	.71389
%RSD	13.62770	1.100726	.2280040	5.041906	.9909383	1.534091	3.531258
#1	3.963535	178.0186	181.9724	4.736530	4731.771	5.195964	21.01200
#2	4.016383	179.7066	181.3004	4.467391	4665.815	5.085550	19.63198
#3	Q3.117981	181.9652	181.2180	4.285934	4642.318	5.239523	20.00485
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.22266	3.812984	155.1522	5177.675	4719.863	9.008053	4682.631
SDEV	.32256	.313513	7.1188	32.942	37.531	.060284	115.159
%RSD	3.155311	8.222259	4.588239	.6362320	.7951639	.6692268	2.459279
#1	10.49040	4.022887	163.2014	5193.162	4709.619	8.962501	4808.590
#2	10.31302	Q3.452599	152.5713	5139.844	4688.518	8.985244	4582.743
#3	9.864562	3.963465	149.6839	5200.020	4761.452	9.076413	4656.559
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.503368	28.54951	18.61221	28.29800	10.81493	10.60663	26.09606
SDEV	.367223	4.17274	.70264	.25850	.39966	.62383	1.77514
%RSD	3.864132	14.61581	3.775136	.9134883	3.695475	5.881480	6.802347
#1	9.511031	31.33747	19.40781	28.53437	10.95018	10.80074	28.13314
#2	9.132375	30.55880	18.07671	28.02196	11.12942	11.11033	25.27462
#3	9.866700	23.75226	18.35211	28.33768	10.36519	9.908829	24.88040
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.439423	10.88240	10.78092	14.30365	8.760565	48.42115	Q18.26917
SDEV	2.450780	1.28323	.60951	3.98122	1.974188	.92145	4.97550
%RSD	29.03967	11.79177	5.653610	27.83360	22.53494	1.902999	27.23441
#1	8.098551	9.895997	11.47615	10.32587	11.03748	48.56028	Q14.19469
#2	Q6.176922	12.33316	10.52812	18.28830	7.526399	49.26512	Q23.81420
#3	11.04279	10.41803	10.33848	14.29678	7.717815	47.43804	Q16.79862
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	48.85874	47.18858	36417.46
SDEV	.39692	.87657	172.39
%RSD	.8123762	1.857589	.4733850
#1	48.89840	48.09017	36229.73
#2	49.23433	47.13618	36454.00
#3	48.44348	46.33938	36568.66
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: CCV OPERATOR:
RUN TIME: 09/14/12 17:00:12
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	97.44132	48836.55	959.4825	999.6075	48640.06	1005.719	992.2939
SDEV	.56816	534.86	8.5483	2.1016	293.26	12.572	17.2735
%RSD	.5830798	1.095208	.8909307	.2102438	.6029241	1.250007	1.740763
#1	96.81596	48822.76	959.2914	1001.995	48664.64	1004.122	992.3644
#2	97.58225	49378.17	968.1247	998.7925	48920.25	1019.013	1009.532
#3	97.92575	48308.71	951.0312	998.0355	48335.27	994.0222	974.9854
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1006.084	985.2454	24641.81	52487.87	48625.88	953.7498	50146.96
SDEV	10.721	11.5571	362.16	620.81	622.03	14.4309	633.94
%RSD	1.065569	1.173012	1.469687	1.182768	1.279221	1.513075	1.264168
#1	1003.902	980.3663	24590.64	52343.10	48485.71	948.9394	50193.12
#2	1017.728	998.4419	25026.82	53168.27	49306.04	969.9716	50756.56
#3	996.6223	976.9281	24307.95	51952.24	48085.89	942.3384	49491.19
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1003.181	1029.108	969.4000	1063.513	997.4706	1013.688	1007.019
SDEV	10.753	12.872	4.4141	14.685	12.7689	9.004	10.177
%RSD	1.071904	1.250798	.4553454	1.380812	1.280130	.8882847	1.010652
#1	1000.986	1030.689	967.3893	1058.804	992.5120	1007.450	1004.651
#2	1014.862	1041.117	974.4615	1079.975	1011.975	1024.011	1018.172
#3	993.6945	1015.518	966.3492	1051.759	987.9248	1009.602	998.2342
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1026.171	977.9921	1007.195	1026.812	1007.135	996.9806	1023.483
SDEV	7.061	18.5309	10.929	11.984	8.216	11.5694	7.312
%RSD	.6881175	1.894793	1.085099	1.167096	.8158063	1.160442	.7144017
#1	1024.356	964.3069	1006.593	1015.060	1003.651	993.0510	1023.884
#2	1033.963	999.0801	1018.413	1039.015	1016.519	1010.003	1030.586
#3	1020.194	970.5892	996.5794	1026.361	1001.235	987.8878	1015.979
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	980.9636	959.7771	35949.29
SDEV	13.4164	6.1869	263.67
%RSD	1.367680	.6446229	.7334545
#1	975.1597	963.9812	35880.73
#2	996.3049	952.6728	35726.66
#3	971.4263	962.6772	36240.46
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB OPERATOR:
RUN TIME: 09/14/12 17:07:26
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.836746	-7.54846	-.283204	-.437844	-7.25248	.2420641	1.513653
SDEV	.466983	4.60001	.065611	.222608	7.03421	.1004828	.664989
%RSD	55.80934	60.93969	23.16755	50.84198	96.99034	41.51084	43.93269
#1	-.607742	-10.3131	-.207462	-.692001	.7603902	.3349556	1.250579
#2	-1.37403	-10.0940	-.319562	-.277485	-10.1076	.1354089	1.020447
#3	-.528471	-2.23834	-.322587	-.344045	-12.4102	.2558278	2.269933
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.8341460	-.766230	.1397155	-283.659	-1.98277	-.346824	-83.5658
SDEV	.2182036	.401266	3.538223	8.532	2.30930	.061826	46.9558
%RSD	26.15892	52.36890	2532.449	3.007772	116.4688	17.82624	56.19016
#1	1.009829	-.307917	-3.92289	-273.842	.0666156	-.401598	-45.3930
#2	.5898935	-1.05435	2.545803	-289.281	-4.48493	-.279785	-69.3060
#3	.9027155	-.936424	1.796232	-287.855	-1.52999	-.359090	-135.998
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.586986	2.921969	-.262097	-.392492	.3557519	.2737921	-6.05413
SDEV	.197443	.476947	.103897	.181417	.6353980	2.678951	2.18566
%RSD	33.63674	16.32279	39.64080	46.22165	178.6071	978.4618	36.10193
#1	-.813872	3.133528	-.353262	-.601330	.0818393	-1.31493	-3.55290
#2	-.492933	2.375837	-.284054	-.273861	1.082165	3.366794	-7.01318
#3	-.454153	3.256542	-.148976	-.302286	-.096749	-1.23049	-7.59630
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.329251	1.031904	.0176962	1.647835	-.412533	-.566496	1.890528
SDEV	1.761256	1.942717	1.678777	1.315823	4.385613	.682276	.957136
%RSD	534.9289	188.2653	9486.657	79.85165	1063.094	120.4380	50.62794
#1	1.423970	-.299698	.2718646	.9182875	-2.43020	.1894626	2.774005
#2	-2.09843	.1342868	1.554896	.8583943	4.618783	-.752392	.8737155
#3	-.313288	3.261124	-1.77367	3.166824	-3.42619	-1.13656	2.023865
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.149375	.3598084	36220.33
SDEV	.789768	.0605783	240.08
%RSD	68.71281	16.83628	.6628292
#1	1.804570	.3703448	36318.46
#2	.2724388	.2946531	36395.80
#3	1.371117	.4144274	35946.73
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: 2091303-MSD1 OPERATOR:
RUN TIME: 09/14/12 17:14:39
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBGGDS 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	46.55833	91075.23	2137.216	51.30739	3762.515	49.23437	492.3095
SDEV	.05285	573.31	22.588	.23586	19.844	.39836	6.7819
%RSD	.1135069	.6294861	1.056910	.4597046	.5274103	.8091106	1.377566
#1	46.50548	90413.30	2119.293	51.26713	3744.815	48.81307	484.7330
#2	46.55833	91398.04	2162.588	51.09425	3758.763	49.60493	497.8129
#3	46.61118	91414.36	2129.767	51.56079	3783.968	49.28511	494.3826
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	276.1476	263.3534	29327.35	2805.809	7847.458	620.1107	653.6576
SDEV	2.1816	1.3794	220.93	17.178	66.784	7.3899	78.3723
%RSD	.7900180	.5237685	.7533291	.6122231	.8510304	1.191703	11.98980
#1	273.9294	261.9302	29105.07	2786.036	7778.472	613.0233	744.1536
#2	278.2907	263.4457	29546.91	2814.337	7911.797	627.7698	608.1497
#3	276.2225	264.6843	29330.07	2817.054	7852.106	619.5388	608.6694
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	518.2907	50.15105	583.1953	521.5938	157.4951	7.901699	310.4192
SDEV	2.8145	5.05537	4.4082	5.1665	2.6837	2.326756	3.6266
%RSD	.5430361	10.08029	.7558743	.9905308	1.703989	29.44628	1.168297
#1	515.0449	55.11821	578.2823	516.4572	154.9907	9.547765	314.6035
#2	519.7708	45.01186	584.4988	526.7898	157.1666	8.917591	308.1807
#3	520.0563	50.32308	586.8048	521.5343	160.3279	5.239741	308.4735
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	47.94725	154.6666	158.9068	7.185243	8.259058	950.4961	986.6353
SDEV	.83252	.4008	4.0800	1.717542	4.333090	6.1451	5.3604
%RSD	1.736329	.2591425	2.567527	23.90374	52.46470	.6465143	.5432961
#1	48.12798	155.0268	154.9724	6.293170	11.17229	944.4382	984.4609
#2	47.03920	154.2349	158.6299	6.097297	10.32529	956.7248	982.7037
#3	48.67456	154.7382	163.1182	9.165263	3.279591	950.3252	992.7411
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	960.4004	1536.047	36346.20
SDEV	7.5608	16.158	117.69
%RSD	.7872590	1.051904	.3237902
#1	960.8680	1541.763	36407.27
#2	967.7166	1517.808	36210.53
#3	952.6166	1548.570	36420.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1209064-01 OPERATOR:
RUN TIME: 09/14/12 17:21:52
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBGGL 1:5
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.651781	15622.03	38.11933	-.037693	883.8060	-.286884	.2985162
SDEV	.267301	305.77	.31945	.107128	19.2529	.162938	.4350649
%RSD	41.01079	1.957326	.8380182	284.2093	2.178405	56.79599	145.7425
#1	-.792707	15550.39	38.15561	.0670879	876.0501	-.176728	.7902754
#2	-.819131	15957.26	37.78329	-.033145	905.7272	-.474053	.1415812
#3	-.343506	15358.43	38.41909	-.147024	869.6409	-.209869	-.036308
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	15.20952	2.634623	6201.632	172.9441	2606.068	25.36953	63.75026
SDEV	.31407	.437430	60.608	.6564	22.723	.34289	145.3031
%RSD	2.064928	16.60312	.9772964	.3795229	.8719356	1.351590	227.9255
#1	15.56753	2.352908	6229.904	173.6851	2616.564	25.37152	231.1785
#2	15.08059	2.412406	6242.940	172.4359	2621.646	25.71143	-10.5381
#3	14.98044	3.138553	6132.054	172.7112	2579.994	25.02565	-29.3896
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.034612	3.750563	19.18602	9.772809	154.9215	-.172438	-.529862
SDEV	1.069154	2.709981	.78040	.199977	.8945	.557546	1.102213
%RSD	26.49954	72.25530	4.067527	2.046255	.5773716	323.3316	208.0189
#1	3.369926	4.588146	18.85490	9.715767	155.5668	-.173520	.4286708
#2	3.465992	5.942870	20.07738	9.607551	153.9005	.3856486	-1.73424
#3	5.267918	.7206729	18.62578	9.995109	155.2973	-.729442	-.284018
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.892558	152.3505	156.2046	2.553327	-1.53360	2.892231	-.530703
SDEV	.688243	.6000	1.4674	4.719265	3.19168	1.052484	2.623108
%RSD	17.68099	.3937985	.9393989	184.8281	208.1161	36.39003	494.2708
#1	4.149728	152.7183	156.9884	2.737390	-1.62712	3.023516	-1.01431
#2	3.112762	152.6750	154.5118	-2.25528	1.703804	3.872914	2.300559
#3	4.415184	151.6581	157.1137	7.177867	-4.67750	1.780264	-2.87835
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.7947209	132.2479	36856.19
SDEV	.8536080	2.2921	74.39
%RSD	107.4098	1.733190	.2018422
#1	.9007171	132.4999	36777.80
#2	1.590381	134.4037	36865.00
#3	-.106935	129.8403	36925.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 2091303-PS1 OPERATOR:
RUN TIME: 09/14/12 17:29:05
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBGGA 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	106.3813	80767.14	4644.291	114.2736	4450.657	113.6126	461.1048
SDEV	.5759	749.47	6.614	.9212	27.603	.6637	2.9373
%RSD	.5413386	.9279399	.1424190	.8061737	.6201996	.5841477	.6370071
#1	107.0419	80382.77	4645.483	114.6640	4453.680	112.9048	459.0983
#2	106.1171	80287.84	4637.161	113.2215	4421.667	114.2208	464.4762
#3	105.9849	81630.82	4650.227	114.9354	4476.624	113.7122	459.7399
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	302.9903	129.0287	34962.57	1960.701	12613.79	348.2520	571.4215
SDEV	3.0895	.8036	192.02	4.320	53.57	2.5168	132.4090
%RSD	1.019653	.6228103	.5492170	.2203181	.4247270	.7226879	23.17187
#1	299.4587	128.6679	34755.93	1957.360	12552.38	345.7552	642.4023
#2	305.1930	128.4687	35135.50	1965.579	12650.95	350.7883	653.2062
#3	304.3191	129.9495	34996.27	1959.165	12638.05	348.2123	418.6560
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	246.2534	684.3348	539.9131	706.0252	965.9882	211.2517	662.9534
SDEV	1.1810	3.7784	8.1188	3.6476	6.6123	2.0741	3.1663
%RSD	.4795899	.5521274	1.503726	.5166345	.6845102	.9818197	.4776078
#1	245.1726	680.0045	538.4434	702.9657	958.4022	213.3401	659.2994
#2	247.5140	686.0396	532.6295	710.0618	970.5305	211.2227	664.6727
#3	246.0736	686.9605	548.6663	705.0482	969.0320	209.1922	664.8881
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	238.4228	959.1803	969.3865	208.9626	212.3942	1170.856	450.1328
SDEV	2.8133	8.6782	5.6471	4.5703	2.7918	5.202	3.1323
%RSD	1.179969	.9047501	.5825388	2.187115	1.314466	.4443047	.6958665
#1	236.2675	949.1612	963.0153	209.0205	215.4964	1168.650	451.9016
#2	241.6054	964.0328	973.7739	213.5036	210.0837	1176.797	451.9807
#3	237.3954	964.3469	971.3705	204.3637	211.6025	1167.120	446.5162
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1132.606	1767.981	35768.62
SDEV	1.832	19.711	95.98
%RSD	.1617655	1.114875	.2683417
#1	1130.520	1778.362	35837.20
#2	1133.345	1745.249	35658.93
#3	1133.954	1780.331	35809.73
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209064-02 OPERATOR:
RUN TIME: 09/14/12 17:36:18
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBHH04 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.73515	28584.59	84.19201	.2271685	3864.198	-.240968	1.212230
SDEV	.33249	126.84	.62665	.1101206	13.911	.295826	.028422
%RSD	19.16202	.4437475	.7443160	48.47528	.3600087	122.7659	2.344592
#1	-2.08746	28590.77	84.72347	.3120379	3863.459	.0573882	1.230103
#2	-1.42687	28454.77	83.50101	.1027312	3850.671	-.246094	1.179456
#3	-1.69111	28708.23	84.35156	.2667363	3878.464	-.534198	1.227130
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	28.30509	10.97893	11209.61	728.6885	10243.21	104.8570	359.0880
SDEV	.40770	.13093	16.55	10.0771	23.13	.2661	126.5591
%RSD	1.440376	1.192565	.1476018	1.382913	.2258395	.2537836	35.24459
#1	27.84212	10.86750	11205.21	719.6718	10251.58	104.5497	238.9422
#2	28.61052	10.94616	11227.91	726.8271	10260.99	105.0112	491.2091
#3	28.46262	11.12314	11195.71	739.5665	10217.06	105.0100	347.1127
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.899769	1.812856	38.14275	41.59498	653.9949	1.170946	8.444585
SDEV	.756773	1.234360	.29481	.29715	3.5043	.779866	3.048948
%RSD	9.579689	68.08923	.7729068	.7143897	.5358299	66.60135	36.10537
#1	8.202520	3.207397	37.88897	41.25535	650.0276	.2829856	5.008900
#2	8.458296	1.370702	38.07314	41.80706	656.6682	1.485176	10.82811
#3	7.038490	.8604689	38.46612	41.72252	655.2888	1.744678	9.496740
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.636167	638.8507	661.5552	-8.41863	5.958212	20.86746	.5929078
SDEV	1.658424	1.3627	5.1678	1.89523	2.102306	1.48233	1.088243
%RSD	29.42469	.2133004	.7811631	22.51228	35.28418	7.103563	183.5435
#1	3.951671	638.8612	655.6019	-6.23374	3.536129	19.71718	.4505412
#2	5.689603	640.2081	664.8857	-9.61867	7.028441	22.54031	1.745328
#3	7.267228	637.4828	664.1780	-9.40348	7.310066	20.34490	-.417146
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.809880	425.3039	36239.57
SDEV	.573468	3.4560	117.34
%RSD	31.68541	.8126054	.3237808
#1	2.263092	421.9055	36131.53
#2	2.001381	425.1913	36222.80
#3	1.165166	428.8148	36364.40
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209064-03 OPERATOR:
RUN TIME: 09/14/12 17:43:30
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBCC05 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.12741	39225.21	99.61208	.3669442	7022.795	-.058773	2.506487
SDEV	.21194	621.72	.73070	.1088152	73.650	.090621	1.061588
%RSD	18.79876	1.585004	.7335416	29.65443	1.048730	154.1899	42.35362
#1	-1.34760	39800.21	99.21598	.2906445	7096.755	.0312805	3.686006
#2	-.924825	38565.46	99.16497	.4915493	6949.458	-.057647	1.627726
#3	-1.10979	39309.97	100.4553	.3186388	7022.172	-.149952	2.205730
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	44.75449	10.79978	20157.31	1302.197	2751.860	85.91185	400.3246
SDEV	.53537	.34398	242.84	7.875	27.604	1.57194	108.6841
%RSD	1.196231	3.185099	1.204716	.6047513	1.003096	1.829718	27.14899
#1	44.97274	10.78089	20306.40	1310.229	2765.854	86.37716	490.3133
#2	44.14447	11.15282	19877.09	1294.489	2720.061	84.15978	279.5756
#3	45.14625	10.46563	20288.43	1301.873	2769.663	87.19862	431.0848
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.14290	3.065030	61.27766	28.41883	108.9154	.8926271	3.027651
SDEV	.26561	3.635673	1.46324	.25149	.3914	2.201506	1.197595
%RSD	2.618685	118.6179	2.387886	.8849546	.3593572	246.6322	39.55525
#1	9.993568	.0742664	62.91206	28.48308	108.4834	.1059703	1.789084
#2	10.44957	2.009016	60.08947	28.14144	109.0163	-.807488	3.114301
#3	9.985575	7.111807	60.83146	28.63196	109.2464	3.379399	4.179567
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.538308	109.8665	108.4402	-7.82033	5.242240	19.06649	-.246512
SDEV	.479737	3.0227	1.7244	1.56087	2.606649	.14005	4.506997
%RSD	5.618639	2.751225	1.590208	19.95914	49.72396	.7345149	1828.310
#1	8.432345	109.5241	107.9634	-7.63902	3.972324	18.99927	.8097249
#2	8.120411	113.0457	107.0042	-9.46394	3.513915	19.22747	3.638565
#3	9.062167	107.0296	110.3528	-6.35803	8.240480	18.97273	-5.18783
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	2.243681	421.8768	36068.13
SDEV	.826798	2.6594	258.42
%RSD	36.85006	.6303733	.7164857
#1	2.219004	424.9441	35790.93
#2	3.082541	420.4710	36302.40
#3	1.429498	420.2154	36111.06
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209064-04 OPERATOR:
RUN TIME: 09/14/12 17:50:43
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBCC06 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.03052	20804.29	76.53471	.2505299	2060.564	-.436475	-.034540
SDEV	.64128	370.73	.77542	.0151147	31.540	.210846	.685253
%RSD	62.22904	1.782010	1.013156	6.033073	1.530672	48.30652	1983.955
#1	-.687013	21148.80	76.85951	.2645148	2092.401	-.243474	.3892813
#2	-1.77038	20411.97	75.64970	.2344948	2029.329	-.661502	-.825116
#3	-.634166	20852.11	77.09489	.2525801	2059.964	-.404450	.3322154
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	17.06554	6.519642	7714.121	291.6267	1367.694	94.46922	241.6439
SDEV	.31227	.204853	64.065	8.8392	13.213	1.49771	116.1766
%RSD	1.829839	3.142084	.8304850	3.031013	.9660491	1.585394	48.07760
#1	17.35603	6.618191	7745.655	296.9820	1376.254	95.47180	353.5279
#2	16.73529	6.656596	7640.401	281.4243	1352.477	92.74758	121.6044
#3	17.10532	6.284141	7756.306	296.4739	1374.351	95.18829	249.7995
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	6.975113	3.201228	23.70615	12.13459	59.76895	.2220330	.7372106
SDEV	.492118	1.009951	1.03797	.20870	.86992	1.072647	2.505116
%RSD	7.055344	31.54887	4.378478	1.719903	1.455466	483.1028	339.8101
#1	7.541660	3.302011	24.41580	11.97332	59.97945	.5323140	1.923587
#2	6.729905	2.144664	22.51486	12.06015	58.81311	1.105337	2.428751
#3	6.653775	4.157009	24.18780	12.37031	60.51431	-.971552	-2.14071
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.181816	62.47462	58.41765	-3.38906	2.024538	18.53675	-.437922
SDEV	2.503210	1.45066	.63317	4.16213	2.051804	.68161	2.077163
%RSD	59.85941	2.322001	1.083866	122.8109	101.3468	3.677062	474.3225
#1	1.810740	63.23807	58.35208	1.354257	.1216247	18.19290	1.748132
#2	6.798982	60.80166	57.81982	-5.09059	4.198325	18.09555	-2.38563
#3	3.935726	63.38412	59.08106	-6.43084	1.753665	19.32179	-.676267
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.593141	373.3129	36337.62
SDEV	.433165	5.3488	240.03
%RSD	27.18940	1.432781	.6605669
#1	1.875616	378.6541	36176.27
#2	1.094428	367.9566	36613.46
#3	1.809377	373.3280	36223.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209064-05 OPERATOR:
RUN TIME: 09/14/12 17:57:56
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBDD07 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.24191	12160.32	38.13791	.0061707	1778.302	.1472216	1.997252
SDEV	1.25366	205.06	.25309	.1965743	19.143	.1526595	.499512
%RSD	100.9462	1.686319	.6636075	3185.613	1.076480	103.6937	25.00995
#1	-.317083	11923.60	37.96472	.2327347	1757.504	-.027406	1.431396
#2	-2.66878	12274.11	38.42836	-.119069	1795.186	.2137073	2.183398
#3	-.739860	12283.26	38.02066	-.095153	1782.215	.2553636	2.376963
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	13.34990	4.466908	5252.409	115.2388	1850.014	72.87948	274.4160
SDEV	.35030	.489414	29.633	6.8185	7.115	.28960	61.2385
%RSD	2.624012	10.95644	.5641711	5.916806	.3846099	.3973707	22.31593
#1	13.28422	4.709005	5225.331	121.6840	1842.506	72.60161	321.9622
#2	13.03709	3.903630	5284.064	108.1001	1856.657	72.85729	205.3144
#3	13.72840	4.788091	5247.831	115.9323	1850.881	73.17954	295.9716
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.511447	.6209969	16.74213	7.913371	114.2170	.2288827	4.596467
SDEV	.515596	2.243352	.62390	.095750	.5465	3.232421	2.313111
%RSD	11.42861	361.2502	3.726536	1.209979	.4784888	1412.261	50.32368
#1	4.965929	2.991716	16.36036	7.896226	114.3800	-3.23642	1.941352
#2	3.951154	-1.46846	16.40392	7.827352	114.6634	3.162494	6.175539
#3	4.617258	.3397379	17.46211	8.016536	113.6075	.7605740	5.672509
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.204724	115.0127	113.8192	-5.90599	3.291380	19.85140	-3.37889
SDEV	1.144962	2.6268	1.3142	4.94402	6.059474	1.59174	4.29804
%RSD	27.23037	2.283953	1.154659	83.71201	184.1013	8.018269	127.2027
#1	2.882763	118.0417	112.5515	-2.29997	-3.70428	19.75543	-2.07406
#2	4.881559	113.6368	115.1754	-3.87614	6.676194	18.30981	-8.17814
#3	4.849851	113.3596	113.7308	-11.5419	6.902226	21.48894	.1155227
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.5334926	299.0474	35615.04
SDEV	1.233758	4.8434	245.22
%RSD	231.2606	1.619606	.6885350
#1	1.566637	294.8700	35894.86
#2	-.832561	304.3564	35512.66
#3	.8664026	297.9158	35437.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209064-06 OPERATOR:
RUN TIME: 09/14/12 18:05:09
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBDD06 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.39164	23179.63	53.77645	.2487388	1944.013	.1094170	1.937632
SDEV	.01526	160.20	.24155	.0671287	17.530	.0304796	.883093
%RSD	1.096235	.6911313	.4491738	26.98761	.9017528	27.85635	45.57586
#1	-1.40045	23206.89	53.70088	.1900804	1941.100	.1445697	2.876256
#2	-1.40045	23007.55	54.04675	.2341858	1928.122	.0933289	1.123223
#3	-1.37403	23324.46	53.58172	.3219502	1962.818	.0903522	1.813419
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	17.50324	6.316306	7460.447	268.6357	1608.874	68.51570	423.1864
SDEV	.37473	.725063	17.620	5.6385	3.442	.29714	161.4840
%RSD	2.140927	11.47923	.2361801	2.098945	.2139405	.4336872	38.15906
#1	17.50962	6.087105	7479.984	271.6341	1611.593	68.85870	237.5265
#2	17.12537	5.733542	7445.760	272.1416	1610.024	68.35207	501.0211
#3	17.87475	7.128271	7455.597	262.1315	1605.004	68.33635	531.0117
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.334876	.1105398	22.94979	11.22362	68.08675	-1.16917	2.424204
SDEV	.920314	.8951562	.04843	.22573	.42525	4.37537	3.871085
%RSD	11.04173	809.8042	.2110423	2.011236	.6245748	374.2280	159.6848
#1	9.345935	-.269880	22.90007	11.28571	68.52119	-6.16419	1.862251
#2	8.112718	1.133075	22.95247	11.41181	68.06776	1.985006	6.545553
#3	7.545976	-.531575	22.99683	10.97334	67.67132	.6716676	-1.13519
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	2.587271	69.97908	67.14150	-9.09240	2.786159	20.07793	-.770326
SDEV	2.634711	.61957	.94563	7.18623	2.973647	.98049	2.236404
%RSD	101.8336	.8853641	1.408408	79.03560	106.7293	4.883430	290.3191
#1	5.370464	69.31341	68.12515	-17.3197	-.595154	19.95749	-2.36722
#2	.1316838	70.08493	67.06018	-4.04296	4.994134	21.11307	-1.72942
#3	2.259666	70.53891	66.23915	-5.91454	3.959497	19.16322	1.785662
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.430324	377.5782	35551.06
SDEV	.400707	6.2092	238.82
%RSD	28.01514	1.644488	.6717721
#1	1.854790	376.5283	35297.06
#2	1.377584	371.9608	35771.06
#3	1.058598	384.2454	35585.06
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209064-07 OPERATOR:
RUN TIME: 09/14/12 18:12:23
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBDD05 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.03052	28643.81	75.07179	.0148135	2122.017	-.176465	1.565324
SDEV	.26817	186.05	.97067	.4650460	15.104	.219991	1.274219
%RSD	26.02280	.6495304	1.292986	3139.347	.7117871	124.6659	81.40287
#1	-1.26833	28506.60	75.02068	.3167612	2126.125	-.283137	.3397817
#2	-1.08337	28569.26	74.12769	.2484023	2105.283	-.322783	1.472995
#3	-.739860	28855.58	76.06701	-.520723	2134.642	.0765260	2.883197
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	27.70075	9.688768	11638.62	603.7701	1091.149	67.56216	330.1153
SDEV	.63953	.462170	135.21	14.6514	11.501	1.07302	138.3543
%RSD	2.308699	4.770159	1.161728	2.426647	1.054047	1.588203	41.91091
#1	27.08134	10.00332	11517.32	590.3186	1081.826	66.64616	368.1983
#2	27.66226	9.158137	11614.17	601.6101	1087.620	67.29761	176.7080
#3	28.35866	9.904849	11784.40	619.3815	1104.001	68.74272	445.4397
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.609709	4.561192	37.66143	20.61058	190.1770	-1.15957	3.884270
SDEV	.539556	1.516423	.53557	.37004	3.4332	1.54789	2.823107
%RSD	6.266830	33.24619	1.422056	1.795398	1.805281	133.4879	72.68050
#1	8.336441	2.825047	38.19886	20.35687	186.8128	-2.92574	4.318134
#2	8.261456	5.232064	37.12775	20.43968	190.0430	-.038919	.8693471
#3	9.231228	5.626465	37.65769	21.03518	193.6753	-.514053	6.465330
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	7.816951	189.0378	190.7454	-7.38878	1.950030	20.16333	-.040147
SDEV	1.945508	3.7008	3.9303	1.00926	2.751144	1.44634	1.130402
%RSD	24.88832	1.957704	2.060469	13.65941	141.0822	7.173132	2815.669
#1	7.303746	184.8122	187.8110	-6.53979	-1.12176	18.65576	.2761601
#2	6.179493	191.7020	189.2145	-8.50467	4.187274	21.53947	.8984088
#3	9.967614	190.5992	195.2108	-7.12188	2.784570	20.29476	-1.29501
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	2.106165	386.4911	35850.33
SDEV	.302285	1.9400	283.64
%RSD	14.35237	.5019505	.7911862
#1	2.452688	388.6830	36167.66
#2	1.896609	385.7953	35761.86
#3	1.969198	384.9949	35621.46
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209064-08 OPERATOR:
RUN TIME: 09/14/12 18:19:36
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBEE05 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.68230	40022.56	124.5920	1.686351	3724.107	-.327682	2.026672
SDEV	.76415	376.08	1.2714	.329494	54.719	.110786	.467023
%RSD	45.42319	.9396714	1.020485	19.53889	1.469326	33.80892	23.04382
#1	-2.51024	39818.44	126.0227	1.888981	3674.986	-.273967	1.866377
#2	-1.00410	40456.56	123.5912	1.306159	3783.084	-.455085	2.552734
#3	-1.53257	39792.66	124.1621	1.863912	3714.249	-.253993	1.660906
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	32.90721	11.39267	13108.09	758.6141	4849.773	95.68072	308.2695
SDEV	1.00208	.53265	61.91	6.2641	21.345	.46743	198.8204
%RSD	3.045169	4.675330	.4723262	.8257300	.4401218	.4885295	64.49565
#1	32.22985	10.88786	13167.64	764.5143	4833.986	95.70077	81.97504
#2	34.05833	11.34080	13112.57	752.0405	4874.058	96.13780	387.9104
#3	32.43346	11.94936	13044.06	759.2873	4841.275	95.20359	454.9230
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.31769	.3664402	40.77285	21.74052	169.2703	-1.23728	3.298587
SDEV	.54802	3.339769	1.23786	.13634	1.3324	.25901	1.015469
%RSD	5.311502	911.4091	3.035988	.6271357	.7871371	20.93338	30.78497
#1	10.09718	1.123401	39.43419	21.89755	169.3059	-1.32091	4.437438
#2	9.914269	-3.28684	41.87611	21.65219	167.9204	-1.44414	2.970904
#3	10.94162	3.262759	41.00824	21.67182	170.5845	-.946797	2.487418
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.667561	166.2170	170.7943	-5.58628	.9336195	17.86723	.1585334
SDEV	.972730	1.0662	1.4696	3.48501	1.528353	.50248	1.176940
%RSD	11.22265	.6414301	.8604700	62.38514	163.7020	2.812307	742.3925
#1	8.000879	166.3797	170.7665	-9.30906	2.666837	17.38823	-.765479
#2	8.218052	165.0788	169.3387	-5.04814	.3548179	18.39029	-.242501
#3	9.783753	167.1925	172.2776	-2.40165	-.220796	17.82316	1.483580
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	2.010164	473.3242	36050.40
SDEV	.728007	8.8494	208.76
%RSD	36.21632	1.869625	.5790669
#1	2.344918	465.3770	35847.86
#2	1.174992	482.8605	36038.46
#3	2.510581	471.7350	36264.86
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: CCV1 OPERATOR:
RUN TIME: 09/14/12 18:26:49
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	96.92165	49097.45	948.1760	1013.864	49028.82	1006.697	996.0152
SDEV	.94941	203.49	6.0319	3.150	71.19	2.822	10.7220
%RSD	.9795660	.4144597	.6361626	.3107100	.1451992	.2803666	1.076492
#1	96.23464	49222.49	954.3025	1010.384	49032.91	1008.916	1005.455
#2	96.52530	49207.21	947.9821	1014.689	49097.88	1007.655	998.2323
#3	98.00502	48862.64	942.2433	1016.520	48955.68	1003.521	984.3580
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1005.443	989.0501	24691.02	52608.51	48755.95	956.0782	50484.06
SDEV	14.059	7.2180	191.52	315.75	319.93	11.0284	220.28
%RSD	1.398338	.7297934	.7756795	.6001903	.6561778	1.153501	.4363415
#1	1014.764	992.0181	24911.40	52893.77	49125.36	968.7674	50612.25
#2	989.2711	994.3109	24596.78	52662.52	48568.39	948.8048	50610.22
#3	1012.293	980.8212	24564.88	52269.23	48574.11	950.6623	50229.69
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1004.366	1027.759	970.0318	1063.282	1003.426	1013.184	999.2839
SDEV	2.995	11.352	6.8951	9.151	3.749	4.703	1.3386
%RSD	.2981997	1.104538	.7108085	.8606510	.3735853	.4641922	.1339553
#1	1007.500	1015.349	973.9370	1069.220	1006.615	1018.457	999.8138
#2	1004.063	1037.619	962.0706	1067.883	999.2968	1009.424	1000.277
#3	1001.533	1030.308	974.0879	1052.744	1004.368	1011.670	997.7615
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1028.443	987.6061	1011.324	1025.898	1006.836	993.6248	1022.262
SDEV	1.849	6.7831	4.055	8.060	3.635	4.3328	2.013
%RSD	.1797724	.6868271	.4009390	.7856219	.3610108	.4360567	.1968715
#1	1028.643	995.4272	1012.200	1033.467	1010.963	997.1634	1021.733
#2	1030.184	984.0603	1006.904	1017.424	1005.430	994.9184	1024.486
#3	1026.502	983.3307	1014.870	1026.803	1004.114	988.7925	1020.567
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	973.9340	972.0975	36017.95
SDEV	3.9698	6.1755	152.51
%RSD	.4076011	.6352786	.4234160
#1	976.1723	964.9858	35844.66
#2	969.3505	975.2001	36131.73
#3	976.2790	976.1066	36077.46
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB1 OPERATOR:
RUN TIME: 09/14/12 18:34:03
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.995288	44.08806	-.334598	-.353479	-15.0367	-.183207	.1031827
SDEV	.230860	5.66669	.078660	.125007	5.9423	.111099	1.055979
%RSD	23.19530	12.85311	23.50877	35.36464	39.51902	60.64132	1023.407
#1	-1.05694	47.76353	-.247183	-.489670	-19.0333	-.117334	.9073503
#2	-.739860	46.93856	-.356943	-.326807	-17.8686	-.120809	.4948730
#3	-1.18906	37.56209	-.399667	-.243962	-8.20806	-.311478	-1.09268
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2855427	-.969278	-2.55851	-289.750	-3.03321	-.294554	-132.292
SDEV	.4001505	.389987	8.28520	8.402	2.13884	.100983	190.198
%RSD	140.1368	40.23479	323.8294	2.899713	70.51412	34.28339	143.7718
#1	-.094105	-1.30969	-4.73254	-280.050	-2.66666	-.402002	79.70435
#2	.7034481	-.543768	-9.53993	-294.436	-5.33164	-.280058	-188.605
#3	.2472849	-1.05438	6.596951	-294.764	-1.10133	-.201602	-287.975
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.5767528	.6508324	-.396874	-.524351	-.439390	.9426446	-5.37361
SDEV	.6180521	5.994866	.206335	.247459	.815450	3.211800	2.12531
%RSD	107.1606	921.1075	51.99015	47.19346	185.5867	340.7222	39.55083
#1	-.024145	5.758386	-.218760	-.769485	-.910716	-2.04512	-7.81240
#2	1.210638	2.143424	-.622974	-.274630	.5022101	.5337357	-3.91719
#3	.5437655	-5.94931	-.348888	-.528937	-.909665	4.339316	-4.39126
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.495220	-.802321	-.258666	1.241826	.7929477	-.906552	-.902310
SDEV	.705960	1.849567	.515574	1.528207	4.362832	1.210874	.501257
%RSD	47.21446	230.5272	199.3206	123.0613	550.2043	133.5691	55.55261
#1	.9379574	-1.07157	-.830866	-.473682	-2.82999	-.422546	-.331410
#2	1.258610	1.167114	.1697594	2.457616	-.427094	-2.28457	-1.10521
#3	2.289092	-2.50251	-.114890	1.741544	5.635926	-.012545	-1.27030
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.797288	.1163118	36540.27
SDEV	1.043918	.1412450	181.97
%RSD	58.08296	121.4365	.4979871
#1	2.688919	.0952491	36446.40
#2	2.053976	.2669055	36424.40
#3	.6489695	-.013219	36750.00
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

METHOD: P42012S2 SAMPLE NAME: 1209064-09 OPERATOR:
RUN TIME: 09/14/12 18:41:16
COMMENT: SDG:1209064 CLIENTID:ASR-2.82-SBFF04 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.634166	96425.11	210.3973	1.248945	8552.069	.9512278	6.768365
SDEV	.160728	1761.70	1.5412	.148533	137.455	.1179641	.862801
%RSD	25.34484	1.827010	.7325322	11.89271	1.607269	12.40125	12.74756
#1	-.449201	94732.92	209.0067	1.411552	8416.188	1.062352	5.943857
#2	-.739860	96293.48	210.1308	1.214879	8548.977	.8274445	6.696301
#3	-.713436	98248.93	212.0544	1.120404	8691.045	.9638872	7.664939
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	100.8263	28.63772	43302.23	2798.437	16894.64	128.5610	636.0763
SDEV	1.7006	.30214	414.22	17.909	184.36	1.7560	192.1431
%RSD	1.686654	1.055051	.9565796	.6399754	1.091223	1.365881	30.20756
#1	99.03887	28.43307	42961.03	2788.769	16749.29	126.7554	543.9589
#2	101.0159	28.98475	43182.54	2787.439	16832.62	128.6649	856.9342
#3	102.4242	28.49534	43763.11	2819.102	17102.01	130.2628	507.3358
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	22.70787	8.040660	134.8114	93.15687	1559.262	-.412812	10.41006
SDEV	.89714	2.576133	3.5996	1.06094	8.802	.777671	1.43341
%RSD	3.950775	32.03882	2.670095	1.138870	.5644958	188.3836	13.76947
#1	23.68578	11.01367	131.2277	92.67375	1560.007	.0346447	9.130319
#2	21.92289	6.468307	134.7797	92.42348	1550.111	.0377059	11.95898
#3	22.51495	6.640003	138.4267	94.37338	1567.668	-1.31079	10.14090
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	22.20138	1529.618	1574.061	-4.98976	1.871893	21.73182	5.675662
SDEV	1.91211	10.309	15.330	2.61407	1.961112	.86201	2.837651
%RSD	8.612581	.6739629	.9739276	52.38860	104.7662	3.966586	49.99682
#1	22.68473	1540.882	1569.555	-2.84809	1.473511	20.74907	8.532276
#2	23.82543	1527.320	1561.489	-7.90268	4.001610	22.08639	5.637350
#3	20.09397	1520.652	1591.139	-4.21852	.1405592	22.35999	2.857362
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	4.289884	704.6357	35617.06
SDEV	.573800	6.3901	164.32
%RSD	13.37566	.9068696	.4613607
#1	3.911459	697.2601	35710.06
#2	4.950099	708.1385	35713.80
#3	4.008094	708.5085	35427.33
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 209005-BLK1 OPERATOR:
RUN TIME: 09/14/12 18:48:29
COMMENT: SDG:1209038 CLIENTID:PBW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.281851	-2.16818	-.257655	-.281172	15.65194	-.547856	-2.30027
SDEV	.421399	8.33671	.076146	.107393	9.89813	.382897	1.95287
%RSD	149.5109	384.5020	29.55347	38.19455	63.23900	69.89001	84.89720
#1	-.634166	2.666774	-.345541	-.232317	18.19586	-.274845	-1.70636
#2	.1849650	-11.7946	-.211431	-.206893	24.02982	-.985541	-4.48114
#3	-.396353	2.623231	-.215992	-.404307	4.730144	-.383183	-.713310
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000
LOW	-5.00000	-200.000	-200.000	-5.00000	-5000.00	-5.00000	-5.00000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.2863120	-.962553	-4.24754	-291.341	-2.68853	-.388808	177.6314
SDEV	.4194586	.583195	4.15069	6.646	.69383	.048658	34.5906
%RSD	146.5040	60.58837	97.71998	2.281076	25.80723	12.51461	19.47322
#1	-.131682	-.818281	.3134333	-295.271	-2.79618	-.361355	216.7699
#2	.2833989	-.465035	-5.25272	-295.084	-1.94716	-.444988	151.1600
#3	.7072196	-1.60434	-7.80334	-283.668	-3.32224	-.360080	164.9644
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000
LOW	-5.00000	-5.00000	-100.000	-5000.00	-5000.00	-10.0000	-5000.00

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.366121	1.033928	-.016762	1.419072	1.684790	-1.19164	-1.90031
SDEV	.670174	.978059	.408418	.249214	2.006031	1.11558	3.52045
%RSD	183.0470	94.59641	2436.567	17.56178	119.0671	93.61700	185.2564
#1	-.812586	1.474616	.4533656	1.695705	H3.027337	.0716740	-3.44398
#2	-.690279	1.714109	-.284081	1.212103	2.648245	-2.04134	-4.38522
#3	.4045007	-.086941	-.219570	1.349407	-.621211	-1.60526	2.128265
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000
LOW	-40.0000	-10.0000	-20.0000	-20.0000	-3.00000	-5.00000	-10.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-1.80177	5.332273	-.136710	-2.71306	-.432402	-.246049	.2648448
SDEV	.47885	4.410470	2.037831	7.58331	2.424797	1.980263	.9310771
%RSD	26.57685	82.71277	1490.619	279.5110	560.7734	804.8263	351.5557
#1	-2.18952	10.31514	-.611599	5.701941	-2.73957	.2505122	1.300355
#2	-1.26652	3.752156	2.096634	-4.82357	-.652635	1.438677	-.002525
#3	-1.94929	1.929519	-1.89517	-9.01756	2.094999	-2.42734	-.503296
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	10.00000					100.0000	50.00000
LOW	-10.0000					-100.000	-50.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.3987759	.3857535	36713.98
SDEV	.3577999	.3051564	713.06
%RSD	89.72456	79.10656	1.942208
#1	.0813758	.6307579	36463.86
#2	.3284265	.0439341	37518.40
#3	.7865254	.4825685	36159.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	5.000000	40.00000	
LOW	-5.00000	-40.0000	

METHOD: P42012S2 SAMPLE NAME: 209005-BS1 OPERATOR:
RUN TIME: 09/14/12 18:55:42
COMMENT: SDG:1209038 CLIENTID:LCSW 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	540.2123	2568.260	543.1420	566.7016	10819.51	553.7186	559.3652
SDEV	1.8125	46.834	4.4077	9.7388	197.03	8.3257	12.2750
%RSD	.3355199	1.823571	.8115147	1.718511	1.821046	1.503590	2.194448
#1	539.3843	2571.135	546.6636	567.4072	10822.33	558.1080	560.9869
#2	538.9615	2613.591	544.5634	576.0684	11015.12	558.9312	570.7487
#3	542.2909	2520.055	538.1990	556.6291	10621.09	544.1168	546.3600
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	3120.000	660.0000	660.0000	13200.00	660.0000	660.0000
LOW	440.0000	2080.000	440.0000	440.0000	8800.000	440.0000	440.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	572.7160	555.2831	5221.919	11813.11	5813.718	538.3945	11235.87
SDEV	12.6588	2.2290	73.879	141.77	78.584	12.2332	209.10
%RSD	2.210316	.4014171	1.414779	1.200086	1.351697	2.272156	1.860965
#1	572.3119	553.7245	5246.659	11873.88	5836.917	539.6033	11351.96
#2	585.5721	557.8362	5280.254	11914.36	5878.092	549.9784	11361.15
#3	560.2641	554.2886	5138.846	11651.09	5726.147	525.6019	10994.48
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	660.0000	6120.000	13200.00	7200.000	660.0000	13200.00
LOW	440.0000	440.0000	4080.000	8800.000	4800.000	440.0000	8800.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	562.0362	1137.643	548.1060	1096.559	1125.737	1114.339	1080.732
SDEV	7.8629	15.739	12.7054	16.799	20.819	23.391	12.877
%RSD	1.399004	1.383447	2.318064	1.532010	1.849325	2.099127	1.191477
#1	565.4510	1140.789	547.6367	1100.925	1132.297	1123.756	1088.467
#2	567.6144	1151.571	561.0397	1110.744	1142.484	1131.554	1087.863
#3	553.0432	1120.569	535.6418	1078.008	1102.428	1087.706	1065.868
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	660.0000	1320.000	660.0000	1320.000	1320.000	1320.000	1320.000
LOW	440.0000	880.0000	440.0000	880.0000	880.0000	880.0000	880.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1130.726	1105.447	1135.865	1114.292	1114.362	1125.675	1124.689
SDEV	13.263	25.234	18.619	29.905	20.279	13.102	13.727
%RSD	1.172962	2.282651	1.639191	2.683780	1.819795	1.163919	1.220494
#1	1137.772	1113.989	1141.437	1122.910	1124.178	1134.165	1127.919
#2	1138.979	1125.302	1151.062	1138.941	1127.865	1132.274	1136.513
#3	1115.427	1077.052	1115.096	1081.024	1091.042	1110.585	1109.635
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
HIGH	1320.000						
LOW	880.0000						

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1124.821	1077.220	35738.55
SDEV	6.715	19.014	520.45
%RSD	.5969935	1.765098	1.456279
#1	1128.307	1072.629	35523.53
#2	1129.077	1098.109	35360.06
#3	1117.080	1060.921	36332.06
ERRORS	NOCHECK	NOCHECK	NOCHECK
HIGH			
LOW			

METHOD: P42012S2 SAMPLE NAME: 1209038-01 OPERATOR:
RUN TIME: 09/14/12 19:02:55
COMMENT: SDG:1209038 CLIENTID:8-27-12 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	63.69842	620.5422	8.213733	-.301104	1539.030	-.292902	-.549653
SDEV	.53655	5.0883	.108151	.179737	4.436	.328294	.657349
%RSD	.8423344	.8199791	1.316709	59.69254	.2882047	112.0832	119.5934
#1	63.33730	618.0524	8.322296	-.272730	1541.835	-.070851	-.244906
#2	63.44299	617.1782	8.212903	-.493341	1533.916	-.137850	-.099985
#3	64.31496	626.3959	8.105999	-.137242	1541.339	-.670005	-1.30407
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	37.55474	179.3020	-11.6370	1660.822	5.188575	-.279027	41840.91
SDEV	1.53667	1.1931	8.8024	5.181	.908036	.040609	162.94
%RSD	4.091801	.6654401	75.64119	.3119421	17.50068	14.55390	.3894380
#1	35.79225	177.9793	-21.7088	1666.418	4.140111	-.318496	41656.36
#2	38.25832	179.6296	-5.41729	1656.193	5.721210	-.237366	41964.89
#3	38.61365	180.2972	-7.78501	1659.856	5.704405	-.281220	41901.49
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.335850	2.765394	.0500596	2.192422	-.445759	-.971519	-1.85373
SDEV	.509517	4.017473	.3104292	.190268	1.049449	3.203880	1.79477
%RSD	15.27399	145.2767	620.1187	8.678445	235.4299	329.7806	96.81952
#1	3.138417	-.154561	-.019683	1.977963	-1.21558	-4.07365	-2.93789
#2	2.954595	1.103596	.3894279	2.258328	.7496315	2.325237	.2179437
#3	3.914539	7.347148	-.219565	2.340974	-.871333	-1.16614	-2.84125
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.216158	2.807407	-2.07040	-2.00252	-.457125	1.602618	-.126500
SDEV	2.013573	1.237076	1.72064	4.07040	2.874472	.830850	1.156119
%RSD	165.5684	44.06472	83.10638	203.2640	628.8150	51.84330	913.9289
#1	.3912853	3.957393	-3.79868	-5.20505	-3.50914	.8657084	1.147392
#2	-.254001	2.966244	-.357514	2.578008	2.198707	1.439063	-1.10915
#3	3.511190	1.498584	-2.05501	-3.38052	-.060945	2.503083	-.417743
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	1.194945	.0576826	36281.82
SDEV	1.298979	.2097412	290.61
%RSD	108.7062	363.6128	.8009722
#1	2.588719	-.182339	36049.86
#2	.9780498	.2056857	36187.80
#3	.0180654	.1497012	36607.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: SDI1209038-01 OPERATOR:
RUN TIME: 09/14/12 19:10:08
COMMENT: SDG:1209038 CLIENTID:8-27-12L 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	11.89061	126.1551	1.502858	-.242730	306.2581	.0590851	1.704394
SDEV	.38382	6.7982	.177348	.112861	7.0652	.0816225	.547728
%RSD	3.227966	5.388768	11.80069	46.49658	2.306938	138.1440	32.13625
#1	12.28696	120.9423	1.496489	-.195951	313.8920	.1530249	1.527970
#2	11.86418	133.8444	1.328781	-.160780	299.9493	.0187266	2.318592
#3	11.52068	123.6787	1.683305	-.371459	304.9331	.0055037	1.266619
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.478572	35.48299	-1.72604	112.8071	.1885259	-.236321	8419.989
SDEV	.069077	.09819	3.98793	7.0401	.7746663	.001111	33.620
%RSD	.8147196	.2767199	231.0450	6.240829	410.9070	.4701217	.3992898
#1	8.469989	35.58110	.9673474	110.3207	-.414501	-.237549	8389.167
#2	8.414187	35.48313	.1618967	107.3475	-.082129	-.235384	8455.841
#3	8.551538	35.38473	-6.30737	120.7530	1.062208	-.236031	8414.961
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1.144963	.7292093	-.534147	.2298595	.6186218	2.281238	-.233904
SDEV	.712505	1.932668	.281986	.1515480	.3162003	1.640573	1.722990
%RSD	62.22946	265.0362	52.79174	65.93072	51.11367	71.91595	736.6216
#1	1.583980	.7475159	-.758072	.4034002	.5190360	3.376758	-1.79362
#2	.3228681	-1.21255	-.217468	.1236081	.9726263	.3950612	-.523702
#3	1.528043	2.652659	-.626903	.1625701	.3642033	3.071893	1.615608
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.3200444	-.502959	1.178082	-2.49240	4.664140	-.755784	.8494924
SDEV	1.542744	.637161	.345574	1.05078	2.964419	1.154256	7.076581
%RSD	482.0404	126.6824	29.33360	42.15935	63.55767	152.7230	833.0364
#1	1.747041	-1.15624	1.354915	-2.86629	6.493269	-1.99014	2.959006
#2	.5300278	.1167591	1.399453	-1.30581	1.243883	-.574019	-7.04196
#3	-1.31694	-.469400	.7798770	-3.30509	6.255269	.2968053	6.631435
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.109423	.2343849	36038.86
SDEV	1.188699	.1706480	133.25
%RSD	1086.335	72.80675	.3697299
#1	-1.32780	.3588228	36187.33
#2	-.047656	.3044806	35929.66
#3	1.047188	.0398513	35999.60
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209038-02 OPERATOR:
RUN TIME: 09/14/12 19:17:21
COMMENT: SDG:1209038 CLIENTID:8-28-12 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	66.79879	881.9371	11.11056	-.296209	2165.571	.1605883	1.714395
SDEV	.14712	10.9990	.12805	.117508	12.014	.0510763	.899767
%RSD	.2202426	1.247142	1.152474	39.67067	.5547948	31.80572	52.48305
#1	66.77236	875.1303	11.22602	-.204220	2174.047	.1214506	2.499426
#2	66.66667	894.6264	11.13283	-.428585	2170.845	.2183667	1.911264
#3	66.95733	876.0544	10.97284	-.255824	2151.822	.1419477	.7324944
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	53.12156	249.7842	-3.56871	2448.479	10.67224	-.261792	59341.00
SDEV	.31538	2.9741	2.65829	16.425	.65581	.093263	358.79
%RSD	.5936958	1.190678	74.48898	.6708294	6.145052	35.62495	.6046213
#1	52.80822	246.3990	-5.52756	2430.627	11.05379	-.315259	59070.26
#2	53.43894	251.9778	-.542650	2462.952	9.914981	-.316016	59747.95
#3	53.11752	250.9757	-4.63591	2451.858	11.04796	-.154102	59204.81
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.719754	.5599823	.5138063	2.206894	1.021725	.0388838	-.299462
SDEV	.835370	1.248003	.4053415	.191908	.988406	1.708441	4.024017
%RSD	14.60500	222.8647	78.88993	8.695860	96.73895	4393.715	1343.750
#1	4.803975	.3339423	.8141215	2.172154	.1831006	1.979892	-1.46407
#2	6.440044	1.905557	.6745503	2.034730	2.111469	-.626437	-3.61273
#3	5.915242	-.559552	.0527472	2.413800	.7706062	-1.23680	4.178415
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.7928693	3.929251	-.430351	.1846633	-.034235	2.778308	1.029063
SDEV	1.082594	2.131617	2.245506	3.552591	2.042518	2.087623	3.196069
%RSD	136.5413	54.24997	521.7844	1923.820	5966.218	75.14011	310.5806
#1	.1099398	6.313553	-2.87804	3.224406	1.358228	4.951805	-1.03240
#2	.2275735	3.266368	1.534377	-3.72076	.9180688	2.594391	-.591171
#3	2.041095	2.207834	.0526090	1.050348	-2.37900	.7887276	4.710763
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.7936725	-.060066	35736.18
SDEV	.5121707	.184397	274.34
%RSD	64.53174	306.9922	.7676797
#1	.9949796	.1139347	35518.73
#2	.2114326	-.253344	35645.40
#3	1.174605	-.040787	36044.40
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209038-03 OPERATOR:
RUN TIME: 09/14/12 19:24:34
COMMENT: SDG:1209038 CLIENTID:8-30-12 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	69.75822	807.8860	10.28870	-.435545	2001.040	.4576482	3.187337
SDEV	.63582	19.5728	.42088	.251114	44.070	.3281600	1.424810
%RSD	.9114569	2.422720	4.090662	57.65516	2.202364	71.70572	44.70220
#1	70.41882	830.0213	10.76844	-.722994	2050.323	.8291543	4.478548
#2	69.15048	792.8666	9.981580	-.258836	1987.376	.2072703	1.658746
#3	69.70538	800.7701	10.11608	-.324805	1965.419	.3365201	3.424717
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	49.06020	226.4144	-8.05000	2221.593	8.898058	-.216532	54569.56
SDEV	1.02249	1.6319	5.07898	42.468	3.099695	.067641	735.98
%RSD	2.084162	.7207634	63.09287	1.911620	34.83563	31.23807	1.348707
#1	49.67612	228.2284	-5.59530	2269.519	11.81844	-.142677	55406.23
#2	47.87990	225.0654	-4.66467	2188.636	5.645762	-.275467	54022.18
#3	49.62457	225.9496	-13.8900	2206.624	9.229975	-.231453	54280.27
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	5.255242	.4232619	.1973360	2.449739	1.897425	-1.33939	-2.93609
SDEV	.993232	1.757793	.3203477	.269784	.785469	.82874	1.18739
%RSD	18.89982	415.2966	162.3362	11.01274	41.39656	61.87416	40.44111
#1	5.281018	-1.13264	.4805465	2.650843	1.264438	-.940702	-3.69487
#2	4.249374	.0724063	-.150343	2.143151	1.651375	-2.29212	-3.54569
#3	6.235335	2.330022	.2618047	2.555224	2.776464	-.785347	-1.56772
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0013353	2.988445	1.352222	-4.47635	.2263974	2.773903	1.000681
SDEV	.3847179	1.286247	1.808258	3.28634	2.399263	1.368656	.549039
%RSD	28811.28	43.04066	133.7250	73.41571	1059.757	49.34046	54.86657
#1	-.442520	4.244671	-.223963	-8.26681	2.716516	4.323337	1.198498
#2	.2391343	3.046519	.9543421	-2.73710	-2.07030	1.729628	1.423401
#3	.2073921	1.674146	3.326286	-2.42513	.0329764	2.268744	.3801448
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.5796377	-.103090	35398.86
SDEV	.5050787	.171876	398.75
%RSD	87.13697	166.7235	1.126439
#1	.0150944	-.173169	34973.93
#2	.9886874	-.228855	35764.86
#3	.7351312	.0927533	35457.80
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209038-04 OPERATOR:
RUN TIME: 09/14/12 19:31:47
COMMENT: SDG:1209038 CLIENTID:8-31-12 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	62.39485	582.5846	7.763926	-.141685	1428.470	-.008727	1.515222
SDEV	.71409	9.2693	.130948	.223395	7.078	.236031	1.088851
%RSD	1.144467	1.591073	1.686627	157.6705	.4954674	2704.718	71.86081
#1	62.12181	588.8182	7.891705	.1094768	1431.618	.1505616	2.555077
#2	61.85757	587.0029	7.630023	-.318196	1420.365	.1031518	1.607357
#3	63.20518	571.9327	7.770050	-.216336	1433.428	-.279893	.3832310
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	35.57149	163.6853	1.657238	1494.025	9.103223	-.219794	38612.13
SDEV	.45265	1.6971	6.183245	9.562	4.526395	.066109	139.52
%RSD	1.272500	1.036819	373.1053	.6400422	49.72299	30.07748	.3613356
#1	35.64247	161.7736	5.324684	1502.291	13.95836	-.146658	38761.30
#2	35.98445	165.0144	-5.48166	1483.553	4.999660	-.275301	38590.23
#3	35.08754	164.2679	5.128692	1496.232	8.351644	-.237424	38484.85
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	3.669914	-.222675	.2427379	2.061867	1.882401	-2.09250	-.780641
SDEV	1.180069	4.519684	.5616200	.284213	.841685	1.29633	1.707911
%RSD	32.15522	2029.724	231.3689	13.78423	44.71339	61.95149	218.7832
#1	4.937414	-.557451	.8912404	2.381795	2.599202	-2.80319	-.654943
#2	2.602982	-4.56566	-.082076	1.838566	.9555981	-.596245	-2.54793
#3	3.469346	4.455089	-.080951	1.965241	2.092402	-2.87806	.8609487
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	.0098413	3.268274	1.190010	.3002870	-3.28744	.9606393	2.380491
SDEV	.5386947	1.410844	.701532	3.508568	1.31583	.9777162	1.126413
%RSD	5473.821	43.16785	58.95177	1168.405	40.02597	101.7777	47.31852
#1	-.476441	4.831271	1.484328	1.209395	-4.80682	1.490594	1.091775
#2	-.082933	2.088957	.3892613	3.264825	-2.52422	1.558964	3.177216
#3	.5888980	2.884593	1.696442	-3.57336	-2.53127	-.167640	2.872480
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	-.222087	.0191352	35758.15
SDEV	.398923	.1156607	417.39
%RSD	179.6244	604.4400	1.167245
#1	-.574385	.0861199	35349.40
#2	.2110718	.0857037	35741.40
#3	-.302949	-.114418	36183.66
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: 1209038-05 OPERATOR:
RUN TIME: 09/14/12 19:39:00
COMMENT: SDG:1209038 CLIENTID:8-29-12 1:1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	81.59598	1316.415	20.49764	-.192606	3182.393	-.160782	-.254312
SDEV	.82423	4.183	.10943	.144369	31.010	.099293	.838677
%RSD	1.010133	.3177697	.5338849	74.95589	.9744216	61.75619	329.7830
#1	80.72401	1311.974	20.48202	-.141700	3151.742	-.081066	.6912972
#2	82.36227	1316.987	20.39686	-.080585	3181.688	-.272006	-.908076
#3	81.70167	1320.282	20.61405	-.355532	3213.749	-.129273	-.546157
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	6000.000	700000.0	50000.00	20000.00	700000.0	40000.00	50000.00
LOW	-4000.00	-700000.	-50000.0	-5000.00	-600000.	-10000.0	-50000.0

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	78.77538	379.6621	17.73546	3796.832	13.96024	-.091339	87673.32
SDEV	.86068	3.2002	9.67349	15.361	4.55108	.261229	78.96
%RSD	1.092577	.8428981	54.54319	.4045770	32.60031	285.9991	.0900600
#1	77.89326	376.0280	9.384204	3814.127	8.735338	-.358424	87582.56
#2	78.82001	382.0587	15.48702	3791.594	16.08519	-.079204	87726.25
#3	79.61289	380.8997	28.33516	3784.776	17.06018	.1636110	87711.14
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	700000.0	200000.0	700000.0	50000.00	400000.0
LOW	-60000.0	-40000.0	-700000.	-100000.	-700000.	-20000.0	-700000.

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.122961	1.845984	.1008908	3.465186	1.606557	1.547630	-1.19604
SDEV	.554582	1.445028	.0747745	.483347	.871996	2.543250	3.73857
%RSD	6.078972	78.27958	74.11428	13.94865	54.27728	164.3319	312.5788
#1	8.532172	3.133397	.0582438	2.925854	2.214261	-1.09195	-5.50457
#2	9.204373	.2830210	.1872309	3.610496	.6074368	3.982133	.7251561
#3	9.632337	2.121533	.0571978	3.859209	1.997974	1.752708	1.191294
ERRORS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS	LC PASS
HIGH	60000.00	60000.00	50000.00	60000.00	60000.00	60000.00	40000.00
LOW	-60000.0	-60000.0	-50000.0	-60000.0	-60000.0	-40000.0	-40000.0

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.660613	5.873304	-.524123	.2316355	2.204309	2.789537	-4.96484
SDEV	1.544865	3.999250	1.698355	4.511139	5.821238	1.259041	1.13694
%RSD	233.8533	68.09199	324.0377	1947.516	264.0845	45.13443	22.89975
#1	-2.40243	10.47673	-1.91129	5.392660	-4.32973	2.946243	-6.27669
#2	.5437220	3.888358	-1.03106	-1.73793	6.837549	1.459477	-4.26526
#3	-.123135	3.254823	1.369977	-2.95982	4.105108	3.962889	-4.35257
ERRORS	LC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC PASS	LC PASS
HIGH	50000.00					40000.00	40000.00
LOW	-20000.0					-40000.0	-40000.0

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.2534297	-.139693	36349.56
SDEV	.5904289	.164810	470.40
%RSD	232.9754	117.9805	1.294090
#1	.5345059	-.266067	35806.46
#2	.6508075	-.199732	36629.06
#3	-.425024	.0467202	36613.13
ERRORS	LC PASS	LC PASS	NOCHECK
HIGH	50000.00	40000.00	
LOW	-20000.0	-40000.0	

METHOD: P42012S2 SAMPLE NAME: LLCCV OPERATOR:
RUN TIME: 09/14/12 19:46:13
COMMENT: LLCCV
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	4.104461	179.2389	183.7065	4.481122	4666.738	4.740980	19.66516
SDEV	.638736	5.3362	.7285	.124777	35.157	.081197	.15473
%RSD	15.56201	2.977152	.3965350	2.784497	.7533439	1.712654	.7868072
#1	4.782666	182.0612	183.0089	4.552782	4629.199	4.829094	19.69279
#2	3.514335	173.0842	183.6483	4.553540	4698.891	4.669179	19.80422
#3	4.016383	182.5712	184.4623	4.337042	4672.125	4.724666	19.49848
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	20.00000
RANGE	1.500000	60.00000	60.00000	1.500000	1500.000	1.500000	6.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	9.801216	Q3.164855	161.9492	5176.027	4705.331	8.920354	4602.280
SDEV	.563723	.349365	4.7415	35.388	45.476	.108890	70.997
%RSD	5.751558	11.03890	2.927774	.6836975	.9664884	1.220696	1.542658
#1	10.33524	Q2.785076	161.4782	5160.995	4703.025	9.037251	4549.765
#2	9.211870	Q3.472567	166.9086	5150.637	4661.051	8.902008	4574.020
#3	9.856542	Q3.236922	157.4608	5216.450	4751.916	8.821801	4683.056
ERRORS	QC PASS	QC FAIL	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	5.000000	200.0000	5000.000	5000.000	10.00000	5000.000
RANGE	3.000000	1.500000	60.00000	1500.000	1500.000	3.000000	1500.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	10.29484	29.30329	18.86400	28.32029	9.664202	11.10090	25.47693
SDEV	.38292	2.00926	.08587	.57736	1.376548	1.95873	3.78270
%RSD	3.719543	6.856775	.4552257	2.038681	14.24379	17.64474	14.84753
#1	10.38242	30.41781	18.86731	28.26693	8.318214	Q13.20270	25.41803
#2	10.62638	26.98379	18.77652	27.77146	11.06940	10.77351	21.72403
#3	9.875712	30.50829	18.94817	28.92247	9.604991	9.326503	29.28873
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	10.00000	30.00000	20.00000	30.00000	10.00000	10.00000	30.00000
RANGE	3.000000	9.000000	6.000000	9.000000	3.000000	3.000000	9.000000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	8.024095	12.47111	8.262518	13.53332	9.886186	48.31592	Q17.96532
SDEV	1.173212	.40001	2.009666	5.89622	.832288	1.47083	3.34224
%RSD	14.62112	3.207511	24.32268	43.56819	8.418695	3.044194	18.60384
#1	Q6.764889	12.11446	6.422603	20.31143	9.653324	49.97331	Q20.66789
#2	9.086395	12.39524	10.40714	10.69955	10.81010	47.16608	Q14.22811
#3	8.221001	12.90362	7.957815	9.588979	9.195130	47.80837	Q18.99996
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC FAIL
VALUE	10.00000					50.00000	50.00000
RANGE	3.000000					15.00000	15.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	47.84060	47.05782	36233.22
SDEV	1.79231	.44121	194.94
%RSD	3.746411	.9376005	.5380058
#1	45.86210	46.66672	36096.66
#2	48.30399	47.53612	36146.53
#3	49.35570	46.97062	36456.46
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	50.00000	50.00000	
RANGE	15.00000	15.00000	

METHOD: P42012S2 SAMPLE NAME: CCV1 OPERATOR:
RUN TIME: 09/14/12 19:53:26
COMMENT: CCV CVS1
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	98.33091	48823.71	966.7324	1004.192	48507.61	1002.712	991.2711
SDEV	.12487	398.64	5.4224	3.622	211.24	.921	5.3341
%RSD	.1269914	.8164851	.5608973	.3606490	.4354773	.0918830	.5381079
#1	98.18999	48462.33	968.7871	1000.017	48271.56	1003.507	996.6477
#2	98.42780	48757.50	960.5829	1006.490	48572.44	1002.926	991.1851
#3	98.37495	49251.31	970.8271	1006.069	48678.84	1001.702	985.9805
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	100.0000	50000.00	1000.000	1000.000	50000.00	1000.000	1000.000
RANGE	10.40000	5200.000	104.0000	104.0000	5200.000	104.0000	104.0000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	995.2388	1000.033	24521.28	52563.63	48324.87	946.4900	50275.77
SDEV	5.6594	6.537	102.48	143.77	228.96	7.1947	212.48
%RSD	.5686507	.6537189	.4179035	.2735114	.4737907	.7601411	.4226299
#1	998.8692	993.0091	24639.58	52718.71	48554.34	954.7075	50376.61
#2	998.1294	1001.148	24464.34	52434.79	48323.84	943.4388	50031.65
#3	988.7178	1005.940	24459.92	52537.38	48096.43	941.3238	50419.06
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	25000.00	50000.00	50000.00	1000.000	50000.00
RANGE	104.0000	104.0000	2600.000	5200.000	5200.000	104.0000	5200.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1001.514	1024.546	959.0169	1056.673	996.0117	1013.605	1008.947
SDEV	2.270	5.343	7.3706	3.608	3.1183	3.058	.589
%RSD	.2266185	.5215154	.7685555	.3414866	.3130826	.3016931	.0583755
#1	1002.274	1020.237	950.5414	1060.310	998.0489	1017.110	1008.269
#2	1003.306	1030.525	963.9253	1053.094	997.5644	1011.483	1009.335
#3	998.9621	1022.878	962.5840	1056.613	992.4219	1012.222	1009.236
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	1000.000	1000.000	1000.000	1100.000	1000.000	1000.000	1000.000
RANGE	104.0000	104.0000	104.0000	114.0000	104.0000	104.0000	104.0000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	1026.000	979.1819	1004.414	1023.831	1008.499	994.4100	1024.659
SDEV	1.163	4.7368	4.723	3.618	5.713	5.5354	3.011
%RSD	.1133287	.4837557	.4702151	.3533762	.5664570	.5566498	.2938487
#1	1024.797	975.5156	1009.299	1022.175	1014.581	1000.450	1021.654
#2	1026.087	984.5302	1004.072	1027.981	1003.246	989.5788	1027.676
#3	1027.117	977.4999	999.8714	1021.338	1007.670	993.2014	1024.646
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	1000.000					1000.000	1000.000
RANGE	104.0000					104.0000	104.0000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	985.1231	965.9258	36396.53
SDEV	7.6348	4.4117	206.93
%RSD	.7750066	.4567291	.5685530
#1	981.5706	961.3795	36157.60
#2	979.9117	970.1892	36518.13
#3	993.8867	966.2090	36513.86
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	1000.000	1000.000	
RANGE	104.0000	104.0000	

METHOD: P42012S2 SAMPLE NAME: CCB1 OPERATOR:
RUN TIME: 09/14/12 20:00:40
COMMENT: CCB
MODE: CONC CORR. FACTOR: 1

ELEM	AG3280	AL3082	BA4934	BE3130	CA3179	CD2265	CO2286
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.431585	31.78628	-.292476	-.254435	-8.49096	-.563341	-1.45995
SDEV	.472925	10.11677	.078310	.194619	10.29137	.227907	.74853
%RSD	109.5787	31.82747	26.77473	76.49051	121.2039	40.45624	51.27079
#1	-.026424	27.68426	-.206527	-.092540	-.897161	-.638619	-1.41255
#2	-.317083	24.36474	-.359782	-.200406	-4.37187	-.744086	-2.23105
#3	-.951248	43.30983	-.311120	-.470360	-20.2039	-.307319	-.736249
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	200.0000	200.0000	5.000000	5000.000	5.000000	5.000000

ELEM	CR2677	CU3247	FE2714	K_7664	MG2790	MN2576	NA3302
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.003362	-1.18521	-8.31346	-283.177	-3.23352	-.416911	88.40507
SDEV	.207344	.48473	4.34875	5.199	1.29880	.061168	75.84959
%RSD	6167.173	40.89806	52.30970	1.836071	40.16673	14.67178	85.79778
#1	-.241710	-.779429	-6.19598	-277.893	-1.98617	-.362972	60.75940
#2	.1354066	-1.72196	-13.3154	-288.288	-3.13611	-.404389	30.25605
#3	.0962176	-1.05422	-5.42901	-283.350	-4.57827	-.483371	174.1997
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	5.000000	5.000000	100.0000	5000.000	5000.000	10.00000	5000.000

ELEM	NI2316	TL1908	V_2924	ZN2062	PB2203	SE1960	SB2068
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.734858	.6360290	-.066120	-.695025	.6605488	-1.01353	-5.73253
SDEV	.156924	2.735380	.397209	.171529	.9526190	1.81418	2.38726
%RSD	21.35434	430.0715	600.7359	24.67954	144.2163	178.9958	41.64416
#1	-.911250	-2.49218	-.485071	-.774751	.6115142	.8107213	-3.32459
#2	-.610754	2.578331	.3050175	-.498143	1.636738	-2.81746	-5.77442
#3	-.682569	1.821935	-.018307	-.812182	-.266606	-1.03385	-8.09857
ERRORS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS	QC PASS
VALUE	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
RANGE	40.00000	10.00000	20.00000	20.00000	3.000000	5.000000	10.00000

ELEM	AS1890	22031	22032	19601	19602	SN1899	BI2230
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
AVGE	-.499570	1.123542	.4289347	-.105521	-1.46718	-1.86655	2.261467
SDEV	.796199	2.420244	1.050135	2.092364	2.20805	1.55253	1.963296
%RSD	159.3769	215.4118	244.8239	1982.883	150.4959	83.17651	86.81514
#1	-.793558	3.045760	-.604235	.3158546	1.057456	-3.65785	1.624767
#2	.4018188	1.919246	1.495250	-2.37650	-3.03793	-1.03248	4.464091
#3	-1.10697	-1.59438	.3957897	1.744086	-2.42107	-.909322	.6955430
ERRORS	QC PASS	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC PASS	QC PASS
VALUE	.0000000					.0000000	.0000000
RANGE	10.00000					100.0000	50.00000

ELEM	MO2020	TI3349	Y_3710
UNITS	UG/L	UG/L	PPM
AVGE	.9568105	-.028216	36856.15
SDEV	1.529419	.172312	314.43
%RSD	159.8456	610.6879	.8531253
#1	2.223088	.1706956	36792.33
#2	1.389753	-.131783	37197.60
#3	-.742409	-.123560	36578.53
ERRORS	QC PASS	QC PASS	NOCHECK
VALUE	.0000000	.0000000	
RANGE	10.00000	40.00000	

4. Digestion and Distillation Logs

The following logs shall be submitted, as appropriate, for each preparation procedure: digestion logs for ICP-AES, ICP-MS, mercury preparations, and cyanide. The logs shall include: (1) date; (2) sample weights and volumes, with initial sample weight/volume and final volume clearly indicated; (3) sufficient information to unequivocally identify which QC samples (i.e., LCS, PB) correspond to each batch digested; (4) comments describing any significant sample changes or reactions which occur during preparation shall be entered in the log and noted in the SDG Narrative; (5) indication of pH less than 2 or greater than 12, as applicable; (6) identification of the sample preparer(s) [signature (s)].

METALS/MERCURY PREPARATION LOG

Metals Method: 3050B / 6010C
Mercury Method: 7471B
Prepared By: NSB

CompuChem
A Division Of
Liberty Analytical Corp.

Preparation Date: 9/13/12
Preparation Time: 0850
Batch Number: 2091303
Blue Soil

COMPUCHEM SAMPLE ID	CLIENT SAMPLE ID	SAMPLE TYPE	ICP Initial (g)	ICP Final (mL)	HG Initial (g)	HG Final (mL)	*Description Before	*Description After ICP
2091301-BLK1	PBS	PBS	1.00	100			N / A	CS / CL
2091301-BS1	LCSS	LCSS	1.00				BR / F	Y / CL
2091301-DUP1	WWTP03D	DUP	1.00				BR / M	Y / CL
2091301-MS1	WWTP03S	MS	1.06				BR / M	Y / CL
2091301-MSD1	WWTP03SD	MSD	1.00				BR / M	Y / CL
1209047-01	WWTP03	SAMPLE	1.00				BR / M	Y / CL
1209047-02	WWTP04	SAMPLE	1.00				BR / M	Y / CL
1209047-03	WWTP08	SAMPLE	1.05				BR / M	Y / CL
1209047-04	WWTP05	SAMPLE	1.04				BR / M	Y / CL
1209047-05	WWTP06	SAMPLE	1.09				BR / M	Y / CL
1209047-06	WWTP07	SAMPLE	1.01				BR / M	Y / CL
1209047-07	WWTP09	SAMPLE	1.05	Y			BR / M	Y / CL

Mercury Standards and QC S0 S0.2 S0.5S1 S5 S10 ICV ICB CRI CCV CCB

NOTE: All standards and QC for mercury were prepared at the same day as the associated samples. Refer to the attached. Standard/QC Preparation Log, with date matching the above preparation date, for preparation method and instruction.

Record of Tempature/Time		
Hot Block Temp In:	95	C
Hot Block Temp Out:	95	C
Hot Block Identifier	Hot Block 2	
Time Hg in water bath		
Time Hg out water bath		
Water Bath Temp In		C
Water Bath Temp Out		C
Water Bath Identifier		

MS Reference
ICAP: 1.0mL XCL-20
Ref #: IJ15602
HG: 1.0mL 100ppb Hg
Ref #:

LCS Reference
ICAP: 1.0g ERA PPT (540)
Ref #: 2I05001
HG: 0.2g ERA PPT (540)
Ref #:

* R=red, BL=blue, Y=yellow, G=green, O=orange, V=violet, W=white, CS=colorless, BR=brown, BK=black GY= grey, F=fine, M=medium, C=coarse, CL=clear, CY=cloudy, OP=opaque

Shading has been applied to unused portions of this worksheet as a substitute for 'Z-out'.

"The presence of the Chemist's/analyst's employee ID number, or signature, on this log attests that strict compliance with the method's SOP has occurred. Any SOP deviations requires documentation by the chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation."

Sample Verification Signature: _____
This signature corroborates that the sample idenification numbers appearing on the digestion cups are the same as those appearing on the field sample containers.

Reviewed By: _____
Date: 091512

Standards/QC Preparation Log for ICP Metals/Mercury Page 1 of 3 **Case/SDG:** 1209047
COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

REAGENTS	REF#[1]	MANUFACTURER	LOT#	EXPIRATION DATE
SULFURIC ACID (H_2SO_4)	2H07016	CALEDON	80286	08/17
NITRIC ACID (HNO_3)	2H31012	EMD	51332	06/17
POTASSIUM PERMANGANATE ($KMnO_4$)	2F29003	JT BAKER	K30649	06/17
HYDROCHLORIC ACID (HCL)	2H29001	CALEDON	81713	08/17
POTASSIUM PERSULFATE ($K_2S_2O_8$)	0F30016	JT BAKER	H44465	06/15
HYDROGEN PEROXIDE (H_2O_2)	2F29002	EMD	51283145	10/31/13
STANDARDS				
XCL 20R	1I15002	HIGH PURITY	1125538	09/13/12
ERA PPT (540)	2I05001	ERA	D071-540	08/31/13
EPA LCS (0405)	0E20016	EPA	0405	05/17/15
TCLP-1REV	2E09002	Inorganic Ventures	E2-MEB376083	05/01/13
ICCV-3	1J06006	Inorganic Ventures	E2-MEB395052	11/01/12
ILM 05.3 Matrix Spike	2D09007	HIGH PURITY	1208727	03/30/13
ICCV-4	2G09022	Inorganic Ventures	E2-MEB429094	08/01/13
ICCV-6	1J18007	Inorganic Ventures	E2-MEB398023	11/01/12
ARSENIC (As) 1000ppm	2E12003	HIGH PURITY	1211132	11/15/13
MERCURY (Hg) 20ppm	2F11003	HIGH PURITY	1215831	06/08/13
ICCV-5	2B17002	INORGANIC VENTURES	F2-MEB41203	03/01/13

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: _____ DATE: 9/13/12

ENTERED BY: _____ DATE: 9/13/12

REVIEWED BY: _____ DATE: 9/13/12

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

12/03/07:RM

Standards/QC Preparation Log for ICP Metals/Mercury Page 2 of 3 **Case/SDG:** 1209017

COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS
Hg 100ppb- 09-10-12-NB	Place in a 100mL volumetric flask: 0.5mL of 20ppm Hg stock solution 2.5mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 100mL volume with reagent water **(PREPARE DAILY)**
$K_2S_2O_8$- 08-28-12-NB Potassium Persulfate	Place in a 2000mL volumetric flask: 100.0g of $K_2S_2O_8$ Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
$KmnO_4$- 08-28-12 -NB Potassium Permanganate	Place in a 2000mL volumetric flask: 100.0g of $KmnO_4$ Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREARE AS NEEDED)**
HNO_3- 08-28-12 – NB Nitric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
HCl- 08-29-12-NB Hydrochloric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HCl Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
Aqua Regia- 09-04-12-nb	Place in a 1000mL container: 600mL of Concentrated HCL 200mL of Concentrated HNO3 **(PREPARE AS NEEDED)**

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log

[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: _____ DATE: 9/13/12

ENTERED BY: _____ DATE: 9/13/12

REVIEWED BY: _____ DATE: 9/13/12

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Standards/QC Preparation Log for ICP Metals/Mercury Page 3 of 3 **Case/SDG:** 1209047
COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS	Resultant Analyte Concentration
ICV- 09-10-12-nb	Pipet into a 300mL BOD Bottle 1.0mL of ICV-5 and 99mL of reagent water. Digest according to sample preparation instructions	4.0µg/L
S0/ICB/CCB-09-10-12-nb	Pipet into a 300mL BOD Bottle 100mL of reagent water Digest according to sample preparation instructions	0.0µg/L
S0.2/CRI- 09-10-12-nb	Pipet into a 300mL BOD Bottle 0.2mL of Hg 100ppb and 99.8mL of reagent water Digest according to sample preparation instructions	0.2µg/L
S0.5- 09-10-12-nb	Pipet into a 300mL BOD Bottle 0.5mL of Hg 100ppb and 99.5mL of reagent water Digest according to sample preparation instructions	0.5µg/L
S1.0- 09-10-12-nb	Pipet into a 300mL BOD Bottle 1.0mL of Hg 100ppb and 99mL of reagent water Digest according to sample preparation instructions	1.0µg/L
S5.0/CCV-09-10-12-nb	Pipet into a 300mL BOD Bottle 5.0mL of Hg 100ppb and 95mL of reagent water Digest according to sample preparation instructions	5.0µg/L
S10.0- 09-10-12-nb	Pipet into a 300mL BOD Bottle 10mL of Hg 100ppb and 90mL of reagent water Digest according to sample preparation instructions	10.0µg/L

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: MBaum DATE: 9/13/12

ENTERED BY: MBaum DATE: 9/13/12

REVIEWED BY: [signature] DATE: 9/13/12

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

INTERNAL DIGESTION COC

2091301

COMPUCHEM

Printed: 9/13/2012 7:23:27AM

Matrix: Soil **Prepared using: METALS - EPA 3050B**

Lab Number	Client ID	Sample Type	
1209047-01	WWTP03	Sample	
1209047-02	WWTP04	Sample	
1209047-03	WWTP08	Sample	
1209047-04	WWTP05	Sample	
1209047-05	WWTP06	Sample	
1209047-06	WWTP07	Sample	
1209047-07	WWTP09	Sample	
2091301-BLK1	PBS	Blank	
2091301-BS1	LCSS	LCS	
2091301-DUP1	WWTP03D	Duplicate	
2091301-MS1	WWTP03S	Matrix Spike	
2091301-MSD1	WWTP03SD	Matrix Spike Dup	

Relinquished By	Date	Received By	Date
Relinquished By	Date	Received By	Date
Relinquished By	Date	Received By	Date
Relinquished By	Date	Received By	Date

Metals Internal Chain of Custody Sheet

Batch: 2091301 **Status:** Batched **Analysis**: 6010 METALS DOD

Lab Id	Client_Id	Received	Container	Extraction	Preservative	Matrix	Due Date	Cust Date
1209047-01 A	WWTP03	09/08/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	9/17/2012	
1209047-02 A	WWTP04	09/08/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	9/17/2012	
1209047-03 A	WWTP08	09/08/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	9/17/2012	
1209047-04 A	WWTP05	09/08/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	9/17/2012	
1209047-05 A	WWTP06	09/08/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	9/17/2012	
1209047-06 A	WWTP07	09/08/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	9/17/2012	
1209047-07 A	WWTP09	09/08/12	4a_2OZ WM Glass, cool	EPA 3050B	Cool 4°C	Soil	9/17/2012	

Cooler #1	9/13/12 0810		9/13/12 0810
Relinquished By	Date/Time	Received By	Date/Time
	9/13/12 0810		9/13/12 0810
Relinquished By	Date/Time	Received By	Date/Time
	9/13/12 1115	Cooler	9/13/12 1115
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Analytical Summary

Enviro Compliance Laboratories, Inc.
816 Kiwanis Street
Hampton, Virginia 23661
(757) 244-3424
Fax: (757) 244-3243
www.envirocompliance.com
eclhampton@envirocompliance.com

Weston Solutions, Inc.
Attn: Anthony Pace
2551 Eltham Ave
Norfolk, VA

Project No. : Project 11
Project Name : Wallops Flight Facility
Date Received: September 27, 2012
Date Sampled : September 25, 2012
Time Sampled : 14:10
Date Issued : October 04, 2012

Lab # 1(A)/Sample ID : WWTP PC01

Parameter	Result	Units	DL	Date/Time Prepared	Date/Time Analyzed	Method	Analyst
Lead	91591.0	mg/kg	2.5	10-04/1000	10-04/1415	3111B	sub*

Lab # 2(A)/Sample ID : WWTP PC02

Parameter	Result	Units	DL	Date/Time Prepared	Date/Time Analyzed	Method	Analyst
Lead	4240.0	mg/kg	2.5	10-04/1000	10-04/1415	3111B	sub*

BDL = Below Detection Limit
All methods are 40 CFR 136 March 12, 2007, Table IB approved.
Reference to Standard Methods is 18th ed.

Anamarie E. McKinley
Laboratory Manager

m:crtH2928485.pdf

Enviro Compliance Laboratories, Inc.
816 Kiwanis Street
Hampton, Virginia 23661
(757) 244-3424
Fax: (757) 244-3243
www.envirocompliance.com
eclhampton@envirocompliance.com

Report Annex

Abbreviations:

NR = Not Reported
ND = Not Detected
BQL = Below Quantitation Level (Result is less than stated QL)
< = Result is less than Quantitation Limit

Quality Assurance Flags:

L = LCS did not meet method criteria.
H = Blank did not meet QC criteria
HT = Sample was not analyzed within holding times.
SR = Surrogate Recovery not available due to dilution.
R = Corr Coef <.995
C = Initial Instrument Calibration did not meet criteria
V = Continuing Calibration Verification did not meet criteria
S = Matrix Spike did not meet criteria
D = Duplicate did not meet criteria
K = Calibration Standard outside Predicted value
OvR = Overrange- Sample was outside of calibration range
UnR = Underrange w/Diln.- Sample was below low standard because of dilution
A = Absorbance reading for QL was <.005
TOX = Toxicity exhibited in BOD
G = GGA/Int. QC was not 198.5+/-30.5
Y = Yield not within 10-200mg

Notes:

Analysis was performed in accordance to NELAC requirements unless otherwise noted.
All methods are 40 CFR 136 March 12, 2007, Table IB approved.
Reference to Standard Methods is 18th ed.

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6-2-4

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-6

Sample wt/vol: 30.00 (g) | Lab File ID: n5960.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 17.3 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2100	U
121-14-2	2,4-Dinitrotoluene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
117-84-0	Di-n-octyl phthalate	400	U
206-44-0	Fluoranthene	400	U
86-73-7	Fluorene	400	U
118-74-1	Hexachlorobenzene	400	U
87-68-3	Hexachlorobutadiene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
67-72-1	Hexachloroethane	400	U
193-39-5	Indeno[1,2,3-cd]pyrene	400	U
78-59-1	Isophorone	400	U
91-57-6	2-Methylnaphthalene	400	U
95-48-7	2-Methylphenol	400	U
15831-10-4	3 & 4 Methylphenol	400	U
91-20-3	Naphthalene	400	U
88-74-4	2-Nitroaniline	2100	U
99-09-2	3-Nitroaniline	2100	U
100-01-6	4-Nitroaniline	2100	U
98-95-3	Nitrobenzene	400	U
88-75-5	2-Nitrophenol	400	U
100-02-7	4-Nitrophenol	2100	U
621-64-7	N-Nitrosodi-n-propylamine	400	U
86-30-6	N-Nitrosodiphenylamine	400	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	400	U
108-95-2	Phenol	400	U
129-00-0	Pyrene	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW7-0.-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-7

Sample wt/vol: 30.05 (g) | Lab File ID: n5961.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 25.4 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	440	U
208-96-8	Acenaphthylene	440	U
120-12-7	Anthracene	440	U
56-55-3	Benzo[a]anthracene	440	U
50-32-8	Benzo[a]pyrene	440	U
205-99-2	Benzo[b]fluoranthene	440	U
191-24-2	Benzo[g,h,i]perylene	440	U
207-08-9	Benzo[k]fluoranthene	440	U
111-91-1	Bis(2-chloroethoxy)methane	440	U
111-44-4	Bis(2-chloroethyl)ether	440	U
108-60-1	bis(chloroisopropyl) ether	440	U
117-81-7	Bis(2-ethylhexyl) phthalate	440	U
101-55-3	4-Bromophenyl phenyl ether	440	U
85-68-7	Butyl benzyl phthalate	440	U
86-74-8	Carbazole	440	U
106-47-8	4-Chloroaniline	880	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-58-7	2-Chloronaphthalene	440	U
95-57-8	2-Chlorophenol	440	U
7005-72-3	4-Chlorophenyl phenyl ether	440	U
218-01-9	Chrysene	440	U
53-70-3	Dibenz(a,h)anthracene	440	U
132-64-9	Dibenzofuran	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
91-94-1	3,3'-Dichlorobenzidine	880	U
120-83-2	2,4-Dichlorophenol	440	U
84-66-2	Diethyl phthalate	440	U
105-67-9	2,4-Dimethylphenol	440	U
131-11-3	Dimethyl phthalate	440	U
84-74-2	Di-n-butyl phthalate	440	U
534-52-1	4,6-Dinitro-2-methylphenol	2300	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW7-0.-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-7

Sample wt/vol: 30.05 (g) | Lab File ID: n5961.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 25.4 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2300	U
121-14-2	2,4-Dinitrotoluene	440	U
606-20-2	2,6-Dinitrotoluene	440	U
117-84-0	Di-n-octyl phthalate	440	U
206-44-0	Fluoranthene	440	U
86-73-7	Fluorene	440	U
118-74-1	Hexachlorobenzene	440	U
87-68-3	Hexachlorobutadiene	440	U
77-47-4	Hexachlorocyclopentadiene	440	U
67-72-1	Hexachloroethane	440	U
193-39-5	Indeno[1,2,3-cd]pyrene	440	U
78-59-1	Isophorone	440	U
91-57-6	2-Methylnaphthalene	440	U
95-48-7	2-Methylphenol	440	U
15831-10-4	3 & 4 Methylphenol	440	U
91-20-3	Naphthalene	440	U
88-74-4	2-Nitroaniline	2300	U
99-09-2	3-Nitroaniline	2300	U
100-01-6	4-Nitroaniline	2300	U
98-95-3	Nitrobenzene	440	U
88-75-5	2-Nitrophenol	440	U
100-02-7	4-Nitrophenol	2300	U
621-64-7	N-Nitrosodi-n-propylamine	440	U
86-30-6	N-Nitrosodiphenylamine	440	U
87-86-5	Pentachlorophenol	2300	U
85-01-8	Phenanthrene	440	U
108-95-2	Phenol	440	U
129-00-0	Pyrene	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	440	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW7-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-8

Sample wt/vol: 30.04 (g) | Lab File ID: n5962.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 19.3 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	410	U
208-96-8	Acenaphthylene	410	U
120-12-7	Anthracene	410	U
56-55-3	Benzo[a]anthracene	410	U
50-32-8	Benzo[a]pyrene	410	U
205-99-2	Benzo[b]fluoranthene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
111-91-1	Bis(2-chloroethoxy)methane	410	U
111-44-4	Bis(2-chloroethyl)ether	410	U
108-60-1	bis(chloroisopropyl) ether	410	U
117-81-7	Bis(2-ethylhexyl) phthalate	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
85-68-7	Butyl benzyl phthalate	410	U
86-74-8	Carbazole	410	U
106-47-8	4-Chloroaniline	820	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-58-7	2-Chloronaphthalene	410	U
95-57-8	2-Chlorophenol	410	U
7005-72-3	4-Chlorophenyl phenyl ether	410	U
218-01-9	Chrysene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
132-64-9	Dibenzofuran	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
91-94-1	3,3'-Dichlorobenzidine	820	U
120-83-2	2,4-Dichlorophenol	410	U
84-66-2	Diethyl phthalate	410	U
105-67-9	2,4-Dimethylphenol	410	U
131-11-3	Dimethyl phthalate	410	U
84-74-2	Di-n-butyl phthalate	410	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW7-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-8

Sample wt/vol: 30.04 (g) | Lab File ID: n5962.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 19.3 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	2100	U
121-14-2	2,4-Dinitrotoluene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
117-84-0	Di-n-octyl phthalate	410	U
206-44-0	Fluoranthene	410	U
86-73-7	Fluorene	410	U
118-74-1	Hexachlorobenzene	410	U
87-68-3	Hexachlorobutadiene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
67-72-1	Hexachloroethane	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
78-59-1	Isophorone	410	U
91-57-6	2-Methylnaphthalene	410	U
95-48-7	2-Methylphenol	410	U
15831-10-4	3 & 4 Methylphenol	410	U
91-20-3	Naphthalene	410	U
88-74-4	2-Nitroaniline	2100	U
99-09-2	3-Nitroaniline	2100	U
100-01-6	4-Nitroaniline	2100	U
98-95-3	Nitrobenzene	410	U
88-75-5	2-Nitrophenol	410	U
100-02-7	4-Nitrophenol	2100	U
621-64-7	N-Nitrosodi-n-propylamine	410	U
86-30-6	N-Nitrosodiphenylamine	410	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	410	U
108-95-2	Phenol	410	U
129-00-0	Pyrene	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS1

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-17

Sample wt/vol: 30.15 (g) | Lab File ID: n5971.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 19.0 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	410	U
208-96-8	Acenaphthylene	410	U
120-12-7	Anthracene	410	U
56-55-3	Benzo[a]anthracene	410	U
50-32-8	Benzo[a]pyrene	410	U
205-99-2	Benzo[b]fluoranthene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
111-91-1	Bis(2-chloroethoxy)methane	410	U
111-44-4	Bis(2-chloroethyl)ether	410	U
108-60-1	bis(chloroisopropyl) ether	410	U
117-81-7	Bis(2-ethylhexyl) phthalate	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
85-68-7	Butyl benzyl phthalate	410	U
86-74-8	Carbazole	410	U
106-47-8	4-Chloroaniline	810	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-58-7	2-Chloronaphthalene	410	U
95-57-8	2-Chlorophenol	410	U
7005-72-3	4-Chlorophenyl phenyl ether	410	U
218-01-9	Chrysene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
132-64-9	Dibenzofuran	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
91-94-1	3,3'-Dichlorobenzidine	810	U
120-83-2	2,4-Dichlorophenol	410	U
84-66-2	Diethyl phthalate	410	U
105-67-9	2,4-Dimethylphenol	410	U
131-11-3	Dimethyl phthalate	410	U
84-74-2	Di-n-butyl phthalate	410	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS1

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-17

Sample wt/vol: 30.15 (g) | Lab File ID: n5971.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 19.0 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
51-28-5	2,4-Dinitrophenol	2100	U	
121-14-2	2,4-Dinitrotoluene	410	U	
606-20-2	2,6-Dinitrotoluene	410	U	
117-84-0	Di-n-octyl phthalate	410	U	
206-44-0	Fluoranthene	410	U	
86-73-7	Fluorene	410	U	
118-74-1	Hexachlorobenzene	410	U	
87-68-3	Hexachlorobutadiene	410	U	
77-47-4	Hexachlorocyclopentadiene	410	U	
67-72-1	Hexachloroethane	410	U	
193-39-5	Indeno[1,2,3-cd]pyrene	410	U	
78-59-1	Isophorone	410	U	
91-57-6	2-Methylnaphthalene	410	U	
95-48-7	2-Methylphenol	410	U	
15831-10-4	3 & 4 Methylphenol	410	U	
91-20-3	Naphthalene	410	U	
88-74-4	2-Nitroaniline	2100	U	
99-09-2	3-Nitroaniline	2100	U	
100-01-6	4-Nitroaniline	2100	U	
98-95-3	Nitrobenzene	410	U	
88-75-5	2-Nitrophenol	410	U	
100-02-7	4-Nitrophenol	2100	U	
621-64-7	N-Nitrosodi-n-propylamine	410	U	L
86-30-6	N-Nitrosodiphenylamine	410	U	
87-86-5	Pentachlorophenol	2100	U	
85-01-8	Phenanthrene	410	U	
108-95-2	Phenol	410	U	
129-00-0	Pyrene	410	U	
120-82-1	1,2,4-Trichlorobenzene	410	U	L
88-06-2	2,4,6-Trichlorophenol	410	U	
95-95-4	2,4,5-Trichlorophenol	410	U	

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS1-D

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-18

Sample wt/vol: 30.13 (g) | Lab File ID: n5972.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 18.5 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	400	U
208-96-8	Acenaphthylene	400	U
120-12-7	Anthracene	400	U
56-55-3	Benzo[a]anthracene	400	U
50-32-8	Benzo[a]pyrene	400	U
205-99-2	Benzo[b]fluoranthene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U
207-08-9	Benzo[k]fluoranthene	400	U
111-91-1	Bis(2-chloroethoxy)methane	400	U
111-44-4	Bis(2-chloroethyl)ether	400	U
108-60-1	bis(chloroisopropyl) ether	400	U
117-81-7	Bis(2-ethylhexyl) phthalate	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
85-68-7	Butyl benzyl phthalate	400	U
86-74-8	Carbazole	400	U
106-47-8	4-Chloroaniline	810	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-58-7	2-Chloronaphthalene	400	U
95-57-8	2-Chlorophenol	400	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
218-01-9	Chrysene	400	U
53-70-3	Dibenz(a,h)anthracene	400	U
132-64-9	Dibenzofuran	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
91-94-1	3,3'-Dichlorobenzidine	810	U
120-83-2	2,4-Dichlorophenol	400	U
84-66-2	Diethyl phthalate	400	U
105-67-9	2,4-Dimethylphenol	400	U
131-11-3	Dimethyl phthalate	400	U
84-74-2	Di-n-butyl phthalate	400	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS1-D

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-18

Sample wt/vol: 30.13 (g) | Lab File ID: n5972.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 18.5 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
51-28-5	2,4-Dinitrophenol	2100	U	
121-14-2	2,4-Dinitrotoluene	400	U	
606-20-2	2,6-Dinitrotoluene	400	U	
117-84-0	Di-n-octyl phthalate	400	U	
206-44-0	Fluoranthene	400	U	
86-73-7	Fluorene	400	U	
118-74-1	Hexachlorobenzene	400	U	
87-68-3	Hexachlorobutadiene	400	U	
77-47-4	Hexachlorocyclopentadiene	400	U	
67-72-1	Hexachloroethane	400	U	
193-39-5	Indeno[1,2,3-cd]pyrene	400	U	
78-59-1	Isophorone	400	U	
91-57-6	2-Methylnaphthalene	400	U	
95-48-7	2-Methylphenol	400	U	
15831-10-4	3 & 4 Methylphenol	400	U	
91-20-3	Naphthalene	400	U	
88-74-4	2-Nitroaniline	2100	U	
99-09-2	3-Nitroaniline	2100	U	
100-01-6	4-Nitroaniline	2100	U	
98-95-3	Nitrobenzene	400	U	
88-75-5	2-Nitrophenol	400	U	
100-02-7	4-Nitrophenol	2100	U	
621-64-7	N-Nitrosodi-n-propylamine	400	U	L
86-30-6	N-Nitrosodiphenylamine	400	U	
87-86-5	Pentachlorophenol	2100	U	
85-01-8	Phenanthrene	400	U	
108-95-2	Phenol	400	U	
129-00-0	Pyrene	400	U	
120-82-1	1,2,4-Trichlorobenzene	400	U	L
88-06-2	2,4,6-Trichlorophenol	400	U	
95-95-4	2,4,5-Trichlorophenol	400	U	

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS6

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-19

Sample wt/vol: 30.01 (g) | Lab File ID: n5973.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 18.1 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	400	U
208-96-8	Acenaphthylene	400	U
120-12-7	Anthracene	400	U
56-55-3	Benzo[a]anthracene	400	U
50-32-8	Benzo[a]pyrene	400	U
205-99-2	Benzo[b]fluoranthene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U
207-08-9	Benzo[k]fluoranthene	400	U
111-91-1	Bis(2-chloroethoxy)methane	400	U
111-44-4	Bis(2-chloroethyl)ether	400	U
108-60-1	bis(chloroisopropyl) ether	400	U
117-81-7	Bis(2-ethylhexyl) phthalate	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
85-68-7	Butyl benzyl phthalate	400	U
86-74-8	Carbazole	400	U
106-47-8	4-Chloroaniline	810	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-58-7	2-Chloronaphthalene	400	U
95-57-8	2-Chlorophenol	400	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
218-01-9	Chrysene	400	U
53-70-3	Dibenz(a,h)anthracene	400	U
132-64-9	Dibenzofuran	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
91-94-1	3,3'-Dichlorobenzidine	810	U
120-83-2	2,4-Dichlorophenol	400	U
84-66-2	Diethyl phthalate	400	U
105-67-9	2,4-Dimethylphenol	400	U
131-11-3	Dimethyl phthalate	400	U
84-74-2	Di-n-butyl phthalate	400	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS6

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-19

Sample wt/vol: 30.01 (g) | Lab File ID: n5973.d

Level: (low/med) Low | Date Received: 02/21/2007

% Moisture: 18.1 | Date Extracted: 03/02/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
51-28-5	2,4-Dinitrophenol	2100	U	
121-14-2	2,4-Dinitrotoluene	400	U	
606-20-2	2,6-Dinitrotoluene	400	U	
117-84-0	Di-n-octyl phthalate	400	U	
206-44-0	Fluoranthene	400	U	
86-73-7	Fluorene	400	U	
118-74-1	Hexachlorobenzene	400	U	
87-68-3	Hexachlorobutadiene	400	U	
77-47-4	Hexachlorocyclopentadiene	400	U	
67-72-1	Hexachloroethane	400	U	
193-39-5	Indeno[1,2,3-cd]pyrene	400	U	
78-59-1	Isophorone	400	U	
91-57-6	2-Methylnaphthalene	400	U	
95-48-7	2-Methylphenol	400	U	
15831-10-4	3 & 4 Methylphenol	400	U	
91-20-3	Naphthalene	400	U	
88-74-4	2-Nitroaniline	2100	U	
99-09-2	3-Nitroaniline	2100	U	
100-01-6	4-Nitroaniline	2100	U	
98-95-3	Nitrobenzene	400	U	
88-75-5	2-Nitrophenol	400	U	
100-02-7	4-Nitrophenol	2100	U	
621-64-7	N-Nitrosodi-n-propylamine	400	U	L
86-30-6	N-Nitrosodiphenylamine	400	U	
87-86-5	Pentachlorophenol	2100	U	
85-01-8	Phenanthrene	400	U	
108-95-2	Phenol	400	U	
129-00-0	Pyrene	400	U	
120-82-1	1,2,4-Trichlorobenzene	400	U	L
88-06-2	2,4,6-Trichlorophenol	400	U	
95-95-4	2,4,5-Trichlorophenol	400	U	

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW2-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-1

Sample wt/vol: 30.00 (g) | Lab File ID: jc05014.d

% Moisture: 16.6 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
72-54-8	4,4'-DDD	4.0	U
72-55-9	4,4'-DDE	7.2	
50-29-3	4,4'-DDT	1.1	J
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
53494-70-5	Endrin ketone	4.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	40	U
11104-28-2	PCB-1221	80	U
11141-16-5	PCB-1232	40	U
53469-21-9	PCB-1242	40	U
12672-29-6	PCB-1248	40	U
11097-69-1	PCB-1254	40	U
11096-82-5	PCB-1260	40	U
8001-35-2	Toxaphene	200	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW2-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-2

Sample wt/vol: 30.00 (g) | Lab File ID: jc05015.d

% Moisture: 8.5 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
72-54-8	4,4'-DDD	3.6	U
72-55-9	4,4'-DDE	3.6	U
50-29-3	4,4'-DDT	3.6	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.6	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.6	U
1031-07-8	Endosulfan sulfate	3.6	U
72-20-8	Endrin	3.6	U
7421-93-4	Endrin aldehyde	3.6	U
53494-70-5	Endrin ketone	3.6	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	36	U
11104-28-2	PCB-1221	73	U
11141-16-5	PCB-1232	36	U
53469-21-9	PCB-1242	36	U
12672-29-6	PCB-1248	36	U
11097-69-1	PCB-1254	36	U
11096-82-5	PCB-1260	36	U
8001-35-2	Toxaphene	190	U

ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW2-19-21

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-3

Sample wt/vol: 30.16 (g) | Lab File ID: jc05016.d

% Moisture: 16.2 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
72-54-8	4,4'-DDD	3.9	U
72-55-9	4,4'-DDE	3.9	U
50-29-3	4,4'-DDT	3.9	U
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
53494-70-5	Endrin ketone	3.9	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	39	U
11104-28-2	PCB-1221	80	U
11141-16-5	PCB-1232	39	U
53469-21-9	PCB-1242	39	U
12672-29-6	PCB-1248	39	U
11097-69-1	PCB-1254	39	U
11096-82-5	PCB-1260	39	U
8001-35-2	Toxaphene	200	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW4-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-12

Sample wt/vol: 30.06 (g) | Lab File ID: jc05025.d

% Moisture: 15.0 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
72-54-8	4,4'-DDD	0.57	J
72-55-9	4,4'-DDE	4.2	
50-29-3	4,4'-DDT	0.79	J
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
53494-70-5	Endrin ketone	3.9	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	39	U
11104-28-2	PCB-1221	79	U
11141-16-5	PCB-1232	39	U
53469-21-9	PCB-1242	39	U
12672-29-6	PCB-1248	39	U
11097-69-1	PCB-1254	39	U
11096-82-5	PCB-1260	39	U
8001-35-2	Toxaphene	200	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW4-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-13

Sample wt/vol: 30.00 (g) | Lab File ID: jc05026.d

% Moisture: 9.1 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
72-54-8	4,4'-DDD	3.6	U
72-55-9	4,4'-DDE	3.6	U
50-29-3	4,4'-DDT	3.6	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.6	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.6	U
1031-07-8	Endosulfan sulfate	3.6	U
72-20-8	Endrin	3.6	U
7421-93-4	Endrin aldehyde	3.6	U
53494-70-5	Endrin ketone	3.6	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	36	U
11104-28-2	PCB-1221	74	U
11141-16-5	PCB-1232	36	U
53469-21-9	PCB-1242	36	U
12672-29-6	PCB-1248	36	U
11097-69-1	PCB-1254	36	U
11096-82-5	PCB-1260	36	U
8001-35-2	Toxaphene	190	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW4-3-5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-14

Sample wt/vol: 30.01 (g) | Lab File ID: jc05027.d

% Moisture: 12.8 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	3.8	U
50-29-3	4,4'-DDT	3.8	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
53494-70-5	Endrin ketone	3.8	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	77	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
8001-35-2	Toxaphene	190	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW5-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-9

Sample wt/vol: 30.15 (g) | Lab File ID: jc05022.d

% Moisture: 10.6 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
72-54-8	4,4'-DDD	3.7	U
72-55-9	4,4'-DDE	0.56	J
50-29-3	4,4'-DDT	3.7	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.7	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
72-20-8	Endrin	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
53494-70-5	Endrin ketone	3.7	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	37	U
11104-28-2	PCB-1221	75	U
11141-16-5	PCB-1232	37	U
53469-21-9	PCB-1242	37	U
12672-29-6	PCB-1248	37	U
11097-69-1	PCB-1254	37	U
11096-82-5	PCB-1260	37	U
8001-35-2	Toxaphene	190	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1MW5-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-10

Sample wt/vol: 30.06 (g) | Lab File ID: jc05023.d

% Moisture: 10.1 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
72-54-8	4,4'-DDD	3.7	U
72-55-9	4,4'-DDE	3.7	U
50-29-3	4,4'-DDT	3.7	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.7	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
72-20-8	Endrin	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
53494-70-5	Endrin ketone	3.7	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	37	U
11104-28-2	PCB-1221	74	U
11141-16-5	PCB-1232	37	U
53469-21-9	PCB-1242	37	U
12672-29-6	PCB-1248	37	U
11097-69-1	PCB-1254	37	U
11096-82-5	PCB-1260	37	U
8001-35-2	Toxaphene	190	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW5-2-4

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-11

Sample wt/vol: 30.11 (g) | Lab File ID: jc05024.d

% Moisture: 13.1 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	3.8	U
50-29-3	4,4'-DDT	3.8	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
53494-70-5	Endrin ketone	3.8	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	77	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
8001-35-2	Toxaphene	190	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW6-0-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-4

Sample wt/vol: 30.04 (g) | Lab File ID: jc05017.d

% Moisture: 13.6 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
72-54-8	4,4'-DDD	1.9 ~~0.72~~	J ~~P~~
72-55-9	4,4'-DDE	14	
50-29-3	4,4'-DDT	8.0	
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
53494-70-5	Endrin ketone	3.8	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	77	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
8001-35-2	Toxaphene	200	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW6-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-5

Sample wt/vol: 30.12 (g) | Lab File ID: jc05018.d

% Moisture: 12.9 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	0.48	J
50-29-3	4,4'-DDT	3.8	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
53494-70-5	Endrin ketone	3.8	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	77	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
8001-35-2	Toxaphene	190	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW6-2-4

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-6

Sample wt/vol: 30.02 (g) | Lab File ID: jc05019.d

% Moisture: 17.3 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.1	U
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
57-74-9	Chlordane (technical)	21	U
72-54-8	4,4'-DDD	4.0	U
72-55-9	4,4'-DDE	1.5	J
50-29-3	4,4'-DDT	0.79	J
319-86-8	delta-BHC	2.1	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
53494-70-5	Endrin ketone	4.0	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
72-43-5	Methoxychlor	21	U
12674-11-2	PCB-1016	40	U
11104-28-2	PCB-1221	81	U
11141-16-5	PCB-1232	40	U
53469-21-9	PCB-1242	40	U
12672-29-6	PCB-1248	40	U
11097-69-1	PCB-1254	40	U
11096-82-5	PCB-1260	40	U
8001-35-2	Toxaphene	210	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW7-0.-0.5

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-7

Sample wt/vol: 30.01 (g) | Lab File ID: jc05020.d

% Moisture: 25.4 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.3	U
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	U
57-74-9	Chlordane (technical)	23	U
72-54-8	4,4'-DDD	0.78	J
72-55-9	4,4'-DDE	11	
50-29-3	4,4'-DDT	2.0	J
319-86-8	delta-BHC	2.3	U
60-57-1	Dieldrin	4.4	U
959-98-8	Endosulfan I	2.3	U
33213-65-9	Endosulfan II	4.4	U
1031-07-8	Endosulfan sulfate	4.4	U
72-20-8	Endrin	4.4	U
7421-93-4	Endrin aldehyde	4.4	U
53494-70-5	Endrin ketone	4.4	U
58-89-9	gamma-BHC (Lindane)	2.3	U
76-44-8	Heptachlor	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
72-43-5	Methoxychlor	23	U
12674-11-2	PCB-1016	44	U
11104-28-2	PCB-1221	90	U
11141-16-5	PCB-1232	44	U
53469-21-9	PCB-1242	44	U
12672-29-6	PCB-1248	44	U
11097-69-1	PCB-1254	44	U
11096-82-5	PCB-1260	44	U
8001-35-2	Toxaphene	230	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW7-0.5-2

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-8

Sample wt/vol: 30.05 (g) | Lab File ID: jc05021.d

% Moisture: 19.3 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.1	U
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
57-74-9	Chlordane (technical)	21	U
72-54-8	4,4'-DDD	4.1	U
72-55-9	4,4'-DDE	4.1	U
50-29-3	4,4'-DDT	4.1	U
319-86-8	delta-BHC	2.1	U
60-57-1	Dieldrin	4.1	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
72-20-8	Endrin	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
53494-70-5	Endrin ketone	4.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
72-43-5	Methoxychlor	21	U
12674-11-2	PCB-1016	41	U
11104-28-2	PCB-1221	83	U
11141-16-5	PCB-1232	41	U
53469-21-9	PCB-1242	41	U
12672-29-6	PCB-1248	41	U
11097-69-1	PCB-1254	41	U
11096-82-5	PCB-1260	41	U
8001-35-2	Toxaphene	210	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS1

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-17

Sample wt/vol: 30.08 (g) | Lab File ID: jc05030.d

% Moisture: 19.0 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 2

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	4.2	U
319-84-6	alpha-BHC	4.2	U
319-85-7	beta-BHC	4.2	U
57-74-9	Chlordane (technical)	42	U
72-54-8	4,4'-DDD	12	
72-55-9	4,4'-DDE	6.0	J
50-29-3	4,4'-DDT	37 ~~20~~	~~P~~ J L
319-86-8	delta-BHC	4.2	U
60-57-1	Dieldrin	5.7 0.92	J ~~P~~
959-98-8	Endosulfan I	4.2	U
33213-65-9	Endosulfan II	8.1	U
1031-07-8	Endosulfan sulfate	8.1	U L
72-20-8	Endrin	8.1	U
7421-93-4	Endrin aldehyde	8.1	U
53494-70-5	Endrin ketone	8.1	U
58-89-9	gamma-BHC (Lindane)	4.2	U
76-44-8	Heptachlor	4.2	U
1024-57-3	Heptachlor epoxide	4.2	U
72-43-5	Methoxychlor	42	U
12674-11-2	PCB-1016	81	U
11104-28-2	PCB-1221	170	U
11141-16-5	PCB-1232	81	U
53469-21-9	PCB-1242	81	U
12672-29-6	PCB-1248	81	U
11097-69-1	PCB-1254	81	U
11096-82-5	PCB-1260	890 ~~280~~	
8001-35-2	Toxaphene	420	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS1-D

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-18

Sample wt/vol: 30.01 (g) | Lab File ID: jc05031.d

% Moisture: 18.5 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 2

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	4.2	U
319-84-6	alpha-BHC	4.2	U
319-85-7	beta-BHC	4.2	U
57-74-9	Chlordane (technical)	42	U
72-54-8	4,4'-DDD	13 ~~7.0~~	J P
72-55-9	4,4'-DDE	6.9	J
50-29-3	4,4'-DDT	30 ~~19~~	~~P~~
319-86-8	delta-BHC	4.2	U
60-57-1	Dieldrin	8.1	U
959-98-8	Endosulfan I	4.2	U
33213-65-9	Endosulfan II	8.1	U
1031-07-8	Endosulfan sulfate	8.1	U
72-20-8	Endrin	8.1	U
7421-93-4	Endrin aldehyde	8.1	U
53494-70-5	Endrin ketone	8.1	U
58-89-9	gamma-BHC (Lindane)	4.2	U
76-44-8	Heptachlor	4.2	U
1024-57-3	Heptachlor epoxide	4.2	U
72-43-5	Methoxychlor	42	U
12674-11-2	PCB-1016	81	U
11104-28-2	PCB-1221	160	U
11141-16-5	PCB-1232	81	U
53469-21-9	PCB-1242	81	U
12672-29-6	PCB-1248	81	U
11097-69-1	PCB-1254	81	U
11096-82-5	PCB-1260	290	
8001-35-2	Toxaphene	420	U

4 J L

L

30 yellow

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS6

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: 680-24460-19

Sample wt/vol: 30.07 (g) | Lab File ID: jc05032.d

% Moisture: 18.1 | Date Received: 02/21/2007

Extraction Method: 3550B | Date Extracted: 03/01/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
309-00-2	Aldrin	2.1	U
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
57-74-9	Chlordane (technical)	21	U
72-54-8	4,4'-DDD	6.2	~~P~~ J
72-55-9	4,4'-DDE	11	
50-29-3	4,4'-DDT	~~27~~ 43	~~P~~ J
319-86-8	delta-BHC	2.1	U
60-57-1	Dieldrin	~~0.46~~ 3.9	~~J P~~ J
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
53494-70-5	Endrin ketone	4.0	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
72-43-5	Methoxychlor	21	U
12674-11-2	PCB-1016	40	U
11104-28-2	PCB-1221	82	U
11141-16-5	PCB-1232	40	U
53469-21-9	PCB-1242	40	U
12672-29-6	PCB-1248	40	U
11097-69-1	PCB-1254	40	U
11096-82-5	PCB-1260	190	
8001-35-2	Toxaphene	210	U

APPENDIX D

Support Documentation
(Organic)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSP5973 Calibration Date(s): 02/23/07 02/24/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1934 0037

LAB FILE ID: RRF1: PQ813 RRF2: PQ814 RRF3: PQ815
RRF4: PQ816 RRF5: PQ826 RRF6: PQ818

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6
DICHLORODIFLUOROMETHANE	1.0008	0.7597	1.0048	0.9218	0.9876	0.9887
CHLOROMETHANE	1.5478	1.0062	1.1737	1.1042	1.1496	1.1773
VINYL CHLORIDE	1.1183	0.8305	1.0230	0.9703	1.0403	1.0617
BROMOMETHANE	1949	3728	9599	17553	41536	85920
CHLOROETHANE	2298	6990	14774	28450	76343	137326
TRICHLOROFLUOROMETHANE	1.1682	0.9399	1.1577	1.1217	1.2016	1.1981
TRICHLOROTRIFLUOROETHANE(113	0.7859	0.5895	0.7525	0.6947	0.7644	0.7751
1 1-DICHLOROETHENE	0.8001	0.5475	0.7034	0.6830	0.7239	0.7570
ACETONE		0.1350	0.1300	0.1141	0.1203	0.1210
CARBON DISULFIDE	2.7163	1.8513	2.2725	2.1761	2.3654	2.4246
METHYLENE CHLORIDE	0.8985	0.6840	0.8325	0.7796	0.8297	0.8480
trans-1 2-DICHLOROETHENE	0.8770	0.7048	0.8542	0.8200	0.8647	0.8953
METHYL T-BUTYL ETHER	2.6943	2.2040	2.6379	2.6127	2.8050	2.9364
1 1-DICHLOROETHANE	1.5266	1.2396	1.4857	1.4104	1.4842	1.4935
VINYL ACETATE	1.9055	1.4822	1.8028	1.7386	1.8805	1.9747
cis-1 2-DICHLOROETHENE	1.0784	0.7617	0.9047	0.9025	0.9416	0.9747
2 2-DICHLOROPROPANE	1.0895	0.8728	1.0670	1.0071	1.0873	1.1080
2-BUTANONE		0.6937	0.5890	0.5438	0.5554	0.5670
BROMOCHLOROMETHANE	0.9373	0.7568	0.8828	0.8619	0.9023	0.9192
CHLOROFORM	1.5052	1.2483	1.4548	1.4000	1.4640	1.5008
1 1 1-TRICHLOROETHANE	0.3763	0.3172	0.4081	0.3864	0.4123	0.4224
1 1-DICHLOROPROPENE	0.4244	0.3421	0.4144	0.4077	0.4301	0.4425
CARBON TETRACHLORIDE	0.3143	0.2448	0.3177	0.3115	0.3350	0.3483
BENZENE	1.4132	1.0940	1.2885	1.2429	1.2792	1.3116
1 2-DICHLOROETHANE	0.4258	0.3475	0.4177	0.3997	0.4054	0.4121
TRICHLOROETHENE	0.3396	0.2705	0.3301	0.3158	0.3355	0.3448
1 2-DICHLOROPROPANE	0.3760	0.3068	0.3587	0.3420	0.3557	0.3603
DIBROMOMETHANE	0.2058	0.1708	0.1967	0.1892	0.1987	0.2037
BROMODICHLOROMETHANE	0.3612	0.3031	0.3746	0.3737	0.4036	0.4163
2-CHLOROETHYL VINYL ETHER	0.2198	0.1929	0.2372	0.2360	0.2617	0.2716
cis-1,3-DICHLOROPROPENE	0.4411	0.3844	0.4696	0.4604	0.4919	0.5124
4-METHYL-2-PENTANONE (MIBK)	0.3716	0.2791	0.3333	0.3288	0.3616	0.3800
TOLUENE	0.8009	0.6692	0.8328	0.7990	0.8467	0.8665
trans-1,3-DICHLOROPROPENE	0.4283	0.3320	0.4159	0.4041	0.4424	0.4708
1 1 2-TRICHLOROETHANE	0.2812	0.2331	0.2776	0.2664	0.2803	0.2884
TETRACHLOROETHENE	0.5148	0.4430	0.5386	0.5162	0.5453	0.5689
1 3-DICHLOROPROPANE	0.5983	0.4606	0.5559	0.5434	0.5620	0.5806
2-HEXANONE	0.4577	0.3348	0.4263	0.4381	0.4616	0.5097
DIBROMOCHLOROMETHANE	2086	8581	21167	43648	123944	251394
1 2-DIBROMOETHANE	0.3215	0.2561	0.3180	0.3031	0.3211	0.3365
CHLOROBENZENE	1.8927	1.4405	1.7512	1.6517	1.7411	1.8016

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSP5973 Calibration Date(s): 02/23/07 02/24/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1934 0037

LAB FILE ID: RRF1: PQ813 RRF2: PQ814 RRF3: PQ815
RRF4: PQ816 RRF5: PQ826 RRF6: PQ818

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6
1 1 1 2-TETRACHLOROETHANE	0.5141	0.4376	0.5298	0.5200	0.5610	0.5958
ETHYL BENZENE	2.9691	2.4412	2.9911	2.8836	3.1040	3.2460
STYRENE	1.8814	1.5680	1.9898	1.9537	2.1454	2.2668
BROMOFORM	1188	5402	13272	28675	84483	180237
ISOPROPYLBENZENE	2.7976	2.3673	3.0322	2.9475	3.2095	3.4027
m,p-XYLENE	1.1683	0.9544	1.1976	1.1807	1.2522	1.3078
BROMOBENZENE	0.7907	0.6486	0.7784	0.7649	0.8172	0.8601
o-XYLENE	1.0884	0.9077	1.1355	1.1311	1.2194	1.2728
1 1 2 2-TETRACHLOROETHANE	0.7312	0.5941	0.7633	0.7420	0.7890	0.8371
1 2 3-TRICHLOROPROPANE	0.2808	0.1971	0.2356	0.2311	0.2358	0.2540
n-PROPYLBENZENE	0.8276	0.6831	0.8958	0.8891	0.9658	0.9988
2-CHLOROTOLUENE	0.7543	0.5901	0.7600	0.7464	0.7850	0.8357
1 3 5-TRIMETHYLBENZENE	2.4815	2.0618	2.6828	2.6929	2.8938	3.0690
4-CHLOROTOLUENE	0.8153	0.6321	0.7799	0.7643	0.8041	0.8459
tert-BUTYLBENZENE	2.1307	1.7248	2.2998	2.2718	2.4926	2.6482
1 2 4-TRIMETHYLBENZENE	2.3262	2.0087	2.6178	2.5936	2.8396	2.9318
sec-BUTYLBENZENE	3.1907	2.6516	3.5644	3.6097	3.9237	4.1308
1 3-DICHLOROBENZENE	1.7428	1.3691	1.6934	1.6428	1.7130	1.8182
p-ISOPROPYLTOLUENE	11093	49599	127293	258791	731705	1413765
1 4-DICHLOROBENZENE	1.7216	1.3265	1.6627	1.6055	1.7030	1.7852
1 2-DICHLOROBENZENE	1.7129	1.3053	1.6007	1.5411	1.6101	1.6926
n-BUTYLBENZENE	10309	43589	113401	232356	663971	1258231
1 2-DIBROMO-3-CHLOROPROPANE	698	2423	6384	12759	37265	75872
1 2 4-TRICHLOROBENZENE	1.3116	0.8423	1.0900	1.0860	1.1706	1.2150
HEXACHLOROBUTADIENE	0.6809	0.4502	0.5642	0.5545	0.6014	0.6379
NAPHTHALENE	12582	39040	94235	194116	551566	1048880
1 2 3-TRICHLOROBENZENE	1.2068	0.8019	1.0386	1.0031	1.0962	1.1228
1,3-DICHLOROPROPENE (total)	0.4347	0.3582	0.4427	0.4322	0.4672	0.4916
1,2-DICHLOROETHENE (total)	0.9777	0.7332	0.8794	0.8612	0.9032	0.9350
XYLENE (total)	1.1416	0.9388	1.1769	1.1642	1.2413	1.2961
METHYL ACETATE	8150	16890	31647	58345	145780	283379
CYCLOHEXANE	0.5493	0.4268	0.5216	0.5069	0.5365	0.5491
METHYL CYCLOHEXANE	0.5491	0.4562	0.5693	0.5552	0.6139	0.6168
DIBROMOFLUOROMETHANE	0.7758	0.6386	0.7824	0.7243	0.7737	0.8023
TOLUENE-d8	1.2476	0.9885	1.1999	1.1698	1.2266	1.2491
4-BROMOFLUOROBENZENE	1.1095	0.7408	0.9028	0.8583	0.9097	0.9532

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSP5973 Calibration Date(s): 02/23/07 02/24/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1934 0037

RRF7: PQ819

COMPOUND	RRF7	CURVE	COEFFICIENTS A0	COEFFICIENTS A1	%RSD OR R^2	
DICHLORODIFLUOROMETHANE	0.9999	AVRG		0.9519	9.391	
CHLOROMETHANE	1.2013	AVRG		1.1943	14.144	
VINYL CHLORIDE	1.1038	AVRG		1.0211	9.561	
BROMOMETHANE	197183	LINR	0.00000000	2.90160944	0.9939535	4/1% RSD
CHLOROETHANE	317972	LINR	0.00000000	1.79382413	0.9954794	
TRICHLOROFLUOROMETHANE	1.2400	AVRG		1.1467	8.598	
TRICHLOROTRIFLUOROETHANE(113	0.8043	AVRG		0.7380	10.031	
1 1-DICHLOROETHENE	0.7889	AVRG		0.7148	11.945	
ACETONE	0.1254	AVRG		0.1243	6.010	
CARBON DISULFIDE	2.5340	AVRG		2.3343	11.824	
METHYLENE CHLORIDE	0.8759	AVRG		0.8212	8.675	
trans-1 2-DICHLOROETHENE	0.9289	AVRG		0.8493	8.497	
METHYL T-BUTYL ETHER	3.0501	AVRG		2.7058	10.084	
1 1-DICHLOROETHANE	1.5318	AVRG		1.4531	7.033	
VINYL ACETATE	2.0184	AVRG		1.8289	9.850	
cis-1 2-DICHLOROETHENE	1.0204	AVRG		0.9406	10.746	
2 2-DICHLOROPROPANE	1.1393	AVRG		1.0530	8.473	
2-BUTANONE	0.5669	AVRG		0.5860	9.365	
BROMOCHLOROMETHANE	0.9400	AVRG		0.8858	7.170	
CHLOROFORM	1.5354	AVRG		1.4441	6.695	
1 1 1-TRICHLOROETHANE	0.4208	AVRG		0.3919	9.490	
1 1-DICHLOROPROPENE	0.4405	AVRG		0.4145	8.290	
CARBON TETRACHLORIDE	0.3536	AVRG		0.3179	11.407	
BENZENE	1.3079	AVRG		1.2767	7.534	
1 2-DICHLOROETHANE	0.4076	AVRG		0.4023	6.366	
TRICHLOROETHENE	0.3452	AVRG		0.3259	8.114	
1 2-DICHLOROPROPANE	0.3593	AVRG		0.3513	6.248	
DIBROMOMETHANE	0.2019	AVRG		0.1953	6.176	
BROMODICHLOROMETHANE	0.4209	AVRG		0.3790	10.708	
2-CHLOROETHYL VINYL ETHER	0.2741	AVRG		0.2419	12.234	
cis-1,3-DICHLOROPROPENE	0.5184	AVRG		0.4683	9.881	
4-METHYL-2-PENTANONE (MIBK)	0.3816	AVRG		0.3480	10.642	
TOLUENE	0.8768	AVRG		0.8131	8.620	
trans-1,3-DICHLOROPROPENE	0.4728	AVRG		0.4238	11.339	
1 1 2-TRICHLOROETHANE	0.2913	AVRG		0.2740	7.200	
TETRACHLOROETHENE	0.5624	AVRG		0.5270	8.052	
1 3-DICHLOROPROPANE	0.5731	AVRG		0.5534	8.061	
2-HEXANONE	0.4984	AVRG		0.4467	12.925	
DIBROMOCHLOROMETHANE	546263	LINR	0.00000000	1.59568321	0.9987136	
1 2-DIBROMOETHANE	0.3374	AVRG		0.3134	8.884	
CHLOROBENZENE	1.7727	AVRG		1.7216	8.330	

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSP5973 Calibration Date: 02/24/07 Time: 0155

Lab File ID: PQ830 Init. Calib. Date(s): 02/23/07 02/24/07

Init. Calib. Times: 1934 0037

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DICHLORODIFLUOROMETHANE	0.95189		0.96065	0.01	0.9		AVRG
CHLOROMETHANE	1.19430		1.23095	0.1	3.1		AVRG
VINYL CHLORIDE	1.02113		1.17970	0.01	15.5	20.0	AVRG
BROMOMETHANE	50.0000	37.3988	0.25778	0.01	-25.2		LINR
CHLOROETHANE	50.0000	53.9296	0.60128	0.01	7.9		LINR
TRICHLOROFLUOROMETHANE	1.14674		1.13603	0.01	-0.9		AVRG
TRICHLOROTRIFLUOROETHANE(113	0.73804		0.76246	0.01	3.3		AVRG
1 1-DICHLOROETHENE	0.71482		0.73705	0.01	3.1	20.0	AVRG
ACETONE	0.12428		0.11649	0.01	-6.3		AVRG
CARBON DISULFIDE	2.33432		2.10024	0.01	-10.0		AVRG
METHYLENE CHLORIDE	0.82118		0.83862	0.01	2.1		AVRG
trans-1 2-DICHLOROETHENE	0.84929		0.84282	0.01	-0.8		AVRG
METHYL T-BUTYL ETHER	2.70579		2.80666	0.01	3.7		AVRG
1 1-DICHLOROETHANE	1.45314		1.62375	0.1	11.7		AVRG
VINYL ACETATE	1.82894		1.94639	0.01	6.4		AVRG
cis-1 2-DICHLOROETHENE	0.94057		1.00709	0.01	7.1		AVRG
2 2-DICHLOROPROPANE	1.05301		1.16146	0.01	10.3		AVRG
2-BUTANONE	0.58596		0.55095	0.01	-6.0		AVRG
BROMOCHLOROMETHANE	0.88575		0.94167	0.01	6.3		AVRG
CHLOROFORM	1.44407		1.52016	0.01	5.3	20.0	AVRG
1 1 1-TRICHLOROETHANE	0.39191		0.42189	0.01	7.6		AVRG
1 1-DICHLOROPROPENE	0.41454		0.43113	0.01	4.0		AVRG
CARBON TETRACHLORIDE	0.31790		0.34266	0.01	7.8		AVRG
BENZENE	1.27675		1.34306	0.01	5.2		AVRG
1 2-DICHLOROETHANE	0.40227		0.40879	0.01	1.6		AVRG
TRICHLOROETHENE	0.32595		0.33294	0.01	2.1		AVRG
1 2-DICHLOROPROPANE	0.35125		0.36894	0.01	5.0	20.0	AVRG
DIBROMOMETHANE	0.19525		0.20223	0.01	3.6		AVRG
BROMODICHLOROMETHANE	0.37904		0.40498	0.01	6.8		AVRG
2-CHLOROETHYL VINYL ETHER	0.24191		0.26463	0.01	9.4		AVRG
cis-1,3-DICHLOROPROPENE	0.46833		0.50938	0.01	8.8		AVRG
4-METHYL-2-PENTANONE (MIBK)	0.34800		0.36725	0.01	5.5		AVRG
TOLUENE	0.81314		0.86981	0.01	7.0	20.0	AVRG
trans-1,3-DICHLOROPROPENE	0.42376		0.45691	0.01	7.8		AVRG
1 1 2-TRICHLOROETHANE	0.27404		0.28412	0.01	3.7		AVRG
TETRACHLOROETHENE	0.52704		0.53400	0.01	1.3		AVRG
1 3-DICHLOROPROPANE	0.55343		0.56419	0.01	1.9		AVRG
2-HEXANONE	0.44668		0.46834	0.01	4.8		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSP5973 Calibration Date: 02/24/07 Time: 0155

Lab File ID: PQ830 Init. Calib. Date(s): 02/23/07 02/24/07

Init. Calib. Times: 1934 0037

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOCHLOROMETHANE	50.0000	46.0880	0.57766	0.01	-7.8		LINR
1 2-DIBROMOETHANE	0.31338		0.31809	0.01	1.5		AVRG
CHLOROBENZENE	1.72164		1.78060	0.3	3.4		AVRG
1 1 1 2-TETRACHLOROETHANE	0.53531		0.55332	0.01	3.4		AVRG
ETHYL BENZENE	2.97447		3.13954	0.01	5.5	20.0	AVRG
STYRENE	1.99994		2.14106	0.01	7.1		AVRG
BROMOFORM	50.0000	44.1206	0.39656	0.1	-11.8		LINR
ISOPROPYLBENZENE	3.01696		3.30901	0.01	9.7		AVRG
m,p-XYLENE	1.19162		1.27567	0.01	7.1		AVRG
BROMOBENZENE	0.78641		0.80813	0.01	2.8		AVRG
o-XYLENE	1.14302		1.24921	0.01	9.3		AVRG
1 1 2 2-TETRACHLOROETHANE	0.75256		0.77392	0.3	2.8		AVRG
1 2 3-TRICHLOROPROPANE	0.23972		0.23388	0.01	-2.4		AVRG
n-PROPYLBENZENE	0.89295		0.96478	0.01	8.0		AVRG
2-CHLOROTOLUENE	0.75605		0.77673	0.01	2.7		AVRG
1 3 5-TRIMETHYLBENZENE	2.70401		2.55883	0.01	-5.4		AVRG
4-CHLOROTOLUENE	0.78203		0.81562	0.01	4.3		AVRG
tert-BUTYLBENZENE	2.31402		2.55059	0.01	10.2		AVRG
1 2 4-TRIMETHYLBENZENE	2.61674		2.54505	0.01	-2.7		AVRG
sec-BUTYLBENZENE	3.59698		4.03839	0.01	12.3		AVRG
1 3-DICHLOROBENZENE	1.67883		1.70753	0.01	1.7		AVRG
p-ISOPROPYLTOLUENE	50.0000	42.0040	2.98334	0.01	-16.0		LINR
1 4-DICHLOROBENZENE	1.65177		1.68971	0.01	2.3		AVRG
1 2-DICHLOROBENZENE	1.58882		1.62706	0.01	2.4		AVRG
n-BUTYLBENZENE	50.0000	42.9256	2.77853	0.01	-14.1		LINR
1 2-DIBROMO-3-CHLOROPROPANE	50.0000	43.1659	0.16812	0.01	-13.7		LINR
1 2 4-TRICHLOROBENZENE	1.14736		1.19511	0.01	4.2		AVRG
HEXACHLOROBUTADIENE	0.59093		0.59636	0.01	0.9		AVRG
NAPHTHALENE	50.0000	41.5055	2.28788	0.01	-17.0		LINR
1 2 3-TRICHLOROBENZENE	1.06729		1.11535	0.01	4.5		AVRG
1,3-DICHLOROPROPENE (total)	0.44605		0.48314	0.01	8.3		AVRG
1,2-DICHLOROETHENE (total)	0.89493		0.92496	0.01	3.4		AVRG
XYLENE (total)	1.17542		1.26685	0.01	7.8		AVRG
METHYL ACETATE	50.0000	52.9760	1.11812	0.01	6.0		LINR
CYCLOHEXANE	0.51973		0.62899	0.01	21.0		AVRG
METHYL CYCLOHEXANE	0.56961		0.66133	0.01	16.1		AVRG
DIBROMOFLUOROMETHANE	0.76105		0.78536	0.01	3.2		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSP5973 Calibration Date: 02/24/07 Time: 0155

Lab File ID: PQ830 Init. Calib. Date(s): 02/23/07 02/24/07

Init. Calib. Times: 1934 0037

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
TOLUENE-d8	1.19237		1.23744	0.01	3.8		AVRG
4-BROMOFLUOROBENZENE	0.91480		0.91620	0.01	0.2		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030507.b/n5955.d
Lab Smp Id: 680-24460-A-1-B Client Smp ID: WFF1-MW2-0-0.5
Inj Date : 05-MAR-2007 10:56
Operator : Inst ID: MSN5973.i
Smp Info : 680-00708311= 24460-1 68649
Misc Info : 680-24460-A-1-B
Comment :
Method : /chem/SM/MSN5973.i/1n030507.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 11:54 johnsonl Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52 Cal File: nq311.d
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.00000	Weight Extracted
M	16.62921	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.577	4.582	(1.000)	223761	40.0000	
$ 5 2-Fluorophenol	112	3.455	3.455	(0.755)	326400	36.0404	1400
$ 6 Phenol-d5	99	4.198	4.203	(0.917)	500612	38.7556	1500
* 20 Naphthalene-d8	136	5.918	5.923	(1.000)	944783	40.0000	
$ 21 Nitrobenzene-d5	82	5.133	5.138	(0.867)	181695	14.6782	590(R)
* 36 Acenaphthene-d10	164	7.991	7.996	(1.000)	644625	40.0000	
$ 40 2-Fluorobiphenyl	172	7.163	7.163	(0.896)	413045	18.3230	730(R)

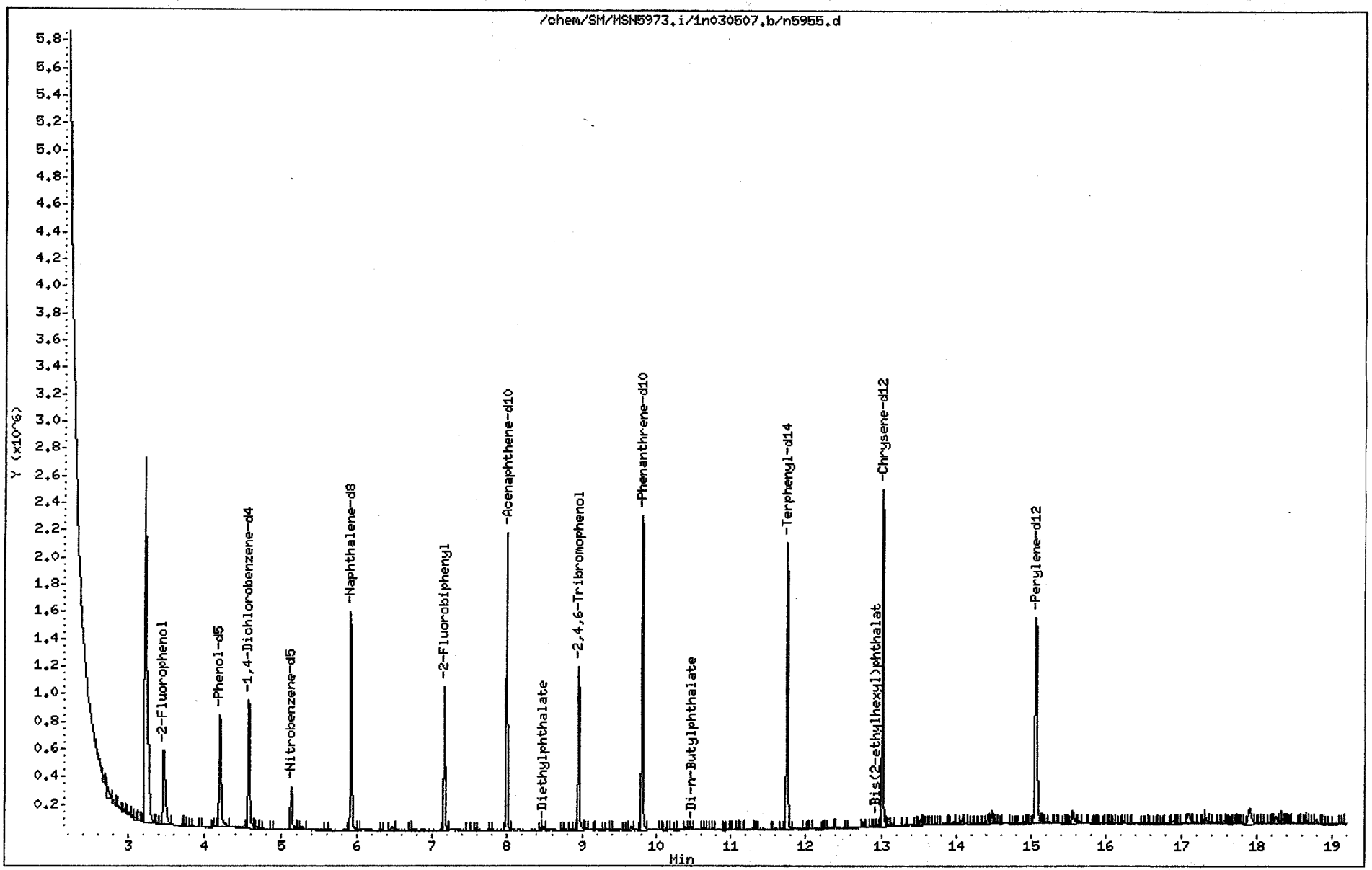
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
	53 Diethylphthalate	149	8.488	8.493	(1.062)	15144	0.63555	25(a)
$	57 2,4,6-Tribromophenol	329	8.958	8.963	(1.121)	187892	49.3672	2000
*	58 Phenanthrene-d10	188	9.807	9.812	(1.000)	1196059	40.0000	
	68 Di-n-Butylphthalate	149	10.480	10.480	(1.069)	7167	0.17593	7.0(aH)
*	71 Chrysene-d12	240	13.012	13.023	(1.000)	1128838	40.0000	
$	73 Terphenyl-d14	244	11.746	11.752	(0.903)	764515	26.8978	1100
	77 Bis(2-ethylhexyl)phthalate	149	12.943	12.948	(0.995)	10797	0.44374	18(a)
*	79 Perylene-d12	264	15.059	15.069	(1.000)	963789	40.0000	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

Data File: /chem/SM/MSN5973.i/1n030507.b/n5955.d
Date : 05-MAR-2007 10:56
Client ID: WFF1-MW2-0-0.5
Sample Info: 680-00708311= 24460-1 68649
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25



Data File: /chem/SM/MSN5973.i/1n030507.b/n5955.d

Date : 05-MAR-2007 10:56

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-00708311= 24460-1 68649

Volume Injected (uL): 1.0

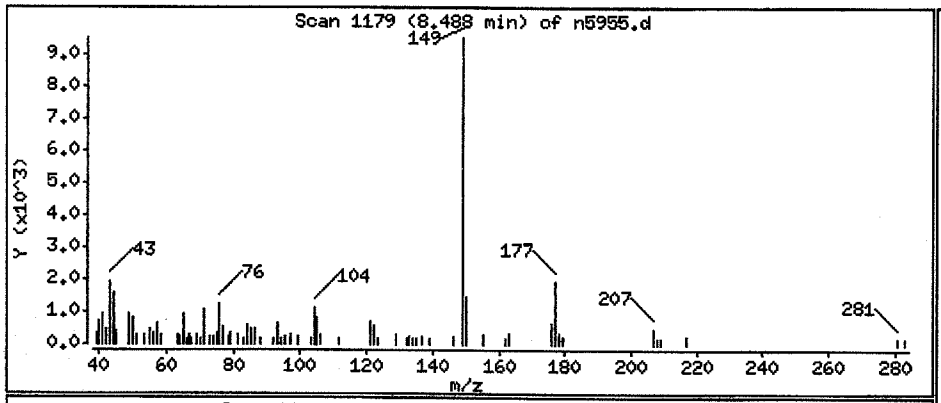
Operator:

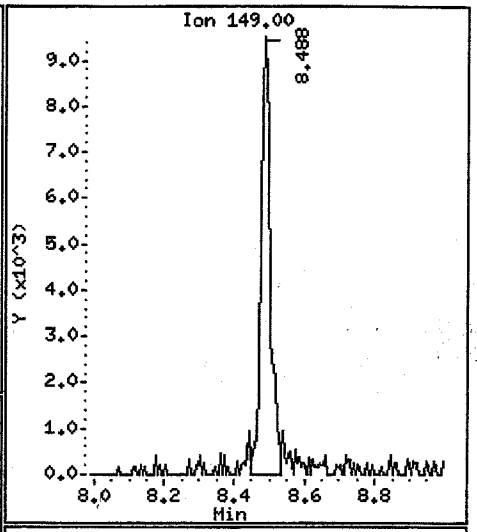
Column phase: SLB-5MS

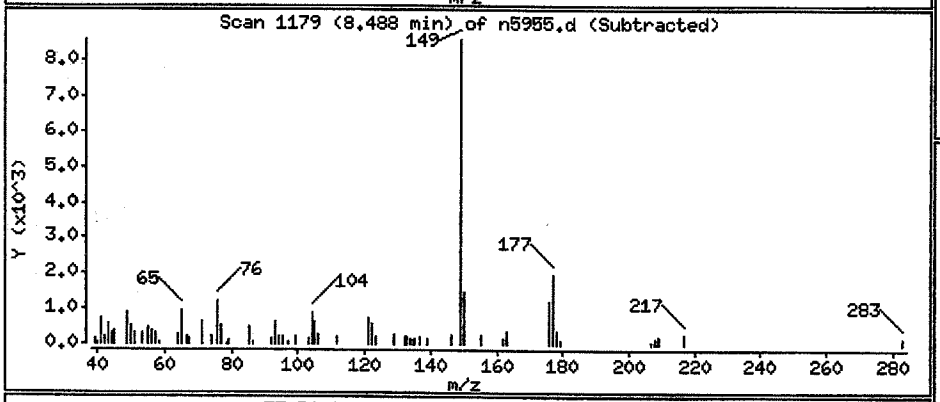
Column diameter: 0.25

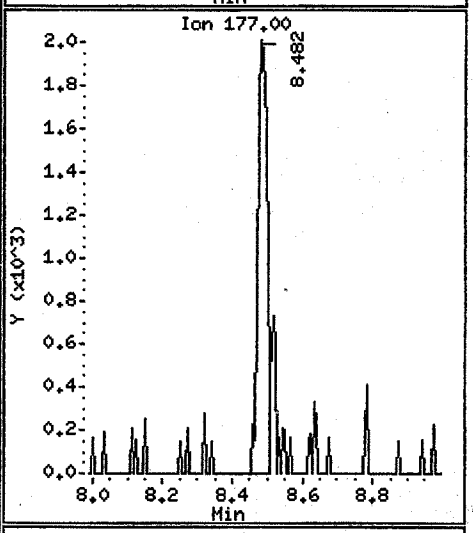
53 Diethylphthalate

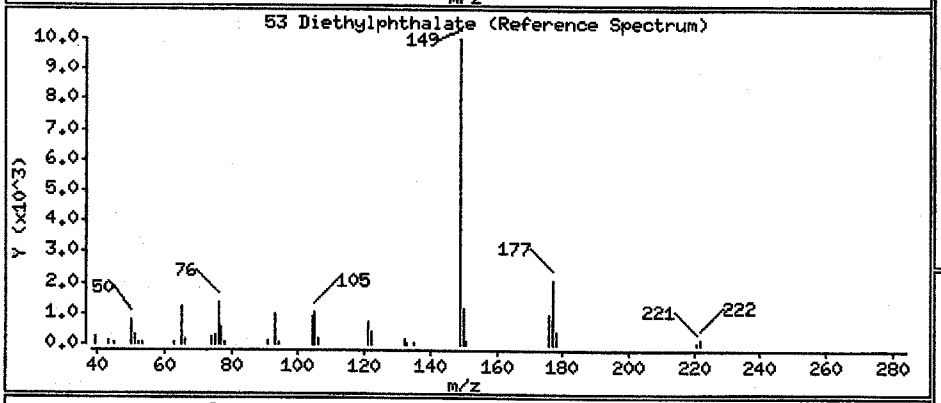
Concentration: 25 ug/Kg

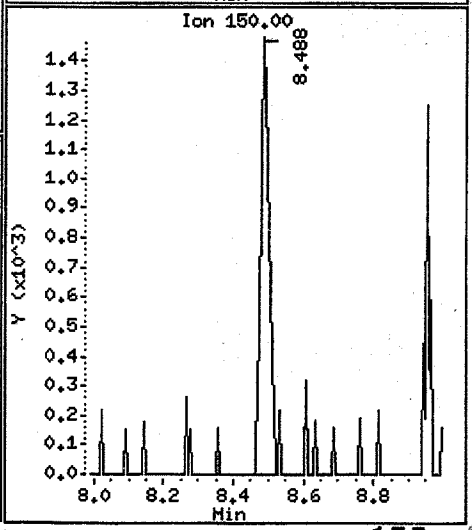


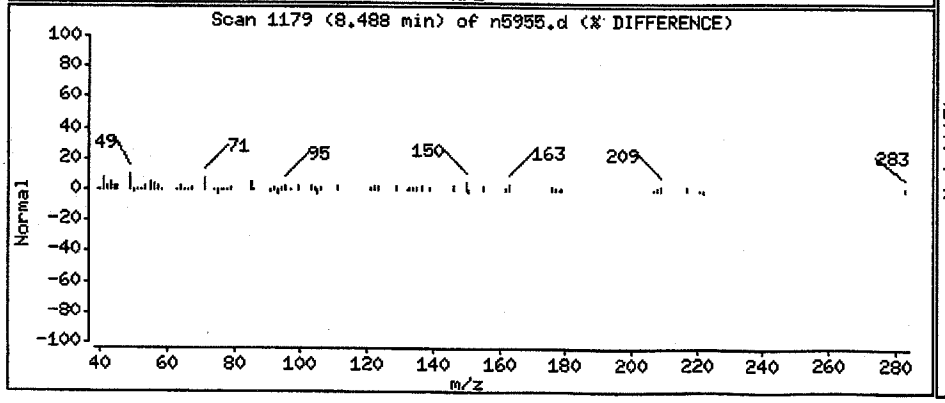












Data File: /chem/SM/MSN5973.i/1n030507.b/n5955.d

Date : 05-MAR-2007 10:56

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-00708311= 24460-1 68649

Volume Injected (uL): 1.0

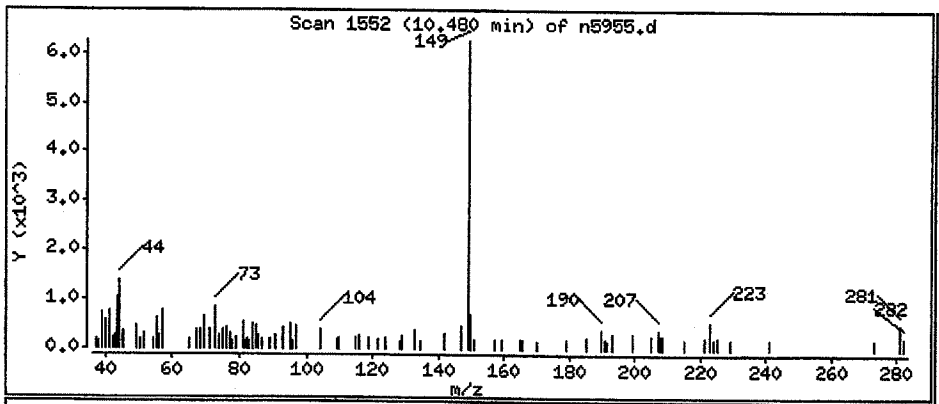
Operator:

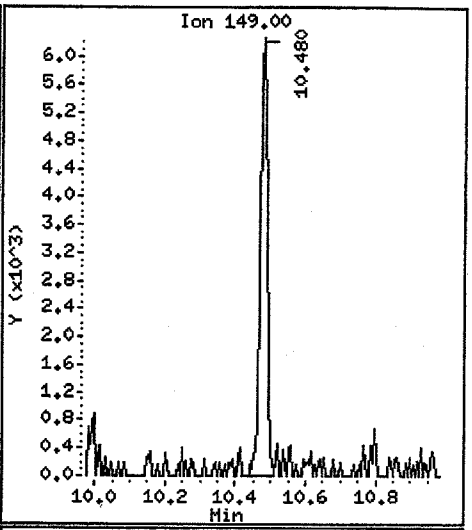
Column phase: SLB-5MS

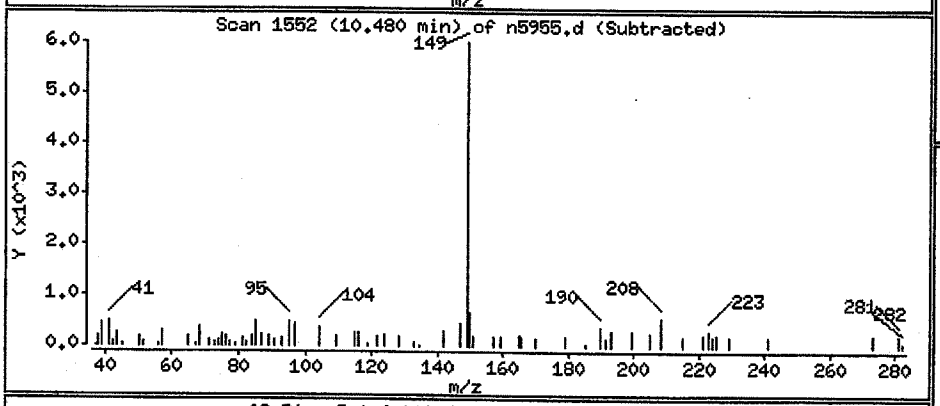
Column diameter: 0.25

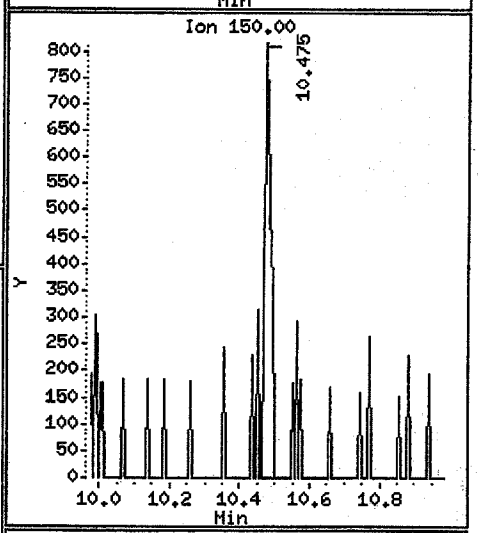
68 Di-n-Butylphthalate

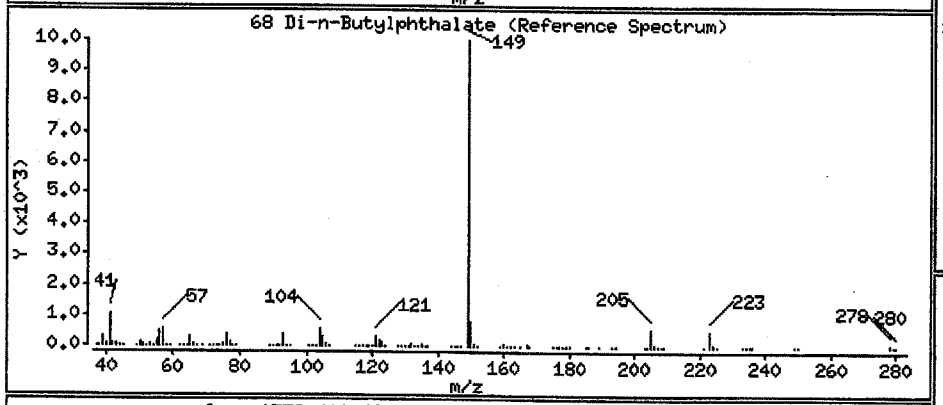
Concentration: 7.0 ug/Kg

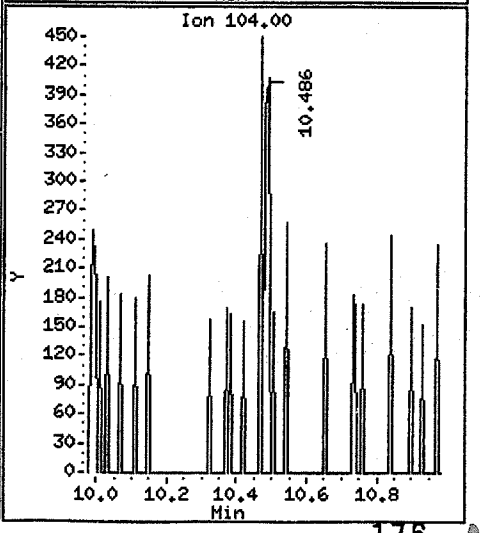


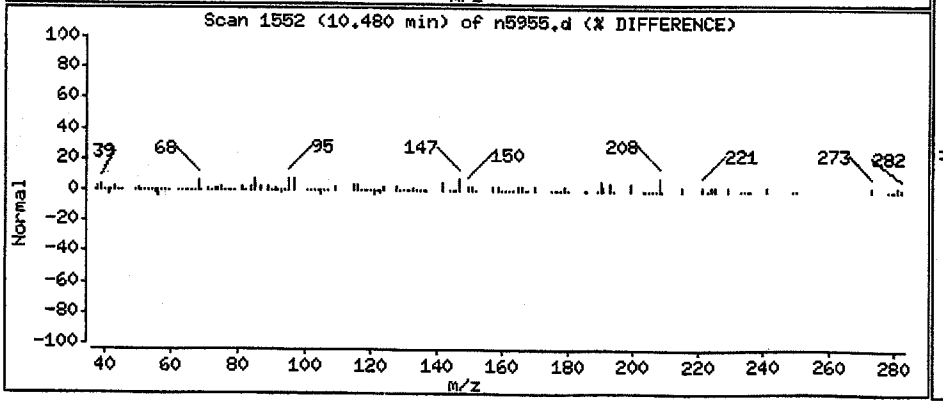












Data File: /chem/SM/MSN5973.i/1n030507.b/n5955.d

Date : 05-MAR-2007 10:56

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-00708311= 24460-1 68649

Volume Injected (uL): 1.0

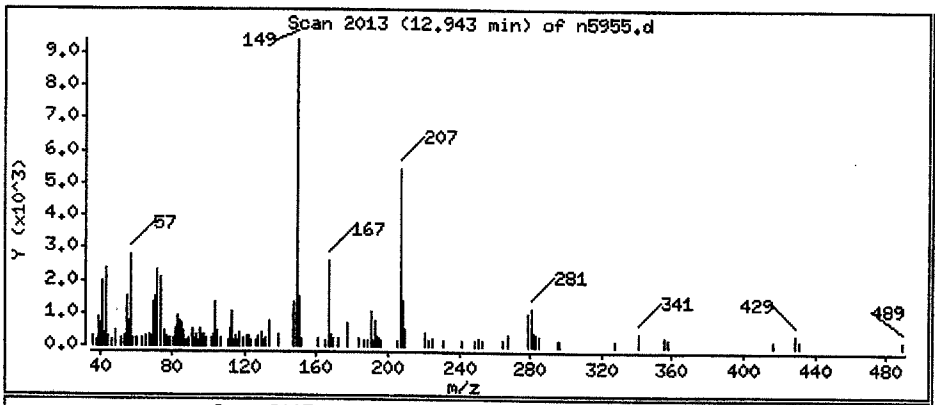
Operator:

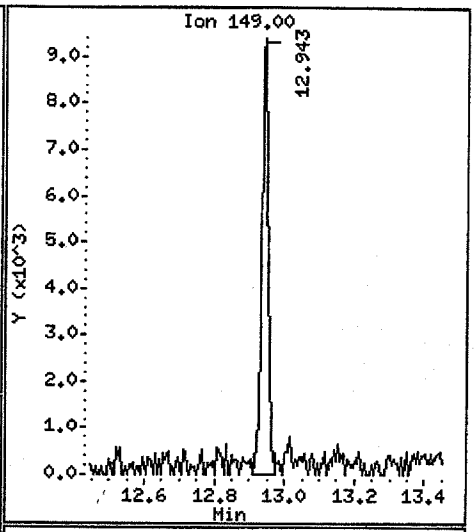
Column phase: SLB-5MS

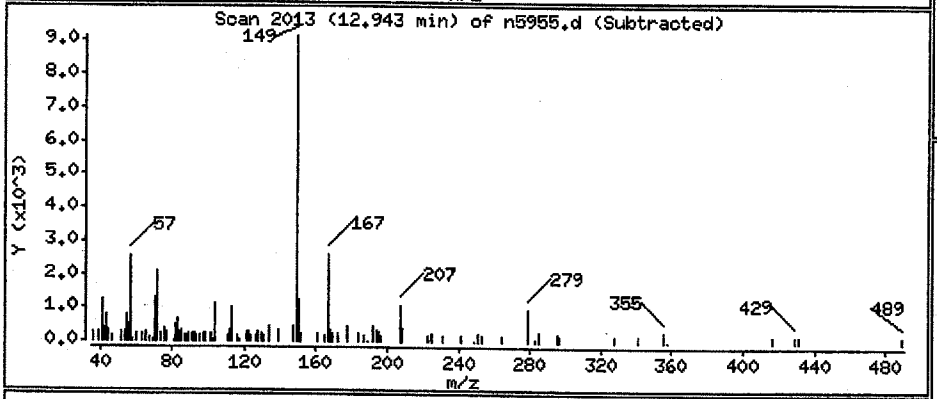
Column diameter: 0.25

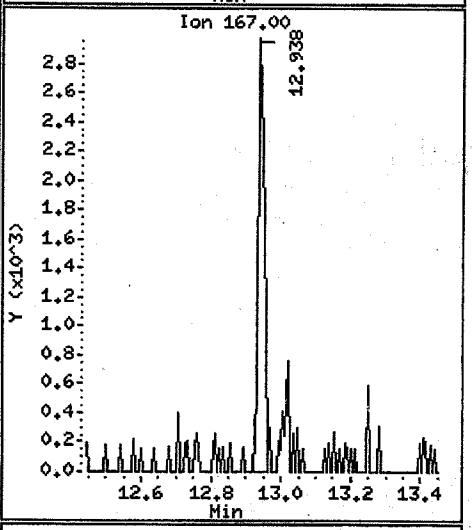
77 Bis(2-ethylhexyl)phthalate

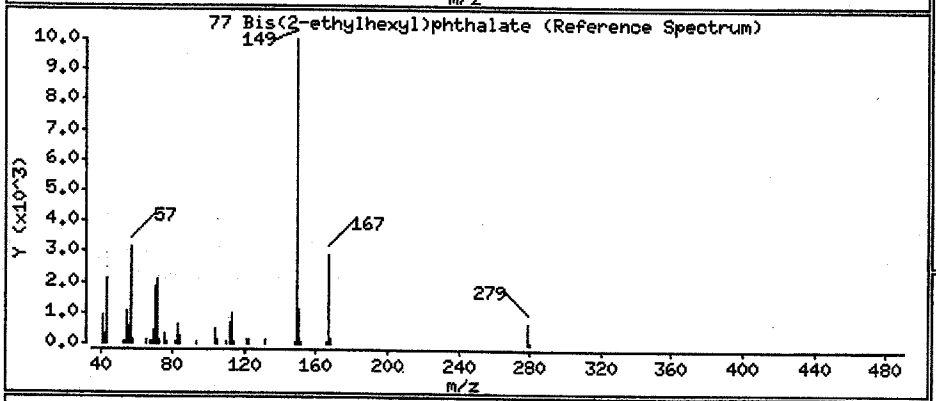
Concentration: 18 ug/Kg

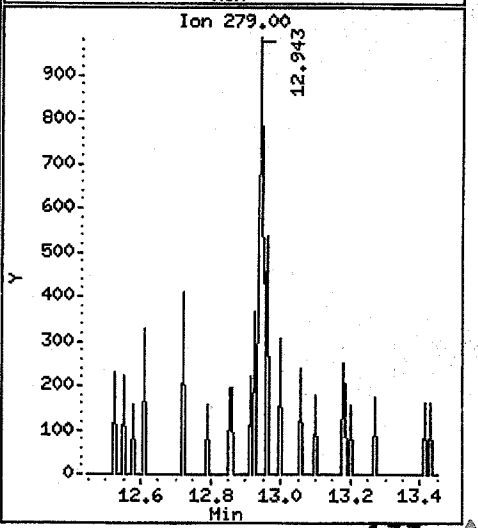


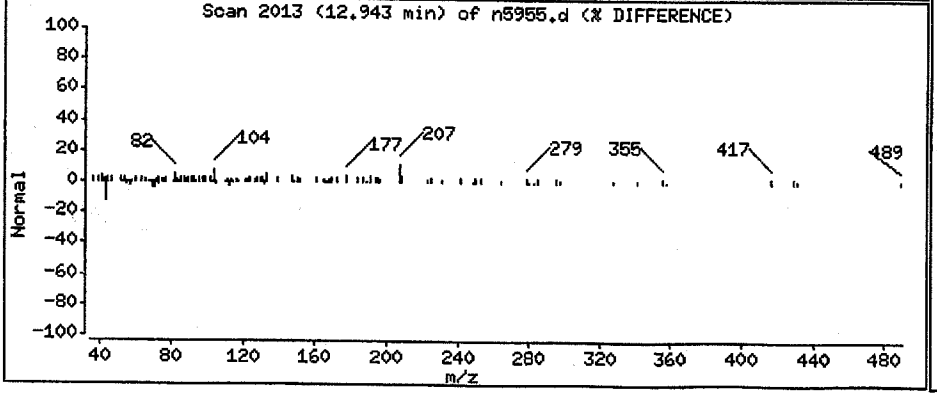












STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030807.b/n6007.d
Lab Smp Id: 680-24460-A-1-C RE
Inj Date : 08-MAR-2007 10:54 SM 3/14/07
Client Smp ID: WFF1-MW2-0-0.5
Operator :
Inst ID: MSN5973.i
Smp Info : 680-24460-A-1-C
Misc Info : 680-24460-A-1-C
Comment :
Method : /chem/SM/MSN5973.i/1n030807.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 12:01 johnsonl
Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52
Cal File: nq311.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.22000	Weight Extracted
M	16.62921	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.524	4.528	(1.000)	245986	40.0000	
$ 5 2-Fluorophenol	112	3.407	3.406	(0.753)	437518	43.9450	1700 (H)
$ 6 Phenol-d5	99	4.145	4.149	(0.916)	600692	42.3018	1700
* 20 Naphthalene-d8	136	5.859	5.864	(1.000)	1003018	40.0000	
$ 21 Nitrobenzene-d5	82	5.080	5.084	(0.867)	252124	19.1852	760
* 36 Acenaphthene-d10	164	7.927	7.937	(1.000)	624948	40.0000	
$ 40 2-Fluorobiphenyl	172	7.099	7.109	(0.896)	506062	23.1562	920

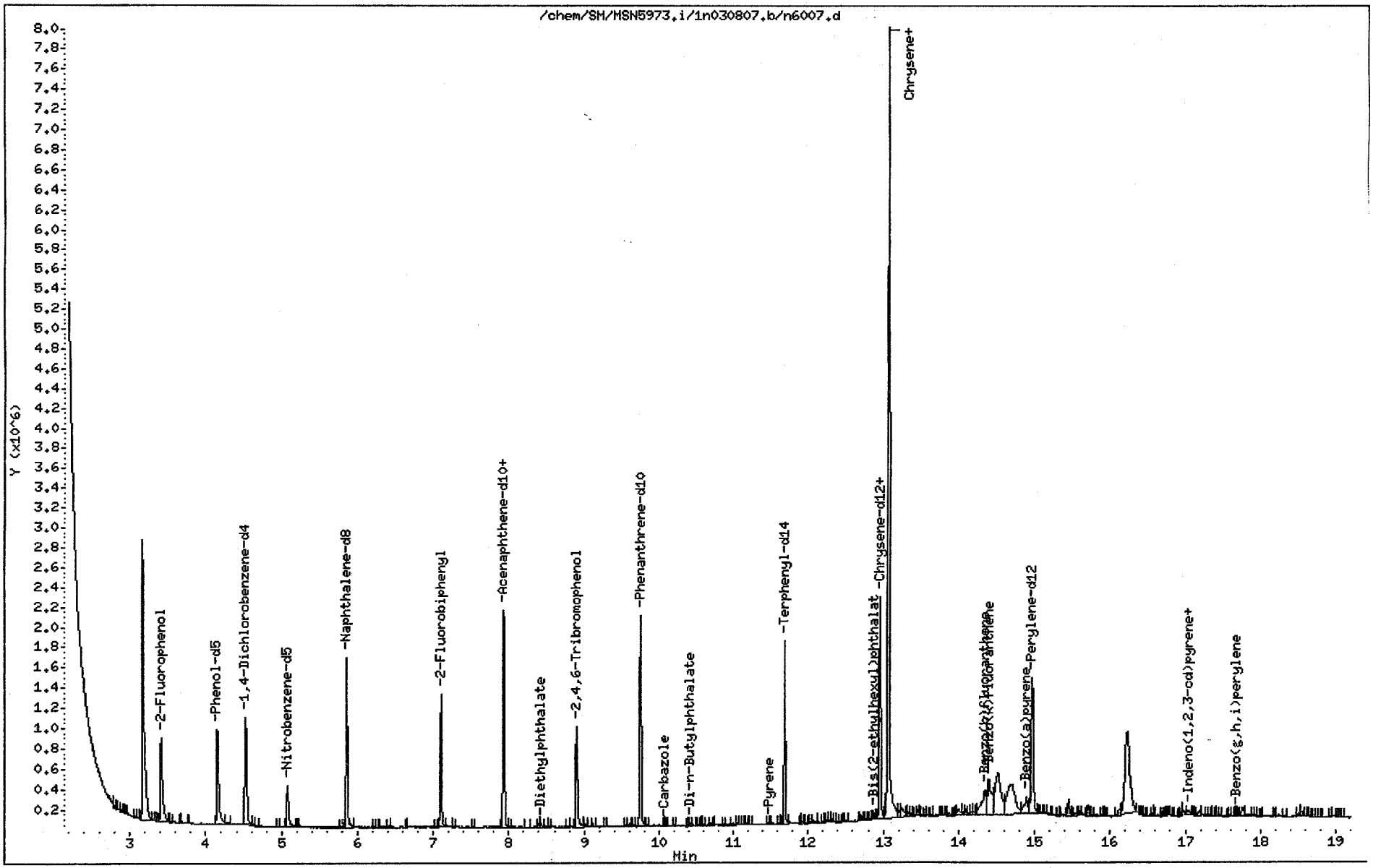
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
	47 Acenaphthene	154	7.932	7.979	(1.001)	2270	0.13291	5.3(aQ)
	53 Diethylphthalate	149	8.429	8.433	(1.063)	15461	0.66928	27(a)
$	57 2,4,6-Tribromophenol	329	8.899	8.903	(1.123)	155983	42.2738	1700
*	58 Phenanthrene-d10	188	9.749	9.753	(1.000)	1089264	40.0000	
	67 Carbazole	167	10.048	10.047	(1.031)	3060	0.10187	4.0(a)
	68 Di-n-Butylphthalate	149	10.416	10.426	(1.068)	11442	0.30841	12(a)
*	71 Chrysene-d12	240	12.954	12.964	(1.000)	1025970	40.0000	
	72 Pyrene	202	11.527	11.532	(0.890)	4222	0.12625	5.0(a)
$	73 Terphenyl-d14	244	11.688	11.692	(0.902)	660895	25.5835	1000
	76 Benzo(a)Anthracene	228	12.938	12.947	(0.999)	6542	0.19713	7.8(a)
	77 Bis(2-ethylhexyl)phthalate	149	12.884	12.894	(0.995)	17322	0.78329	31(a)
	78 Chrysene	228	13.061	12.990	(1.008)	18534	0.57421	23(aQH)
*	79 Perylene-d12	264	14.962	14.977	(1.000)	840771	40.0000	
	81 Benzo(b)fluoranthene	252	14.348	14.363	(0.959)	13371	0.40661	16(a)
	82 Benzo(k)fluoranthene	252	14.391	14.401	(0.962)	18087	0.55339	22(a)
	83 Benzo(a)pyrene	252	14.872	14.881	(0.994)	25893	0.85470	34(a)
	84 Indeno(1,2,3-cd)pyrene	276	17.030	17.045	(1.315)	39514	1.07714	43(a)
	85 Dibenzo(a,h)anthracene	278	17.046	17.066	(1.139)	36590	1.25674	50(a)
	86 Benzo(g,h,i)perylene	276	17.671	17.691	(1.181)	38112	1.32140	52(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d
Date : 08-MAR-2007 10:54
Client ID: WFF1-MW2-0-0.5
Sample Info: 680-24460-A-1-C
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25



Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

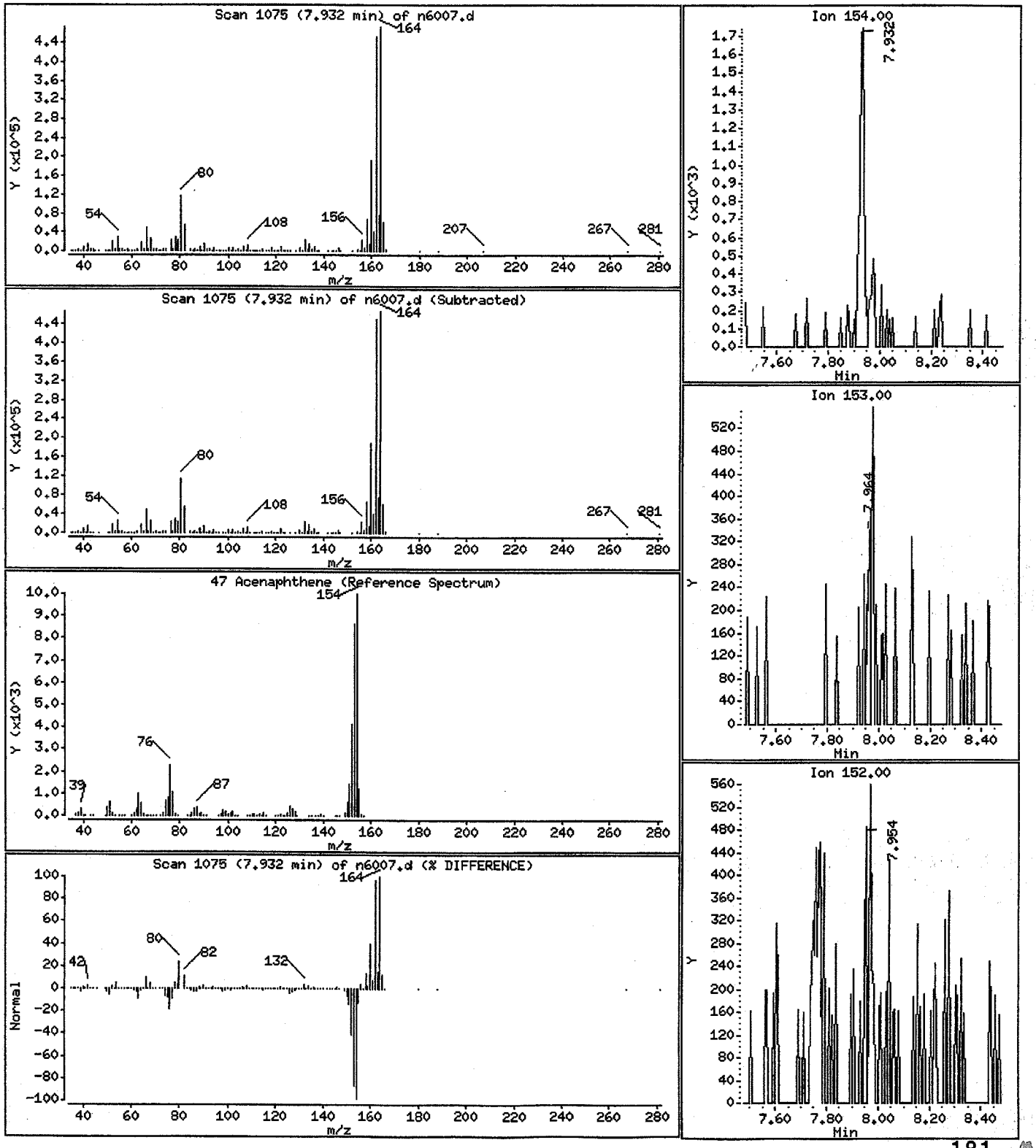
Operator:

Column phase: SLB-5MS

Column diameter: 0.25

47 Acenaphthene

Concentration: 5.3 ug/Kg



Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

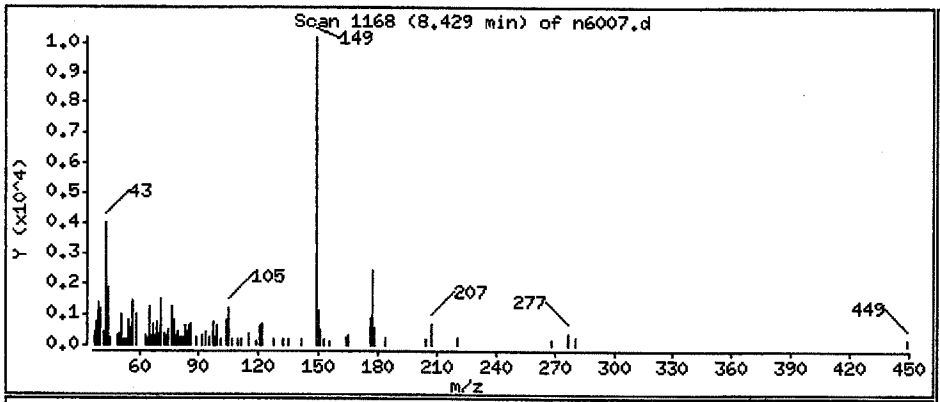
Operator:

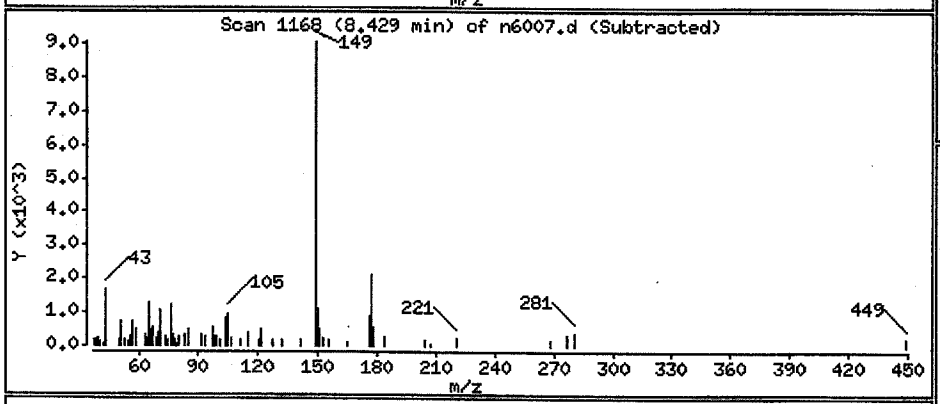
Column phase: SLB-5MS

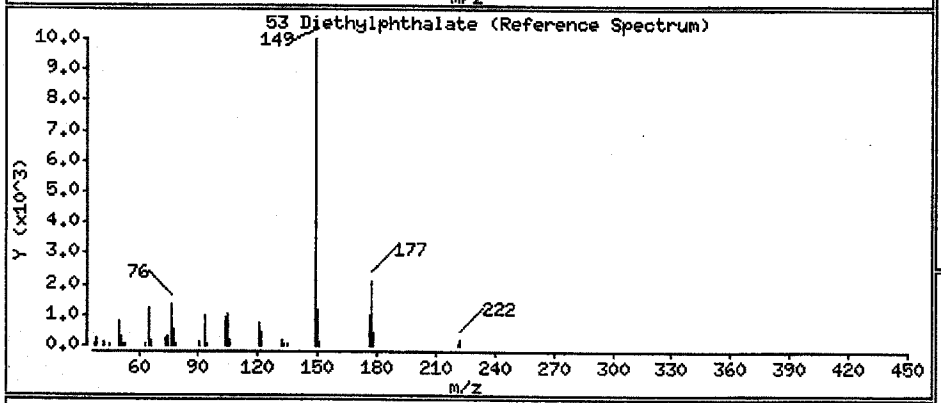
Column diameter: 0.25

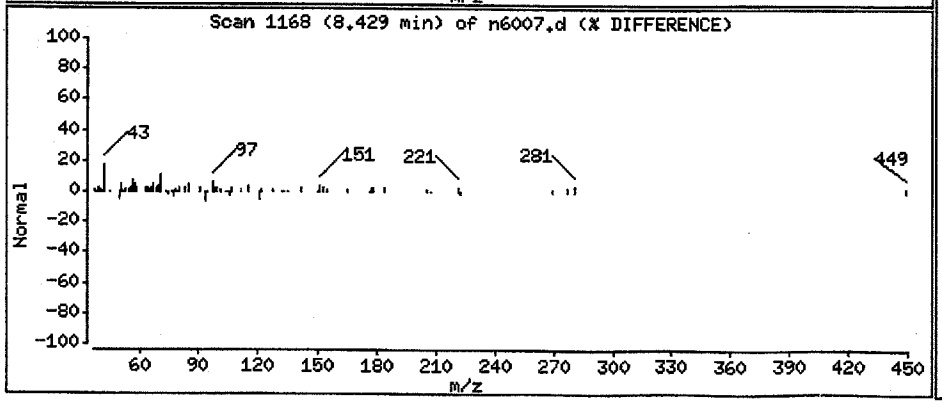
53 Diethylphthalate

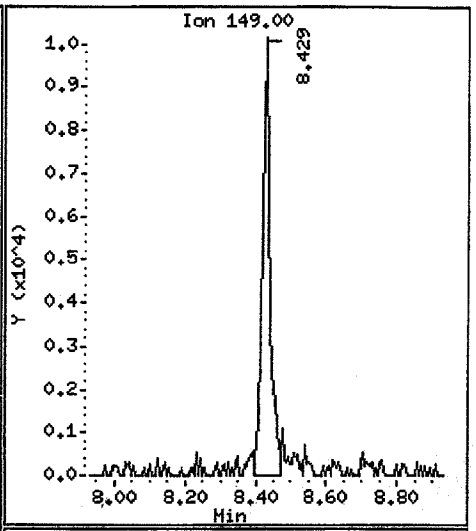
Concentration: 27 ug/Kg

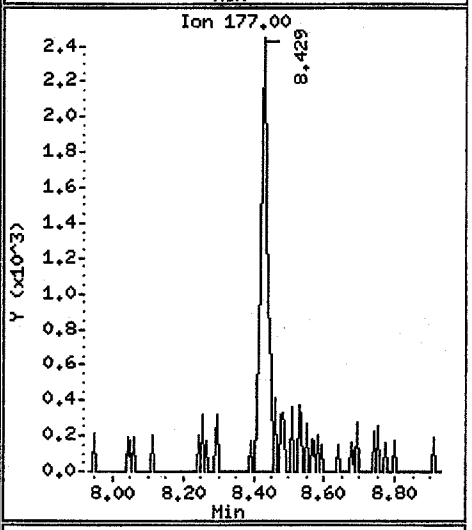


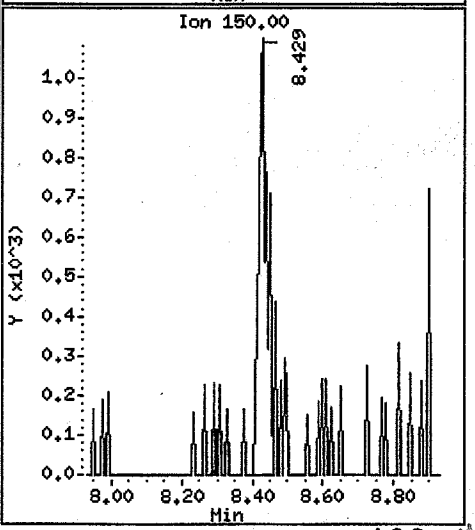












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

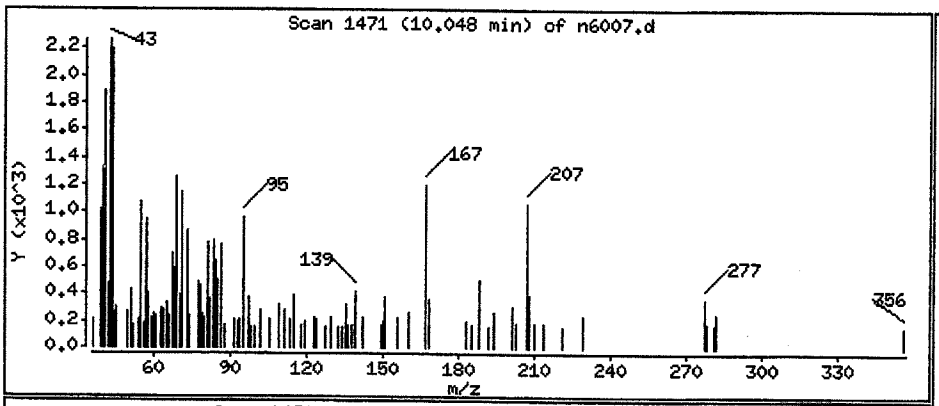
Operator:

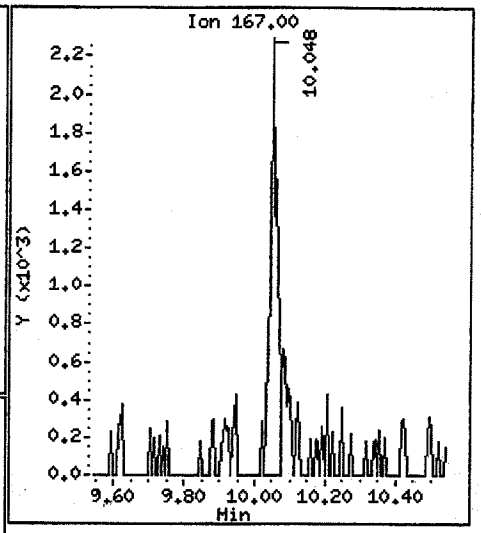
Column phase: SLB-5MS

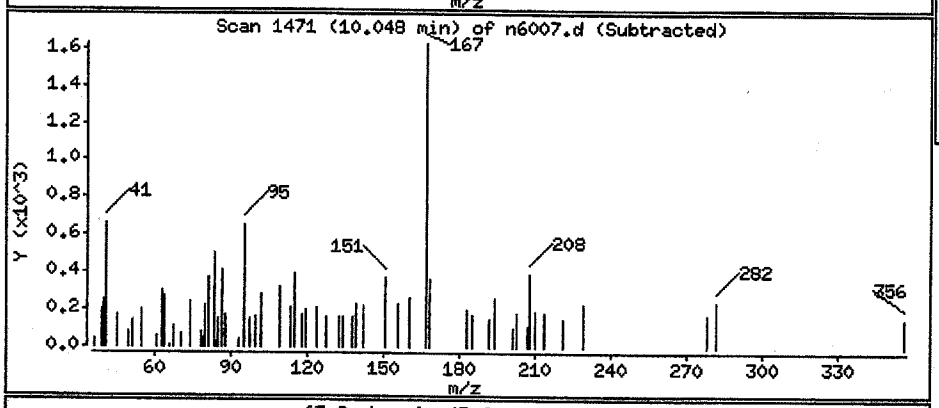
Column diameter: 0.25

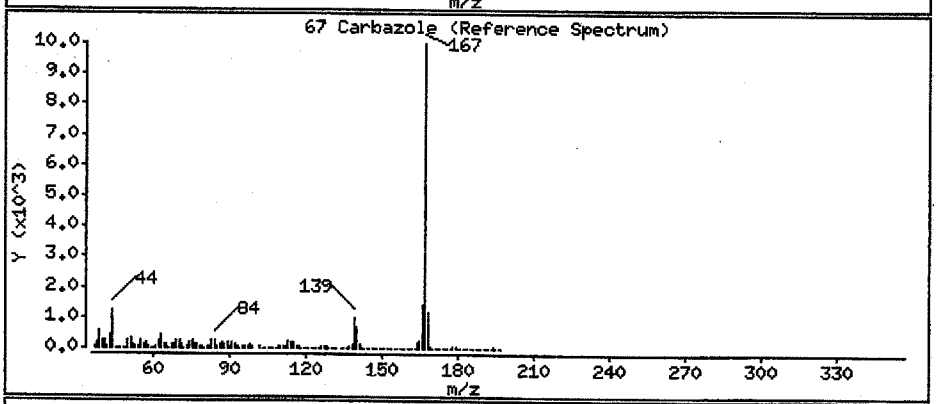
67 Carbazole

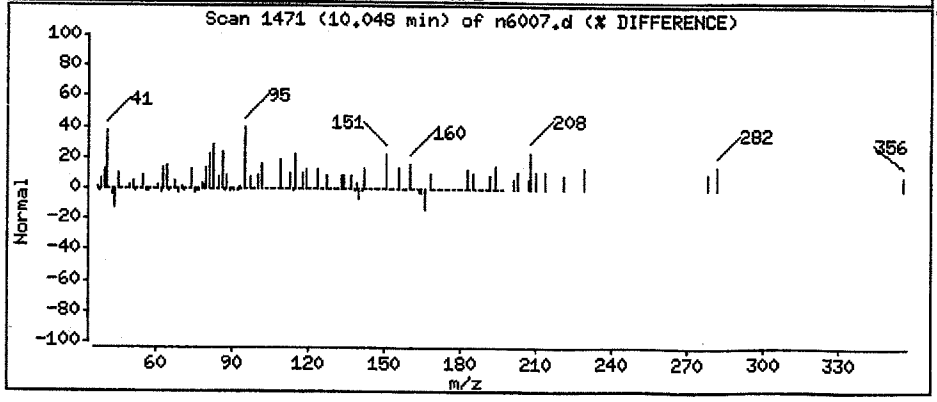
Concentration: 4.0 ug/Kg











Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

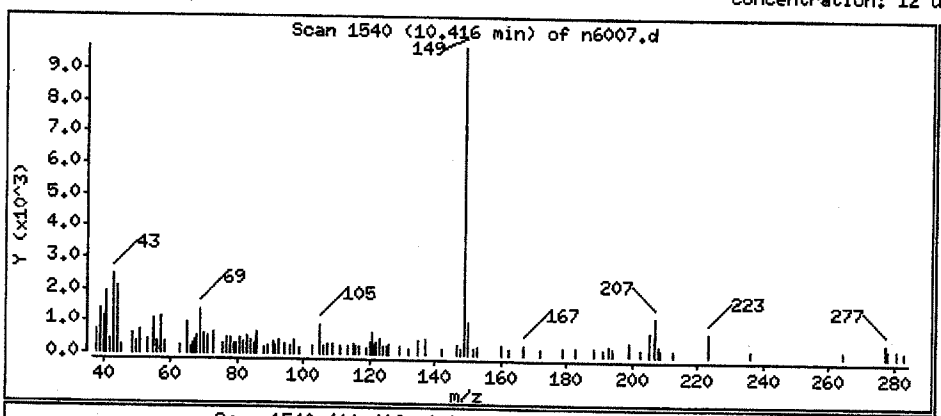
Operator:

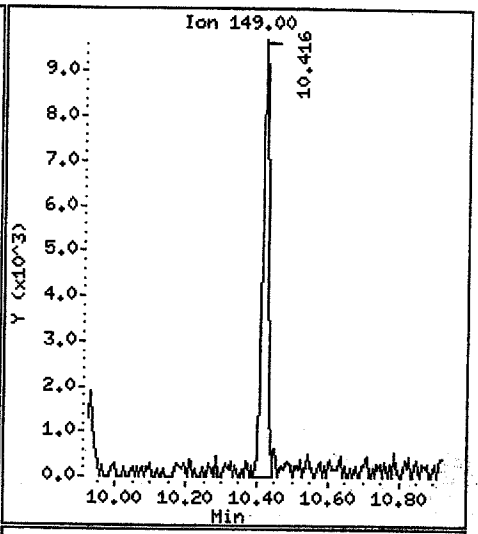
Column phase: SLB-5MS

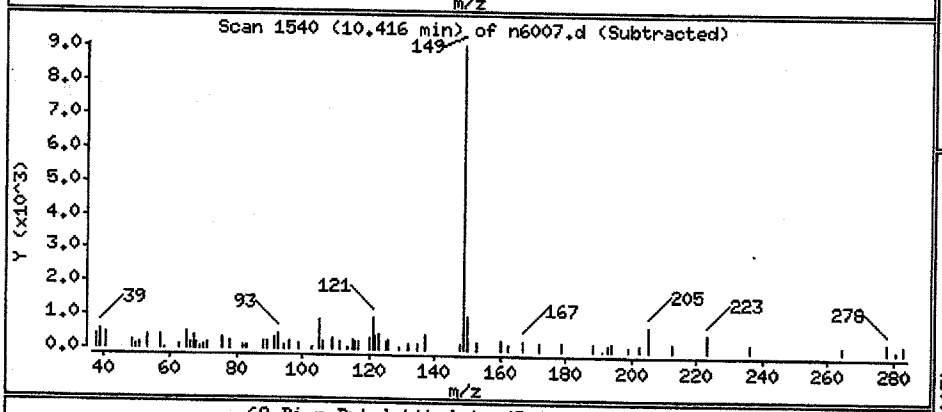
Column diameter: 0.25

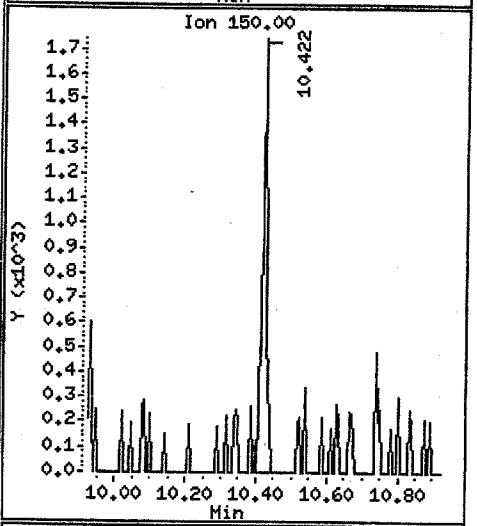
68 Di-n-Butylphthalate

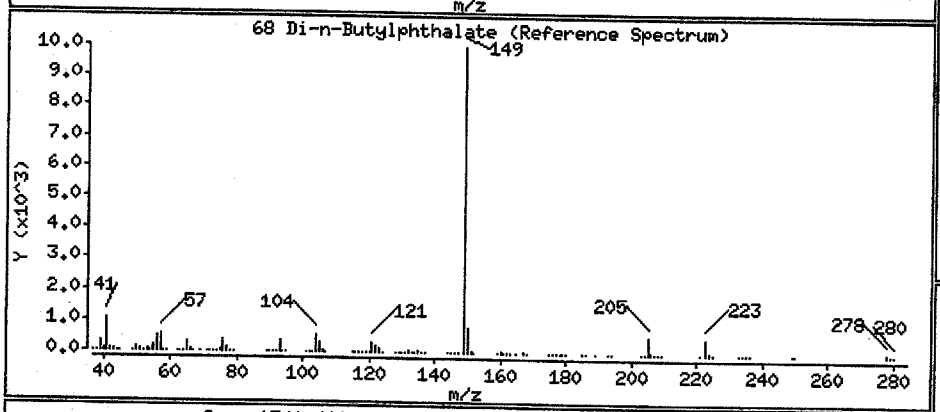
Concentration: 12 ug/Kg

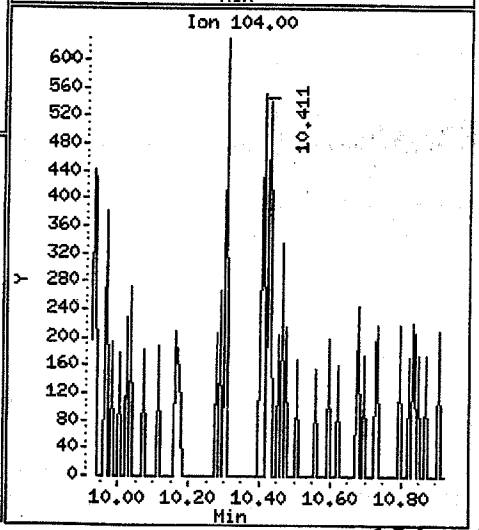


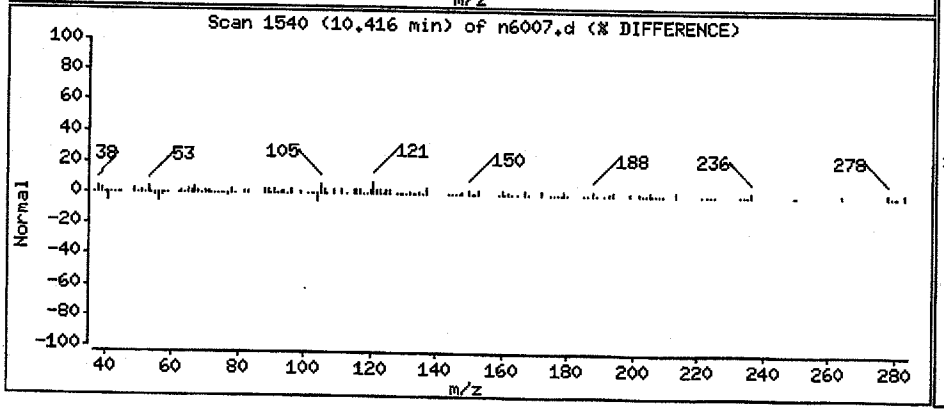












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

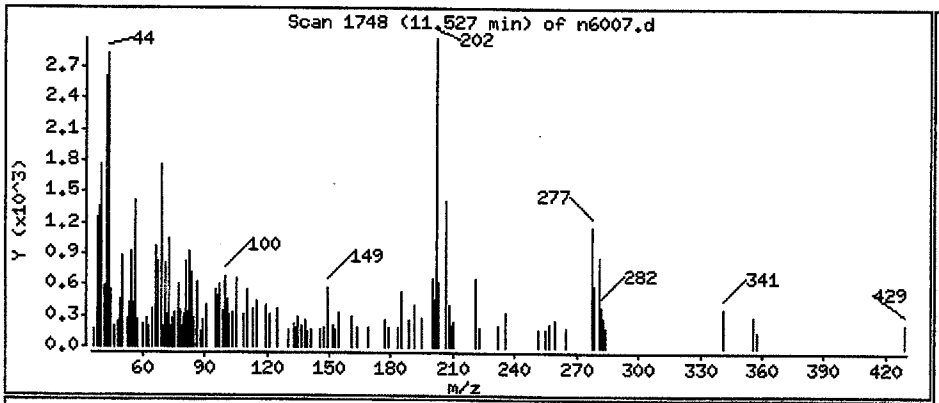
Operator:

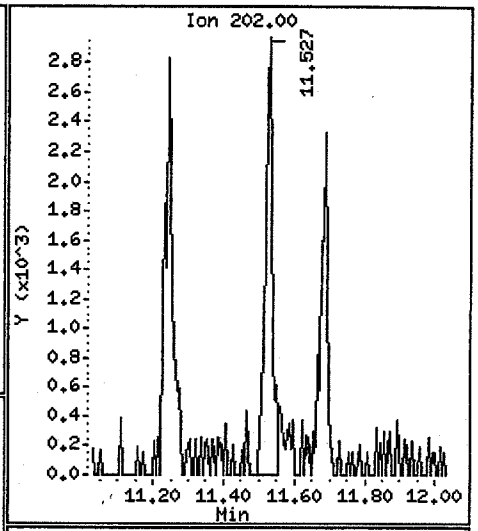
Column phase: SLB-5MS

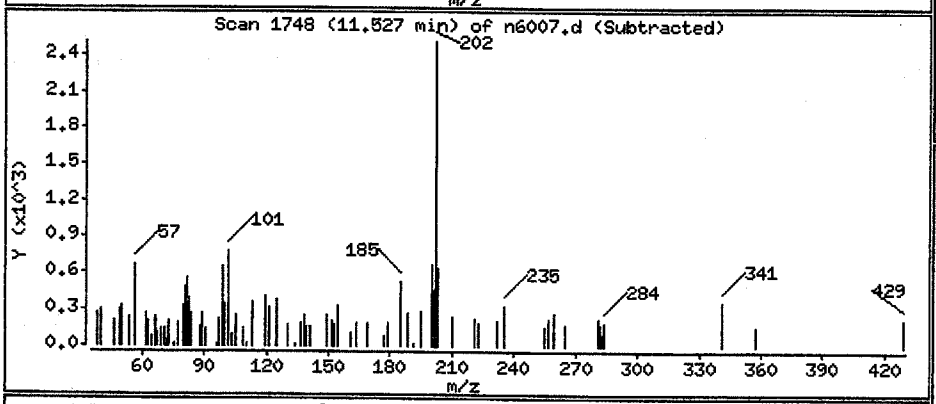
Column diameter: 0.25

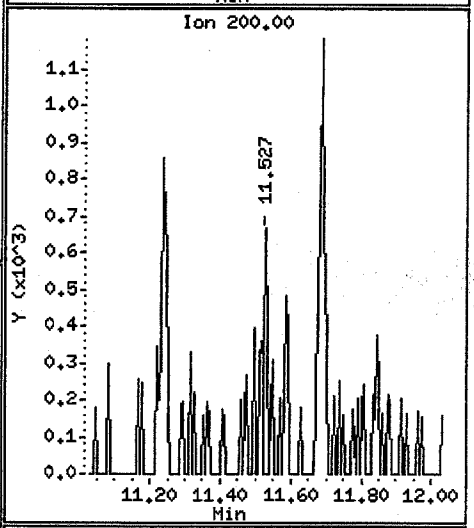
72 Pyrene

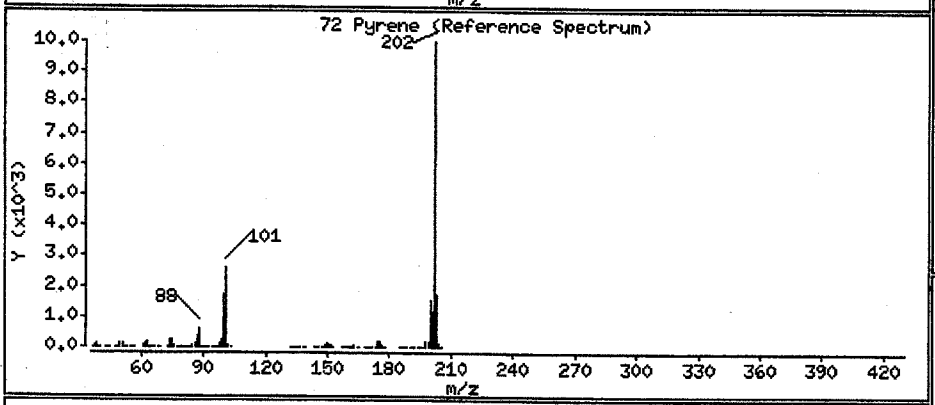
Concentration: 5.0 ug/Kg

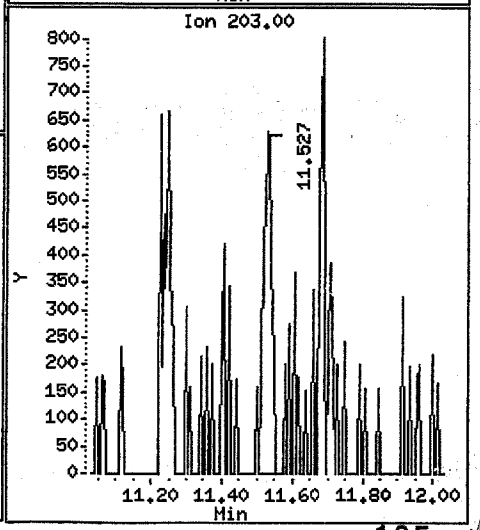


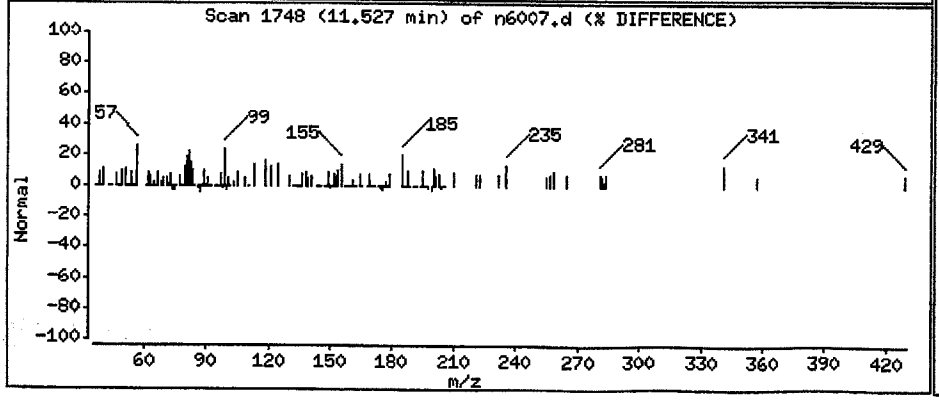












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

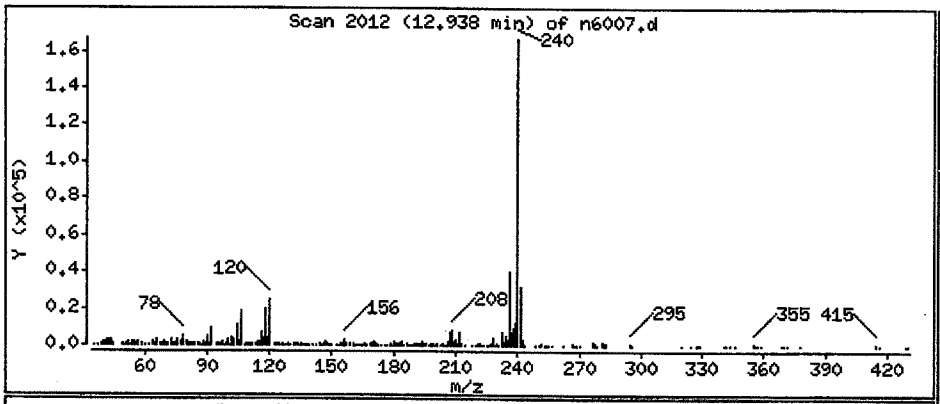
Operator:

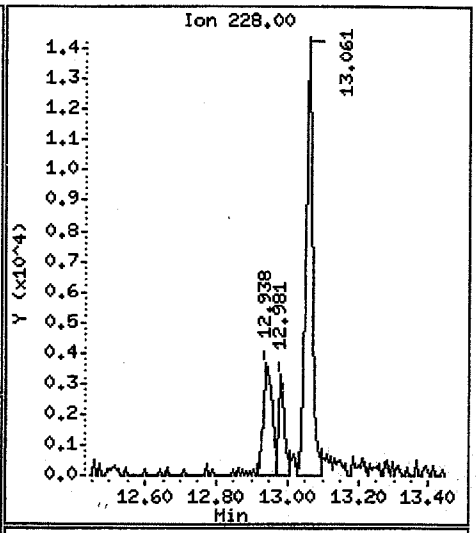
Column phase: SLB-5MS

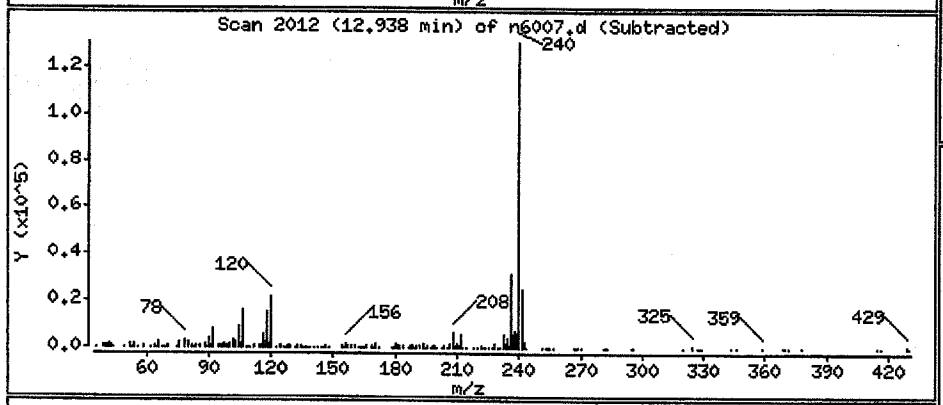
Column diameter: 0.25

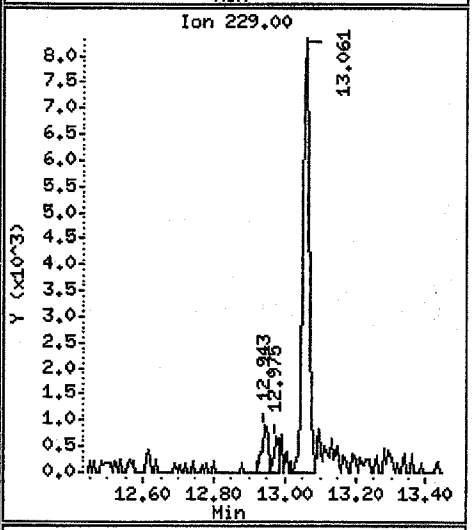
76 Benzo(a)Anthracene

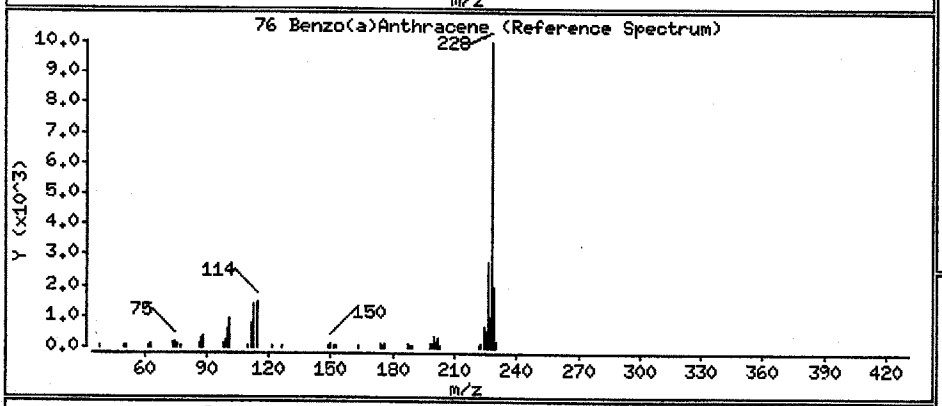
Concentration: 7.8 ug/Kg

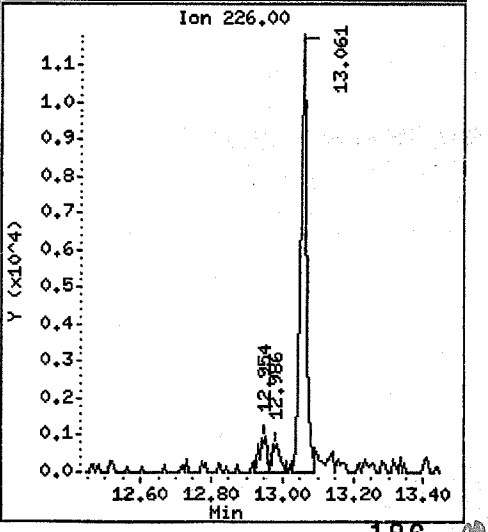


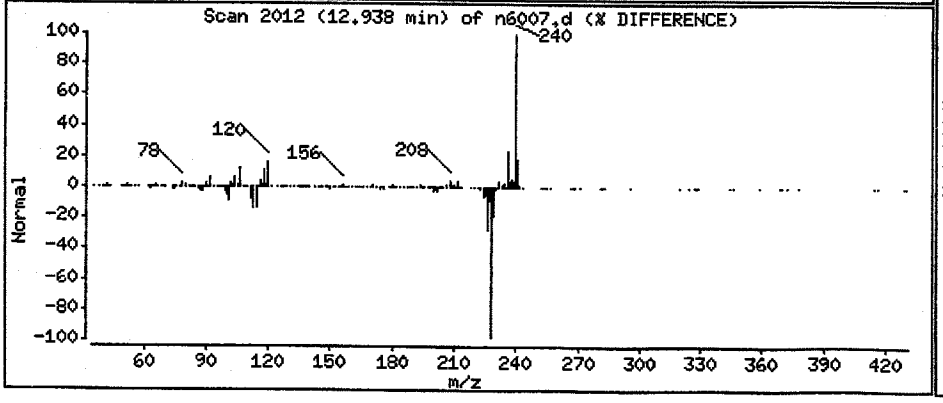












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

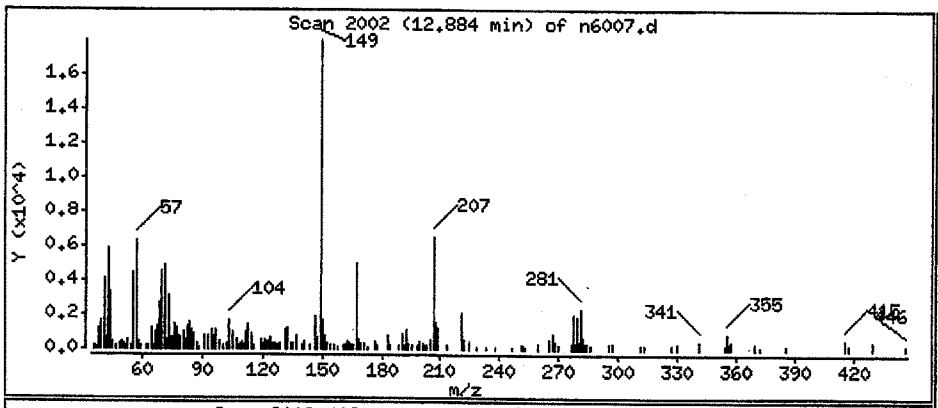
Operator:

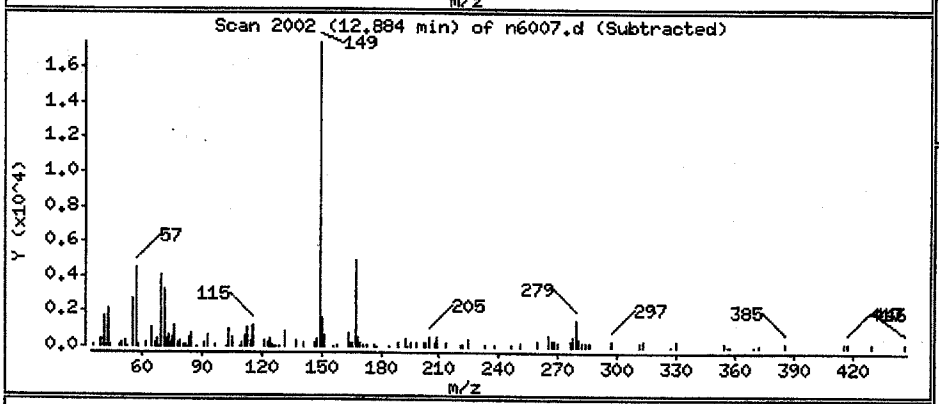
Column phase: SLB-5MS

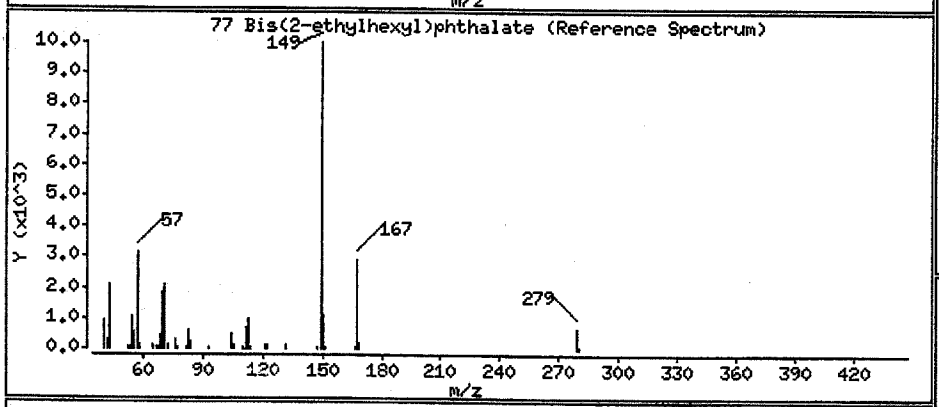
Column diameter: 0.25

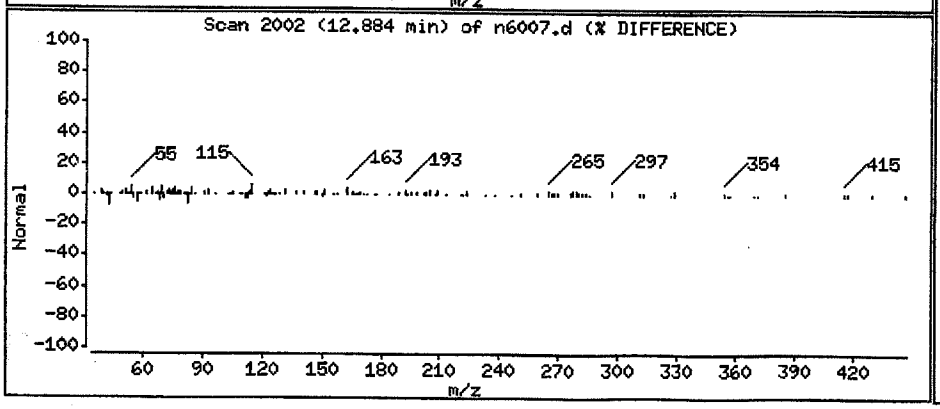
77 Bis(2-ethylhexyl)phthalate

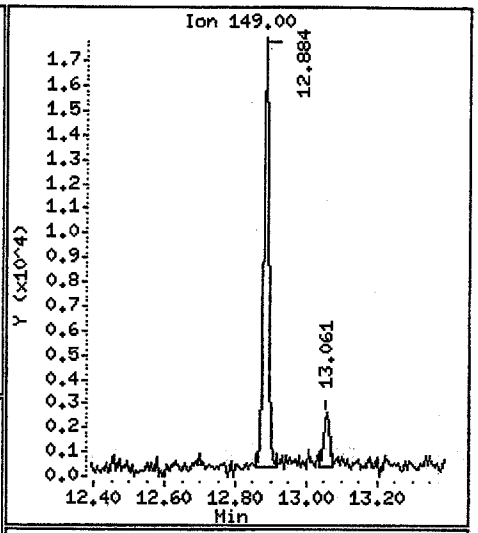
Concentration: 31 ug/Kg

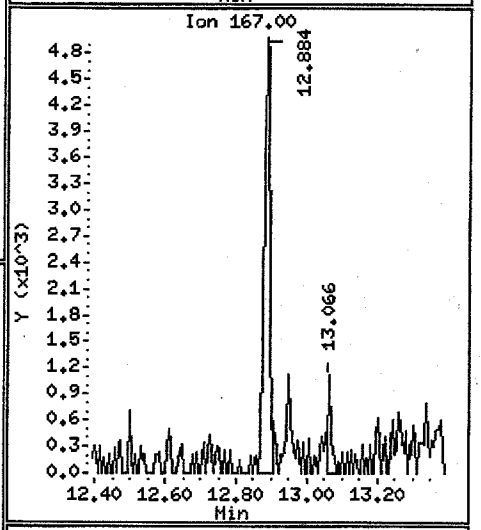


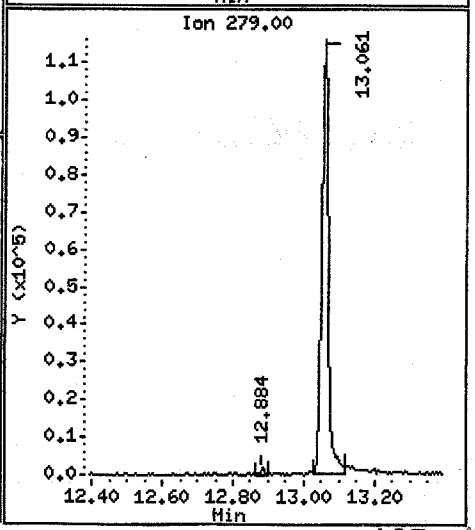












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

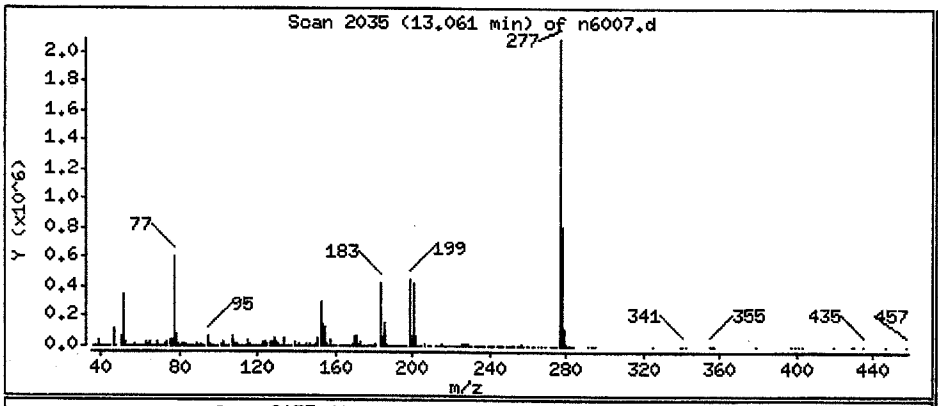
Operator:

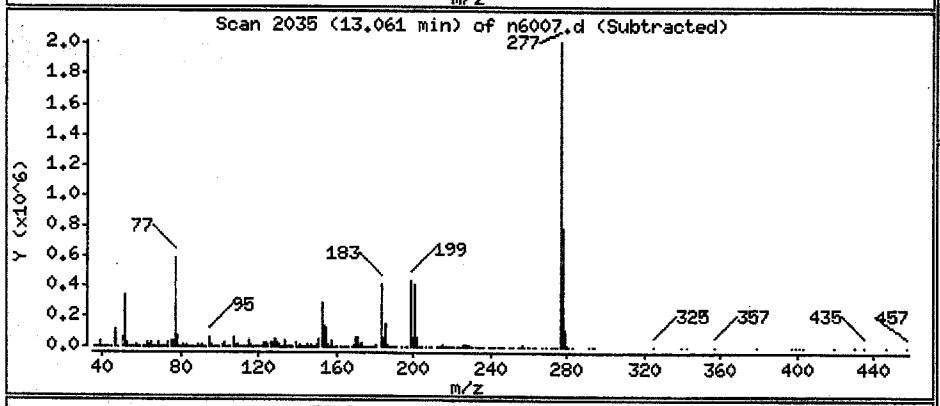
Column phase: SLB-5MS

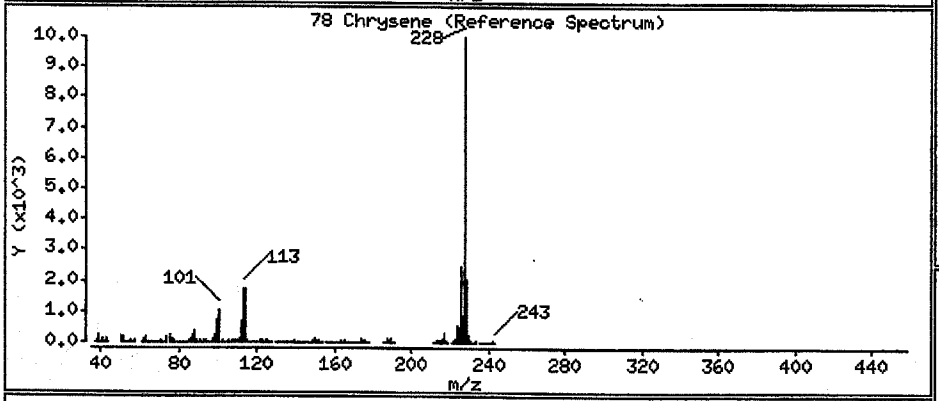
Column diameter: 0.25

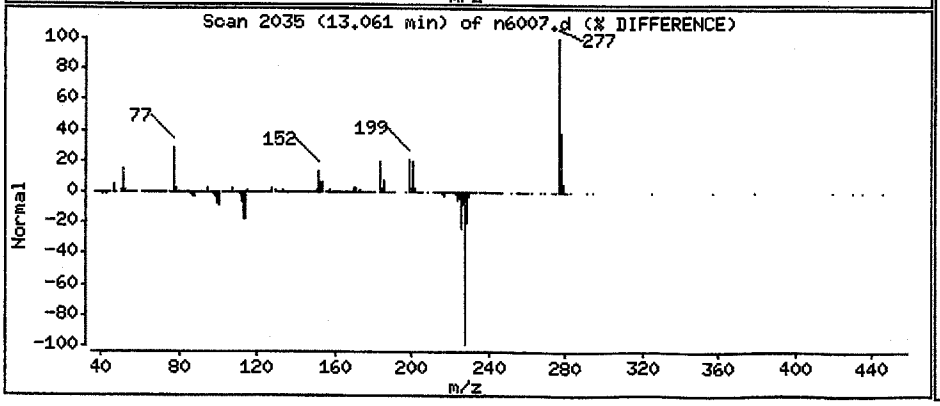
78 Chrysene

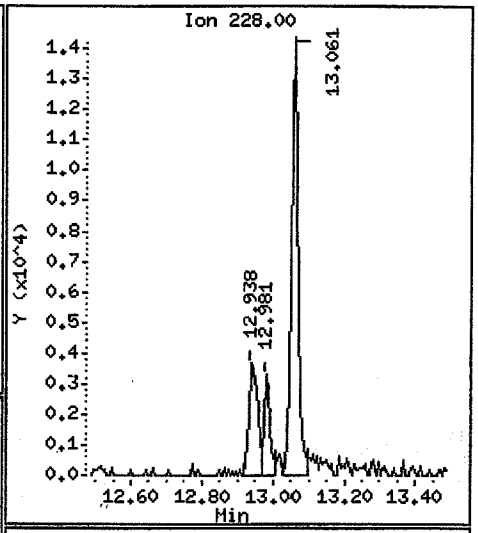
Concentration: 23 ug/Kg

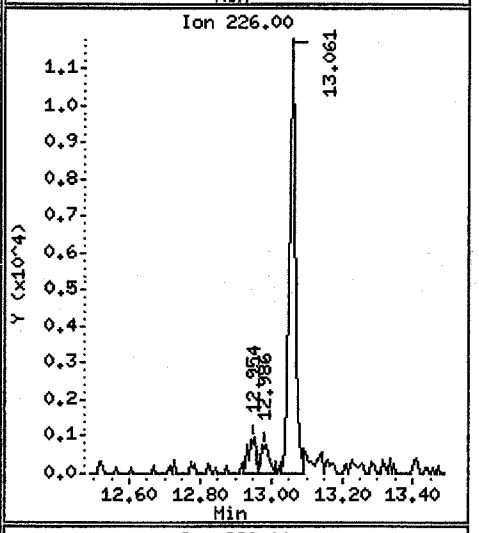


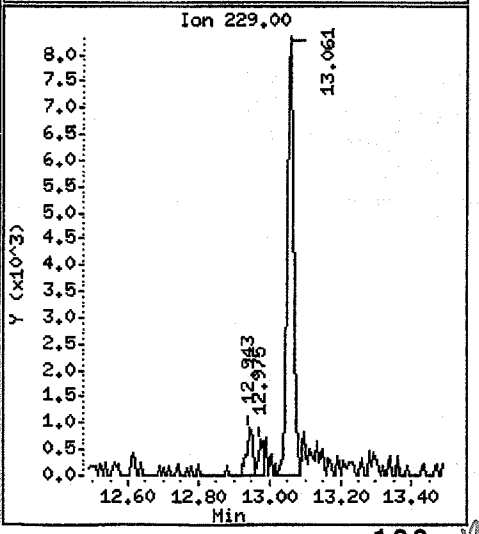












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

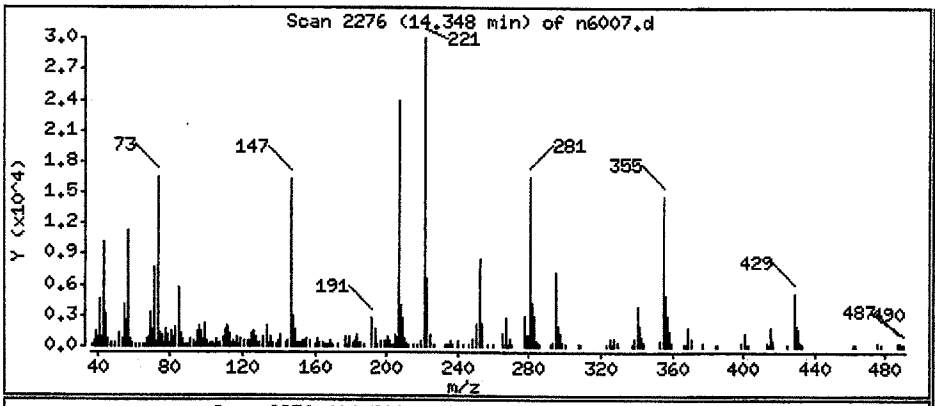
Operator:

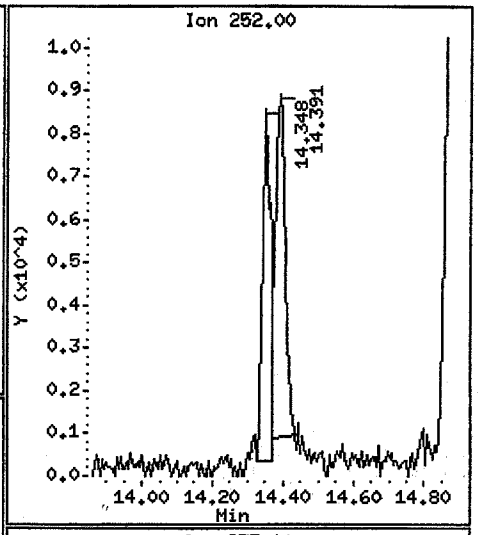
Column phase: SLB-5MS

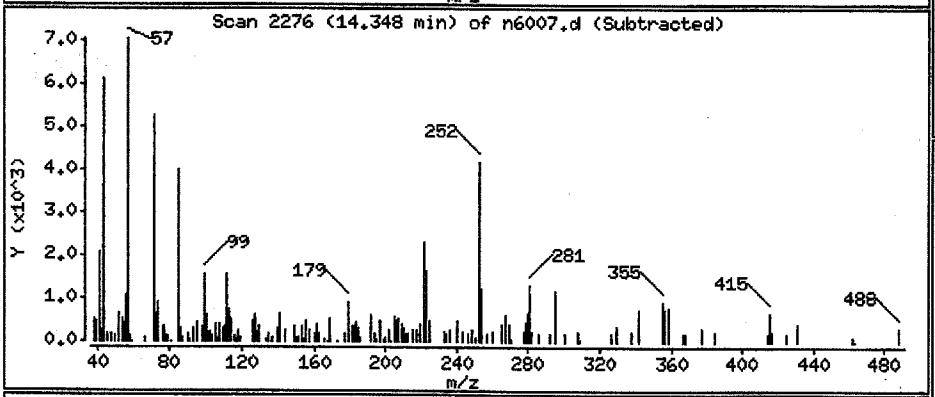
Column diameter: 0.25

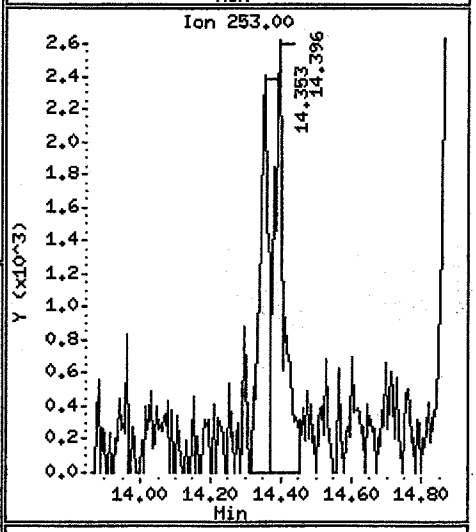
81 Benzo(b)fluoranthene

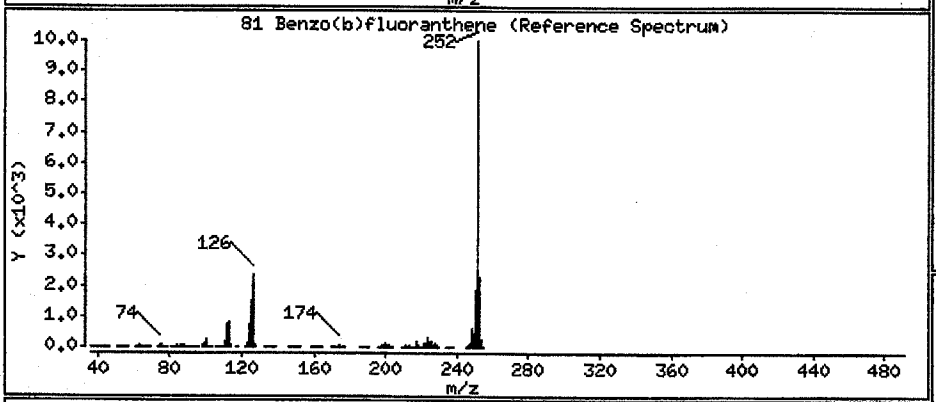
Concentration: 16 ug/Kg

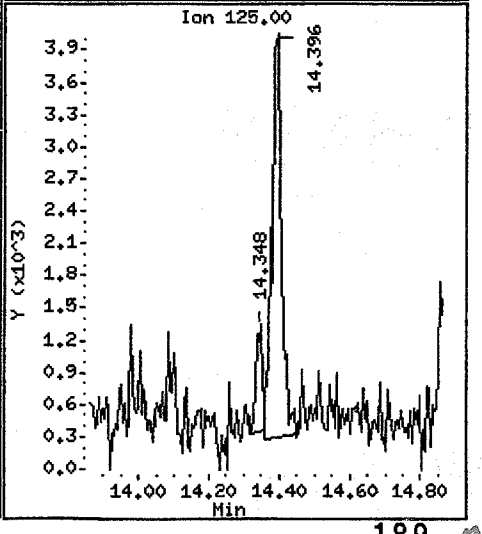


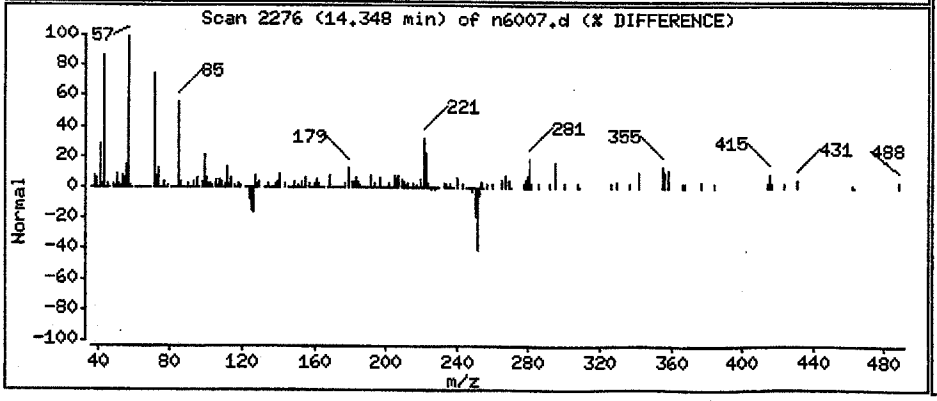












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

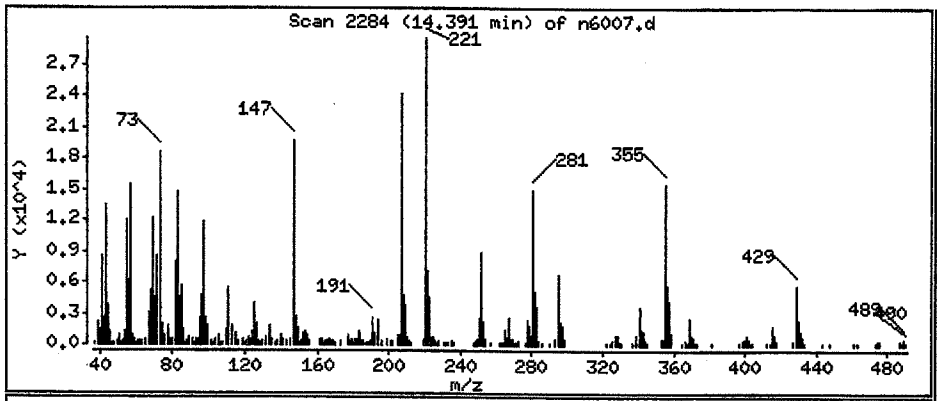
Operator:

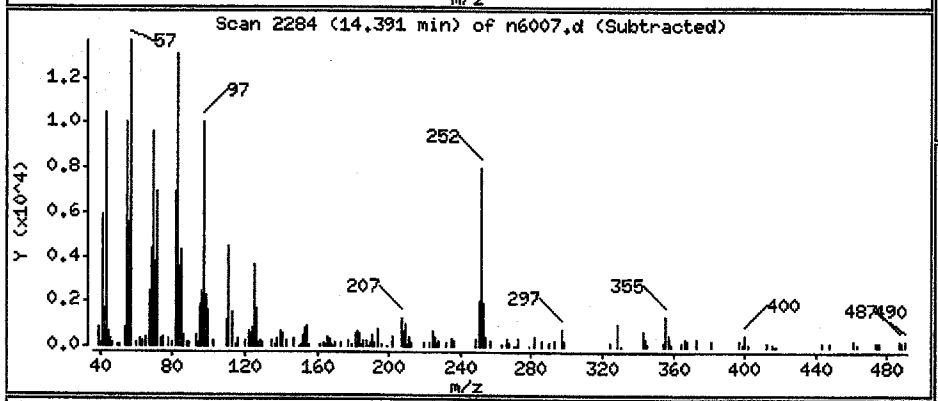
Column phase: SLB-5MS

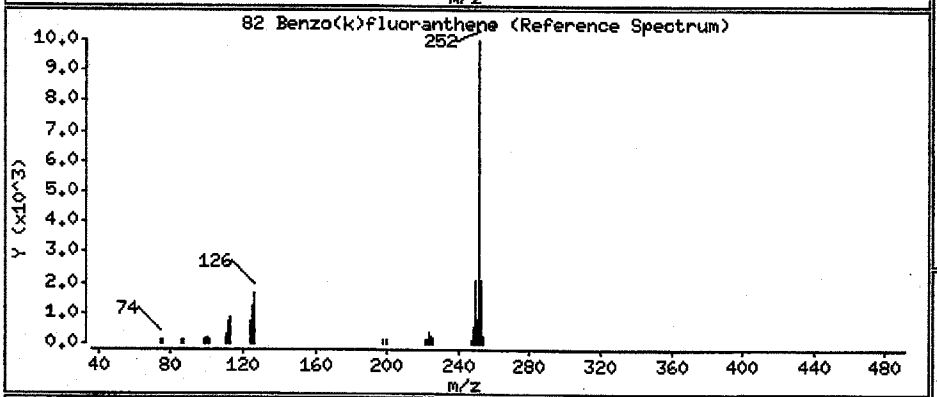
Column diameter: 0.25

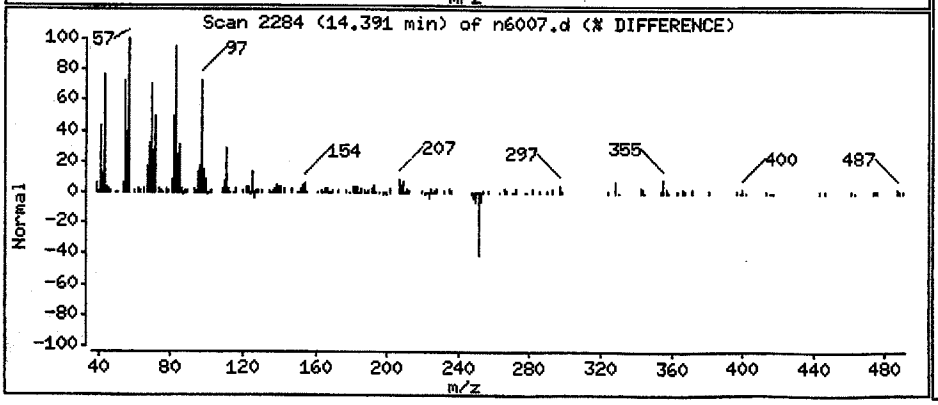
82 Benzo(k)fluoranthene

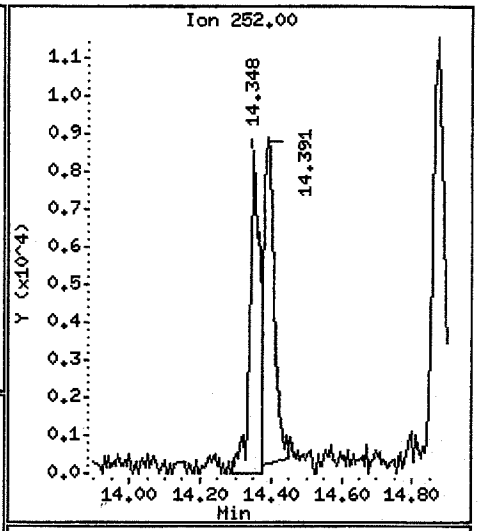
Concentration: 22 ug/Kg

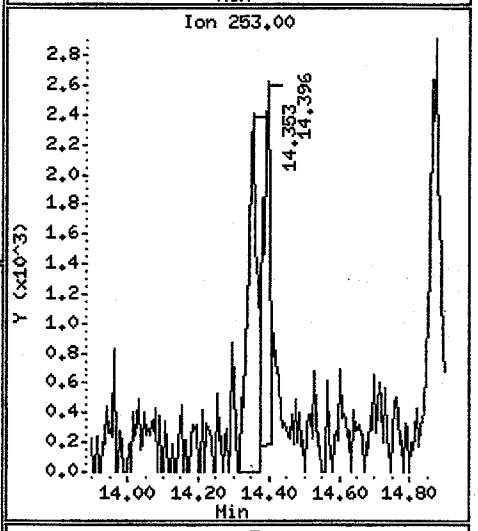


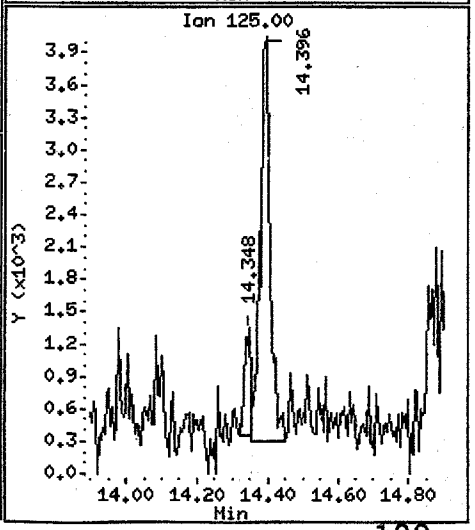












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

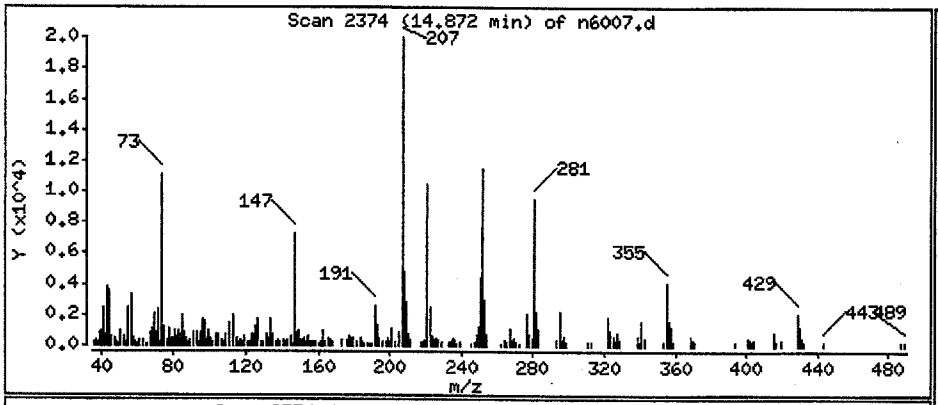
Operator:

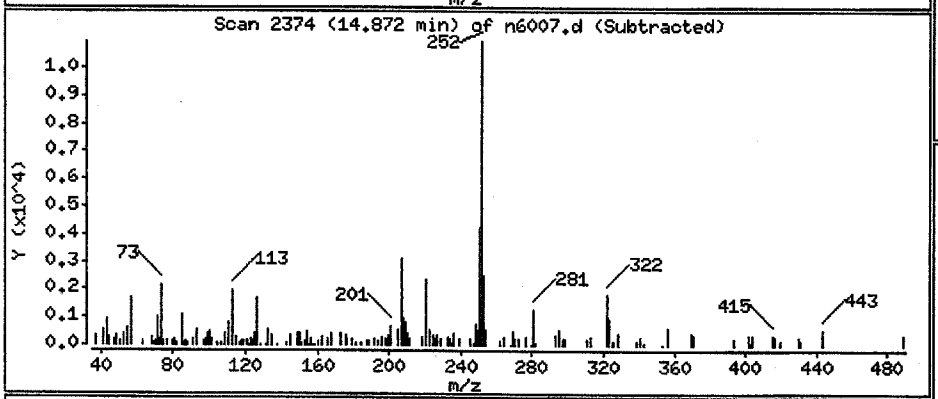
Column phase: SLB-5MS

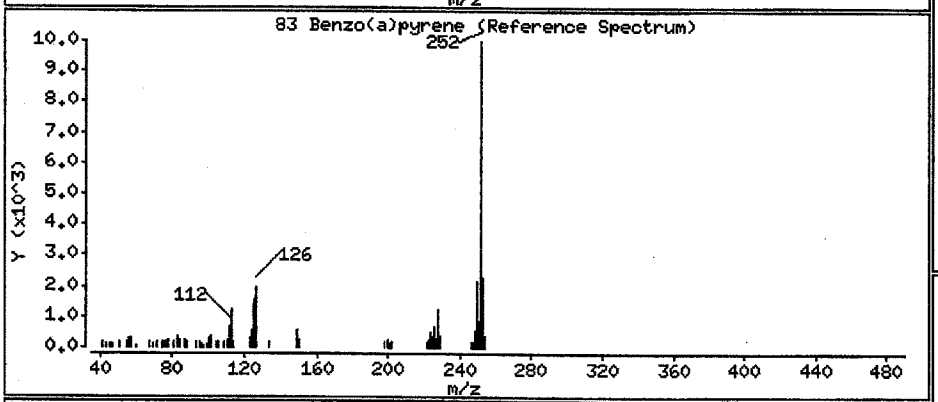
Column diameter: 0.25

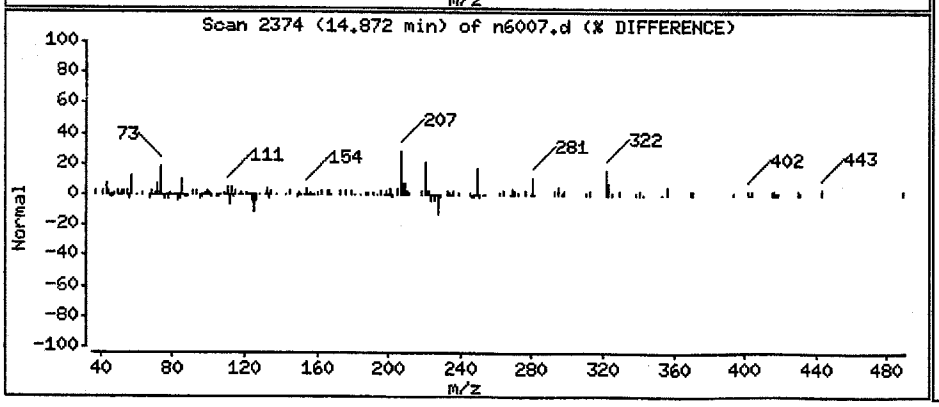
83 Benzo(a)pyrene

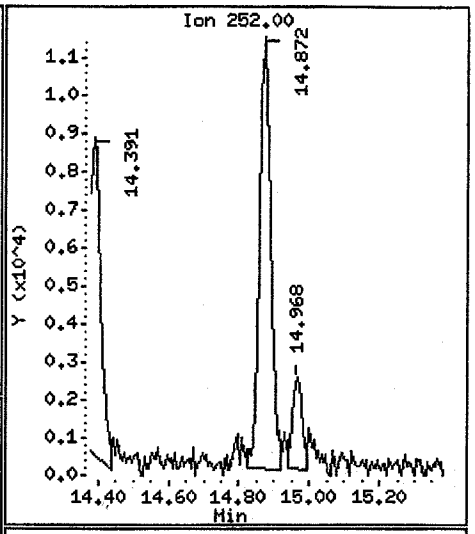
Concentration: 34 ug/Kg

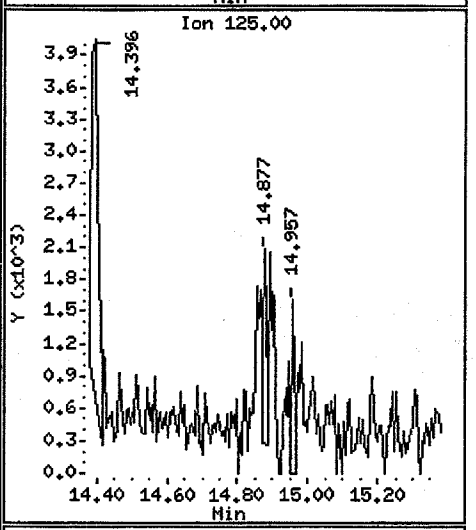


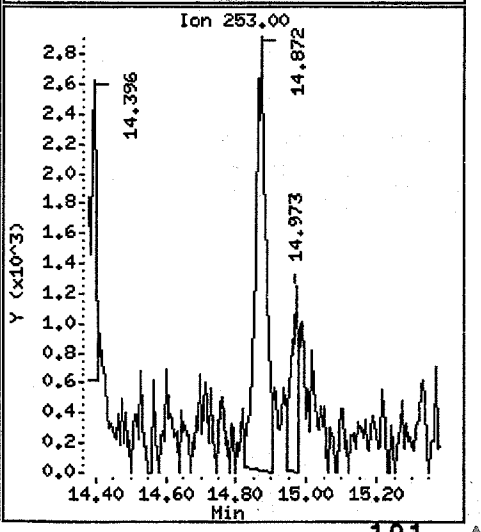












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

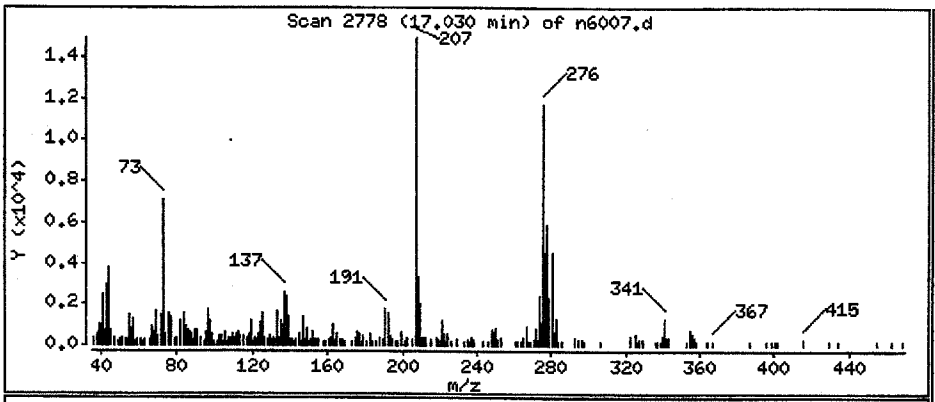
Operator:

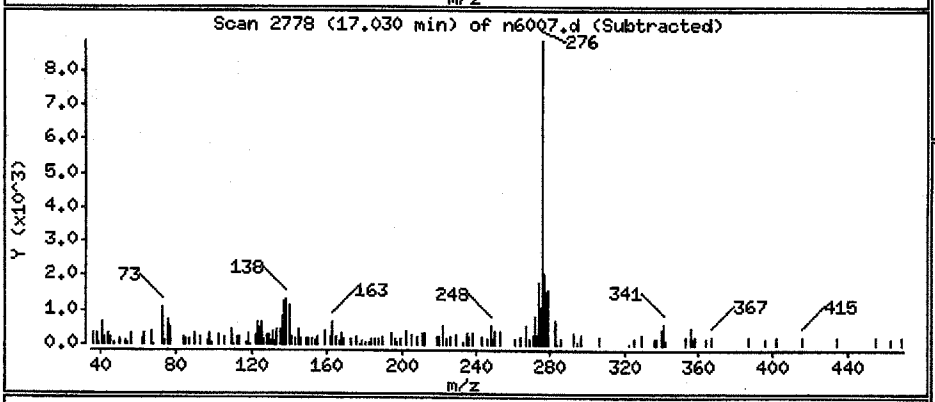
Column phase: SLB-5MS

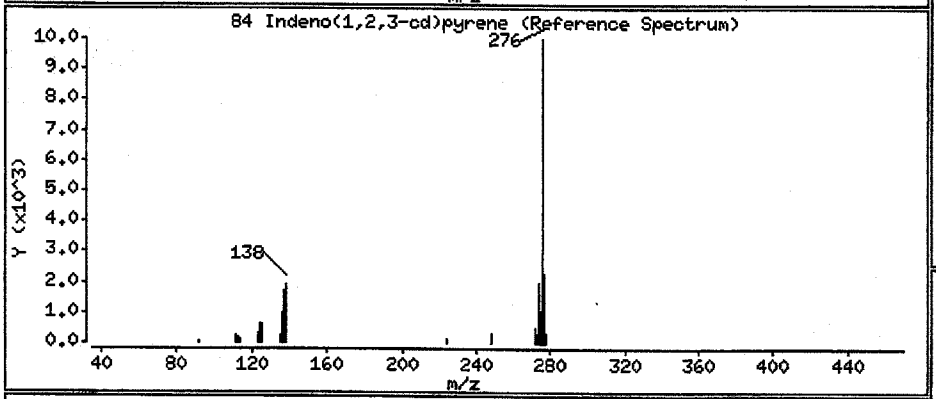
Column diameter: 0.25

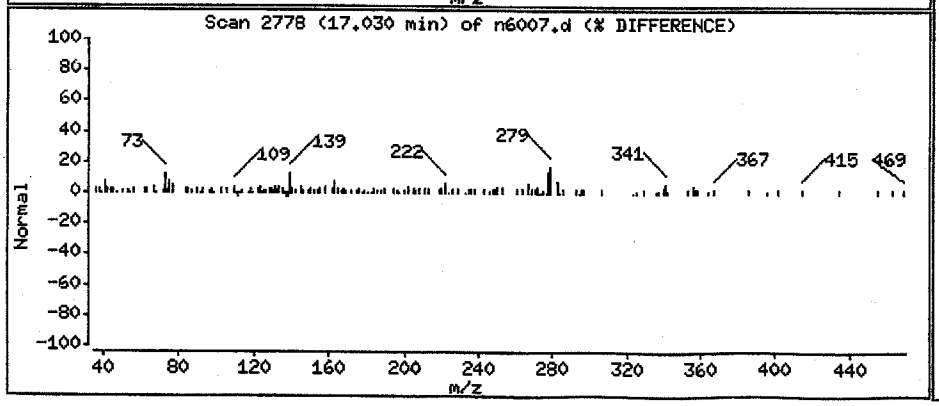
84 Indeno(1,2,3-cd)pyrene

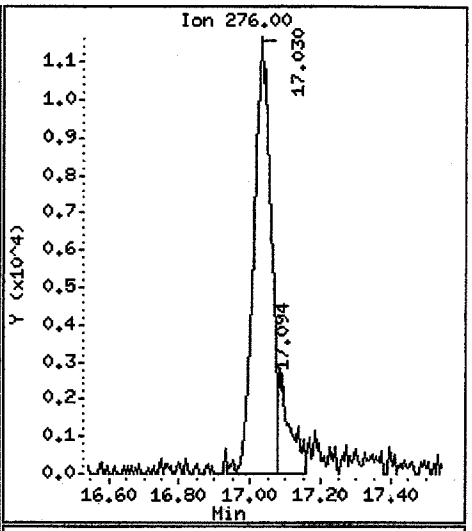
Concentration: 43 ug/Kg

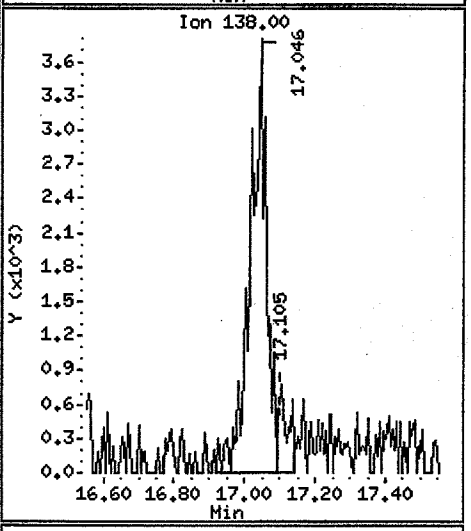


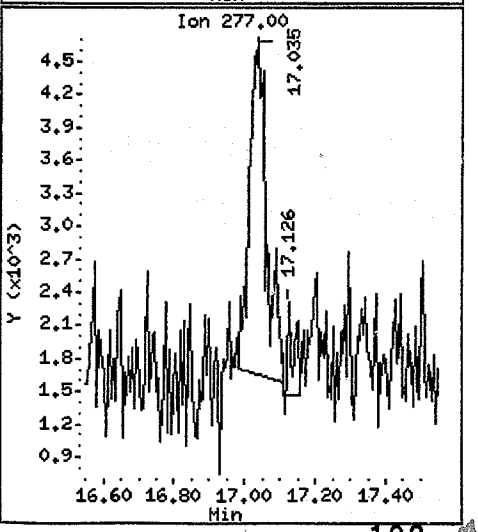












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

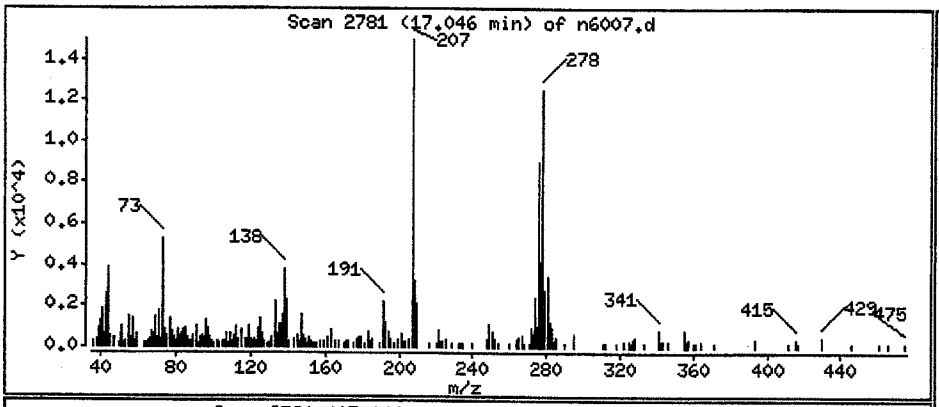
Operator:

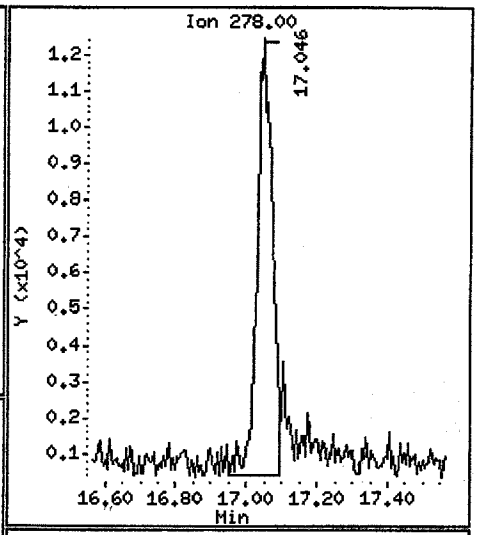
Column phase: SLB-5MS

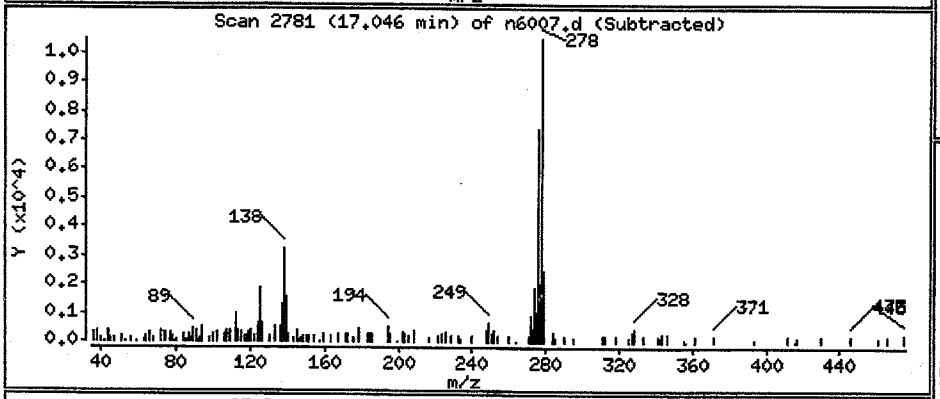
Column diameter: 0.25

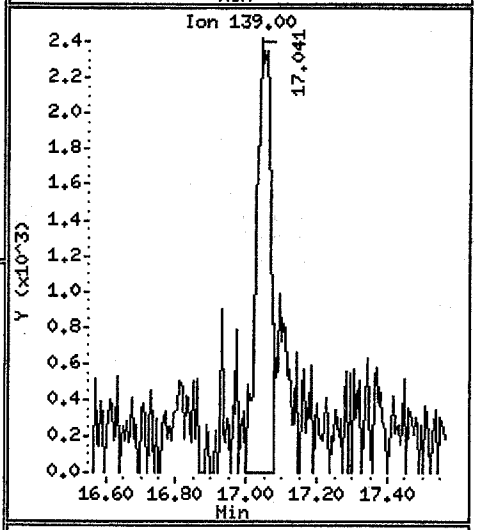
85 Dibenzo(a,h)anthracene

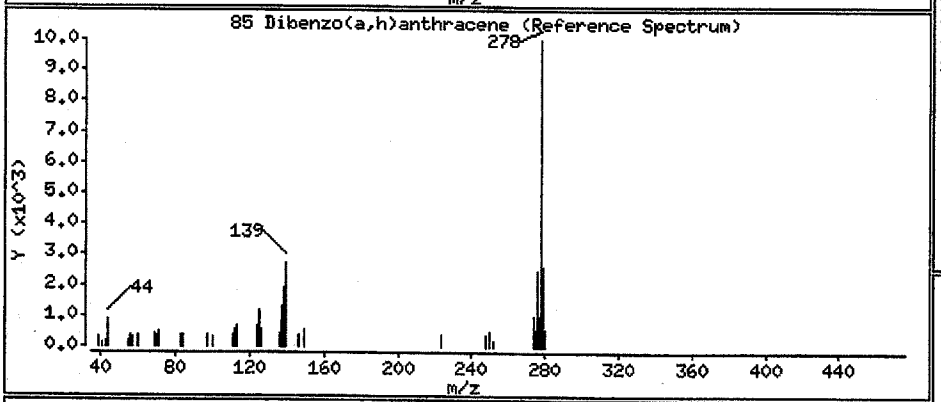
Concentration: 50 ug/Kg

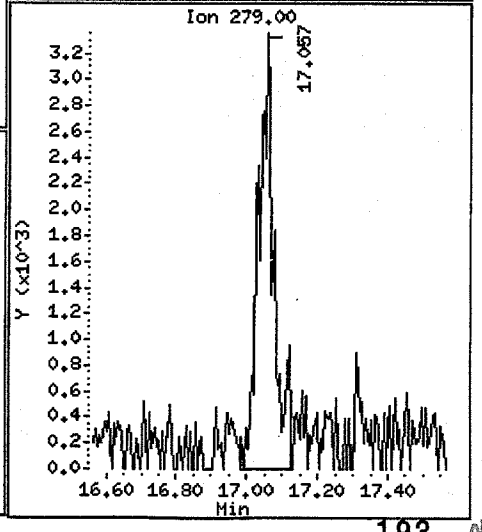


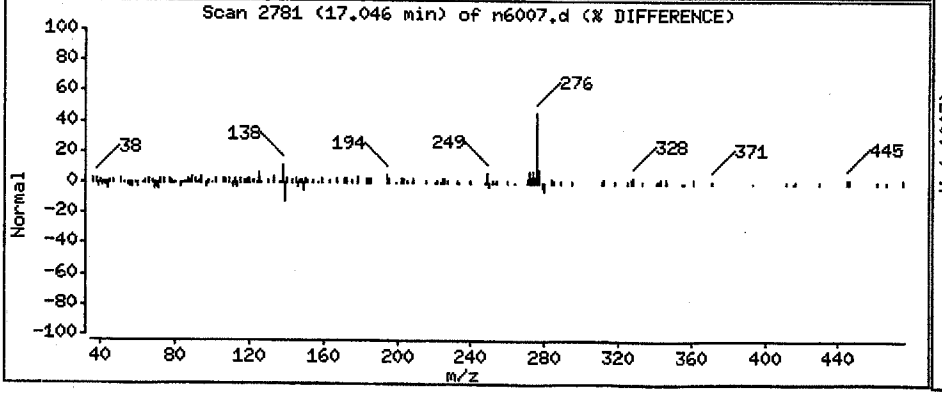












Data File: /chem/SM/MSN5973.i/1n030807.b/n6007.d

Date : 08-MAR-2007 10:54

Client ID: WFF1-MW2-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-1-C

Volume Injected (uL): 1.0

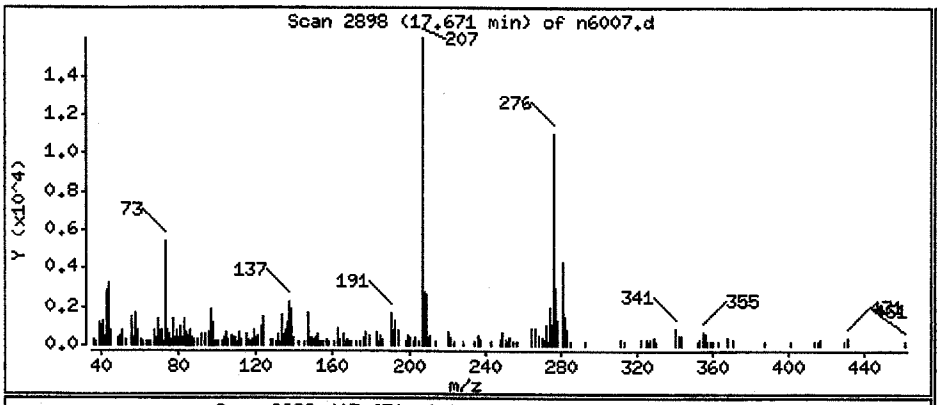
Operator:

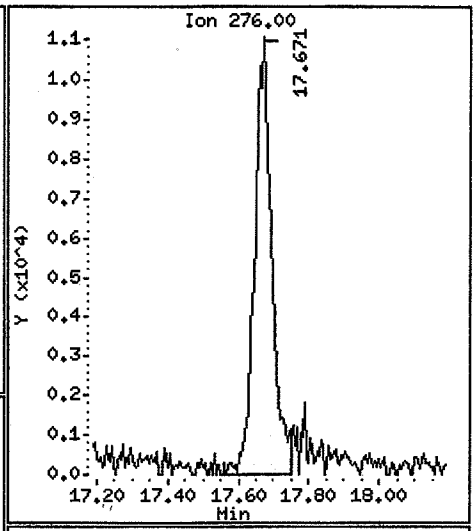
Column phase: SLB-5MS

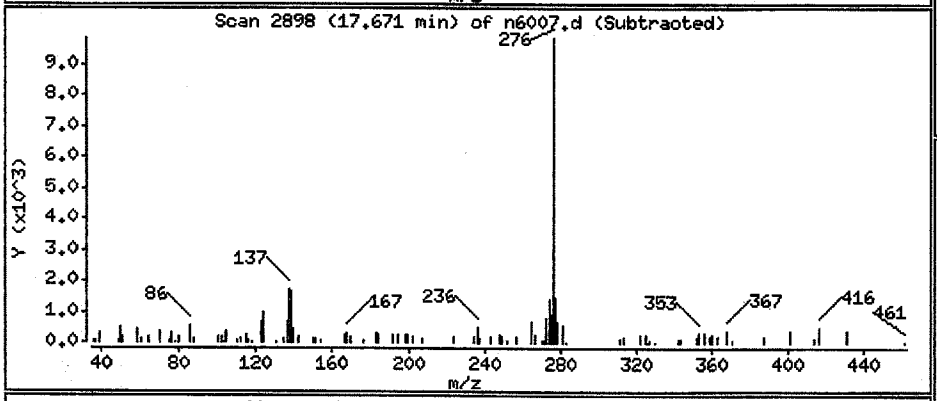
Column diameter: 0.25

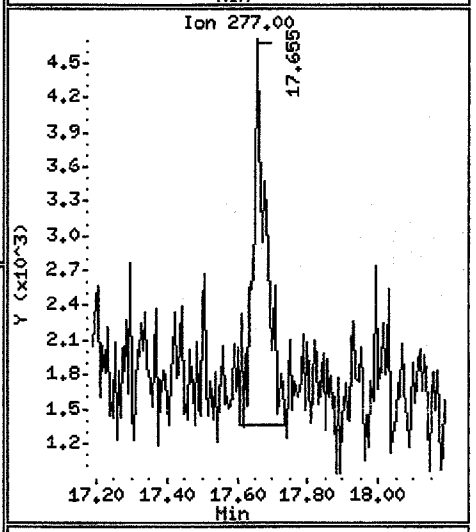
86 Benzo(g,h,i)perylene

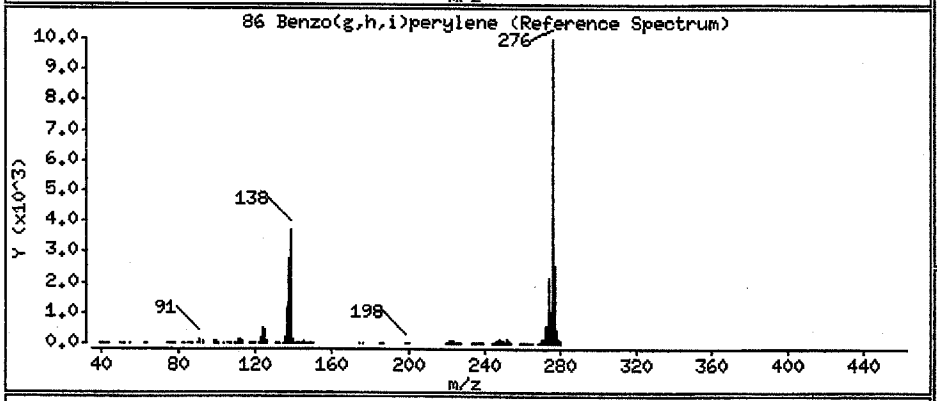
Concentration: 52 ug/Kg

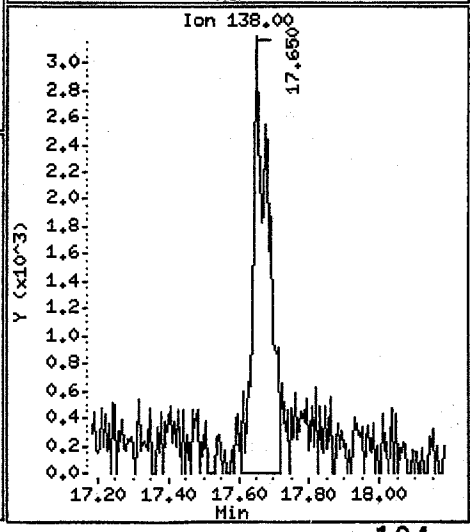


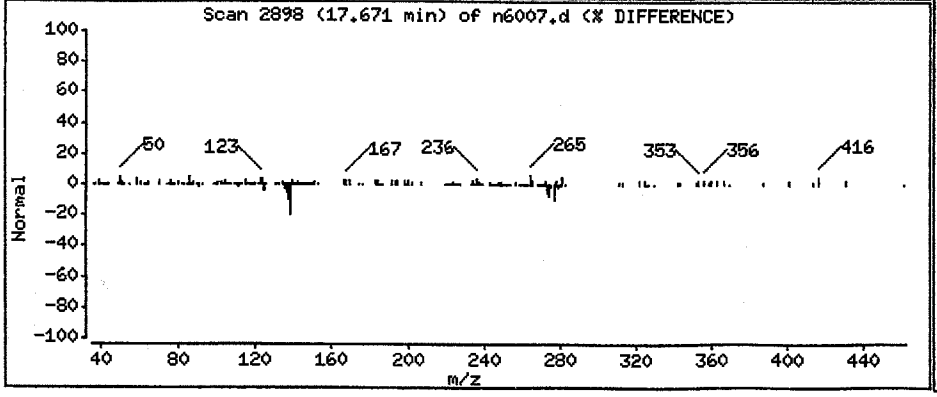












STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030507.b/n5956.d
Lab Smp Id: 680-24460-A-2-B Client Smp ID: WFF1-MW2-0.5-2
Inj Date : 05-MAR-2007 11:22
Operator : Inst ID: MSN5973.i
Smp Info : 680-00708312= 24460-2 68649
Misc Info : 680-24460-A-2-B
Comment :
Method : /chem/SM/MSN5973.i/1n030507.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 11:54 johnsonl Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52 Cal File: nq311.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.10000	Weight Extracted
M	8.54789	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.583	4.582	(1.000)	215463	40.0000	(Q)
$ 5 2-Fluorophenol	112	3.461	3.455	(0.755)	303987	34.8583	1300(R)
$ 6 Phenol-d5	99	4.204	4.203	(0.917)	441605	35.5041	1300(R)
* 20 Naphthalene-d8	136	5.918	5.923	(1.000)	865990	40.0000	
$ 21 Nitrobenzene-d5	82	5.138	5.138	(0.868)	155272	13.6849	500(R)
* 36 Acenaphthene-d10	164	7.991	7.996	(1.000)	565540	40.0000	
$ 40 2-Fluorobiphenyl	172	7.163	7.163	(0.896)	366512	18.5324	670(R)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
$ 57 2,4,6-Tribromophenol	329	8.958	8.963	(1.121)	129114	38.6676	1400
* 58 Phenanthrene-d10	188	9.807	9.812	(1.000)	1001291	40.0000	
* 71 Chrysene-d12	240	13.013	13.023	(1.000)	917319	40.0000	
$ 73 Terphenyl-d14	244	11.747	11.752	(0.903)	531665	23.0186	840
* 79 Perylene-d12	264	15.059	15.069	(1.000)	781681	40.0000	

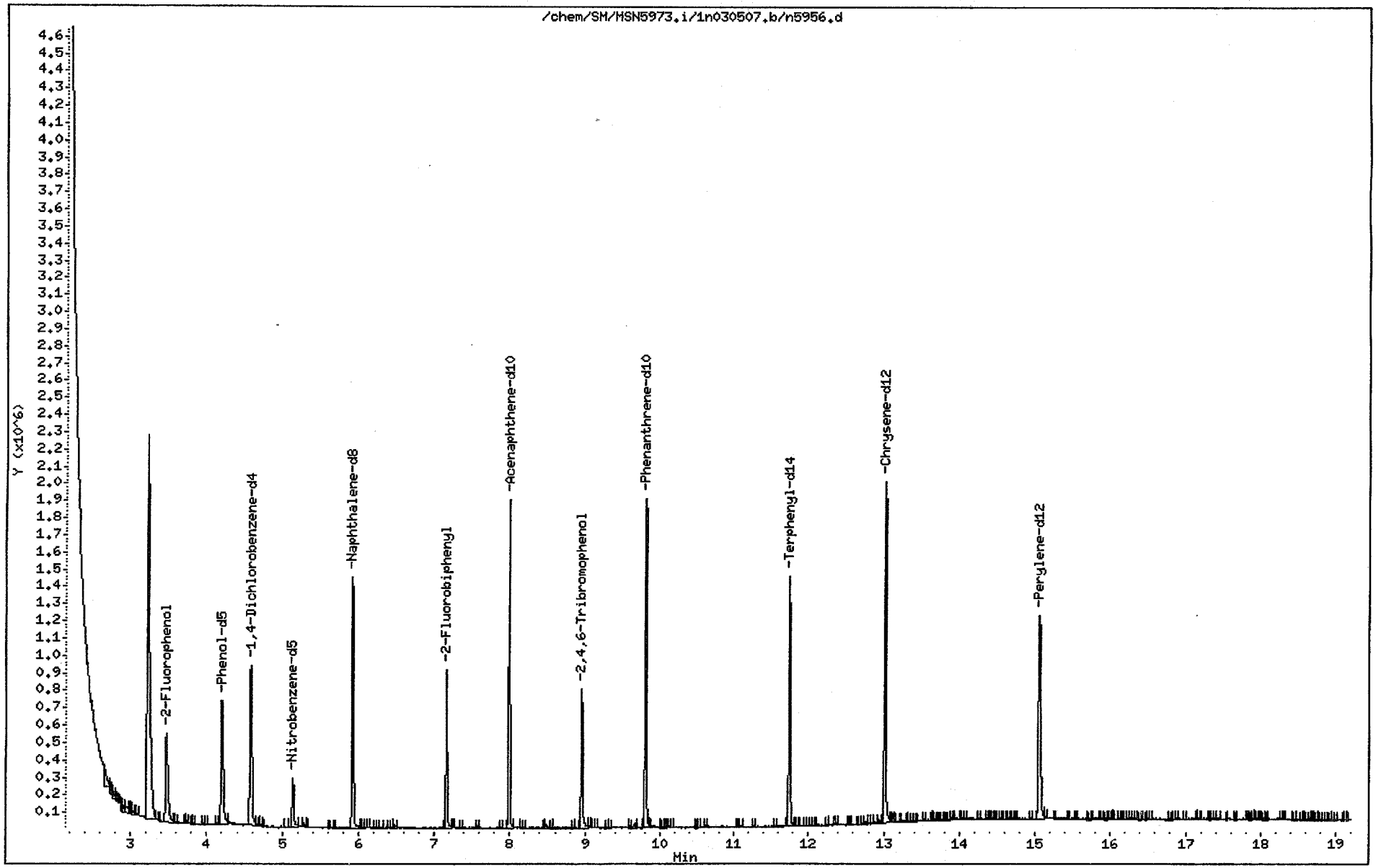
QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

197

Data File: /chem/SM/MSN5973.i/1n030507.b/n5956.d
Date : 05-MAR-2007 11:22
Client ID: WFF1-MW2-0.5-2
Sample Info: 680-00708312= 24460-2 68649
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25



STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030807.b/n6008.d
Lab Smp Id: 680-24460-A-2-C RE Client Smp ID: WFF1-MW2-0.5-2
Inj Date : 08-MAR-2007 11:21 SHW 3/14/07 Inst ID: MSN5973.i
Operator :
Smp Info : 680-24460-A-2-C
Misc Info : 680-24460-A-2-C
Comment :
Method : /chem/SM/MSN5973.i/1n030807.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 12:01 johnsonl Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52 Cal File: nq311.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.29000	Weight Extracted
M	8.54789	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.524	4.528	(1.000)	219642	40.0000	
$ 5 2-Fluorophenol	112	3.413	3.406	(0.754)	327680	36.8603	1300
$ 6 Phenol-d5	99	4.150	4.149	(0.917)	461945	36.4328	1300(R)
* 20 Naphthalene-d8	136	5.859	5.864	(1.000)	918387	40.0000	
$ 21 Nitrobenzene-d5	82	5.079	5.084	(0.867)	172886	14.3679	520(R)
* 36 Acenaphthene-d10	164	7.932	7.937	(1.000)	579755	40.0000	
$ 40 2-Fluorobiphenyl	172	7.104	7.109	(0.896)	382280	18.8557	680(R)

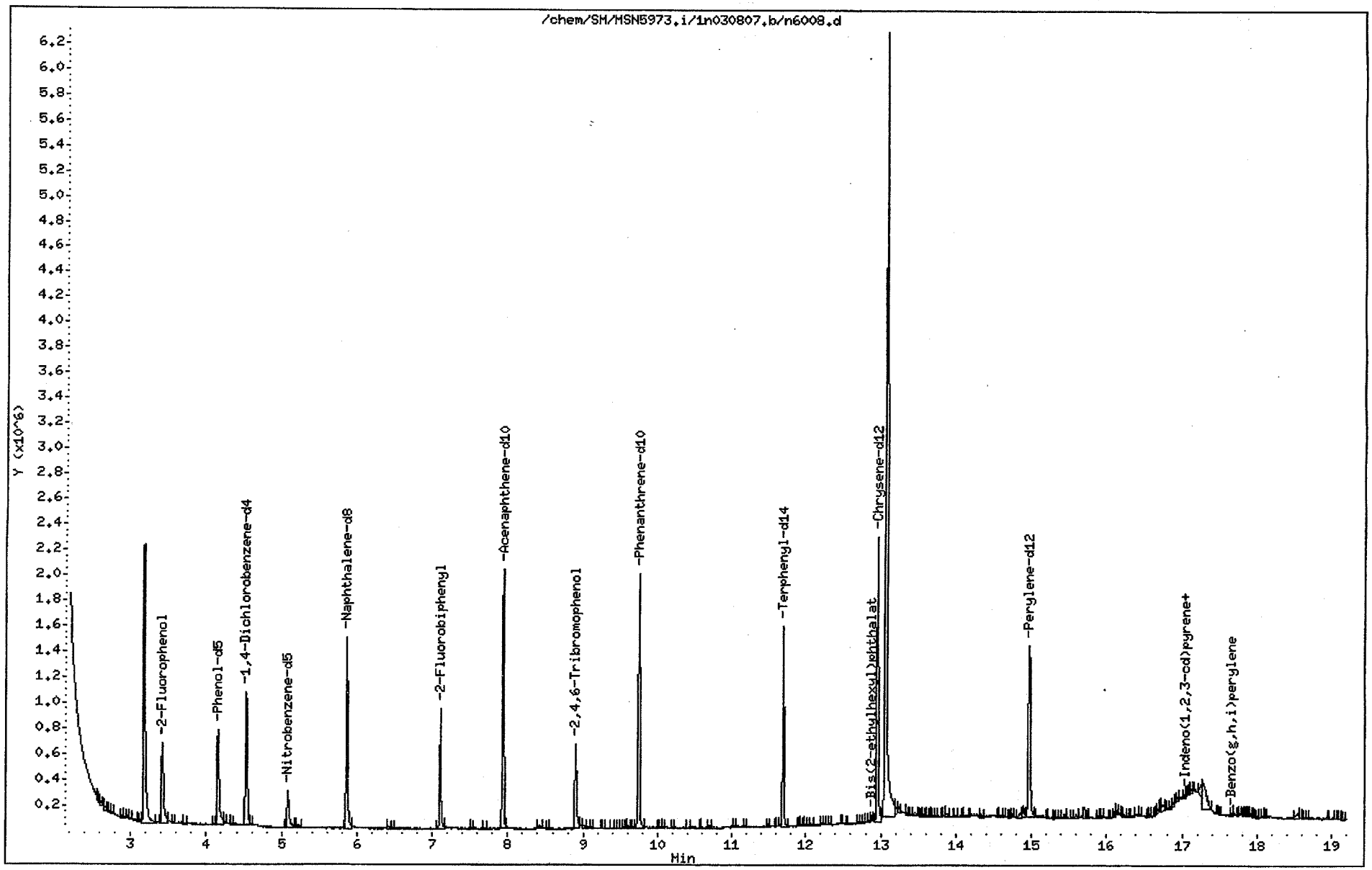
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
$	57 2,4,6-Tribromophenol	329	8.899	8.903	(1.122)	107091	31.2857	1100
*	58 Phenanthrene-d10	188	9.748	9.753	(1.000)	1033638	40.0000	
*	71 Chrysene-d12	240	12.954	12.964	(1.000)	1014832	40.0000	
$	73 Terphenyl-d14	244	11.688	11.692	(0.902)	594915	23.2821	840
	77 Bis(2-ethylhexyl)phthalate	149	12.884	12.894	(0.995)	14226	0.65035	23(a)
*	79 Perylene-d12	264	14.968	14.977	(1.000)	843660	40.0000	
	84 Indeno(1,2,3-cd)pyrene	276	17.030	17.045	(1.315)	21722	0.59864	22(a)
	85 Dibenzo(a,h)anthracene	278	17.046	17.066	(1.139)	20761	0.71063	26(aQ)
	86 Benzo(g,h,i)perylene	276	17.671	17.691	(1.181)	24904	0.86050	31(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/SM/MSN5973.i/1n030807.b/n6008.d
Date : 08-MAR-2007 11:21
Client ID: WFF1-MW2-0.5-2
Sample Info: 680-24460-A-2-C
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25



Data File: /chem/SM/MSN5973.i/1n030807.b/n6008.d

Date : 08-MAR-2007 11:21

Client ID: WFF1-MW2-0.5-2

Instrument: MSN5973.i

Sample Info: 680-24460-A-2-C

Volume Injected (uL): 1.0

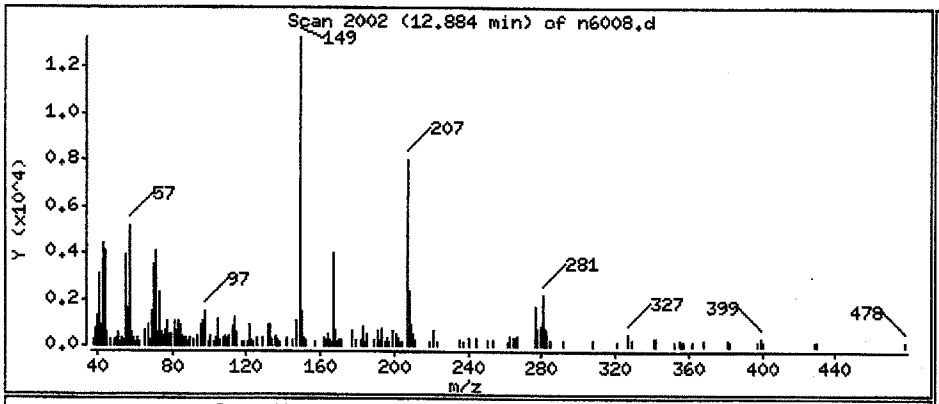
Operator:

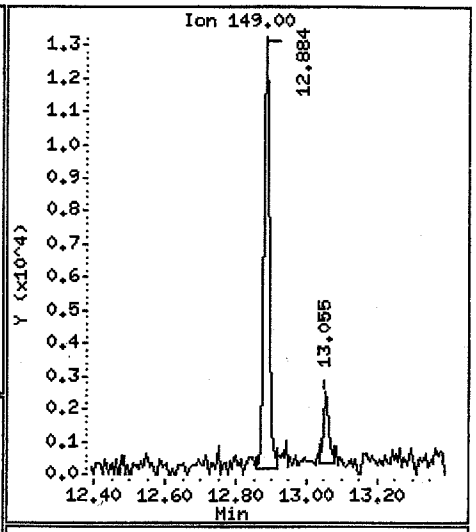
Column phase: SLB-5MS

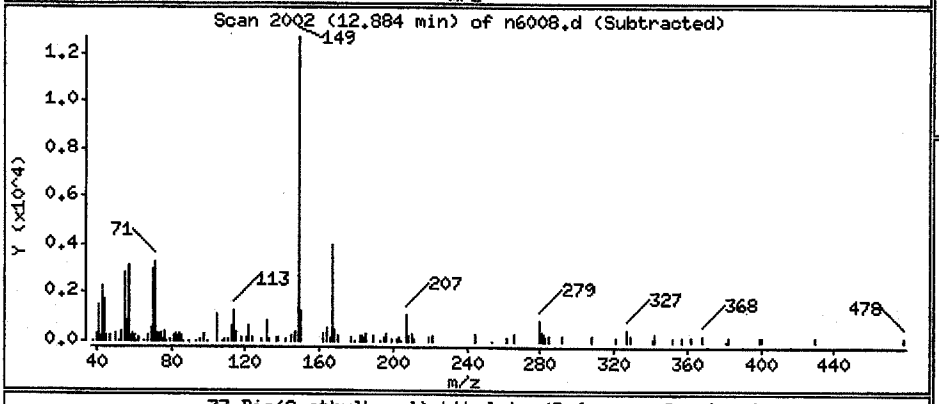
Column diameter: 0.25

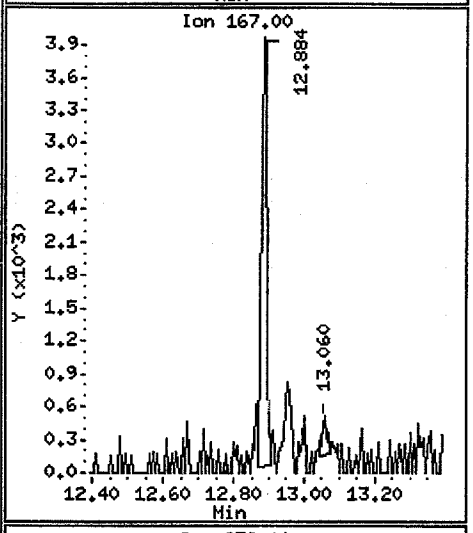
77 Bis(2-ethylhexyl)phthalate

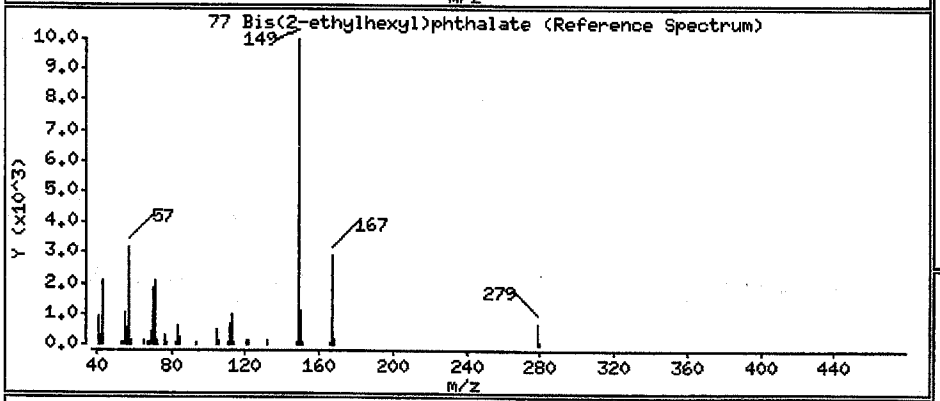
Concentration: 23 ug/Kg

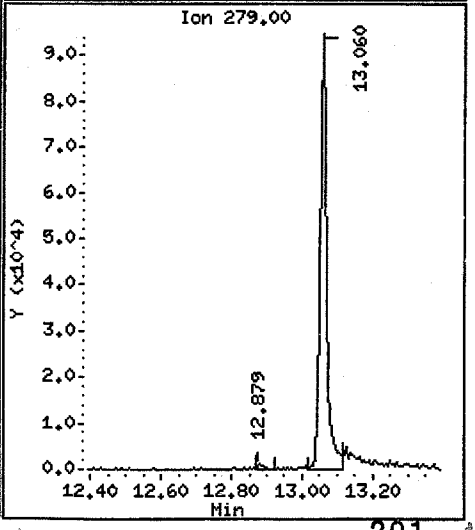


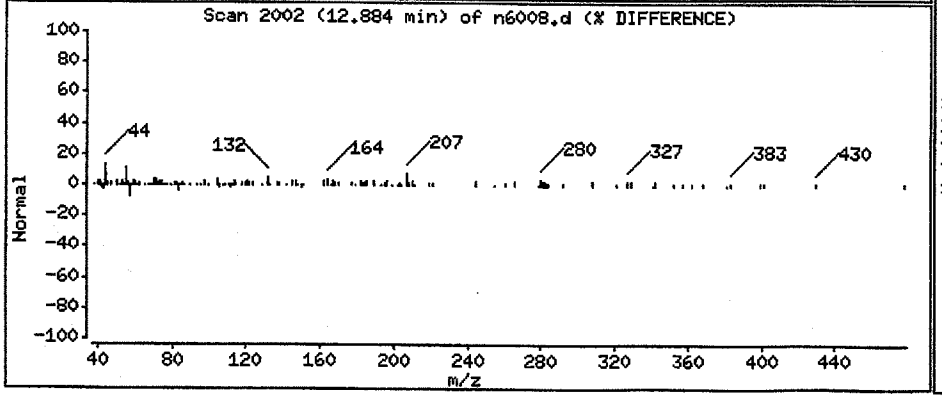












Data File: /chem/SM/MSN5973.i/1n030807.b/n6008.d

Date : 08-MAR-2007 11:21

Client ID: WFF1-MW2-0.5-2

Instrument: MSN5973.i

Sample Info: 680-24460-A-2-C

Volume Injected (uL): 1.0

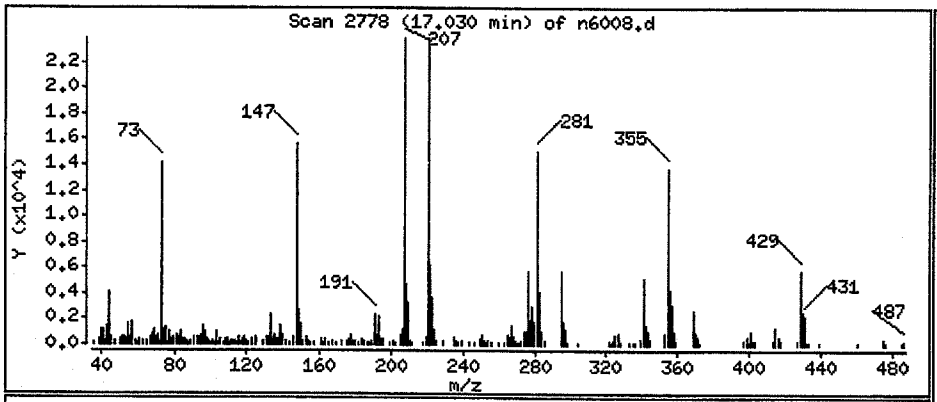
Operator:

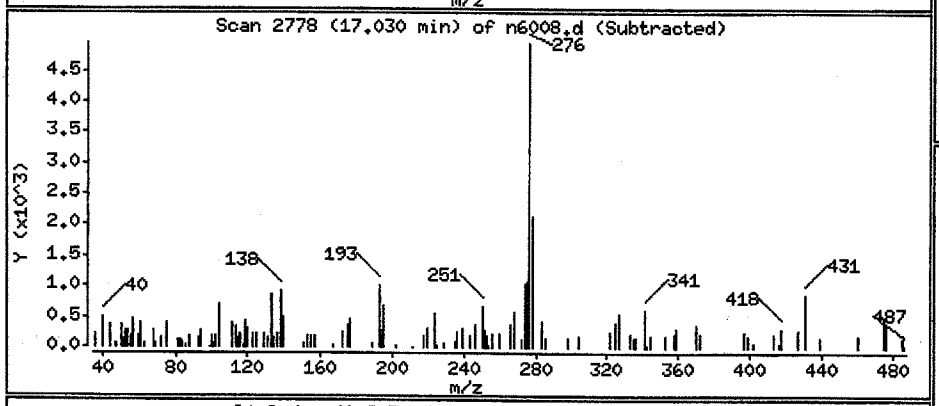
Column phase: SLB-5MS

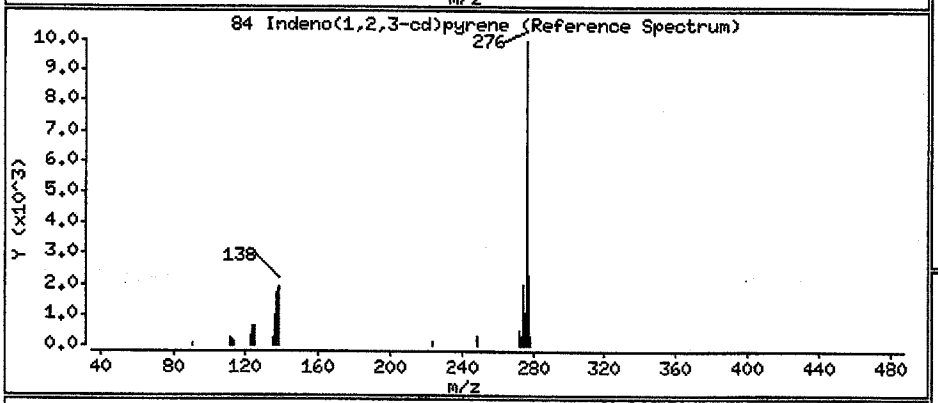
Column diameter: 0.25

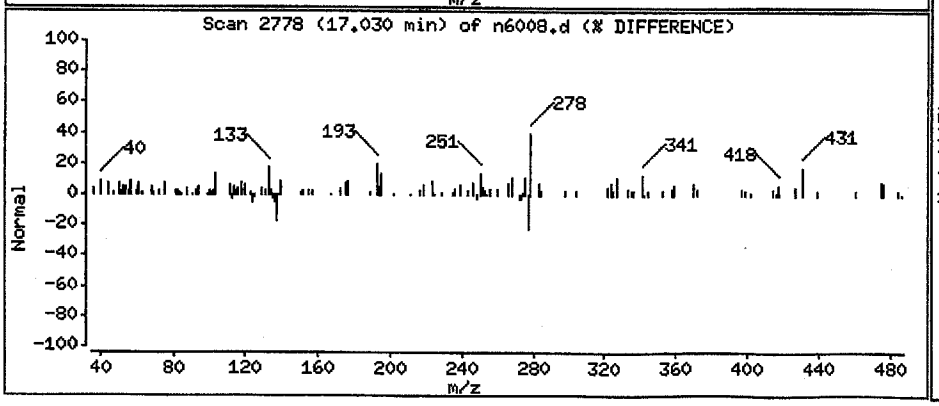
84 Indeno(1,2,3-cd)pyrene

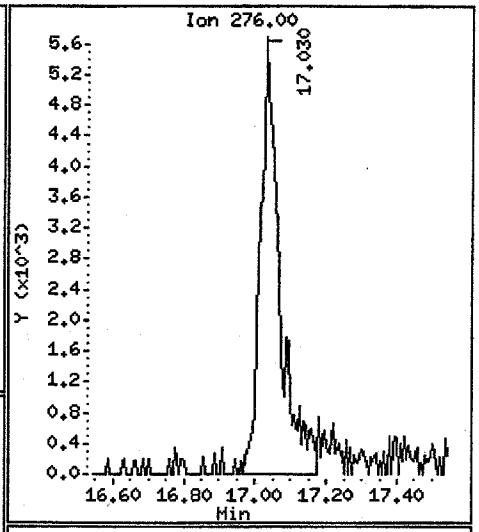
Concentration: 22 ug/Kg

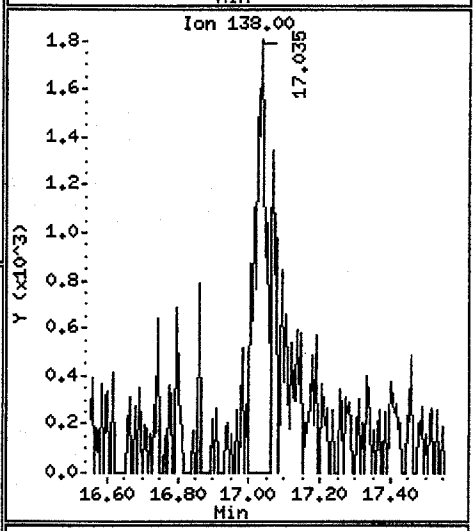


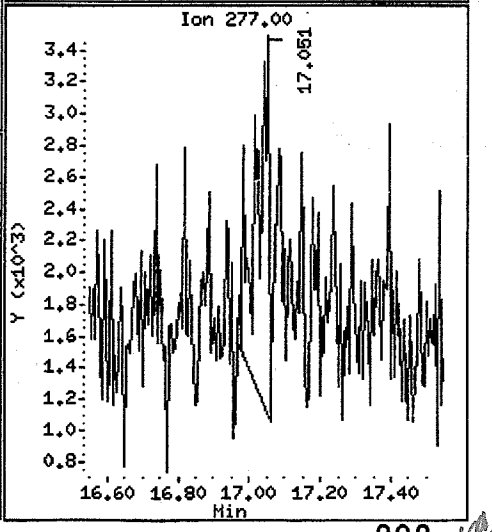












Data File: /chem/SM/MSN5973.i/1n030807.b/n6008.d

Date : 08-MAR-2007 11:21

Client ID: WFF1-MW2-0.5-2

Instrument: MSN5973.i

Sample Info: 680-24460-A-2-C

Volume Injected (uL): 1.0

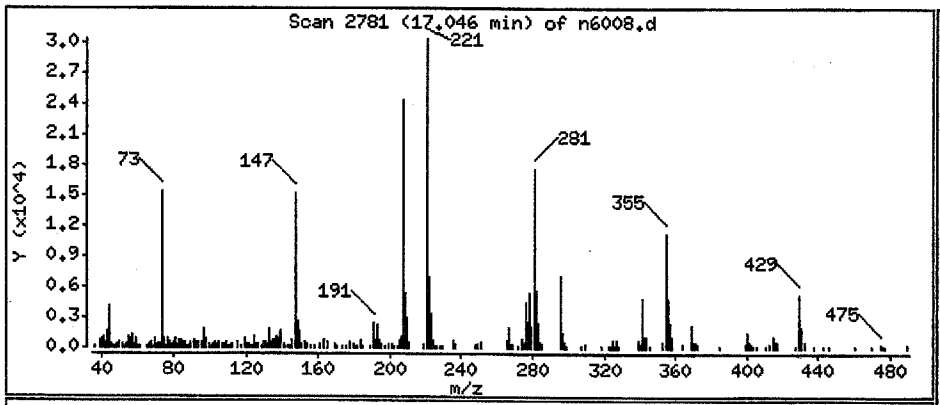
Operator:

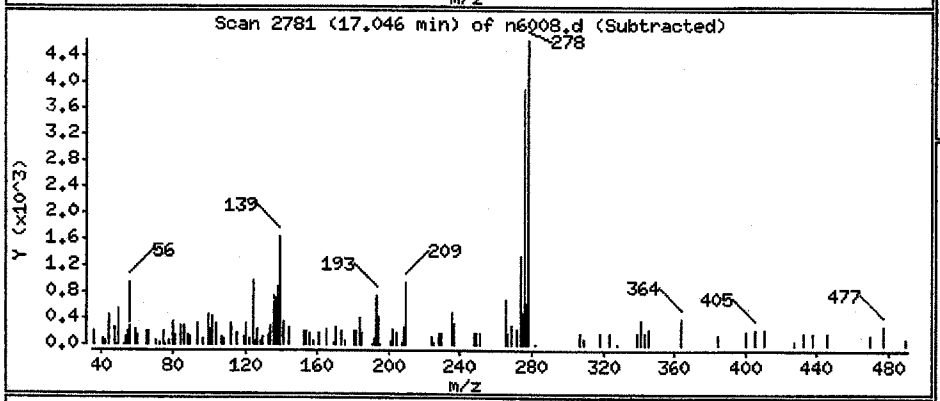
Column phase: SLB-5MS

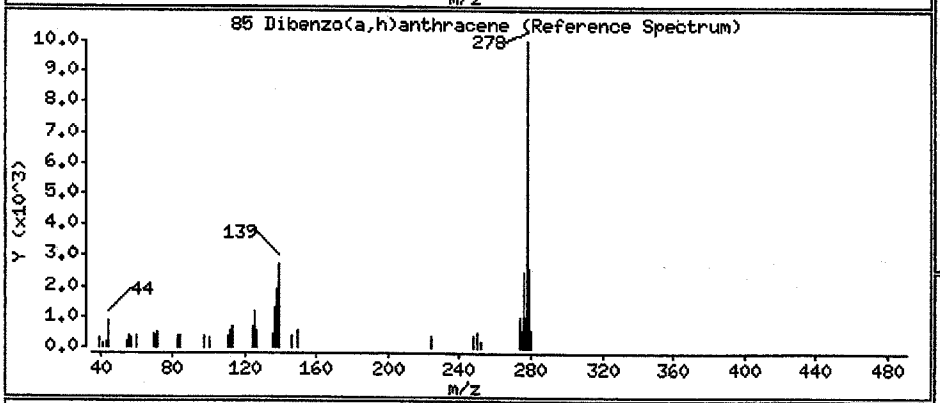
Column diameter: 0.25

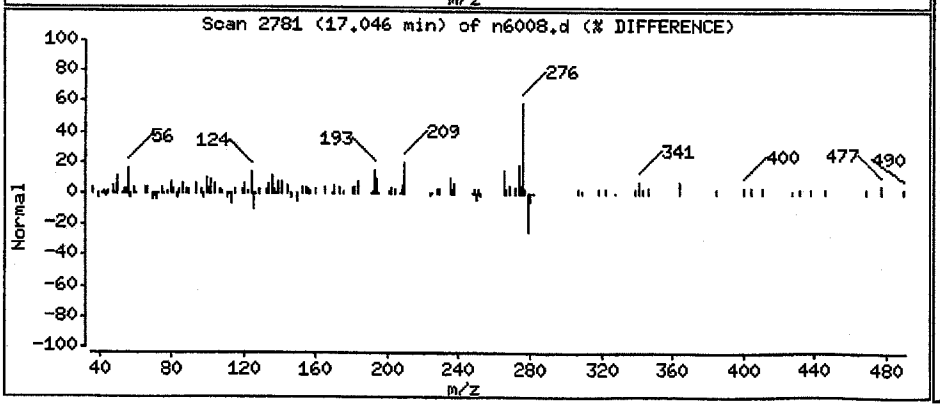
85 Dibenzo(a,h)anthracene

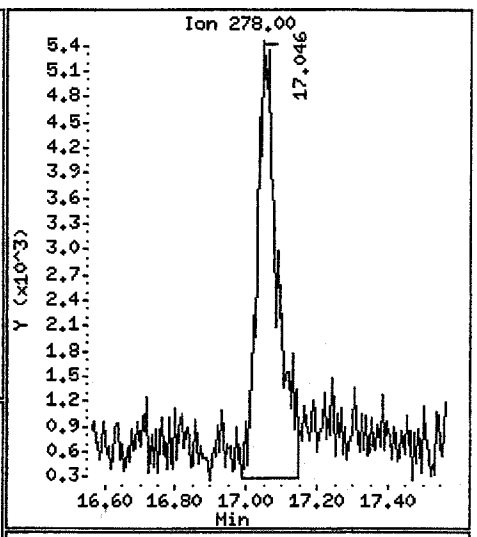
Concentration: 26 ug/Kg

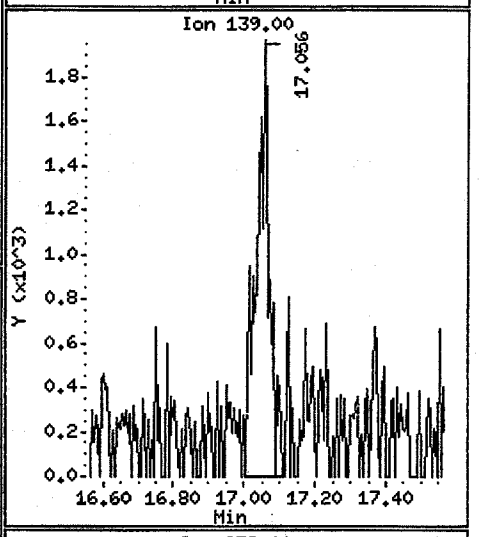


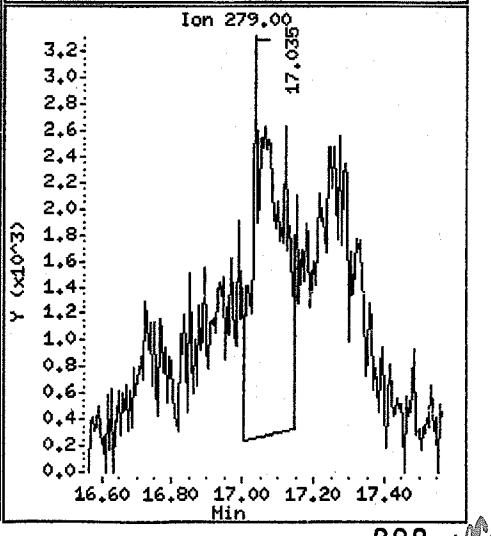












Data File: /chem/SM/MSN5973.i/1n030807.b/n6008.d

Date : 08-MAR-2007 11:21

Client ID: WFF1-MW2-0.5-2

Instrument: MSN5973.i

Sample Info: 680-24460-A-2-C

Volume Injected (uL): 1.0

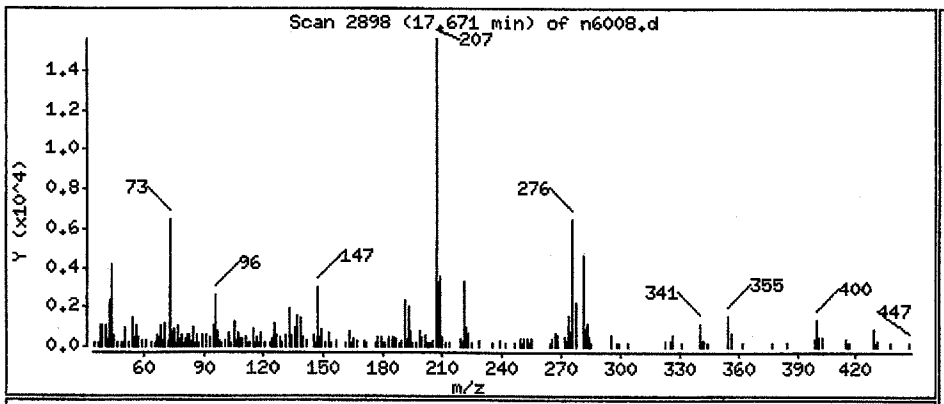
Operator:

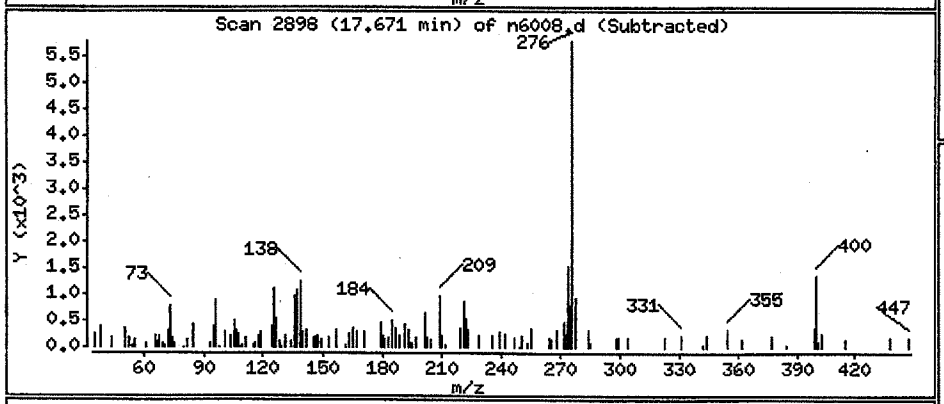
Column phase: SLB-5MS

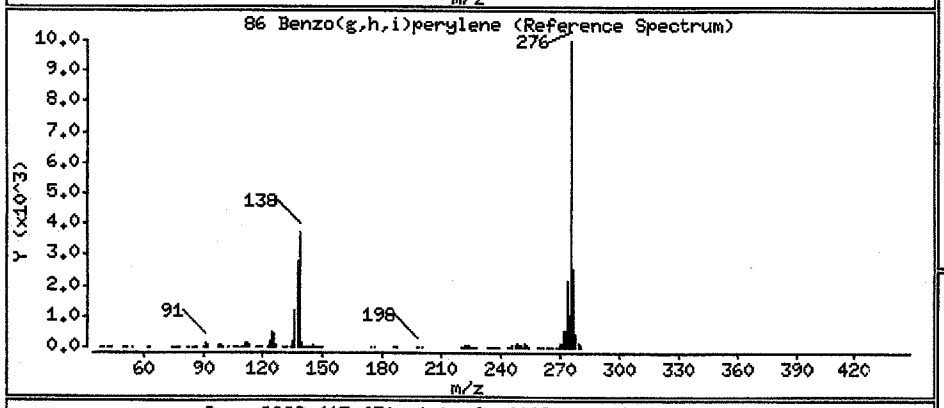
Column diameter: 0.25

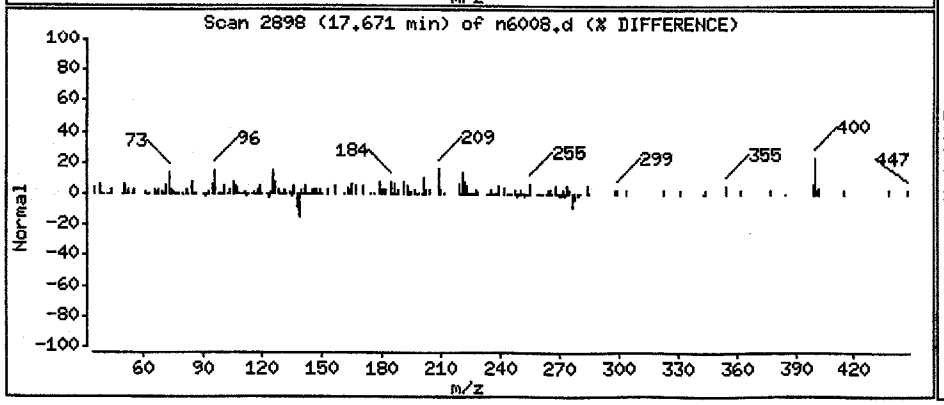
86 Benzo(g,h,i)perylene

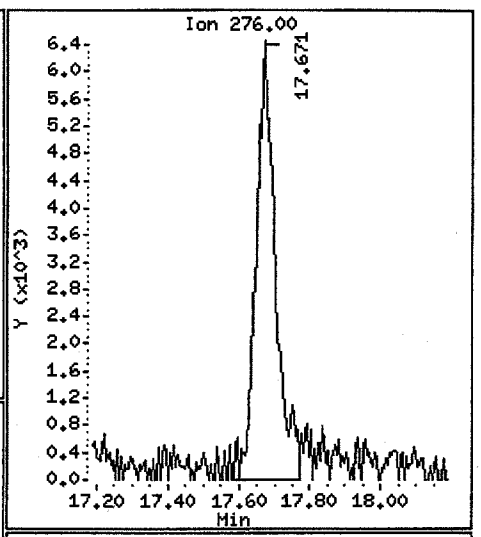
Concentration: 31 ug/Kg

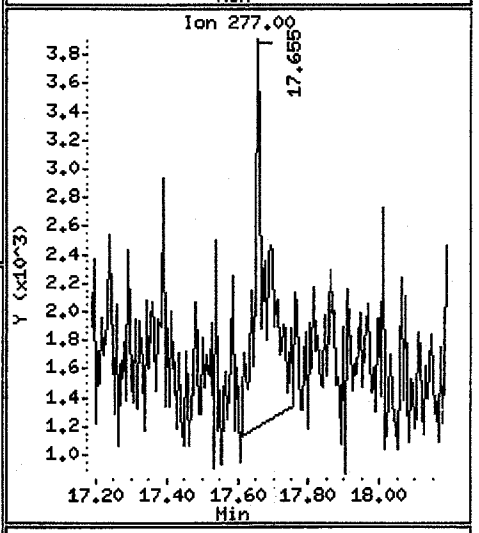


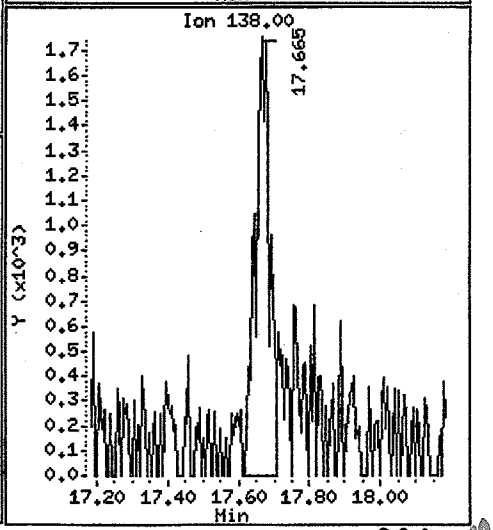












STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030507.b/n5957.d
Lab Smp Id: 680-24460-A-3-B Client Smp ID: WFF1-MW2-19-21
Inj Date : 05-MAR-2007 11:48
Operator : Inst ID: MSN5973.i
Smp Info : 680-00708313= 24460-3 68649
Misc Info : 680-24460-A-3-B
Comment :
Method : /chem/SM/MSN5973.i/1n030507.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 11:54 johnsonl Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52 Cal File: nq311.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.03000	Weight Extracted
M	16.21339	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
*	1 1,4-Dichlorobenzene-d4	152	4.580	4.582	(1.000)	279201	40.0000	
$	5 2-Fluorophenol	112	3.458	3.455	(0.755)	517123	45.7616	1800
$	6 Phenol-d5	99	4.200	4.203	(0.917)	758515	47.0614	1900
*	20 Naphthalene-d8	136	5.921	5.923	(1.000)	1134822	40.0000	
$	21 Nitrobenzene-d5	82	5.135	5.138	(0.867)	265459	17.8538	710
*	36 Acenaphthene-d10	164	7.993	7.996	(1.000)	732904	40.0000	
$	40 2-Fluorobiphenyl	172	7.160	7.163	(0.896)	582416	22.7244	900

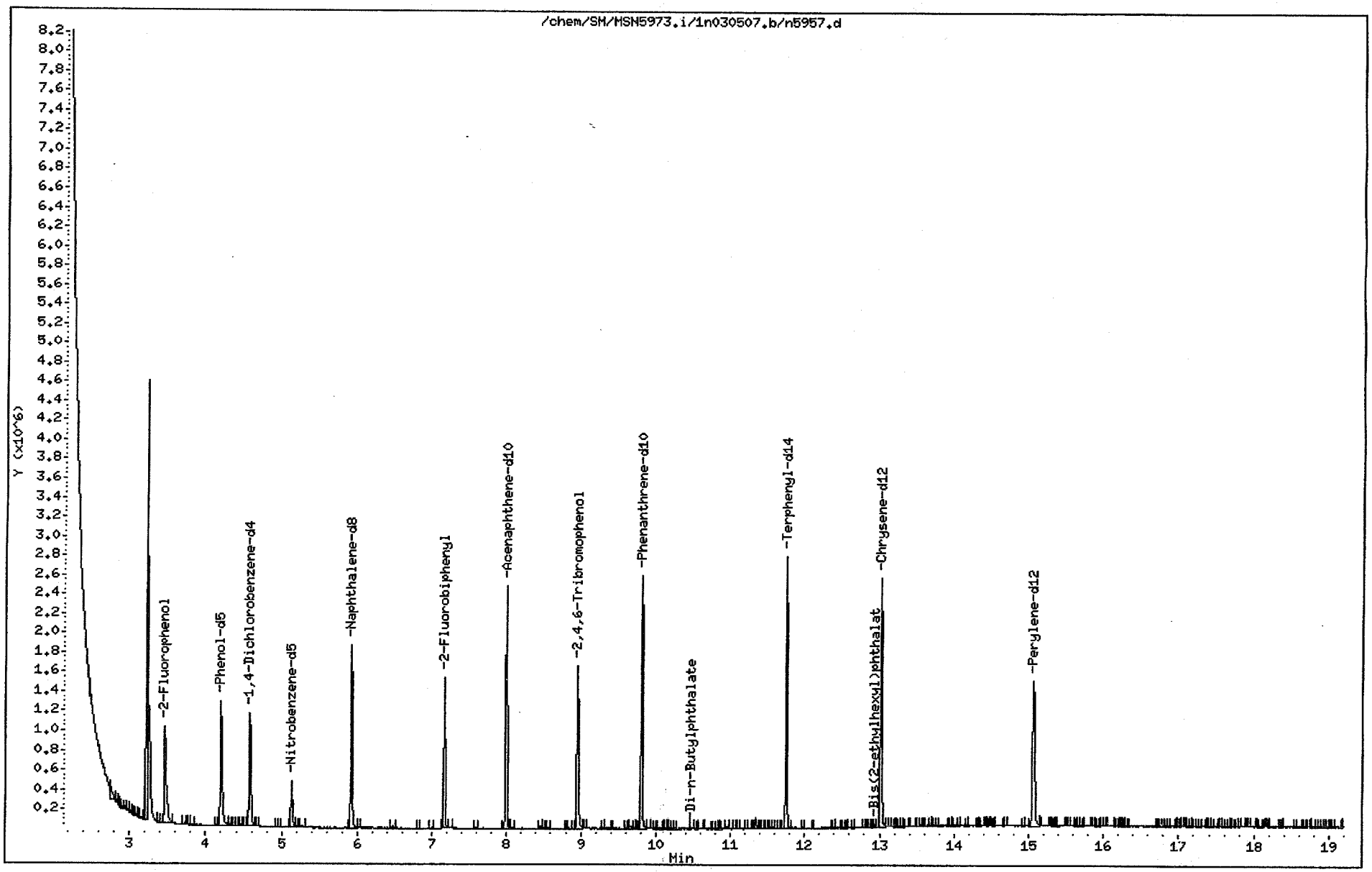
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
$	57 2,4,6-Tribromophenol	329	8.960	8.963	(1.121)	277757	64.1883	2600
*	58 Phenanthrene-d10	188	9.810	9.812	(1.000)	1300972	40.0000	
	68 Di-n-Butylphthalate	149	10.483	10.480	(1.069)	6891	0.15551	6.2(a)
*	71 Chrysene-d12	240	13.015	13.023	(1.000)	1187767	40.0000	
$	73 Terphenyl-d14	244	11.749	11.752	(0.903)	1047873	35.0380	1400
	77 Bis(2-ethylhexyl)phthalate	149	12.940	12.948	(0.994)	7290	0.28474	11(a)
*	79 Perylene-d12	264	15.061	15.069	(1.000)	971840	40.0000	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/SM/MSN5973.i/1n030507.b/n5957.d
Date : 05-MAR-2007 11:48
Client ID: WFF1-MW2-19-21
Sample Info: 680-00708313= 24460-3 68649
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25



Data File: /chem/SM/MSN5973.i/1n030507.b/n5957.d

Date : 05-MAR-2007 11:48

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-00708313= 24460-3 68649

Volume Injected (uL): 1.0

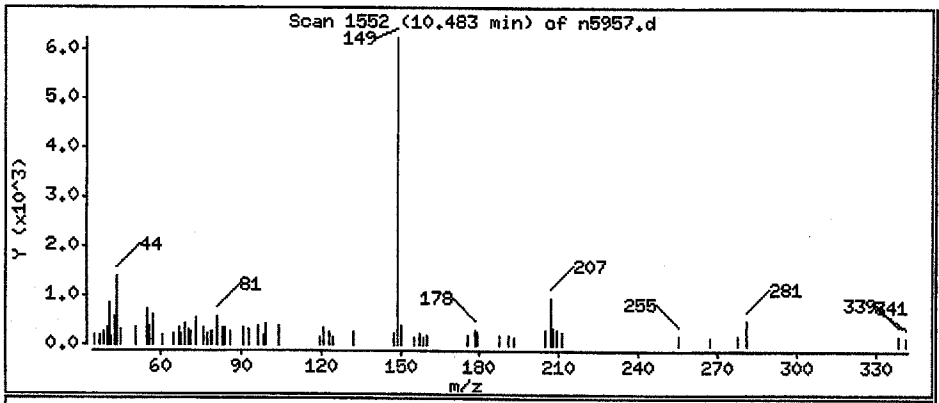
Operator:

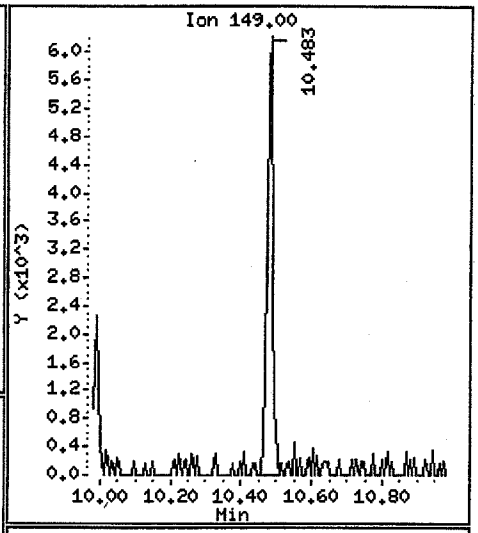
Column phase: SLB-5MS

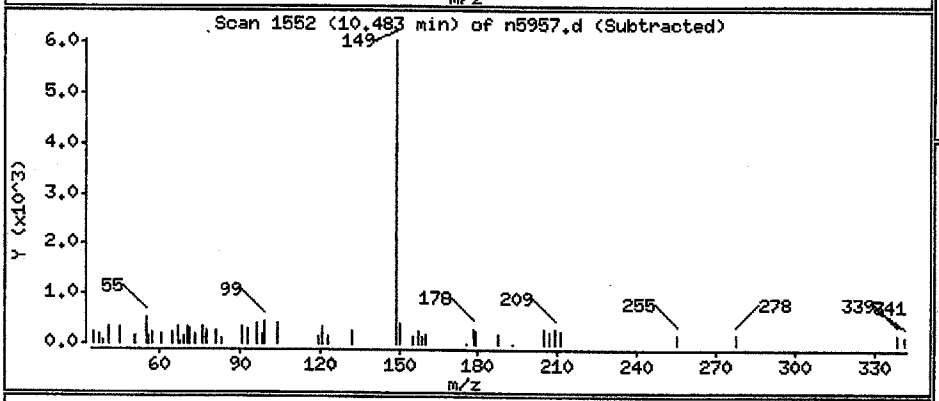
Column diameter: 0.25

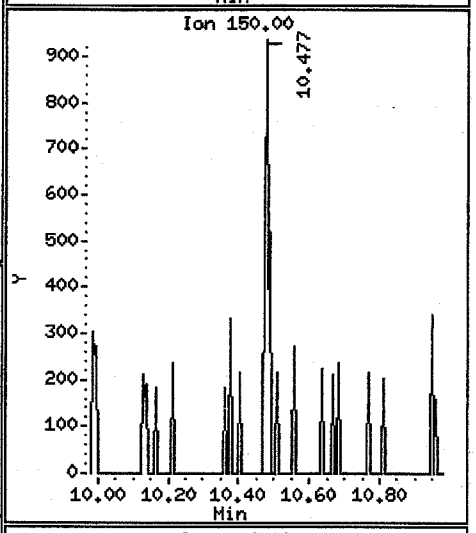
68 Di-n-Butylphthalate

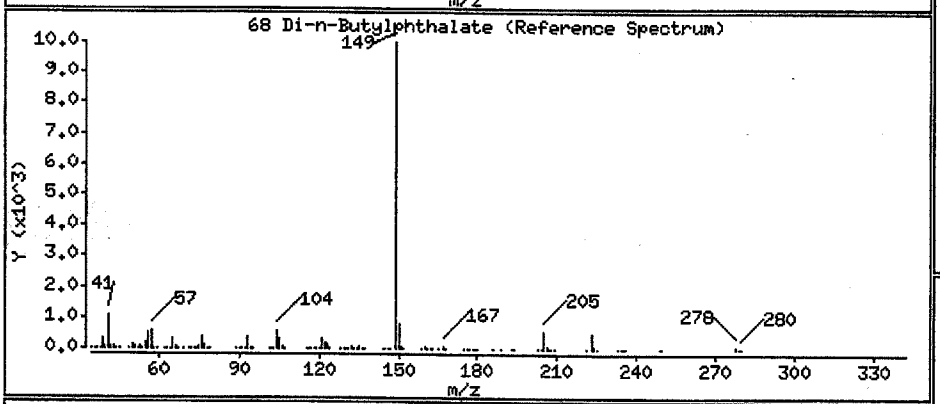
Concentration: 6.2 ug/Kg

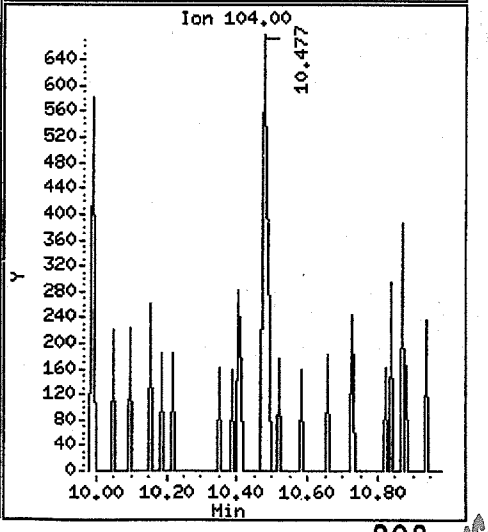


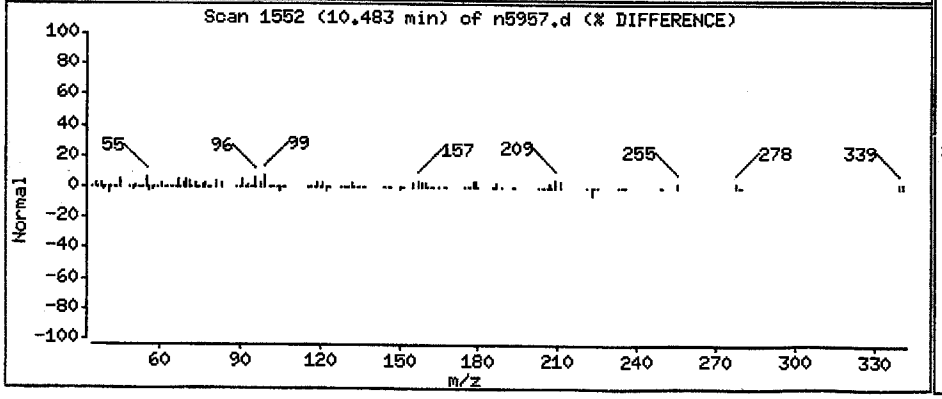












Data File: /chem/SM/MSN5973.i/1n030507.b/n5957.d

Date : 05-MAR-2007 11:48

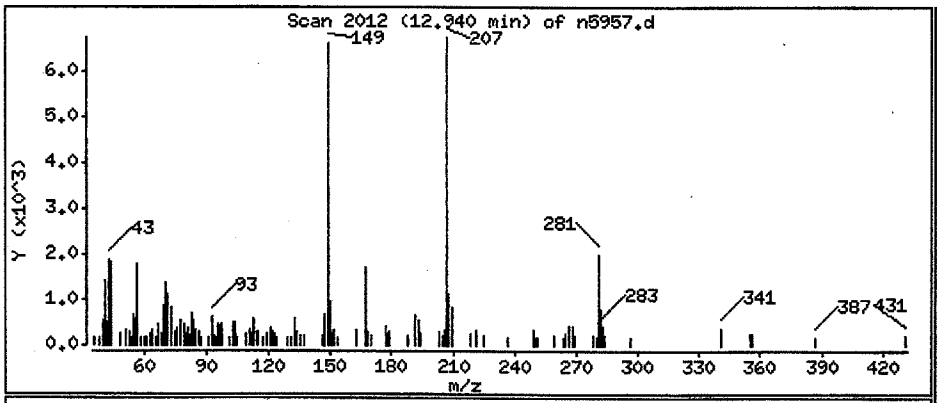
Client ID: WFF1-MW2-19-21 Instrument: MSN5973.i

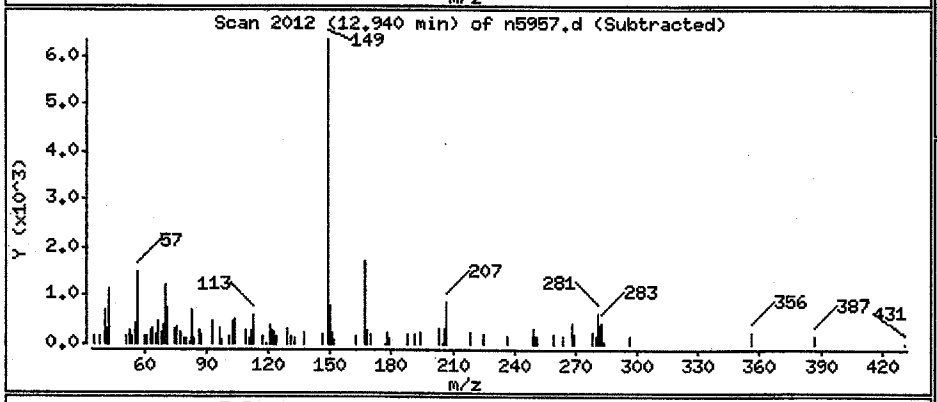
Sample Info: 680-00708313= 24460-3 68649

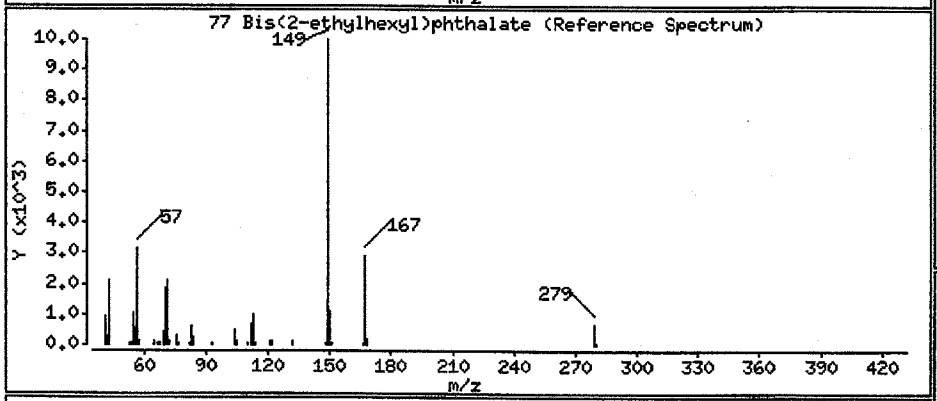
Volume Injected (uL): 1.0 Operator:

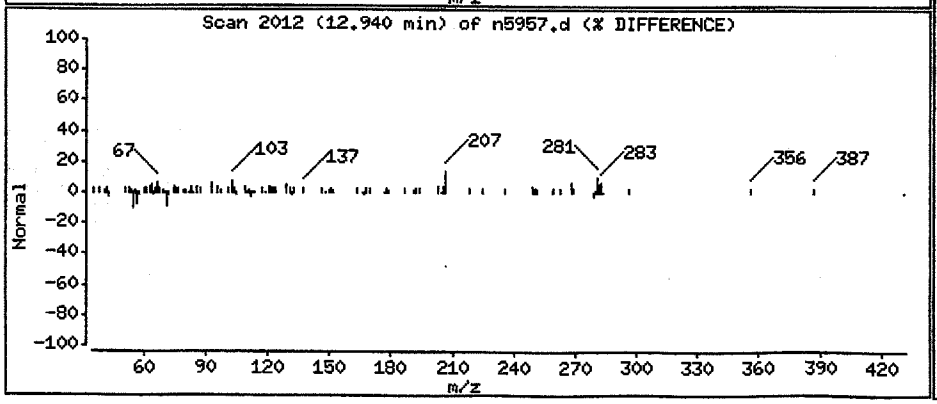
Column phase: SLB-5MS Column diameter: 0.25

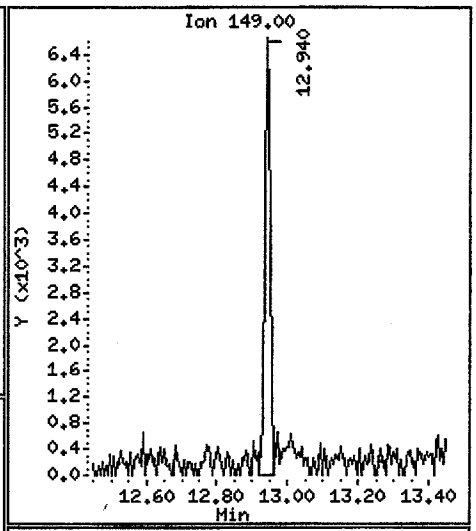
77 Bis(2-ethylhexyl)phthalate Concentration: 11 ug/Kg

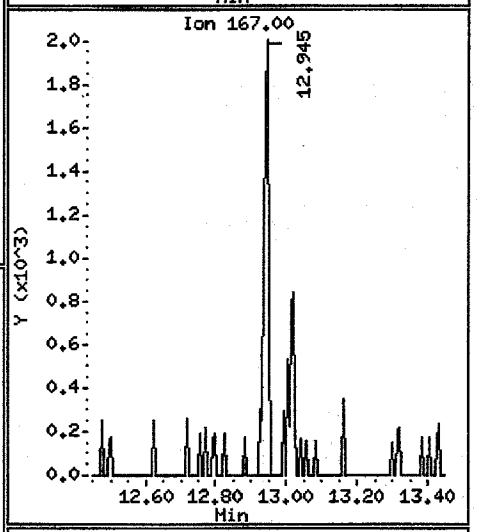


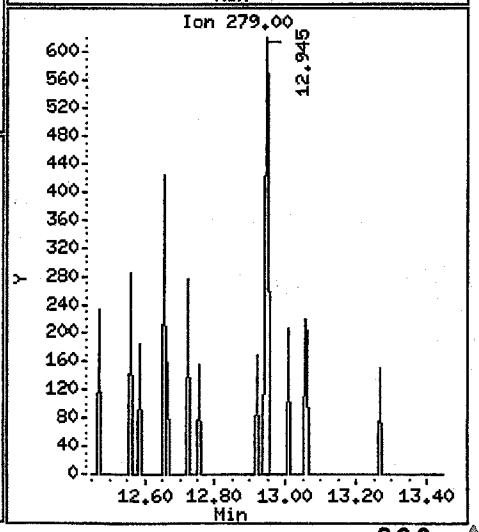












STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030807.b/n6009.d
Lab Smp Id: 680-24460-A-3-CRE Client Smp ID: WFF1-MW2-19-21
Inj Date : 08-MAR-2007 12:12 3/14/07
Operator : Inst ID: MSN5973.i
Smp Info : 680-24460-A-3-C
Misc Info : 680-24460-A-3-C
Comment :
Method : /chem/SM/MSN5973.i/1n030807.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 12:01 johnsonl Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52 Cal File: nq311.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.27000	Weight Extracted
M	16.21339	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

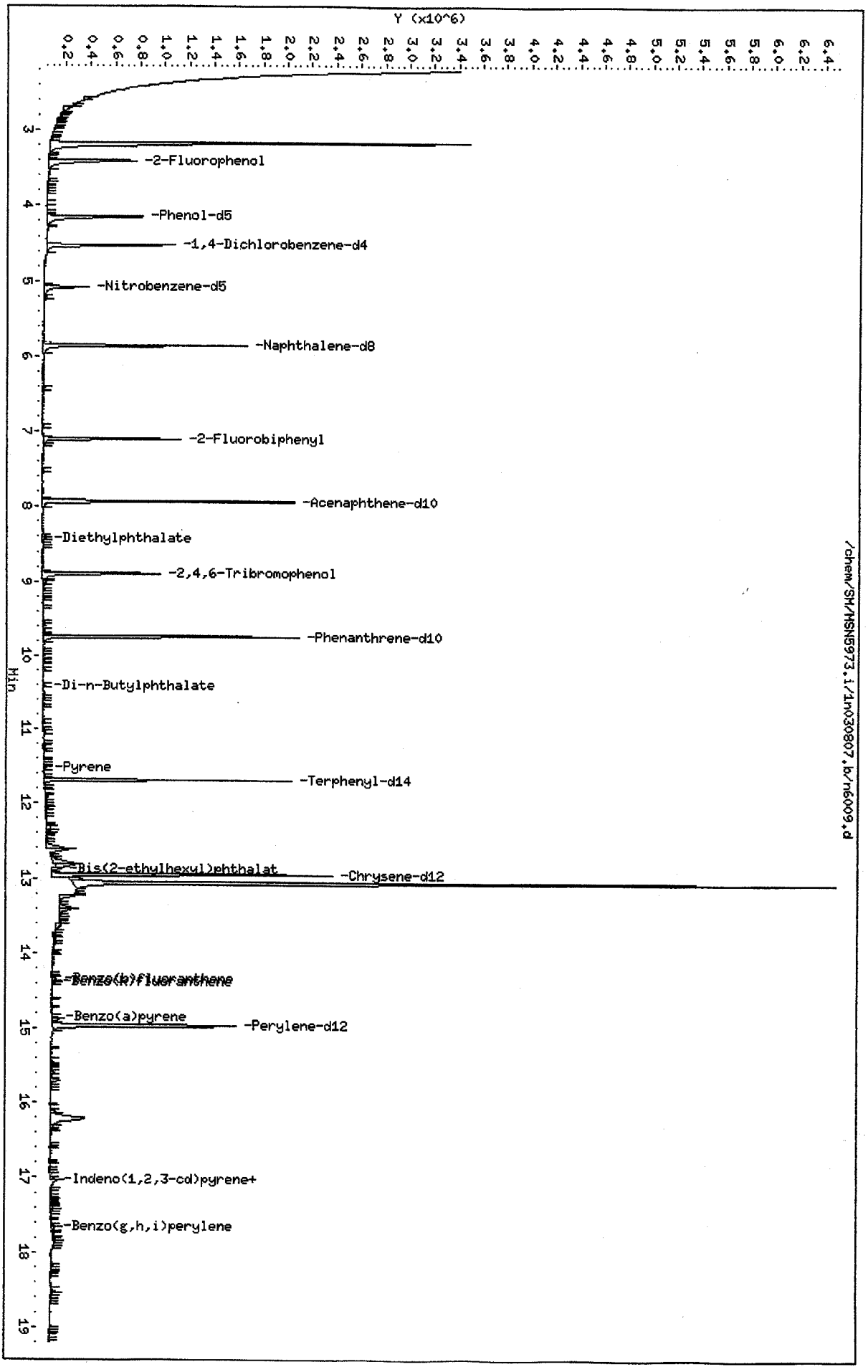
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.525	4.528	(1.000)	238895	40.0000	
$ 5 2-Fluorophenol	112	3.408	3.406	(0.753)	395308	40.8839	1600
$ 6 Phenol-d5	99	4.146	4.149	(0.916)	520177	37.7191	1500(R)
* 20 Naphthalene-d8	136	5.860	5.864	(1.000)	986315	40.0000	
$ 21 Nitrobenzene-d5	82	5.080	5.084	(0.867)	226630	17.5373	690
* 36 Acenaphthene-d10	164	7.928	7.937	(1.000)	630835	40.0000	
$ 40 2-Fluorobiphenyl	172	7.100	7.109	(0.896)	453174	20.5426	810

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
53	Diethylphthalate	149	8.425	8.433	(1.063)	7694	0.32995	13(a)
$ 57	2,4,6-Tribromophenol	329	8.900	8.903	(1.123)	156283	41.9598	1700
* 58	Phenanthrene-d10	188	9.744	9.753	(1.000)	1100477	40.0000	
68	Di-n-Butylphthalate	149	10.423	10.426	(1.070)	10981	0.29297	12(a)
* 71	Chrysene-d12	240	12.949	12.964	(1.000)	1093854	40.0000	
72	Pyrene	202	11.528	11.532	(0.890)	10977	0.30788	12(a)
$ 73	Terphenyl-d14	244	11.689	11.692	(0.903)	763124	27.7075	1100
77	Bis(2-ethylhexyl)phthalate	149	12.885	12.894	(0.995)	17385	0.73735	29(a)
* 79	Perylene-d12	264	14.963	14.977	(1.000)	954825	40.0000	
81	Benzo(b)fluoranthene	252	14.360	14.363	(0.960)	16492	0.44161	17(a)
82	Benzo(k)fluoranthene	252	14.392	14.401	(0.962)	21970	0.59190	23(a)
83	Benzo(a)pyrene	252	14.867	14.881	(0.994)	26494	0.77008	30(a)
84	Indeno(1,2,3-cd)pyrene	276	17.026	17.045	(1.315)	39254	1.00365	40(a)
85	Dibenzo(a,h)anthracene	278	17.052	17.066	(1.140)	37169	1.12414	44(a)
86	Benzo(g,h,i)perylene	276	17.667	17.691	(1.181)	38011	1.16048	46(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.



Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d
Date : 08-MAR-2007 12:12
Client ID: WFF1-MW2-19-21
Sample Info: 680-24460-A-3-C
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25

Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

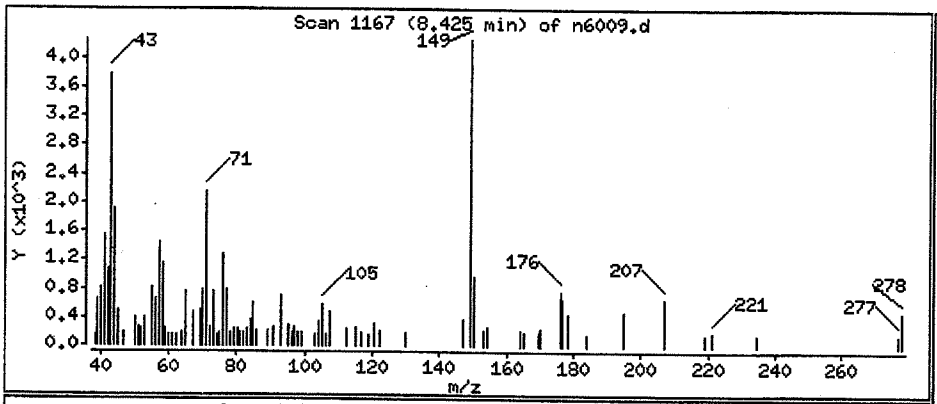
Operator:

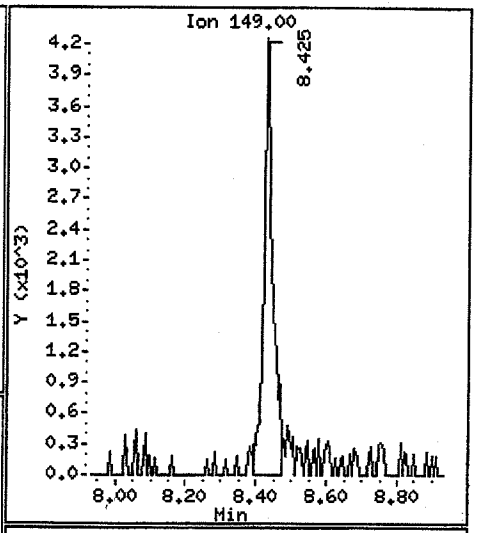
Column phase: SLB-5MS

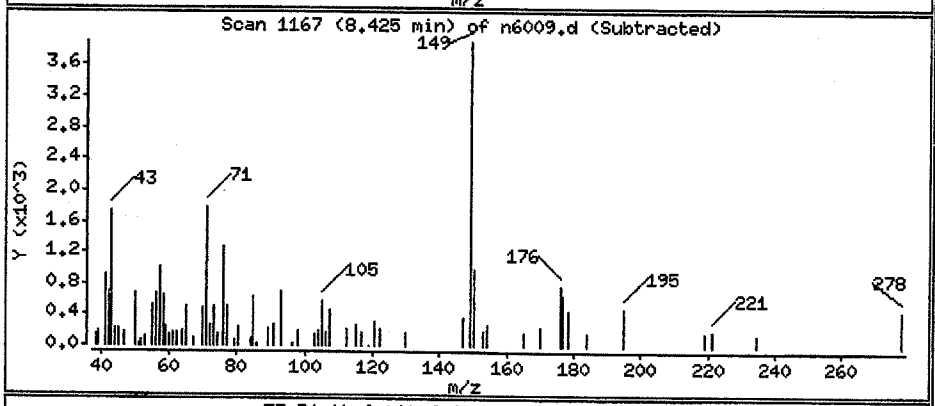
Column diameter: 0.25

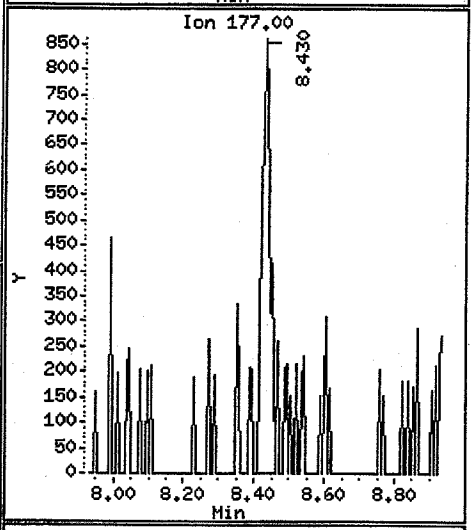
53 Diethylphthalate

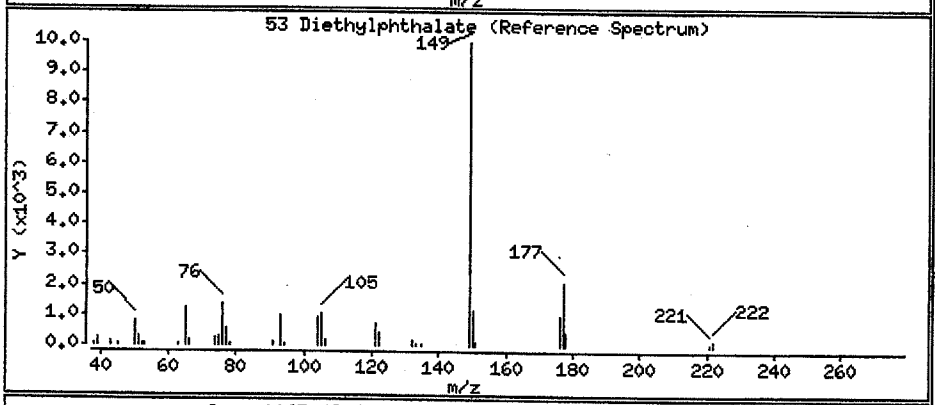
Concentration: 13 ug/Kg

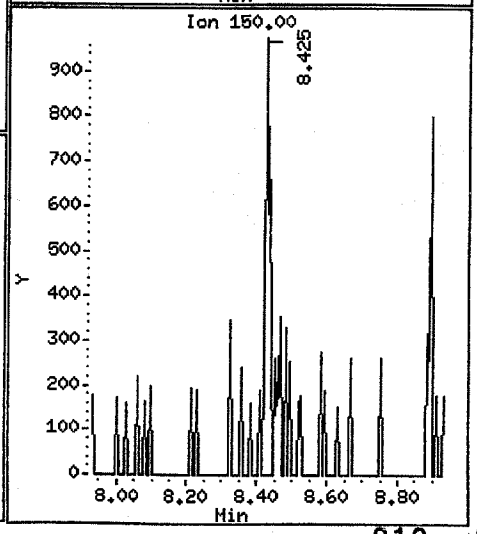


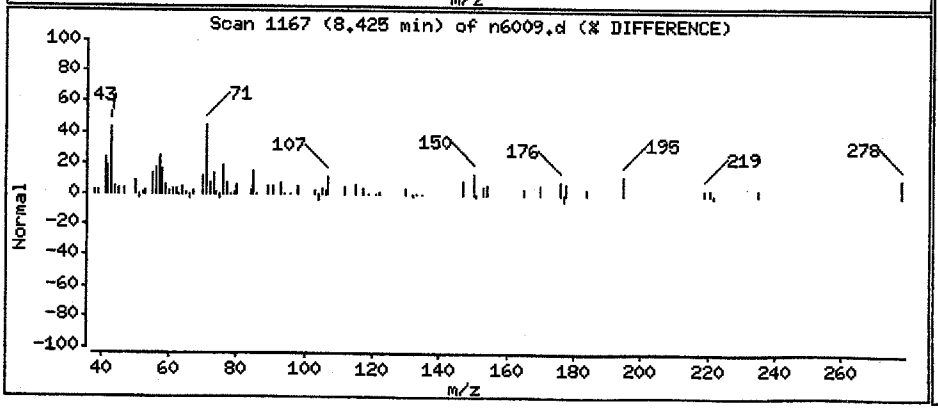












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

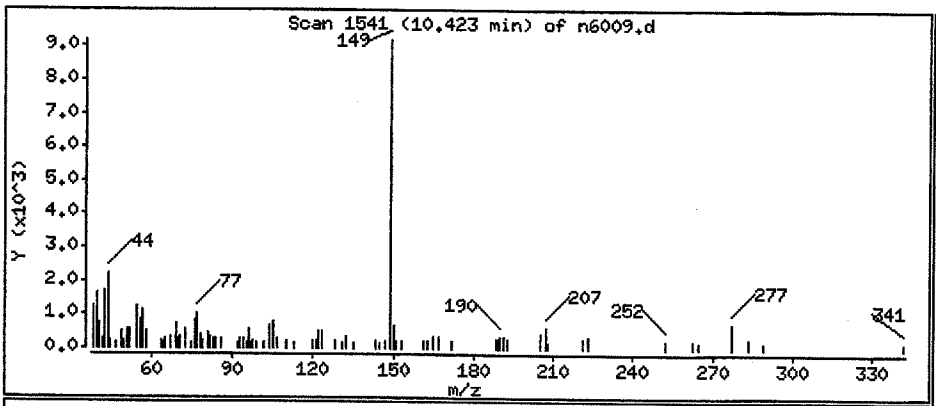
Operator:

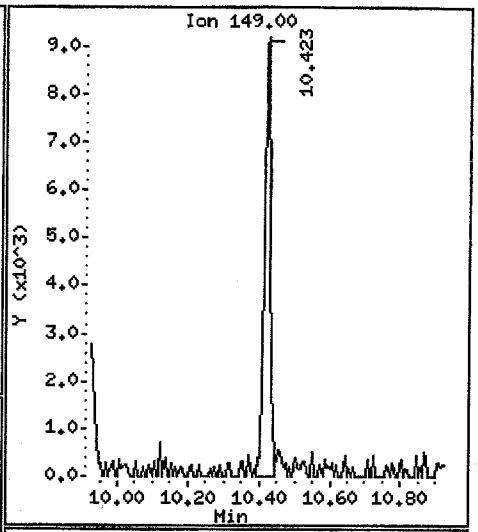
Column phase: SLB-5MS

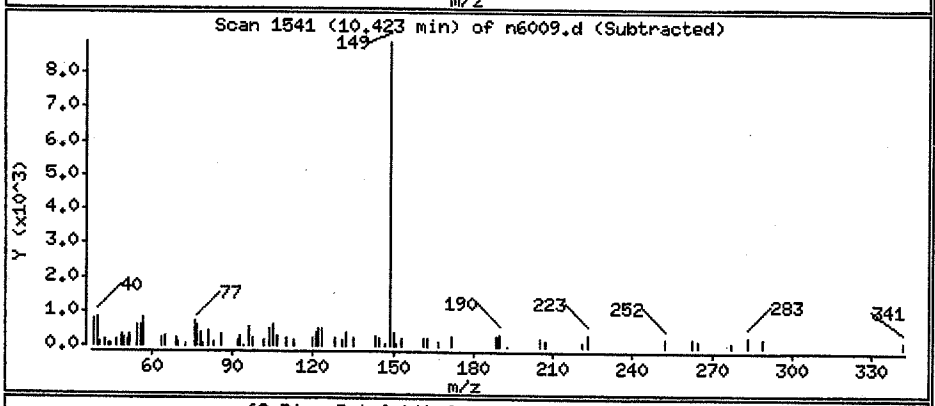
Column diameter: 0.25

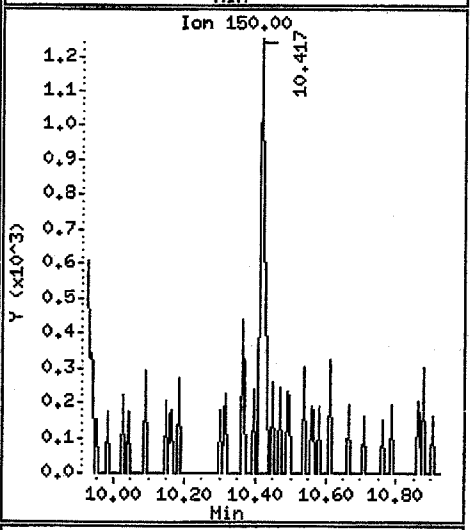
68 Di-n-Butylphthalate

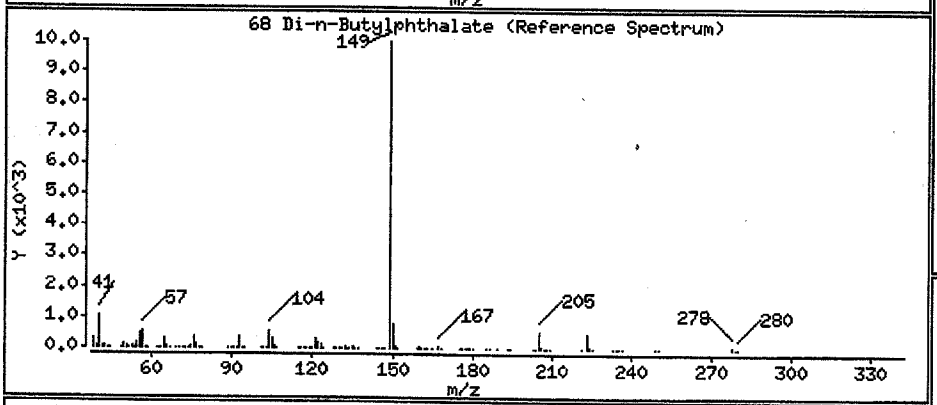
Concentration: 12 ug/Kg

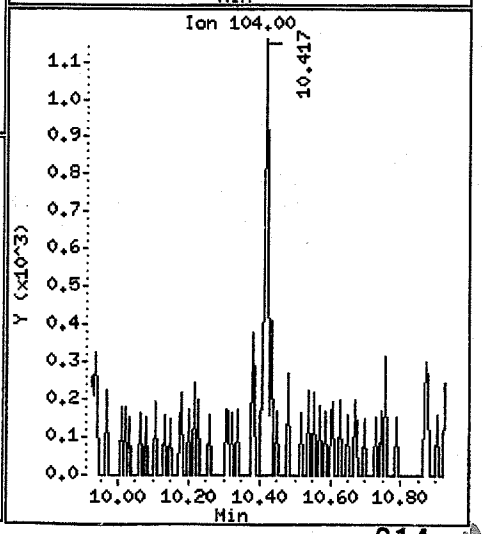


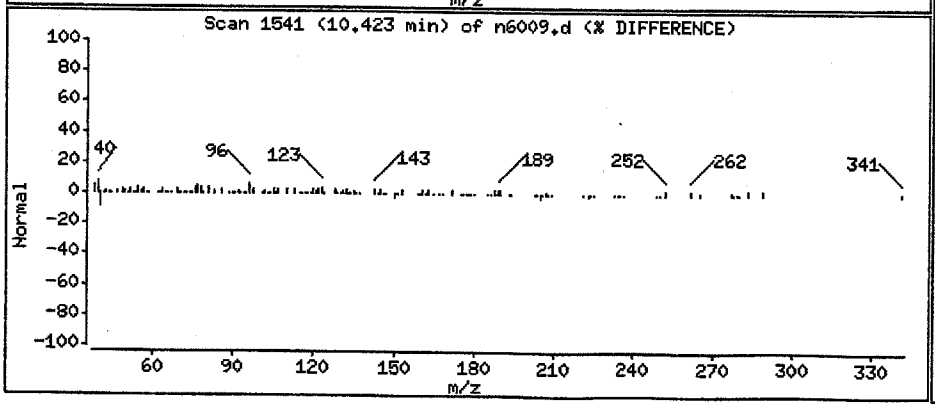












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

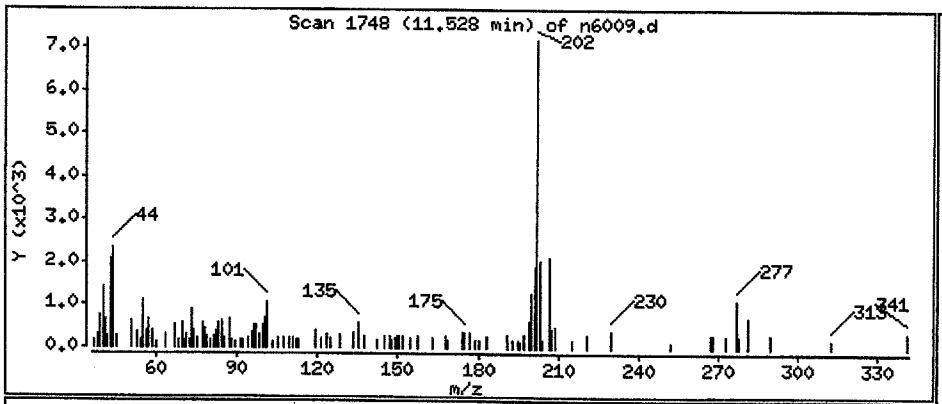
Operator:

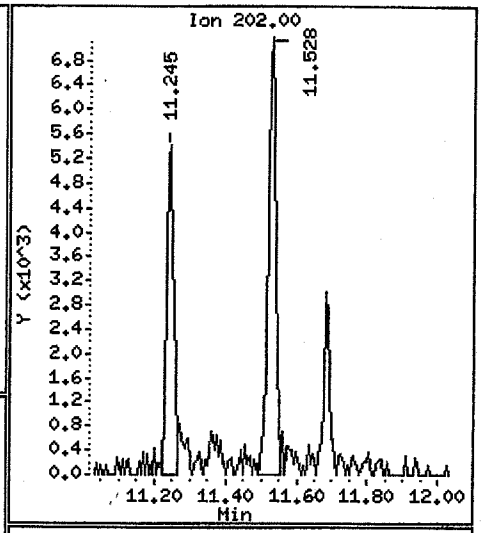
Column phase: SLB-5MS

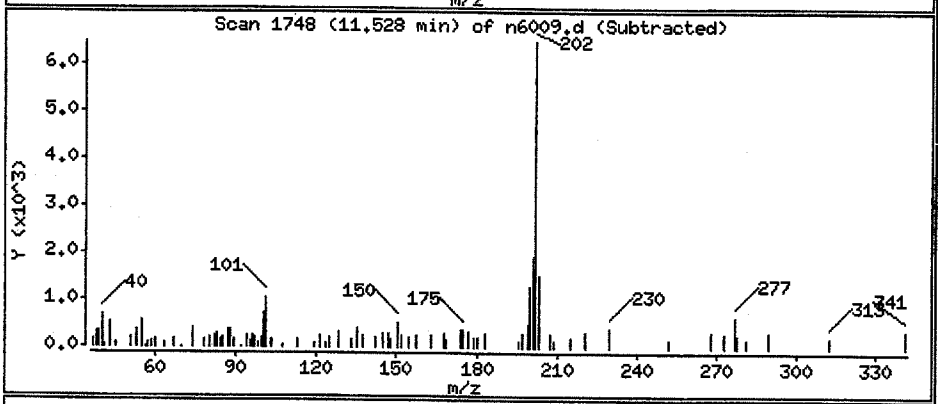
Column diameter: 0.25

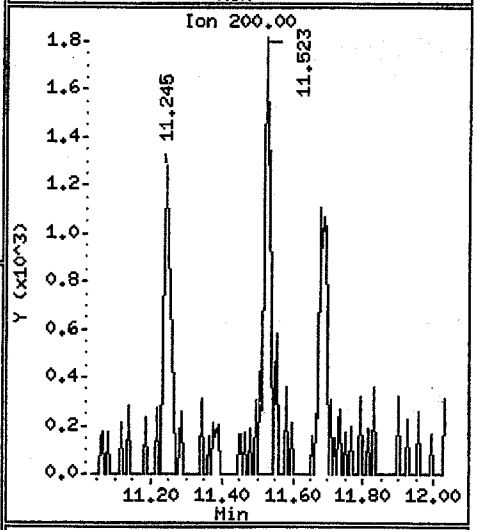
72 Pyrene

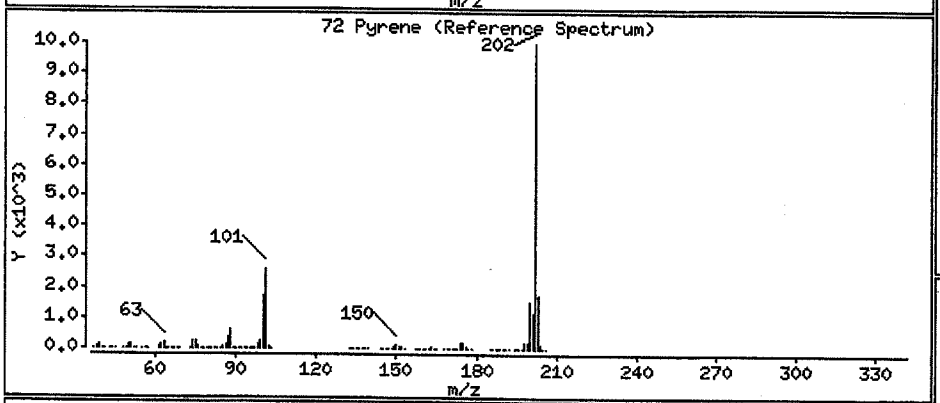
Concentration: 12 ug/Kg

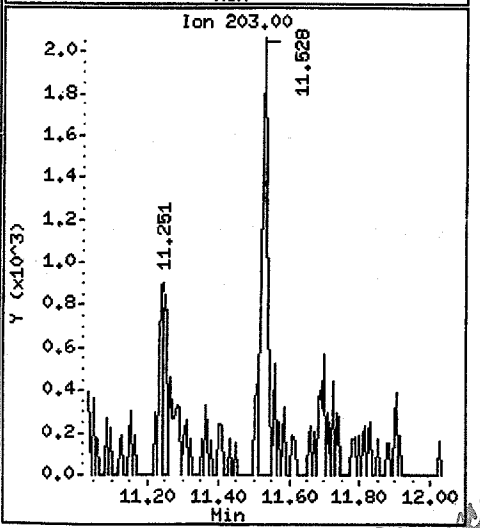


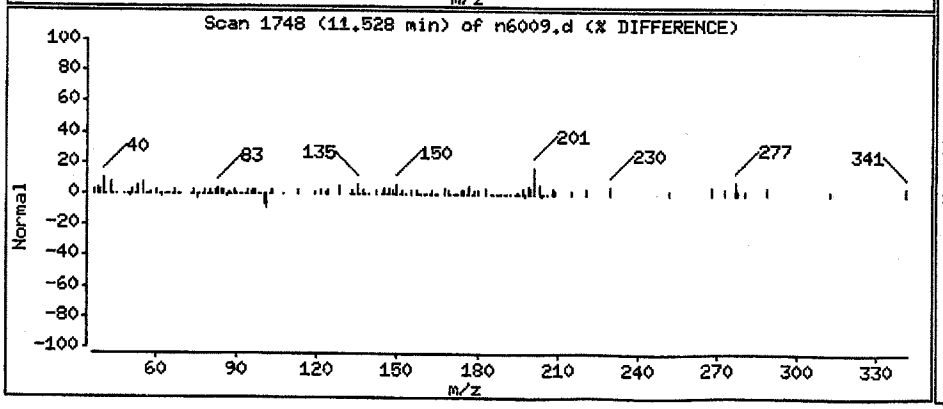












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

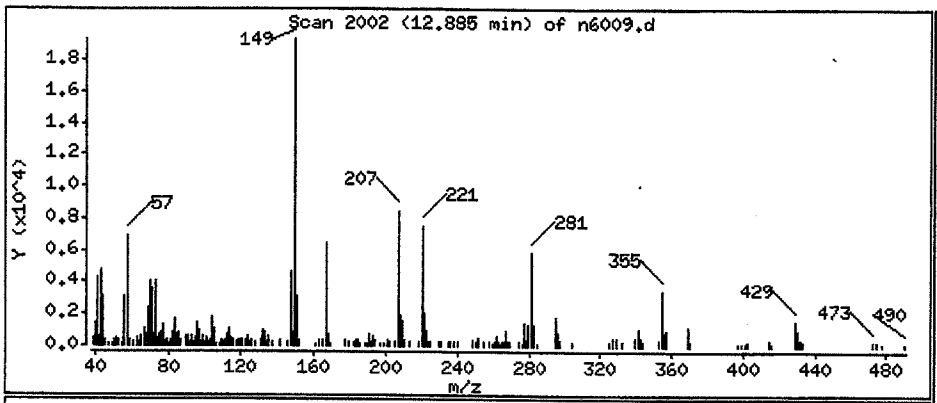
Operator:

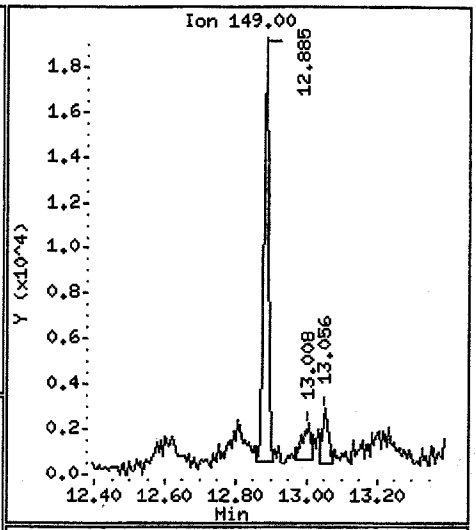
Column phase: SLB-5MS

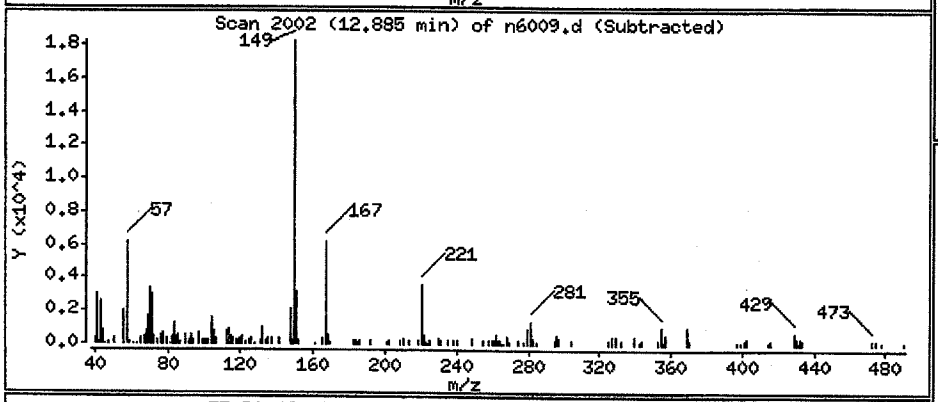
Column diameter: 0.25

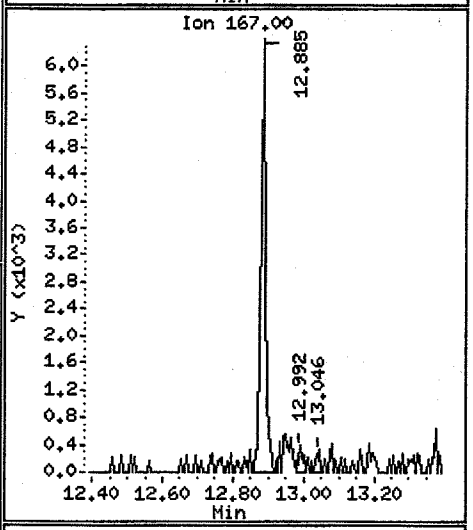
77 Bis(2-ethylhexyl)phthalate

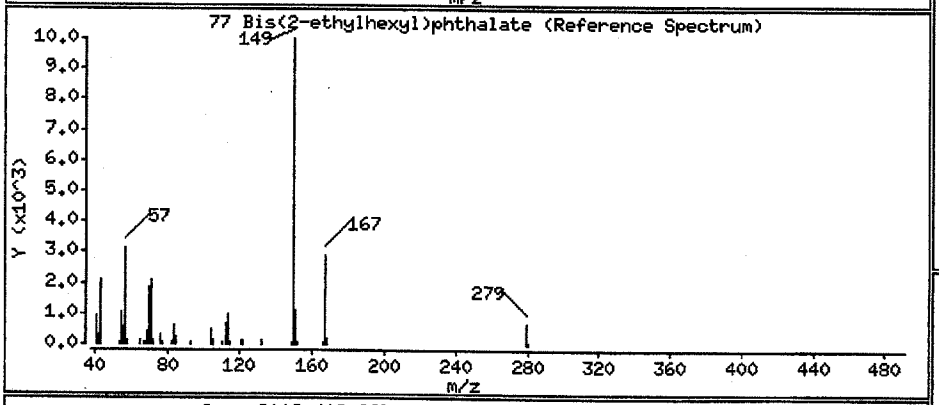
Concentration: 29 ug/Kg

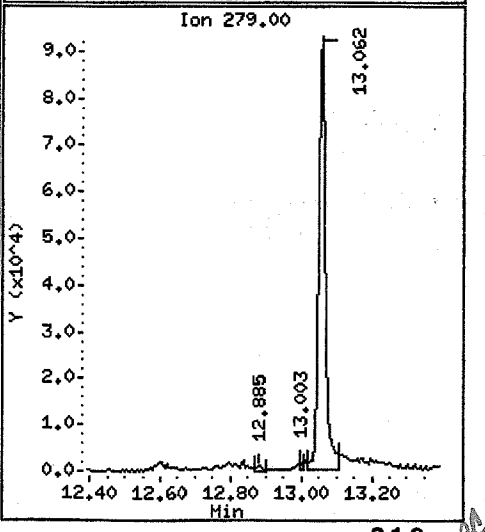


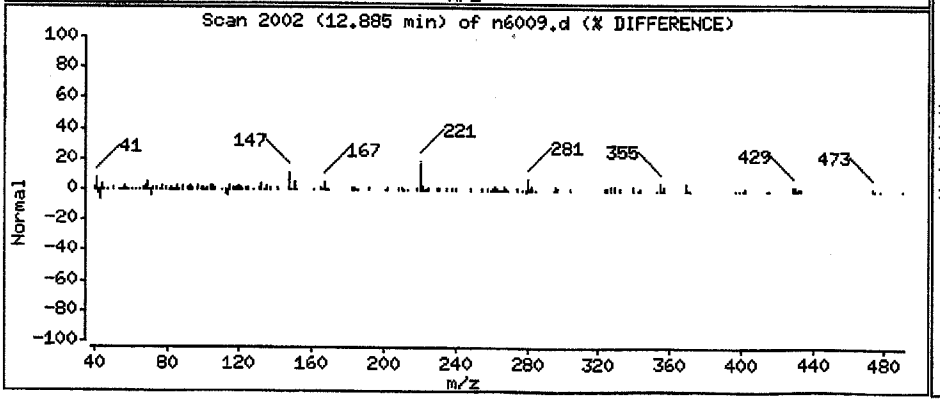












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

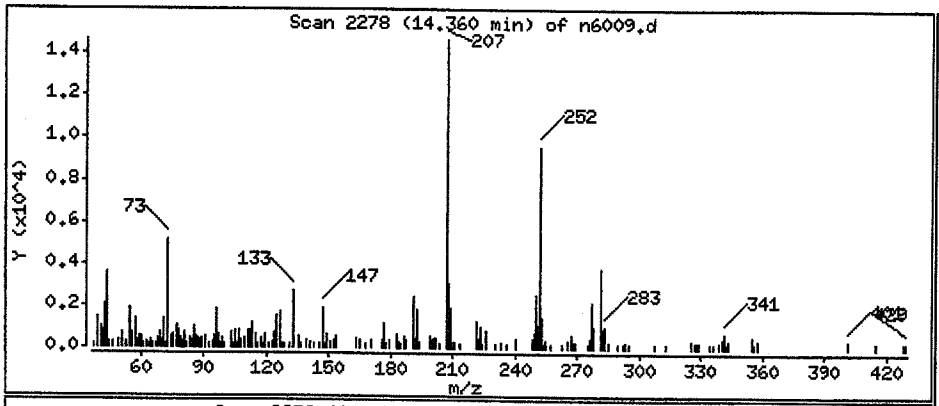
Operator:

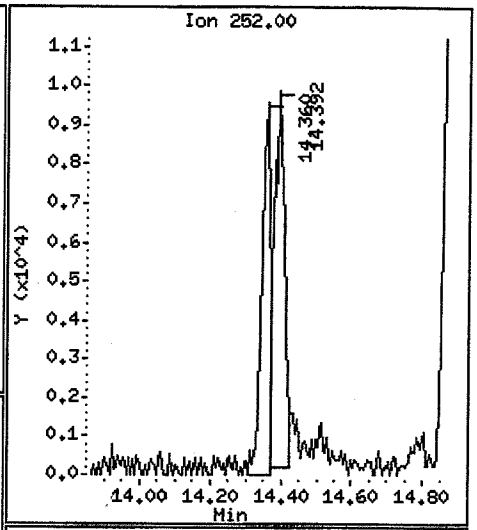
Column phase: SLB-5MS

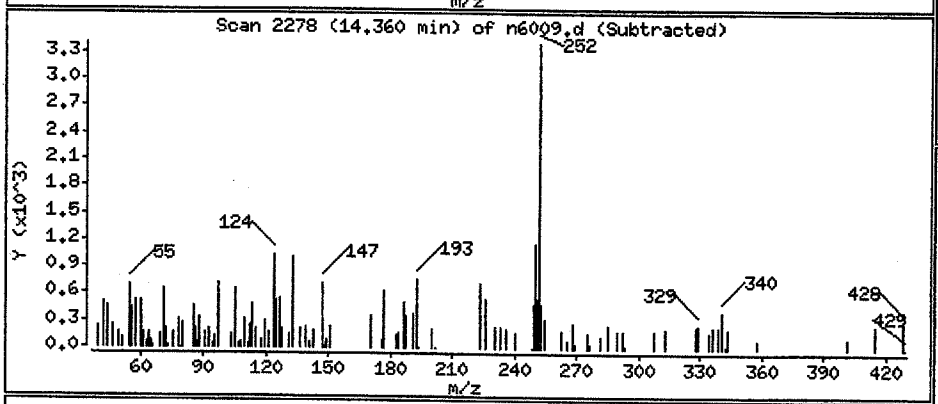
Column diameter: 0.25

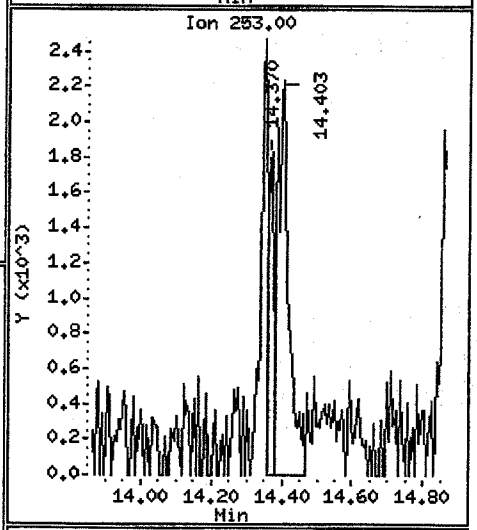
81 Benzo(b)fluoranthene

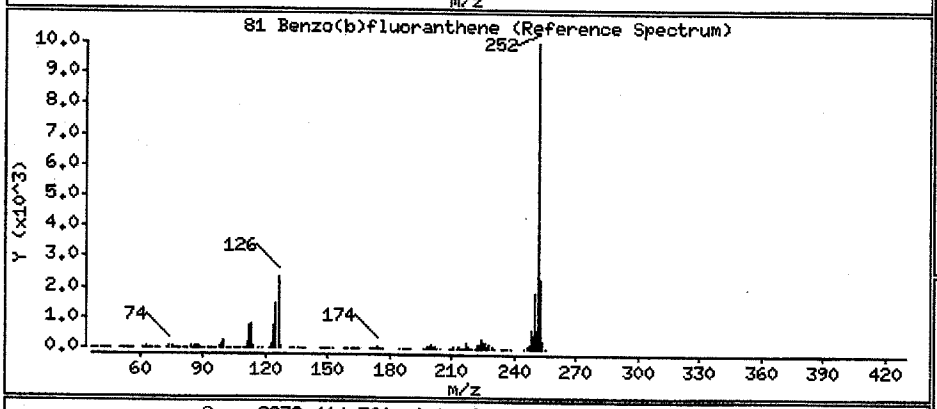
Concentration: 17 ug/Kg

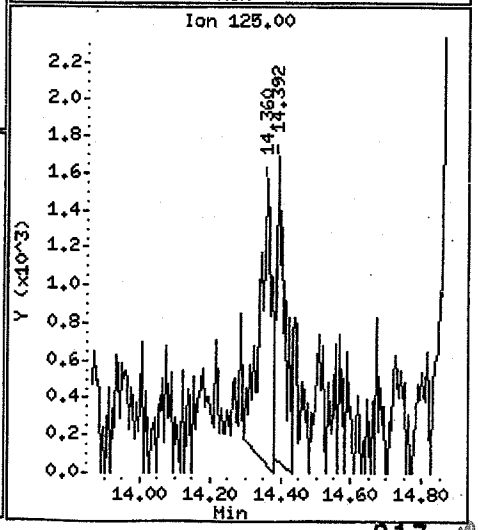


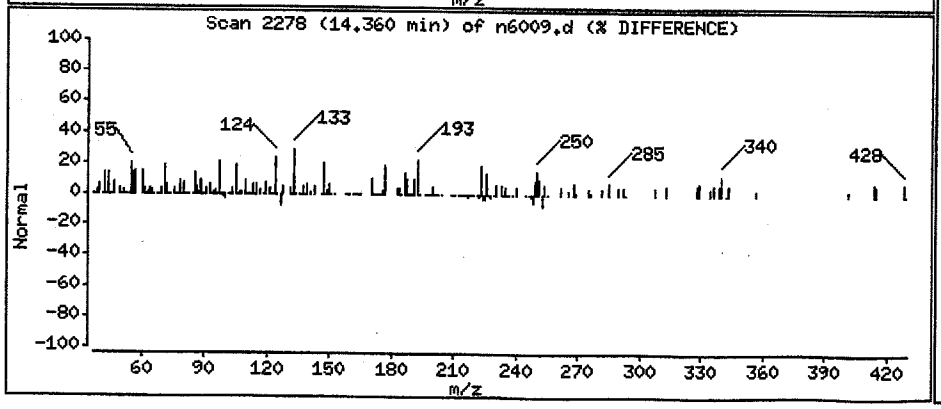












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

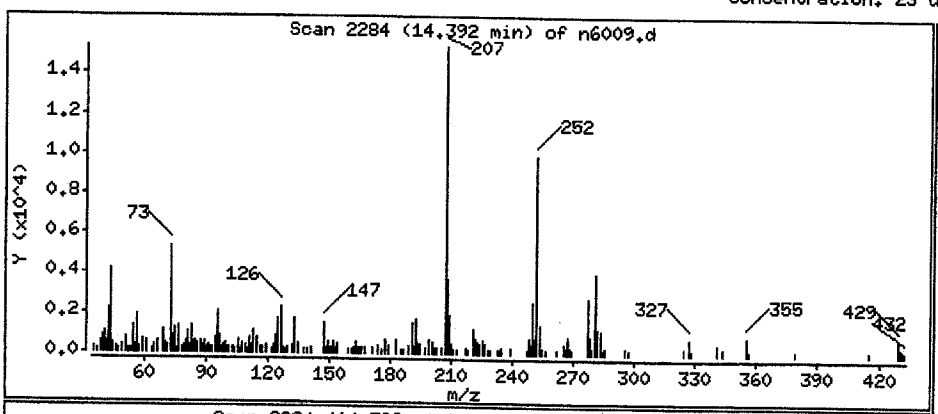
Operator:

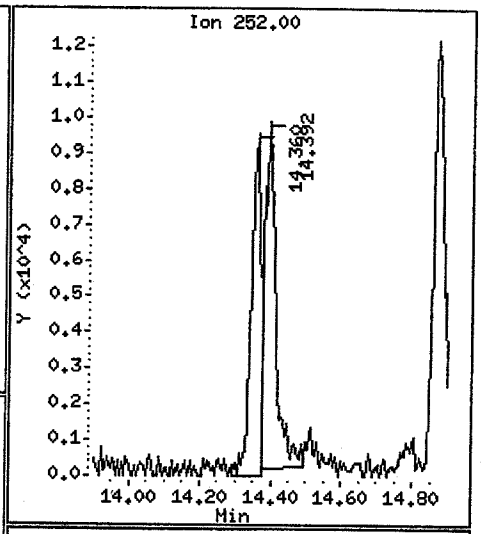
Column phase: SLB-5MS

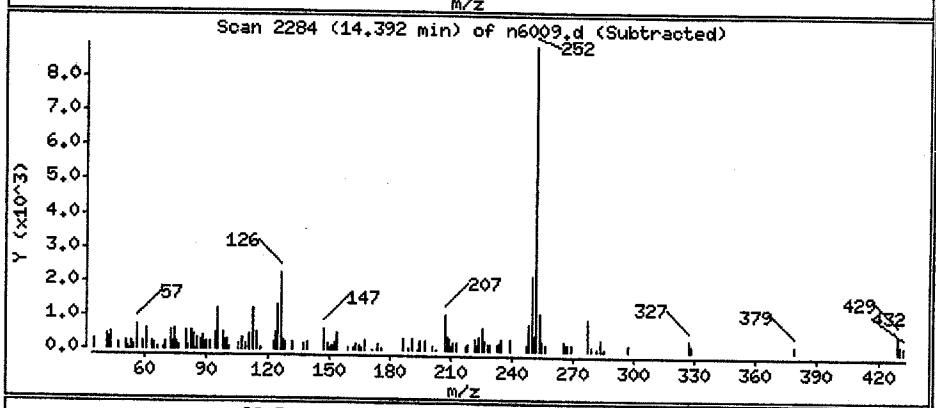
Column diameter: 0.25

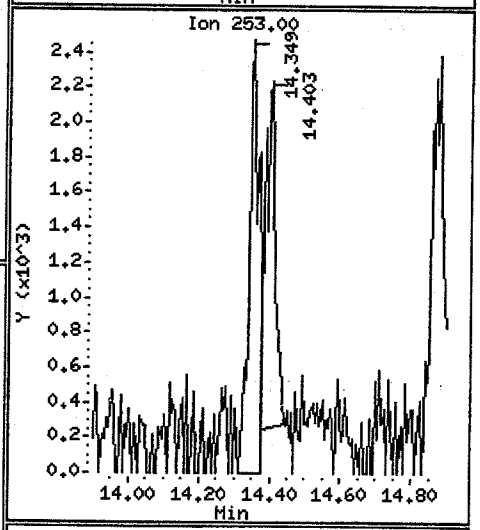
82 Benzo(k)fluoranthene

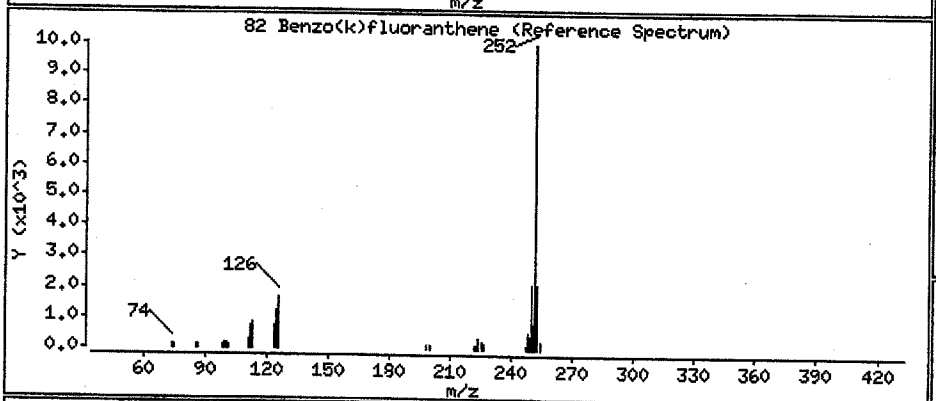
Concentration: 23 ug/Kg

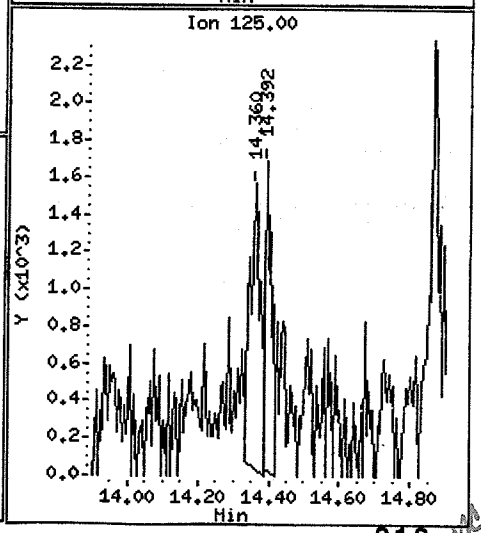


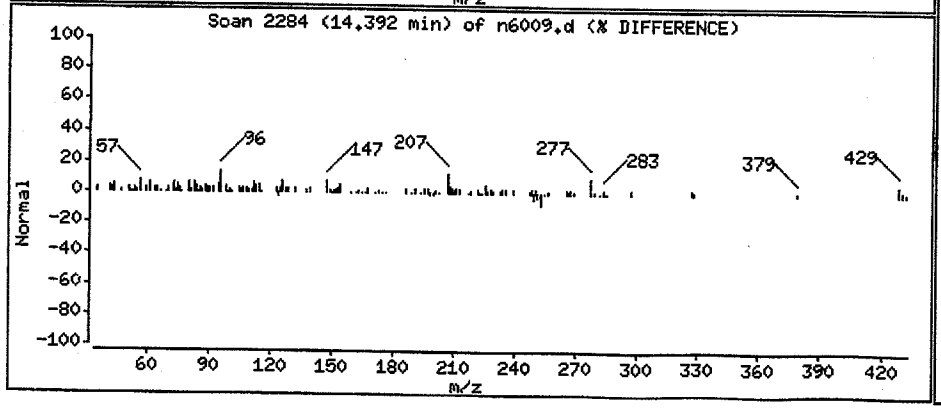












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

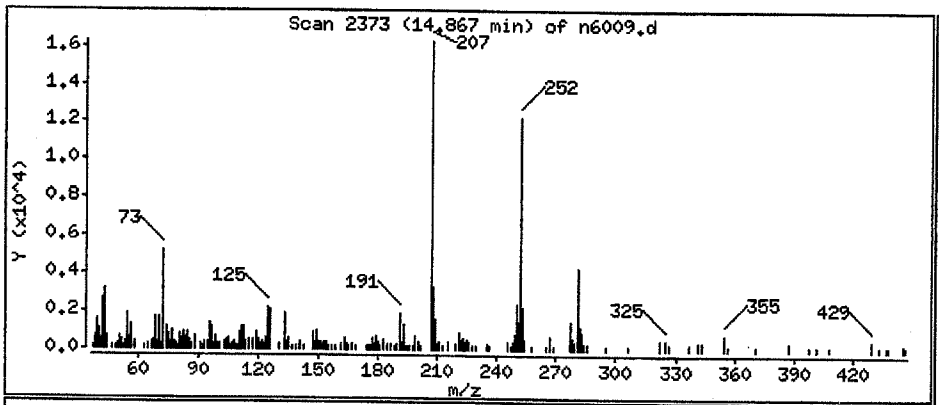
Operator:

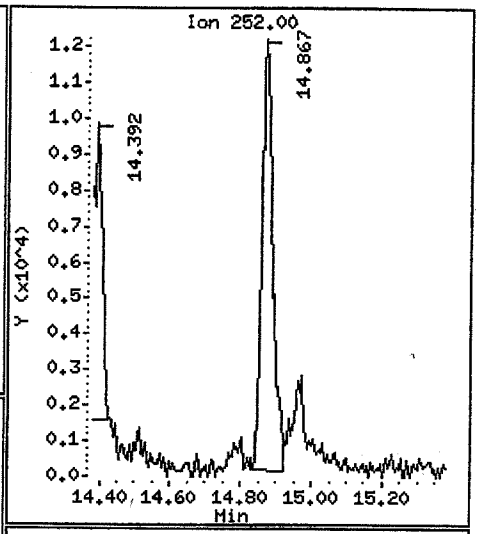
Column phase: SLB-5MS

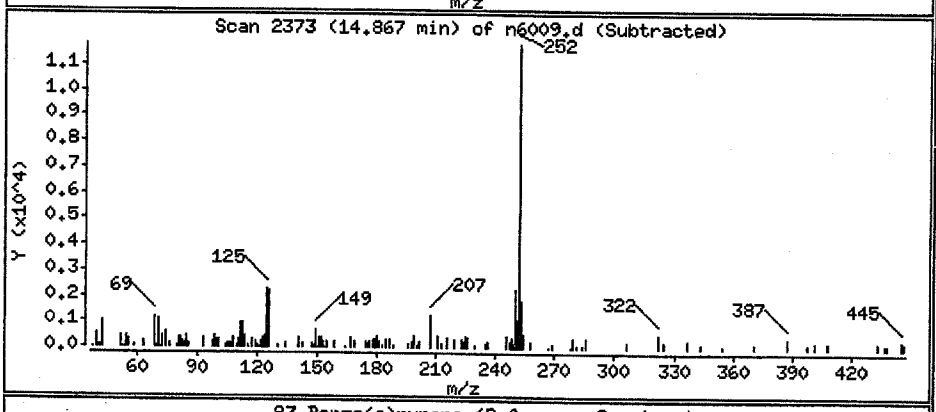
Column diameter: 0.25

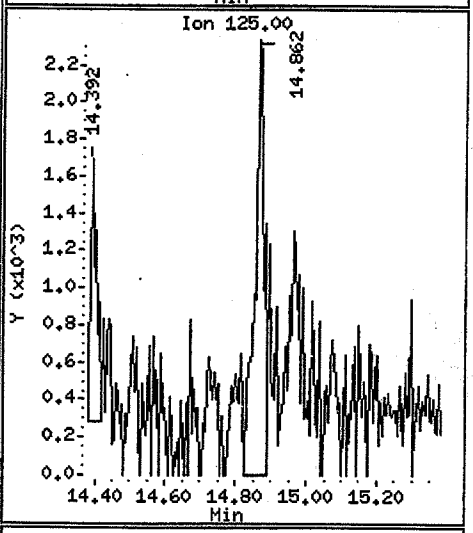
83 Benzo(a)pyrene

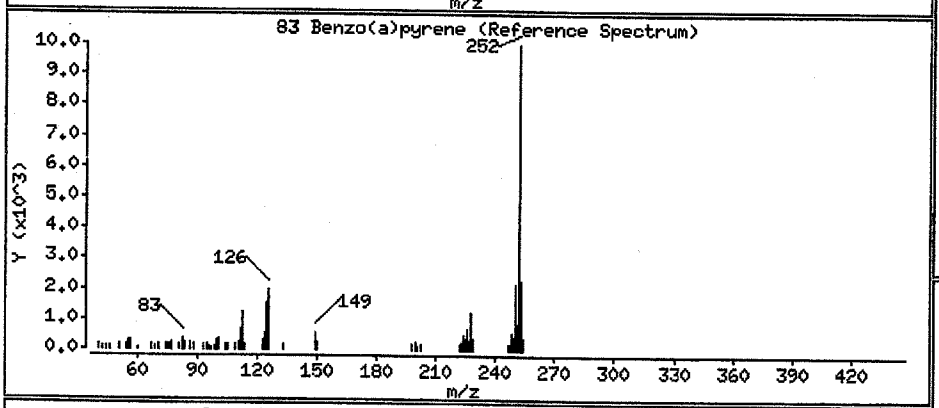
Concentration: 30 ug/Kg

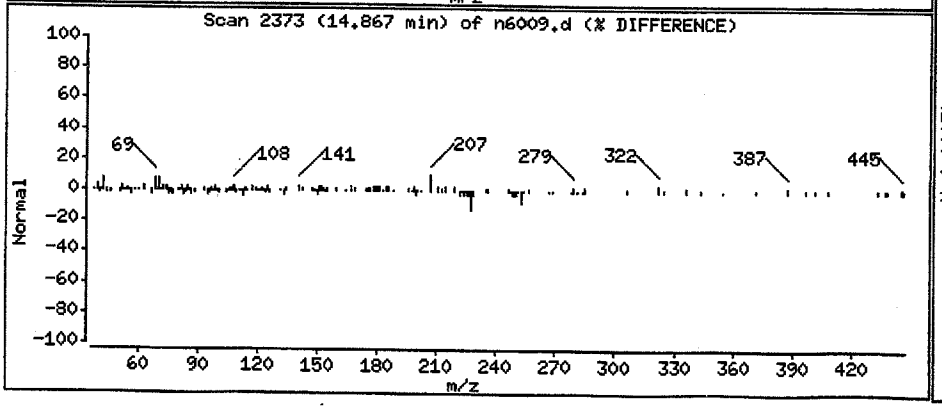


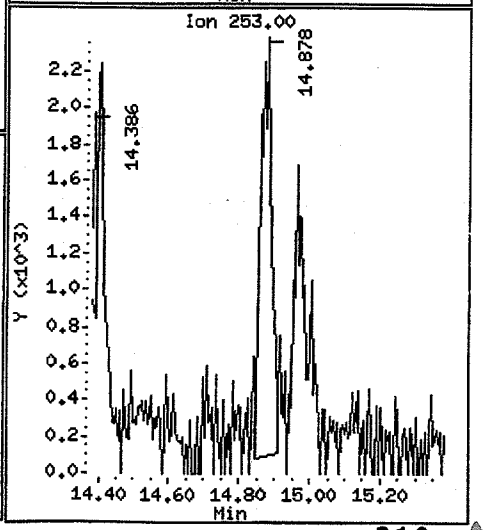












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

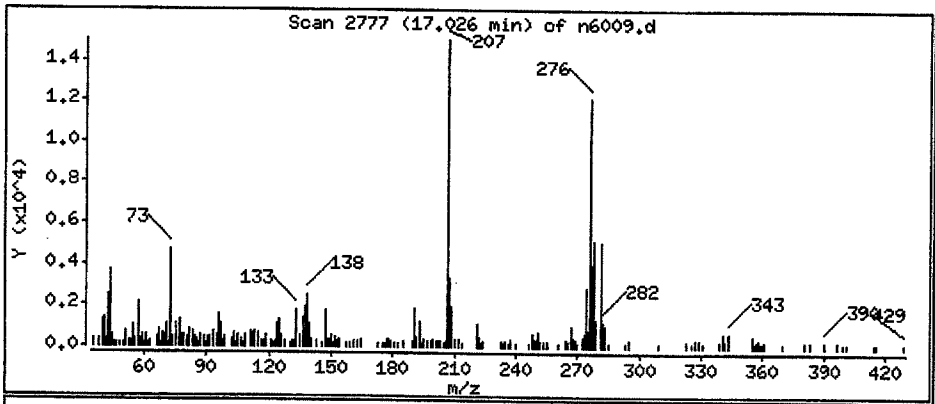
Operator:

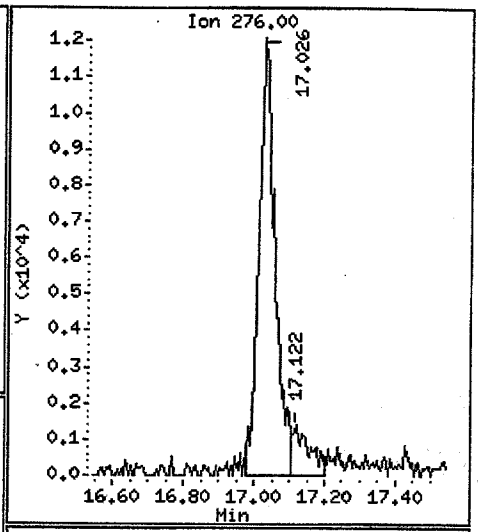
Column phase: SLB-5MS

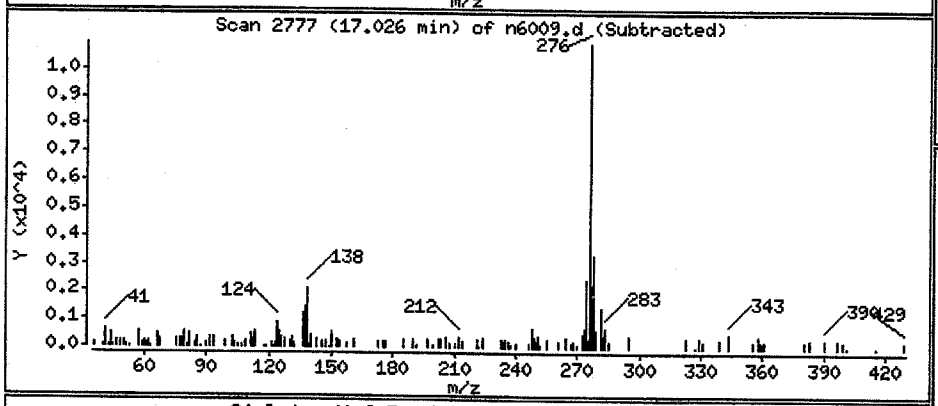
Column diameter: 0.25

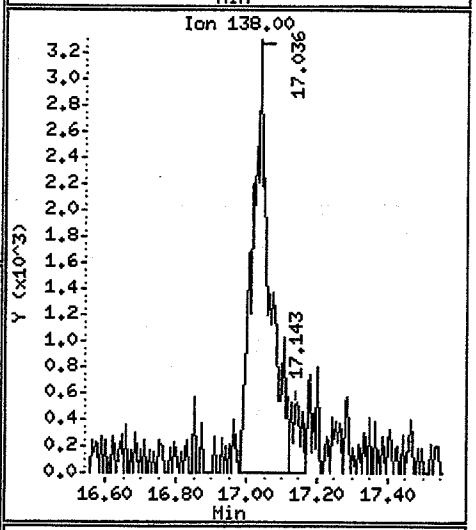
84 Indeno(1,2,3-cd)pyrene

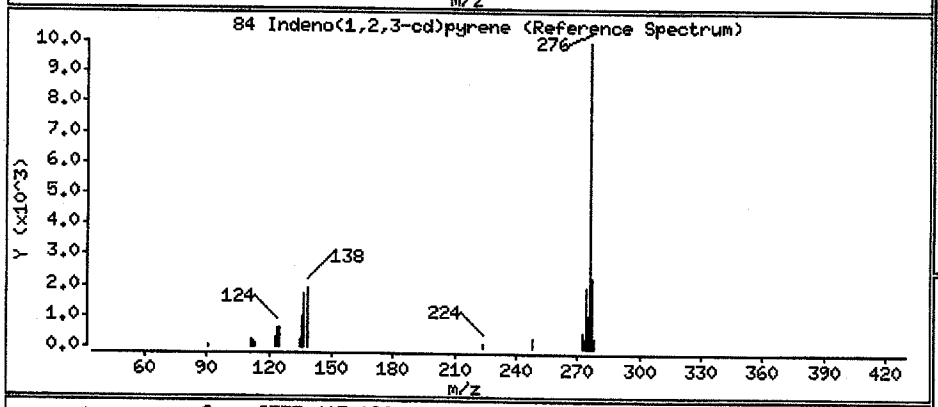
Concentration: 40 ug/Kg

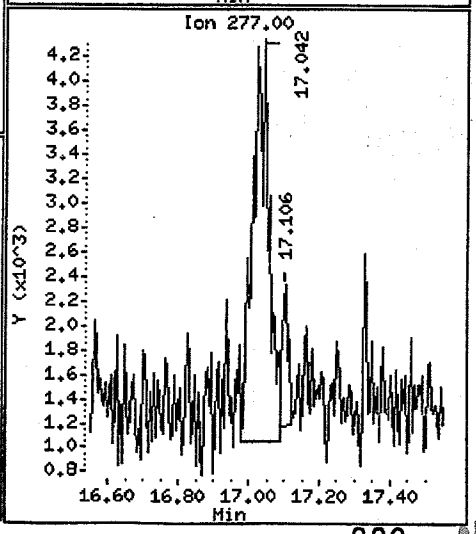


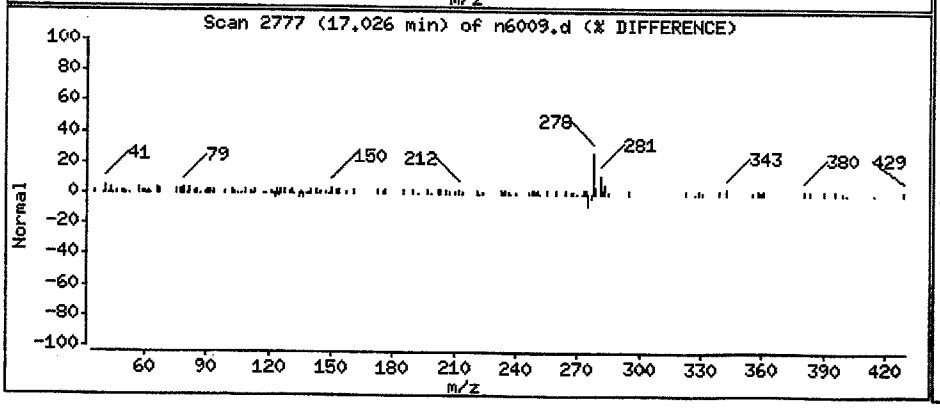












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

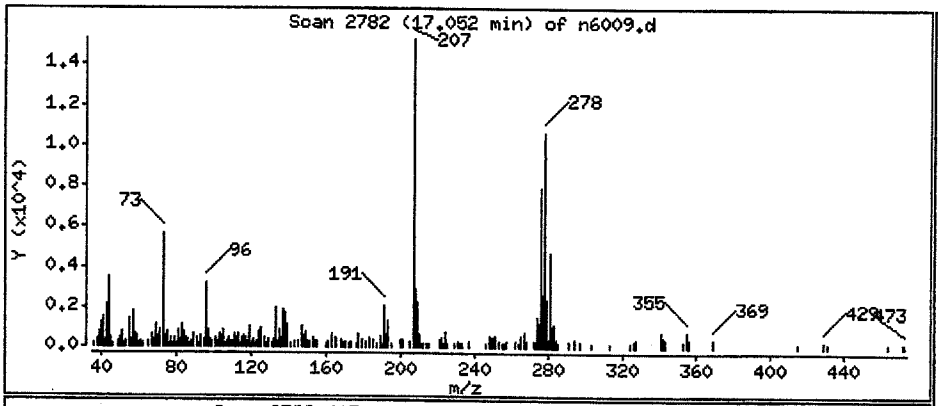
Operator:

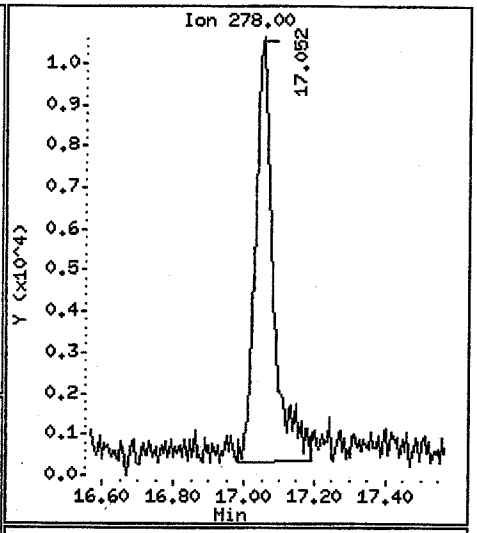
Column phase: SLB-5MS

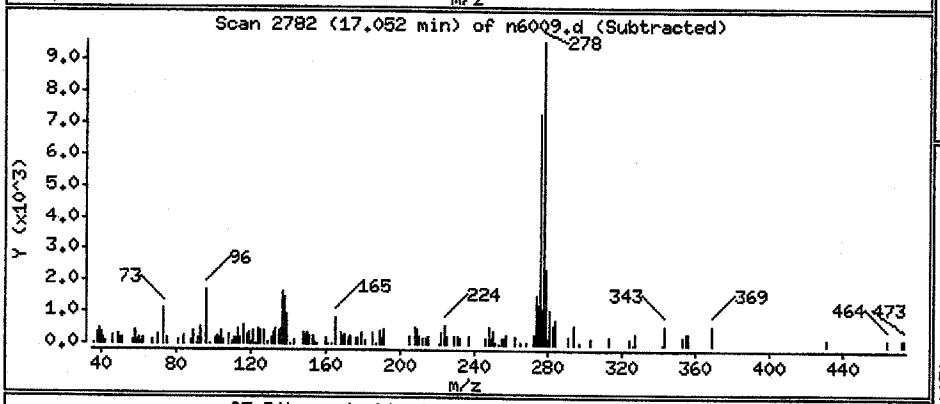
Column diameter: 0.25

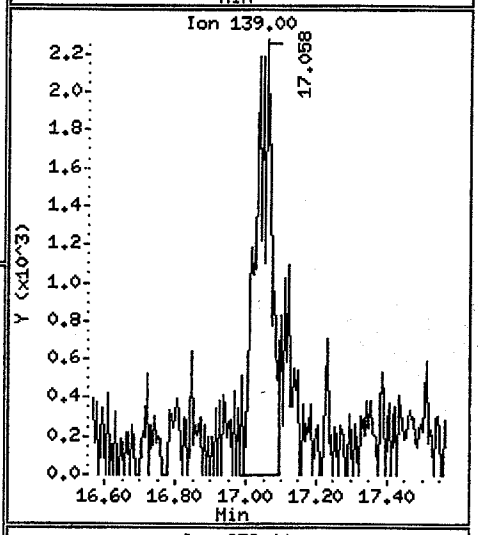
85 Dibenzo(a,h)anthracene

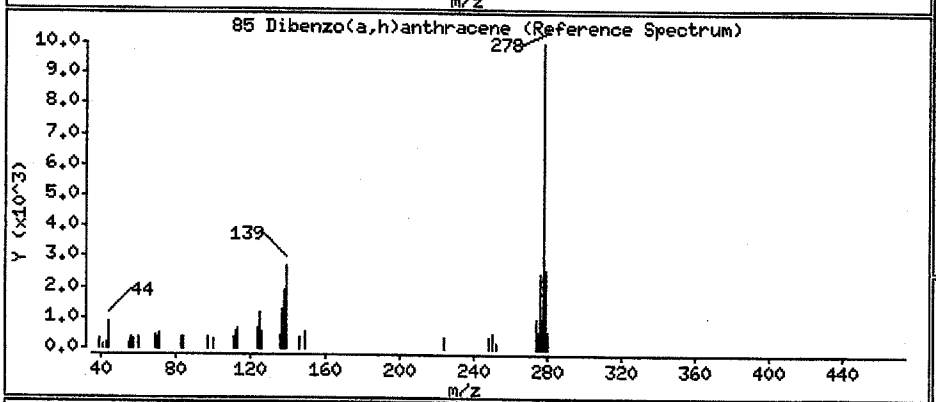
Concentration: 44 ug/Kg

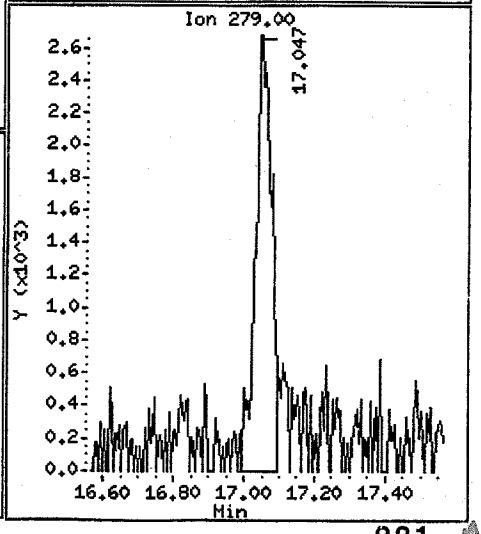


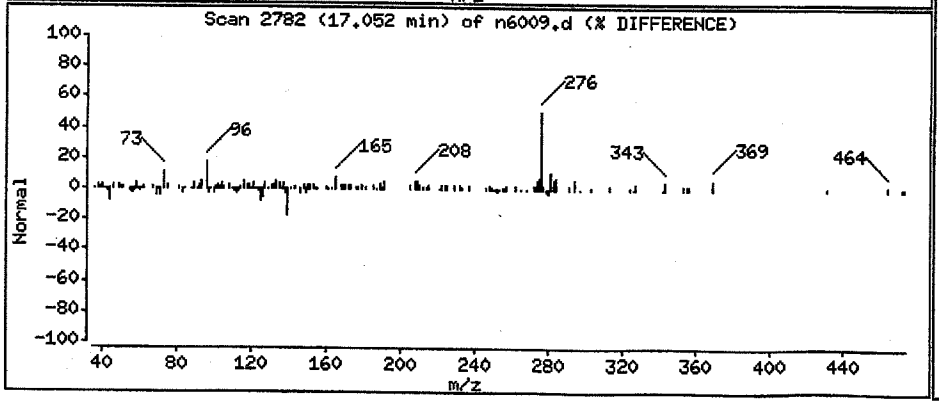












Data File: /chem/SM/MSN5973.i/1n030807.b/n6009.d

Date : 08-MAR-2007 12:12

Client ID: WFF1-MW2-19-21

Instrument: MSN5973.i

Sample Info: 680-24460-A-3-C

Volume Injected (uL): 1.0

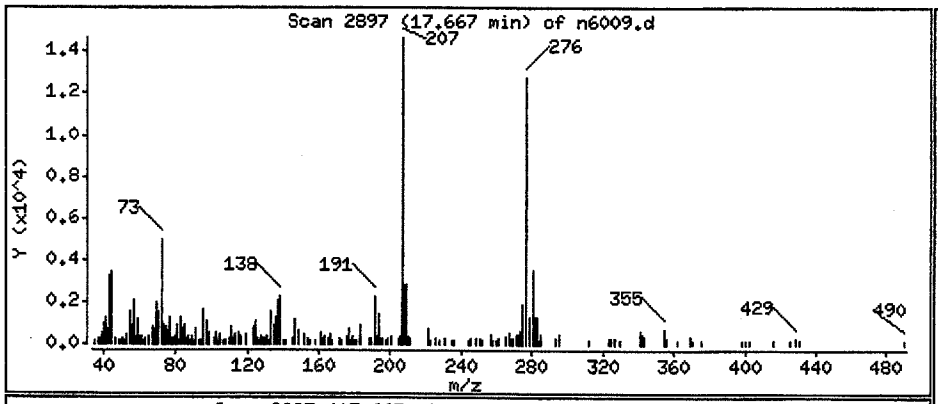
Operator:

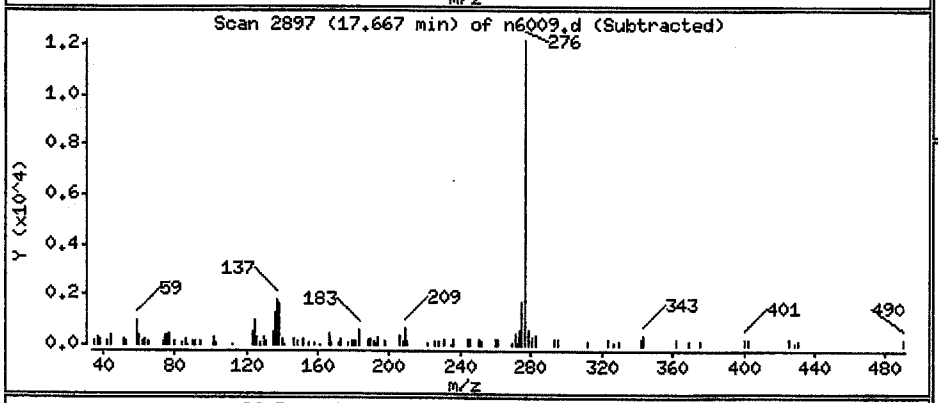
Column phase: SLB-5MS

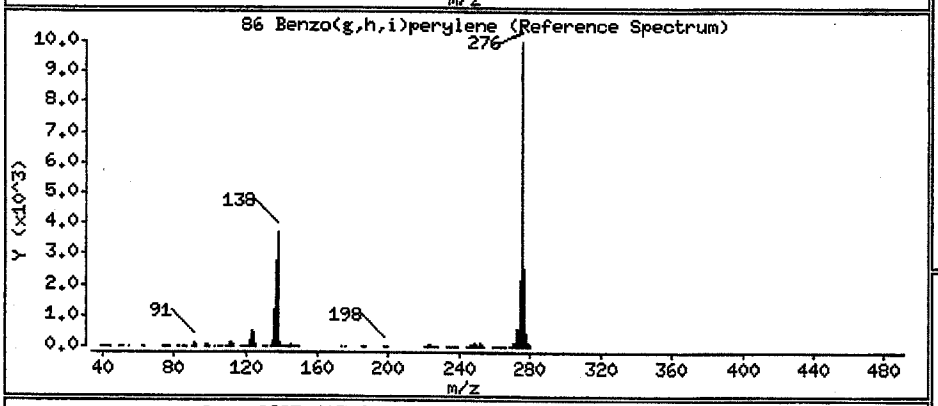
Column diameter: 0.25

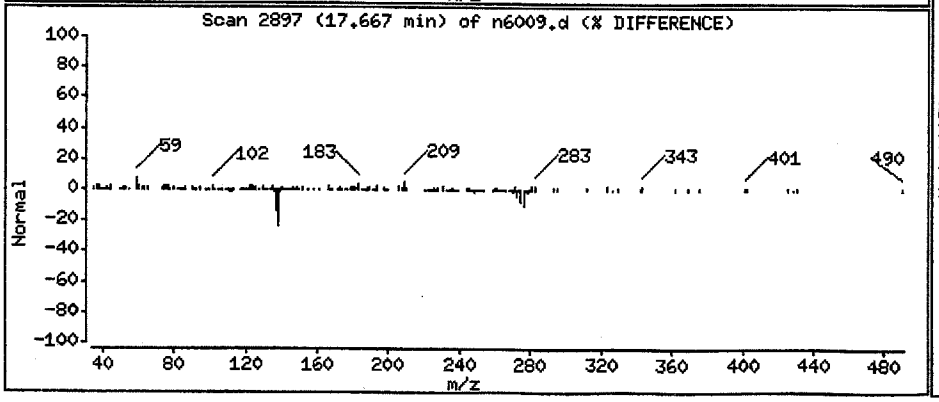
86 Benzo(g,h,i)perylene

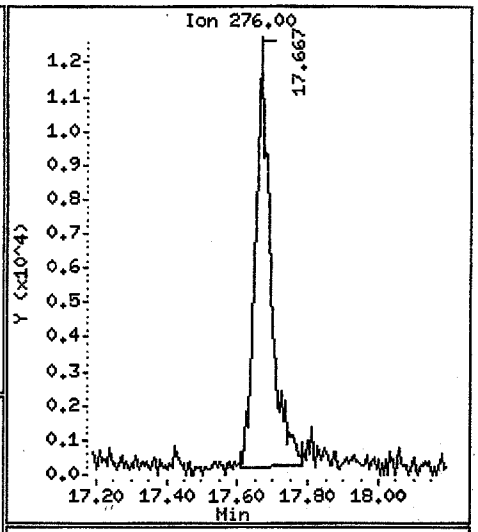
Concentration: 46 ug/Kg

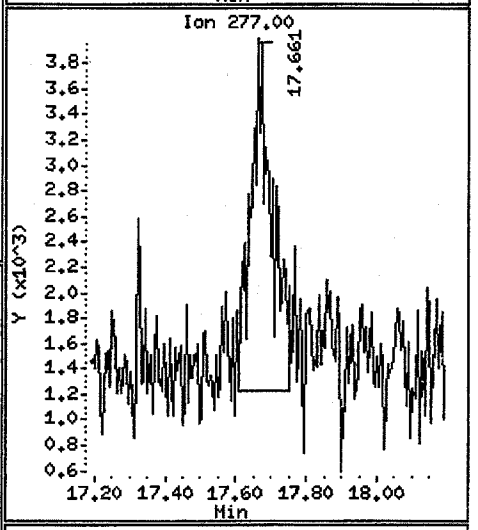


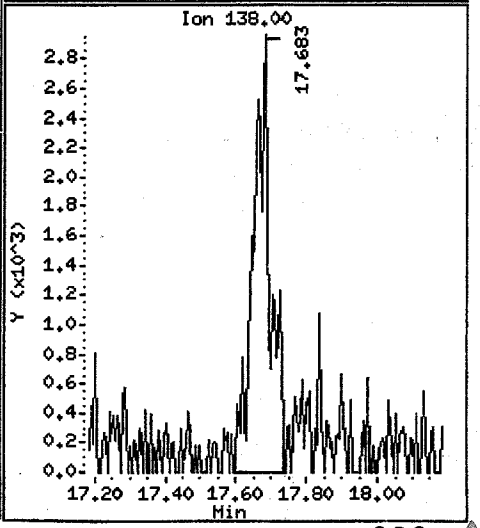












STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030507.b/n5958.d
Lab Smp Id: 680-24460-A-4-B Client Smp ID: WFF1-MW6-0-0.5
Inj Date : 05-MAR-2007 12:14
Operator : Inst ID: MSN5973.i
Smp Info : 680-00708314= 24460-4 68649
Misc Info : 680-24460-A-4-B
Comment :
Method : /chem/SM/MSN5973.i/1n030507.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 11:54 johnsonl Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52 Cal File: nq311.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.00000	Weight Extracted
M	13.58696	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.578	4.582	(1.000)	237746	40.0000	
$ 5 2-Fluorophenol	112	3.457	3.455	(0.755)	370679	38.5220	1500
$ 6 Phenol-d5	99	4.199	4.203	(0.917)	513366	37.4051	1400(R)
* 20 Naphthalene-d8	136	5.919	5.923	(1.000)	1036210	40.0000	
$ 21 Nitrobenzene-d5	82	5.134	5.138	(0.867)	228448	16.8268	650
* 36 Acenaphthene-d10	164	7.992	7.996	(1.000)	750230	40.0000	
$ 40 2-Fluorobiphenyl	172	7.159	7.163	(0.896)	490677	18.7029	720(R)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
	53 Diethylphthalate	149	8.489	8.493	(1.062)	6590	0.23763	9.2(a)
$	57 2,4,6-Tribromophenol	329	8.959	8.963	(1.121)	221879	50.0910	1900
*	58 Phenanthrene-d10	188	9.808	9.812	(1.000)	1399336	40.0000	
	69 Fluoranthene	202	11.304	11.308	(1.153)	10775	0.23251	9.0(aQ)
*	71 Chrysene-d12	240	13.019	13.023	(1.000)	1418525	40.0000	
$	73 Terphenyl-d14	244	11.748	11.752	(0.902)	795420	22.2700	860
*	79 Perylene-d12	264	15.065	15.069	(1.000)	1235450	40.0000	
	81 Benzo(b)fluoranthene	252	14.435	14.449	(0.958)	16904	0.34983	13(aQH)
	82 Benzo(k)fluoranthene	252	14.477	14.492	(0.961)	5547	0.11550	4.5(aQ)

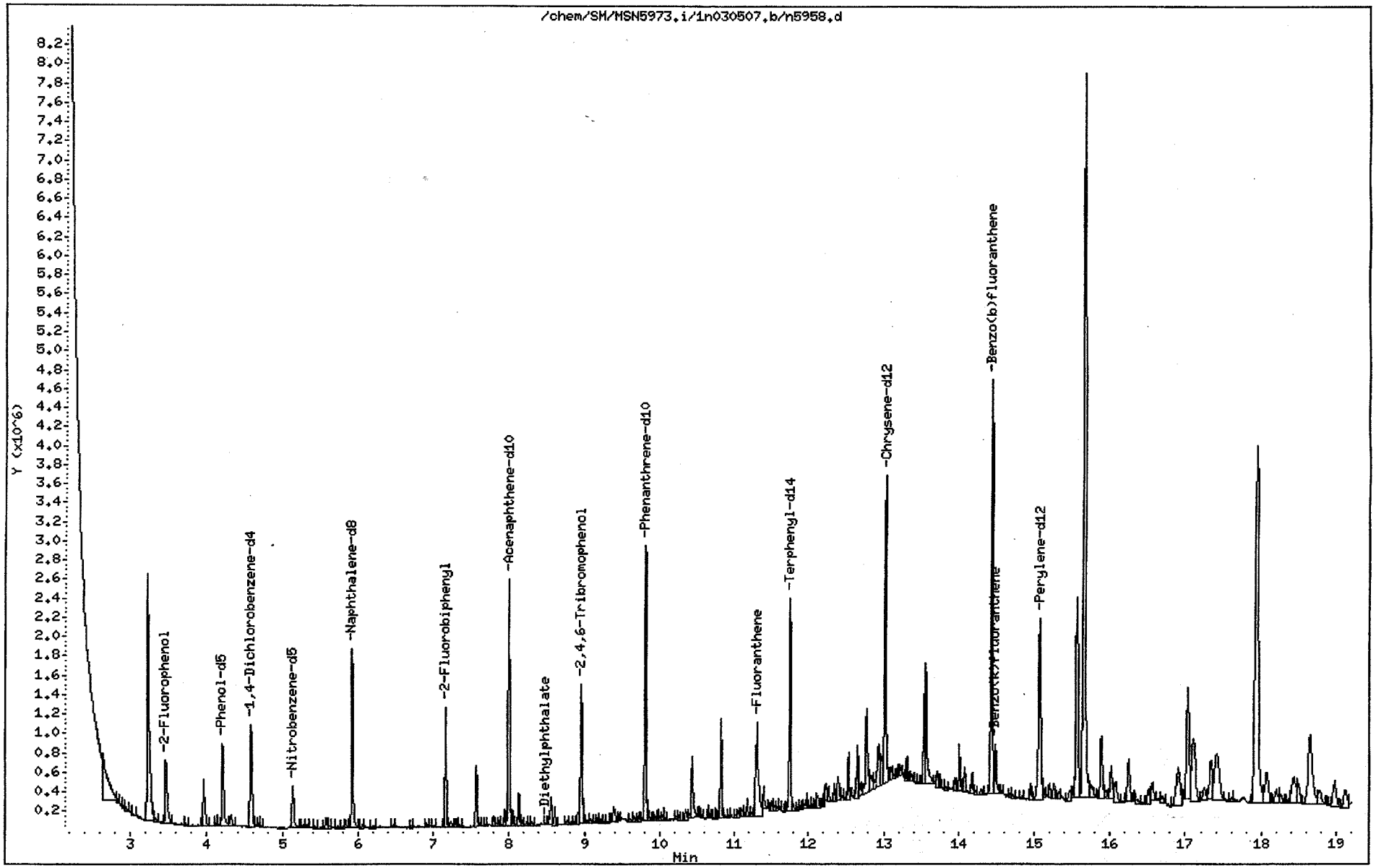
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

225

Data File: /chem/SM/MSN5973.i/1n030507.b/n5958.d
Date : 05-MAR-2007 12:14
Client ID: WFF1-MW6-0-0.5
Sample Info: 680-00708314= 24460-4 68649
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25



Data File: /chem/SM/MSN5973.i/1n030507.b/n5958.d

Date : 05-MAR-2007 12:14

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-00708314= 24460-4 68649

Volume Injected (uL): 1.0

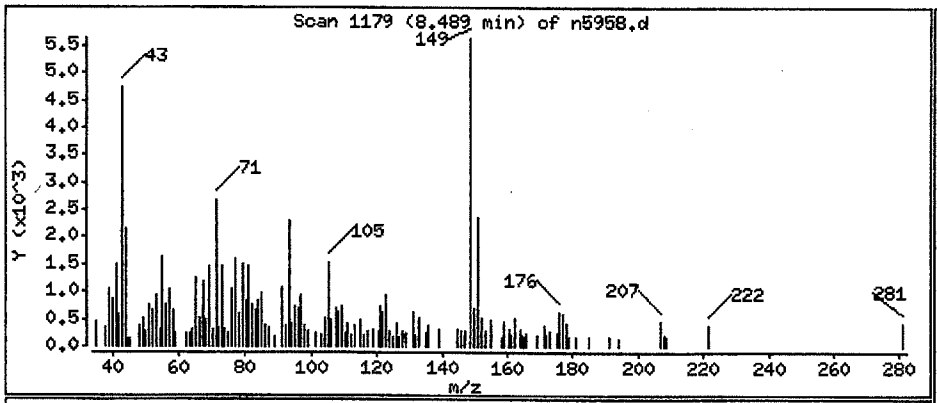
Operator:

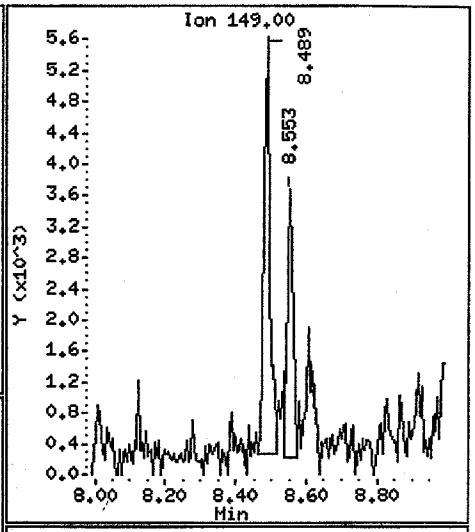
Column phase: SLB-5MS

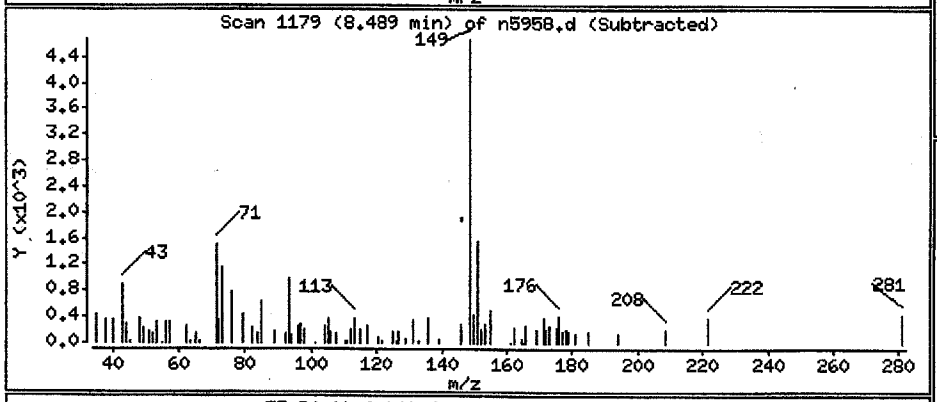
Column diameter: 0.25

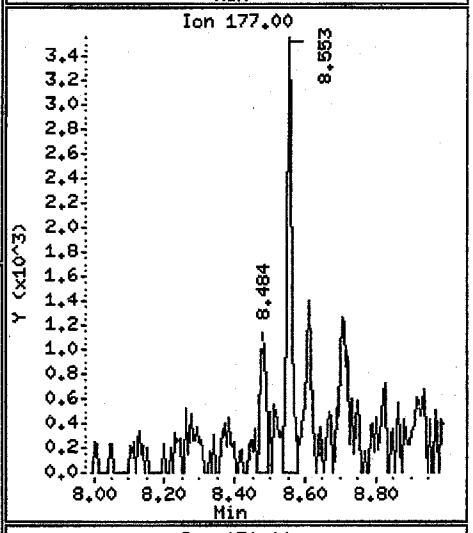
53 Diethylphthalate

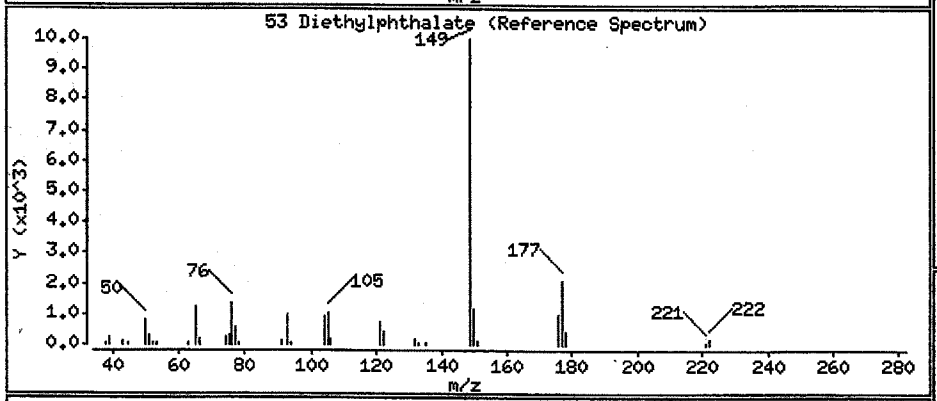
Concentration: 9.2 ug/Kg

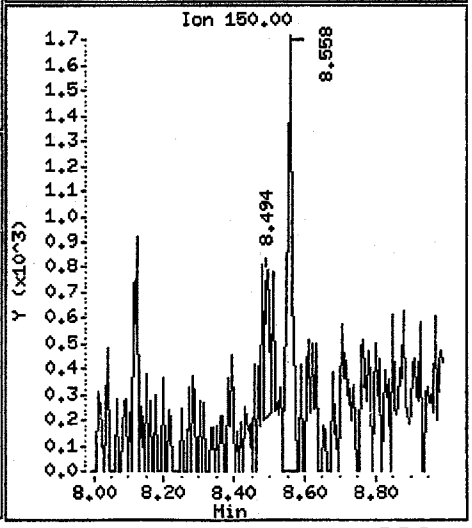


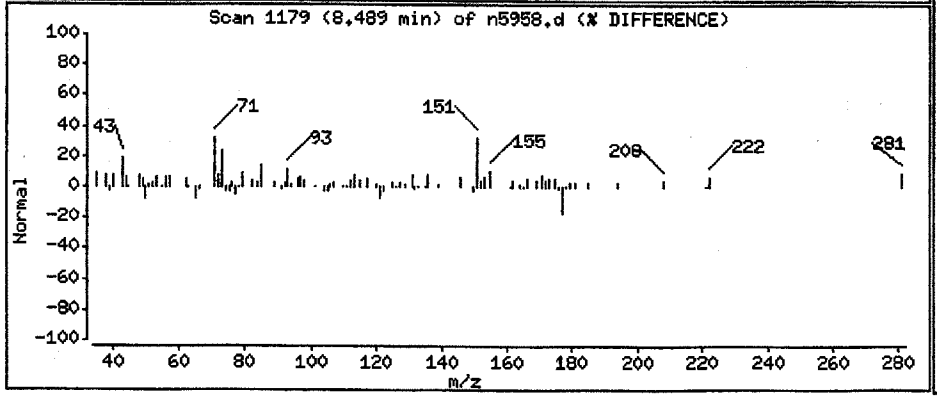












Data File: /chem/SM/MSN5973.i/1n030507.b/n5958.d

Date : 05-MAR-2007 12:14

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-00708314= 24460-4 68649

Volume Injected (uL): 1.0

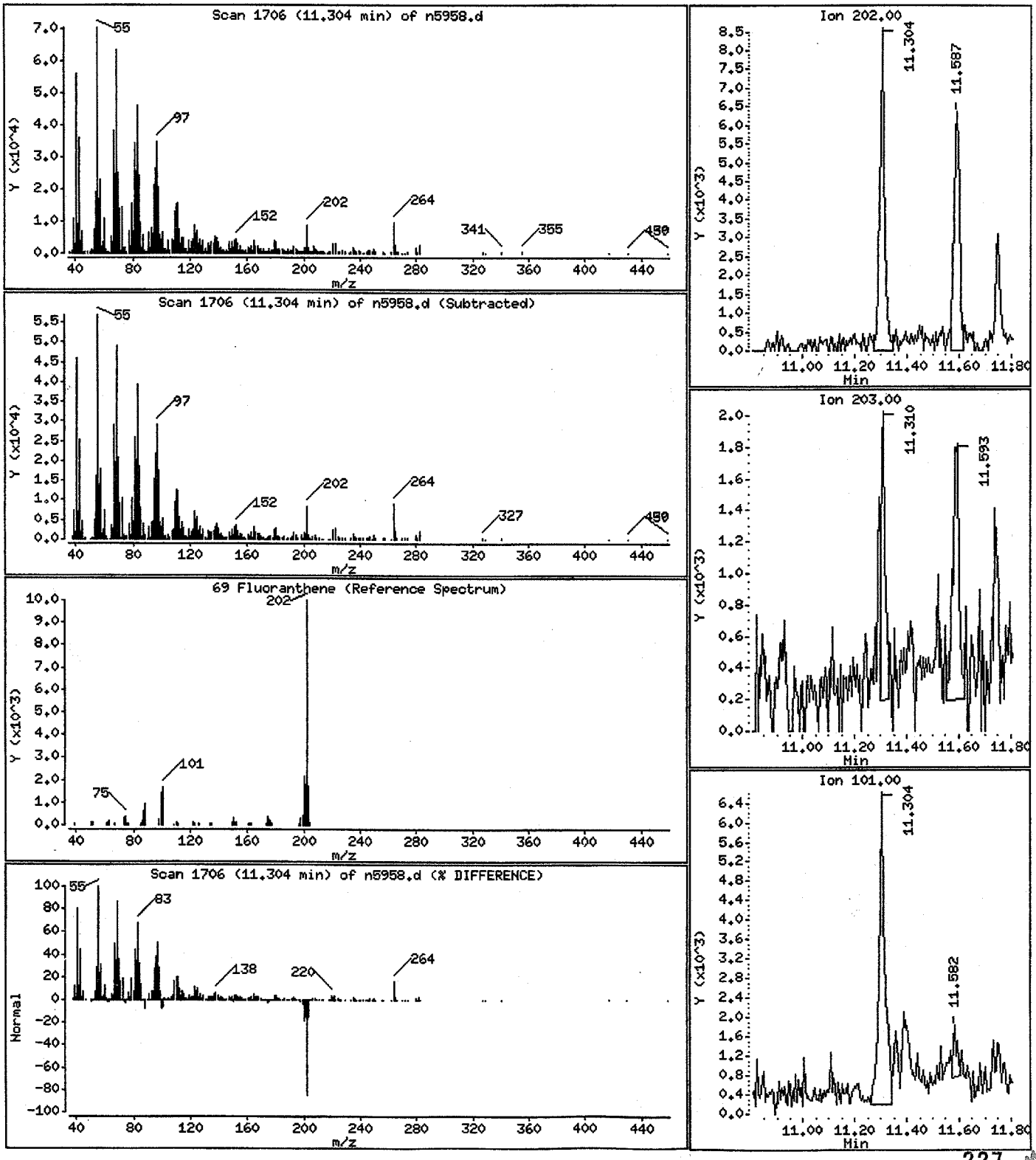
Operator:

Column phase: SLB-5MS

Column diameter: 0.25

69 Fluoranthene

Concentration: 9.0 ug/Kg



Data File: /chem/SM/MSN5973.i/1n030507.b/n5958.d

Date : 05-MAR-2007 12:14

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-00708314= 24460-4 68649

Volume Injected (uL): 1.0

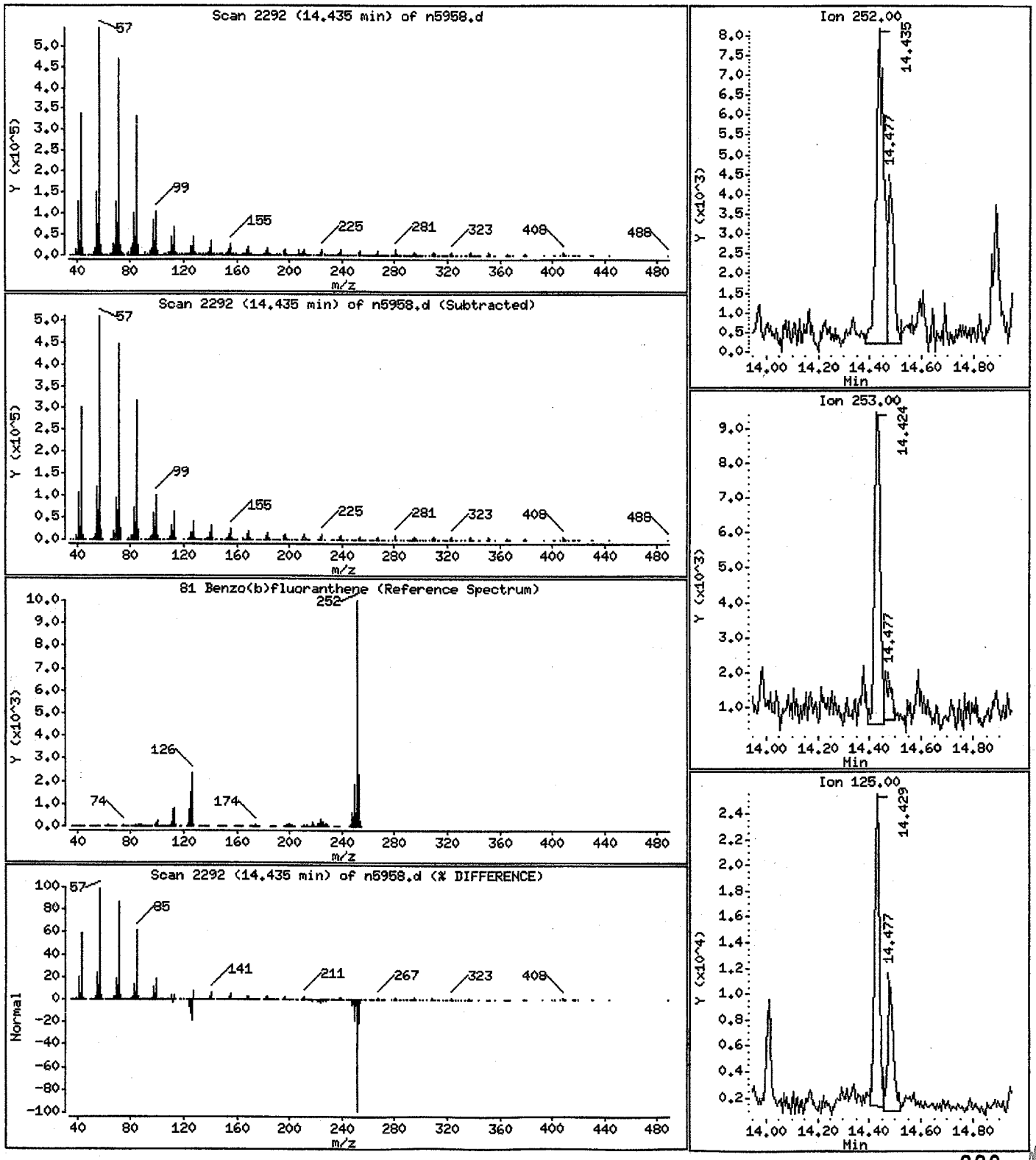
Operator:

Column phase: SLB-5MS

Column diameter: 0.25

81 Benzo(b)fluoranthene

Concentration: 13 ug/Kg



Data File: /chem/SM/MSN5973.i/1n030507.b/n5958.d

Date : 05-MAR-2007 12:14

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-00708314= 24460-4 68649

Volume Injected (uL): 1.0

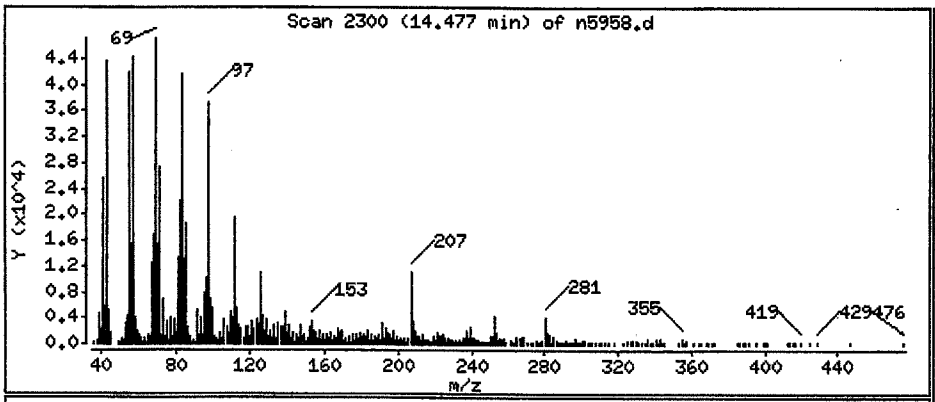
Operator:

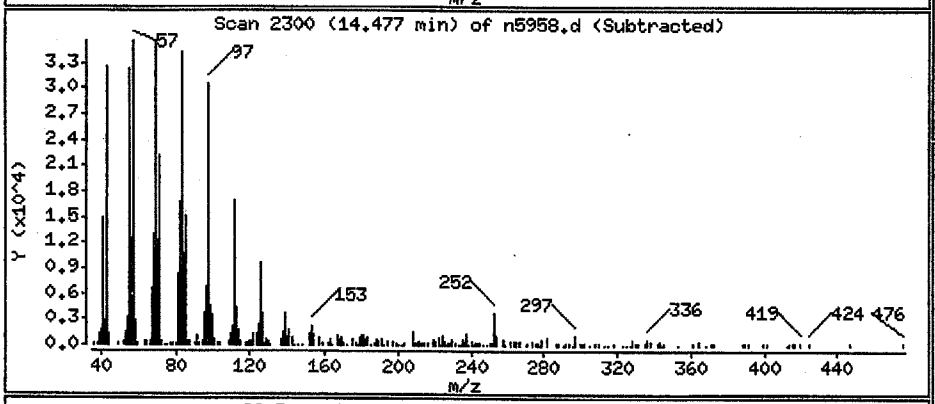
Column phase: SLB-5MS

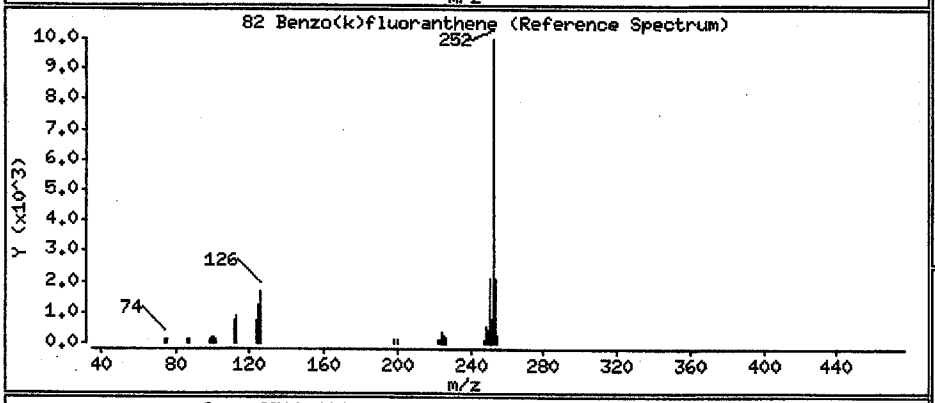
Column diameter: 0.25

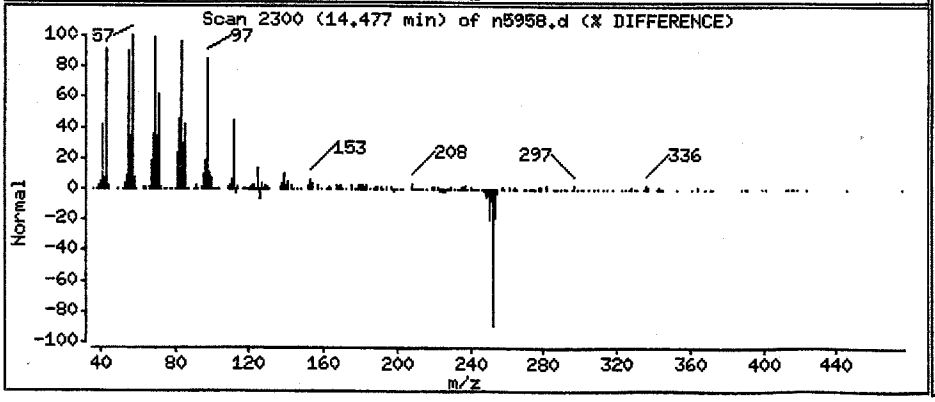
82 Benzo(k)fluoranthene

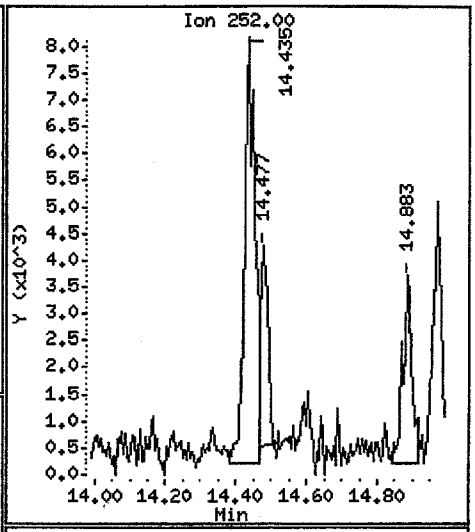
Concentration: 4.5 ug/Kg

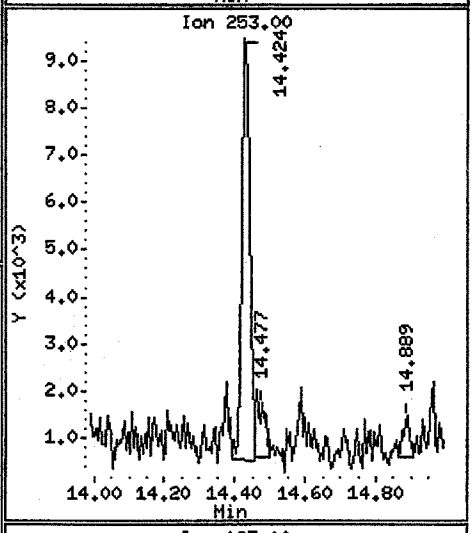


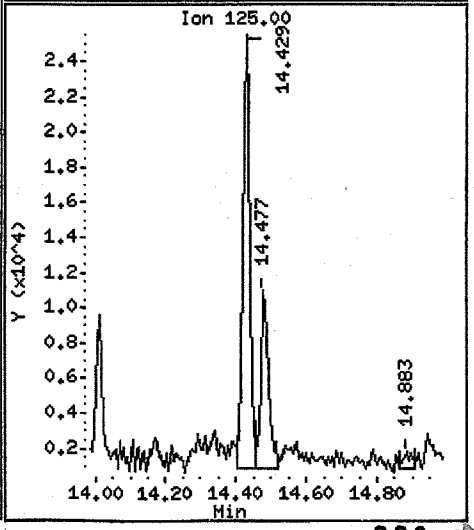












STL SAVANNAH

Semivolatile REPORT SW-846 Method 8270C

Data file : /chem/SM/MSN5973.i/1n030807.b/n6010.d
Lab Smp Id: 680-24460-A-4-C RE
Client Smp ID: WFF1-MW6-0-0.5
Inj Date : 08-MAR-2007 12:39 3/14/07
Operator :
Inst ID: MSN5973.i
Smp Info : 680-24460-A-4-C
Misc Info : 680-24460-A-4-C
Comment :
Method : /chem/SM/MSN5973.i/1n030807.b/n-8270CAP9-m.m
Meth Date : 12-Mar-2007 12:01 johnsonl
Quant Type: ISTD
Cal Date : 15-FEB-2007 09:52
Cal File: nq311.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: TL2005.sub
Target Version: 3.50
Processing Host: savchem1

Concentration Formula:
Amt * DF * 1/Vi * Vt/Ws * 100/(100 - M) * A * B * C * D * GPC * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Vi	1.00000	Injection Volume
Vt	1.00000	Final Volume
Ws	30.07000	Weight Extracted
M	13.58696	% Moisture
A	1000.00000	uL to mL conversion
B	1000.00000	g to kg conversion
C	0.00100	ng to ug conversion
D	1.00000	ug to mg conversion(value = 1 if no conv
GPC	1.00000	GPC FACTOR

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-d4	152	4.524	4.528	(1.000)	238880	40.0000	
$ 5 2-Fluorophenol	112	3.407	3.406	(0.753)	494406	51.1361	2000
$ 6 Phenol-d5	99	4.150	4.149	(0.917)	671819	48.7180	1900
* 20 Naphthalene-d8	136	5.859	5.864	(1.000)	990864	40.0000	
$ 21 Nitrobenzene-d5	82	5.079	5.084	(0.867)	285013	21.9539	840
27 Benzoic acid	105	5.523	5.554	(0.943)	43516	5.96460	230(aQ)
* 36 Acenaphthene-d10	164	7.932	7.937	(1.000)	622982	40.0000	

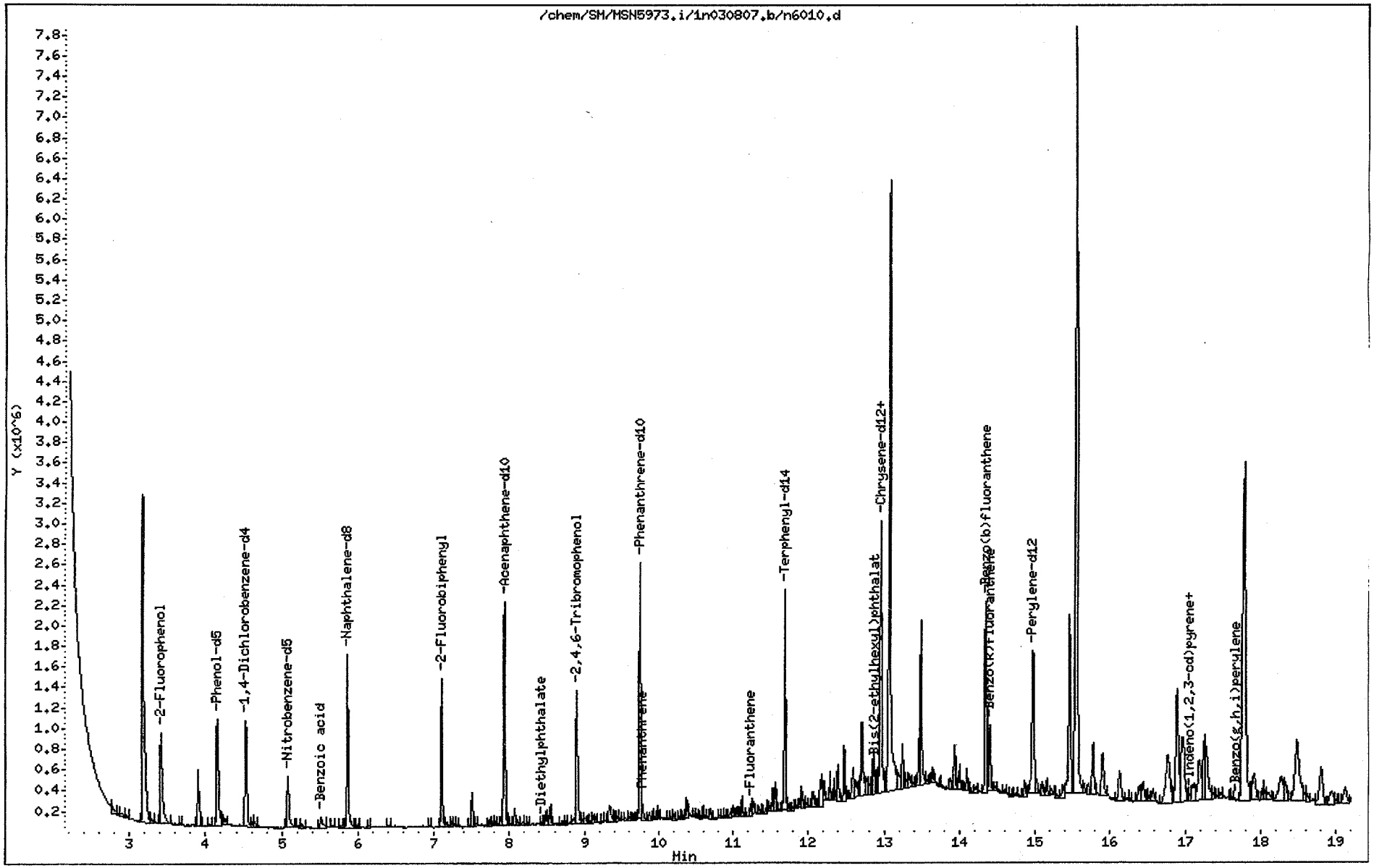
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kg)
$	40 2-Fluorobiphenyl	172	7.099	7.109	(0.895)	572019	26.2568	1000
	53 Diethylphthalate	149	8.429	8.433	(1.063)	5165	0.22429	8.6(a)
$	57 2,4,6-Tribromophenol	329	8.899	8.903	(1.122)	194311	52.8274	2000
*	58 Phenanthrene-d10	188	9.748	9.753	(1.000)	1110656	40.0000	
	65 Phenanthrene	178	9.775	9.785	(1.003)	7376	0.23780	9.2(a)
	69 Fluoranthene	202	11.244	11.249	(1.153)	10933	0.29724	11(a)
*	71 Chrysene-d12	240	12.954	12.964	(1.000)	1078859	40.0000	
$	73 Terphenyl-d14	244	11.688	11.692	(0.902)	788047	29.0101	1100
	76 Benzo(a)Anthracene	228	12.943	12.947	(0.999)	9106	0.26094	10(a)
	77 Bis(2-ethylhexyl)phthalate	149	12.890	12.894	(0.995)	21431	0.92158	35(a)
	78 Chrysene	228	12.991	12.990	(1.003)	8684	0.25585	9.8(a)
*	79 Perylene-d12	264	14.968	14.977	(1.000)	902684	40.0000	
	81 Benzo(b)fluoranthene	252	14.359	14.363	(0.959)	12143	0.34394	13(aQ)
	82 Benzo(k)fluoranthene	252	14.391	14.401	(0.961)	7847	0.22362	8.6(aQ)
	84 Indeno(1,2,3-cd)pyrene	276	17.040	17.045	(1.315)	30348	0.78672	30(a)
	85 Dibenzo(a,h)anthracene	278	17.046	17.066	(1.139)	27190	0.86983	33(a)
	86 Benzo(g,h,i)perylene	276	17.671	17.691	(1.181)	27912	0.90138	35(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d
Date : 08-MAR-2007 12:39
Client ID: WFF1-MW6-0-0.5
Sample Info: 680-24460-A-4-C
Volume Injected (uL): 1.0
Column phase: SLB-5MS

Instrument: MSN5973.i
Operator:
Column diameter: 0.25



Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

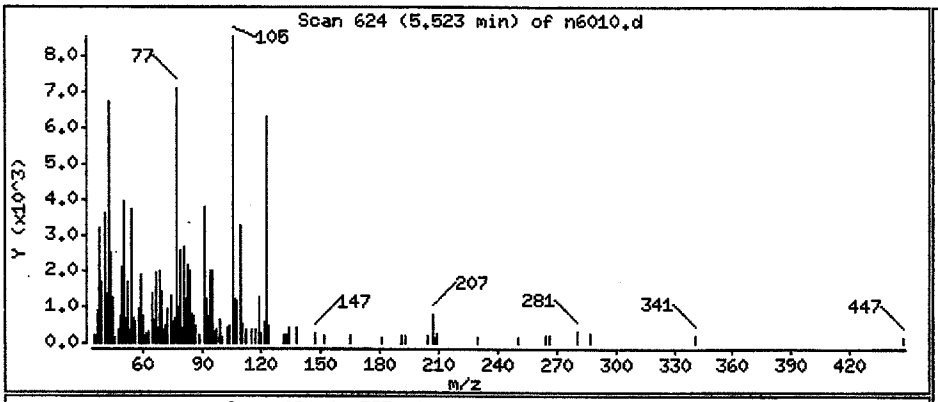
Operator:

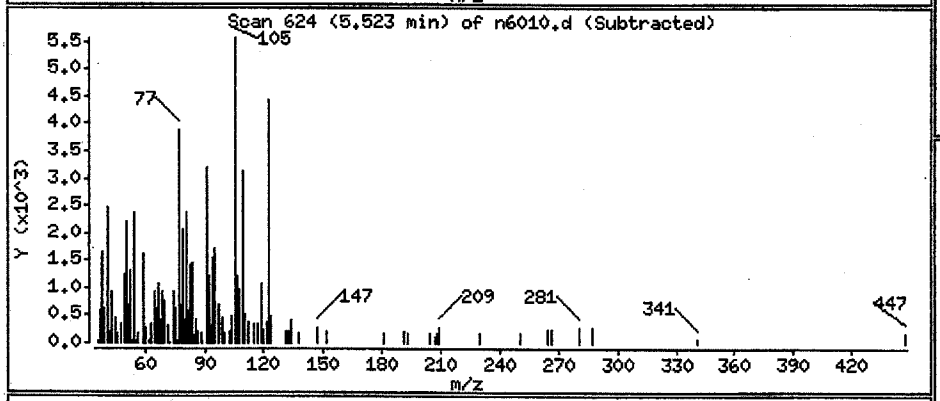
Column phase: SLB-5MS

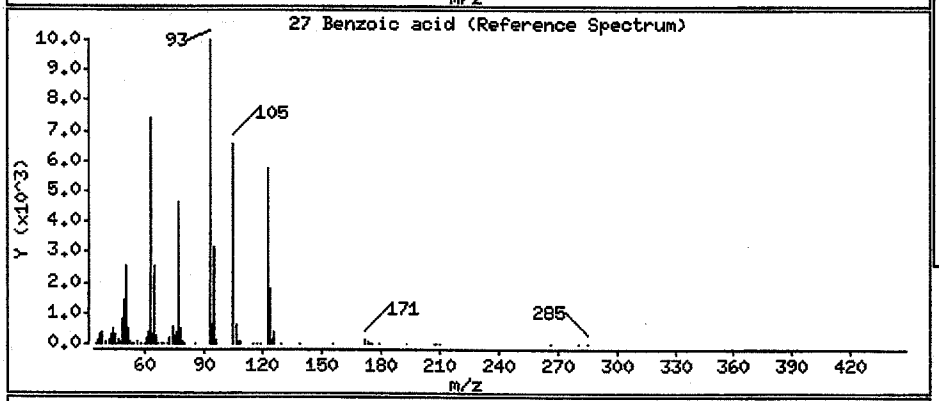
Column diameter: 0.25

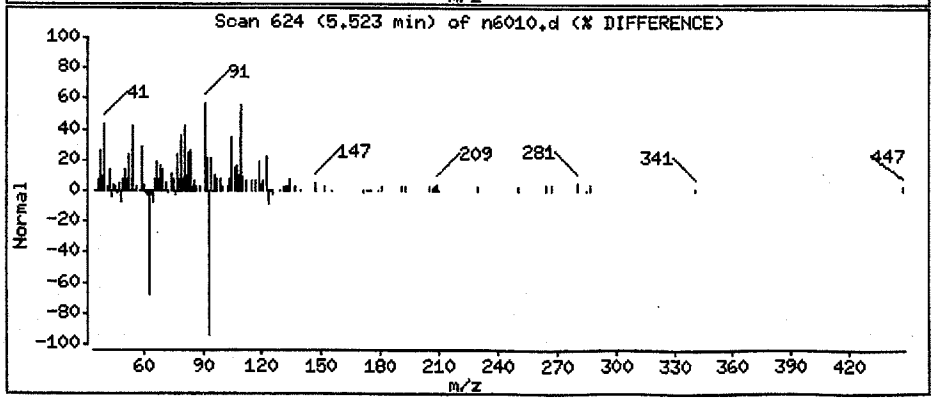
27 Benzoic acid

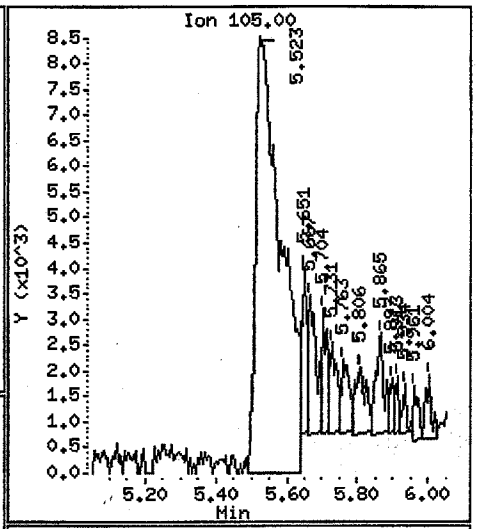
Concentration: 230 ug/Kg

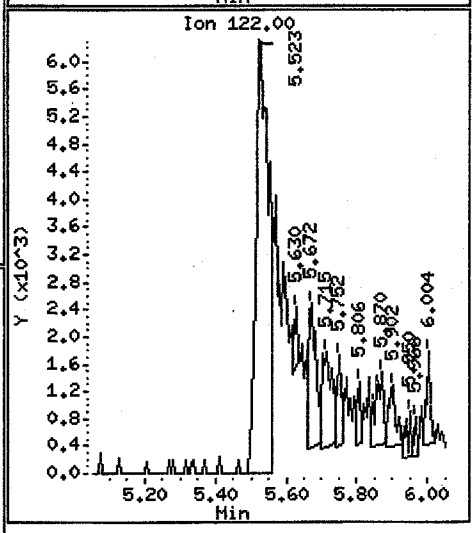












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

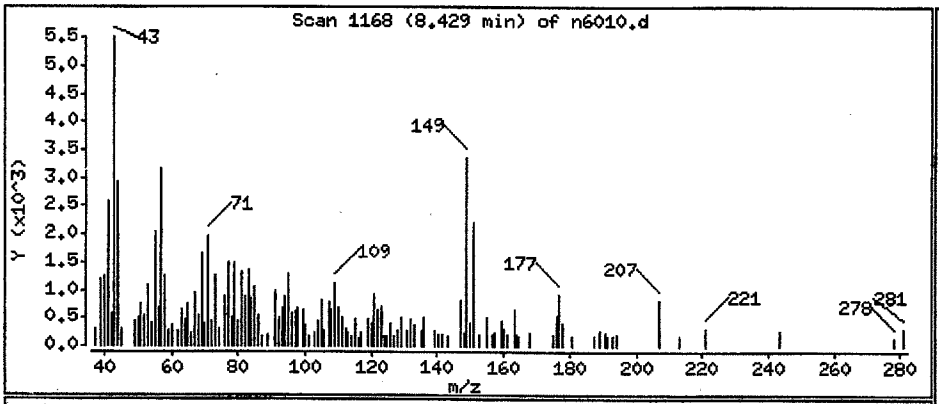
Operator:

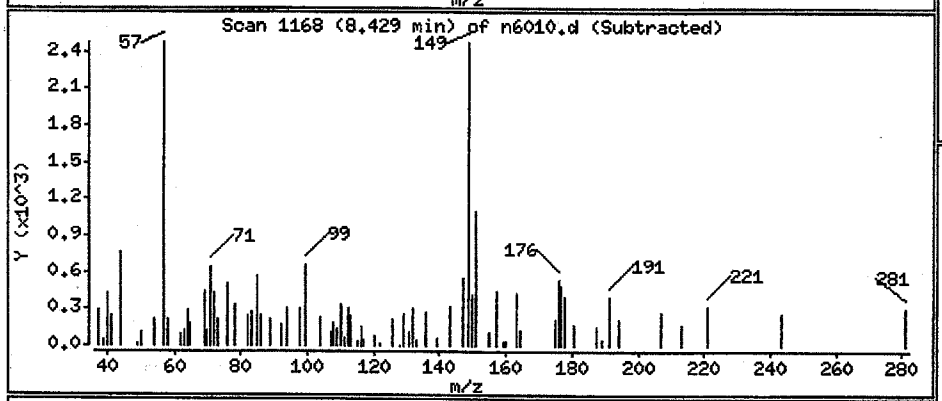
Column phase: SLB-5MS

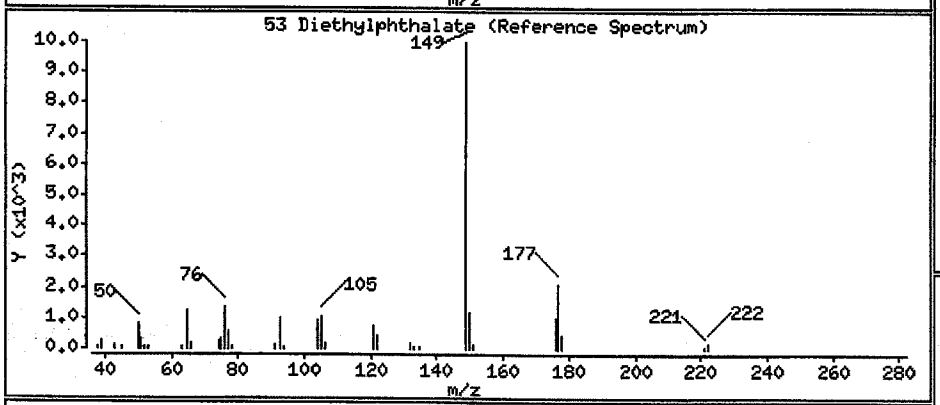
Column diameter: 0.25

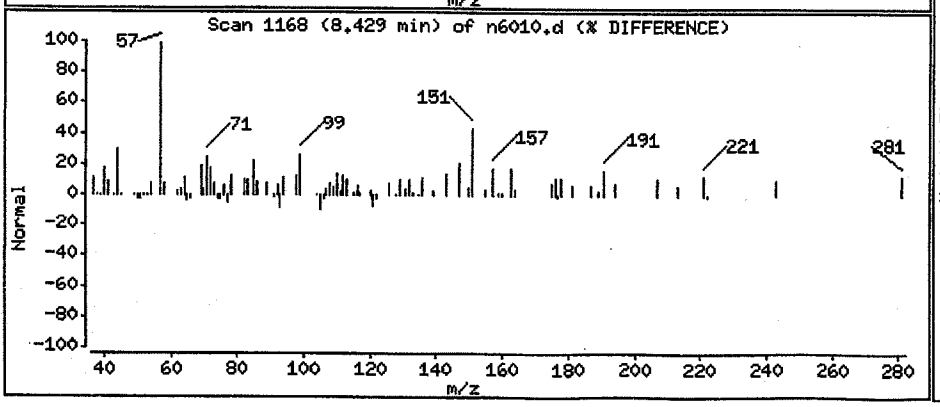
53 Diethylphthalate

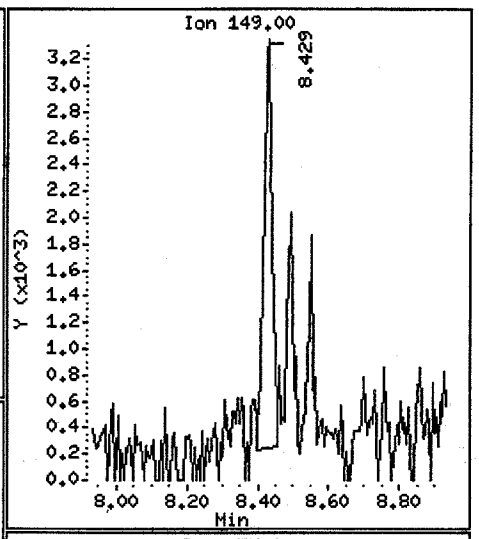
Concentration: 8.6 ug/Kg

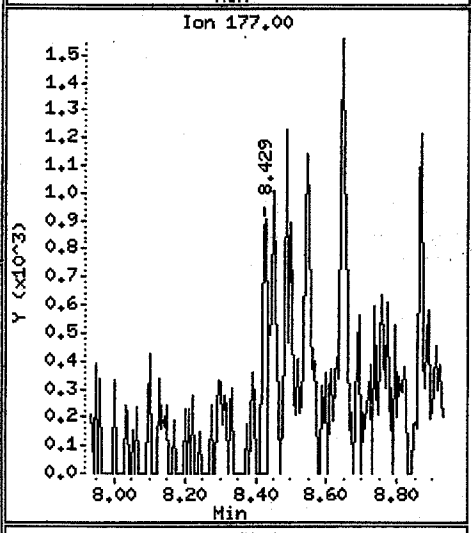


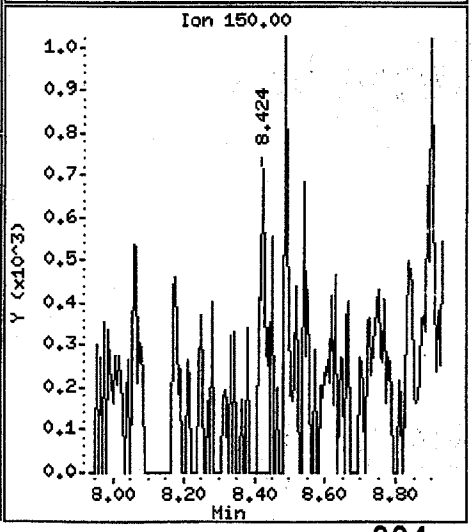












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

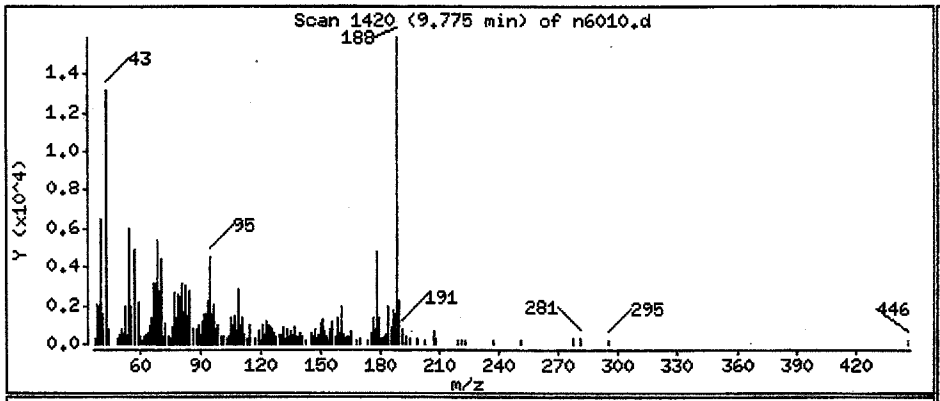
Operator:

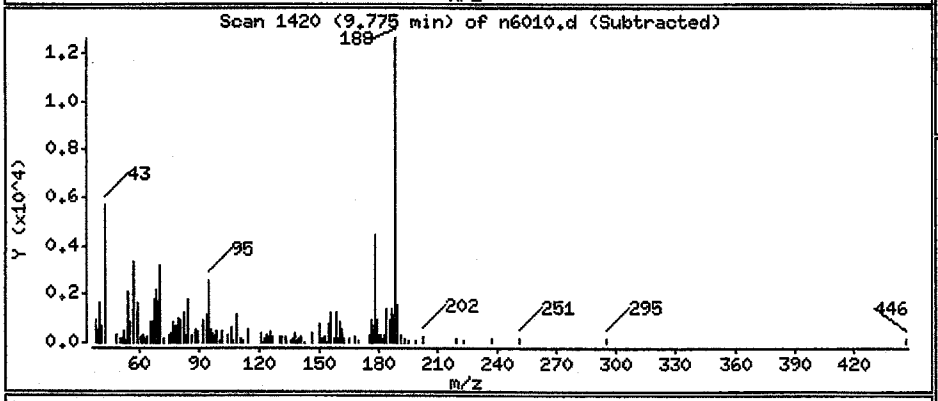
Column phase: SLB-5MS

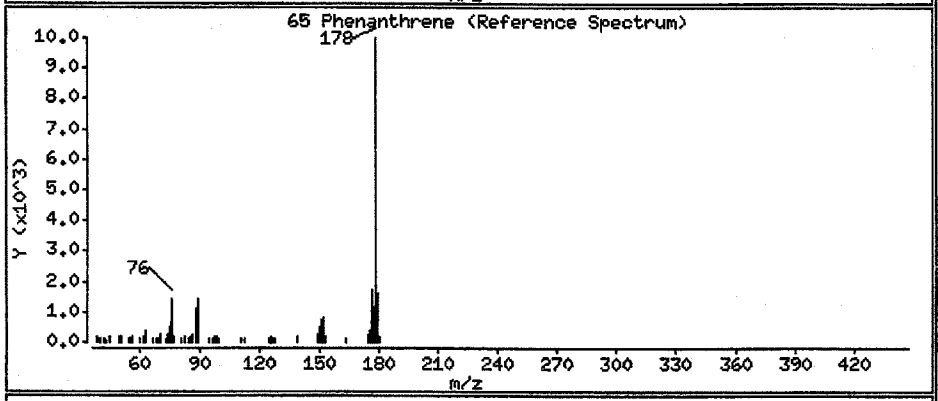
Column diameter: 0.25

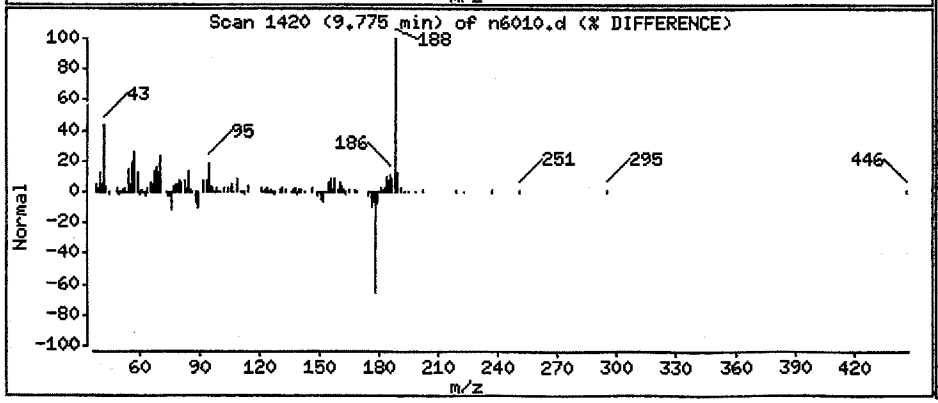
65 Phenanthrene

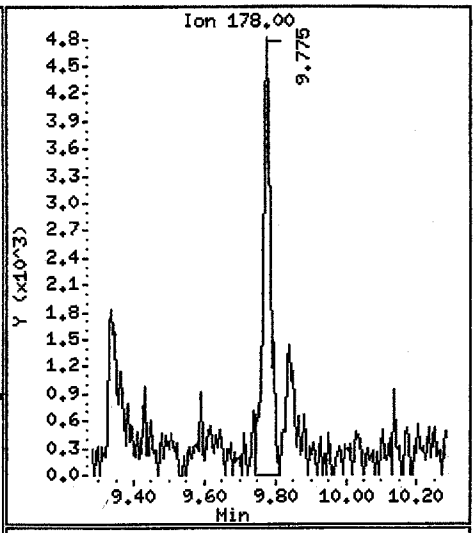
Concentration: 9.2 ug/Kg

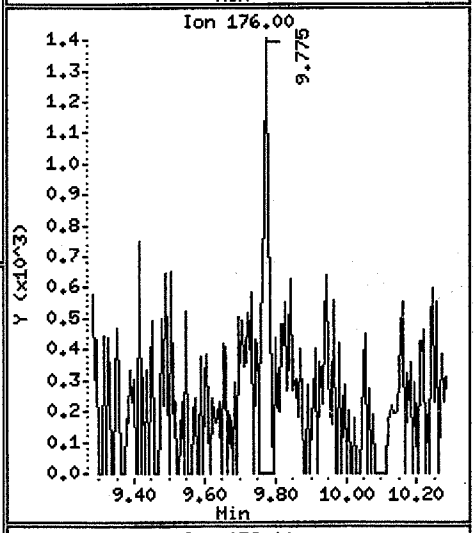


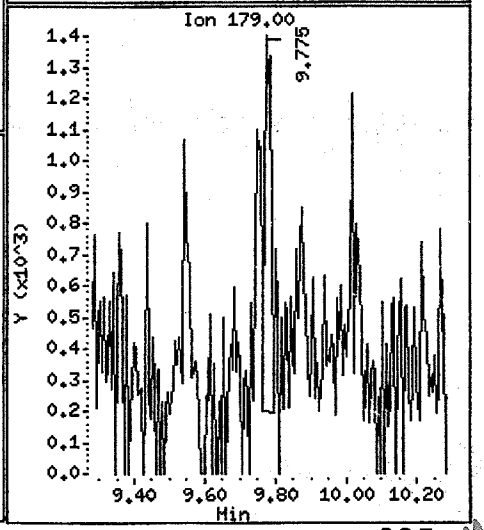












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

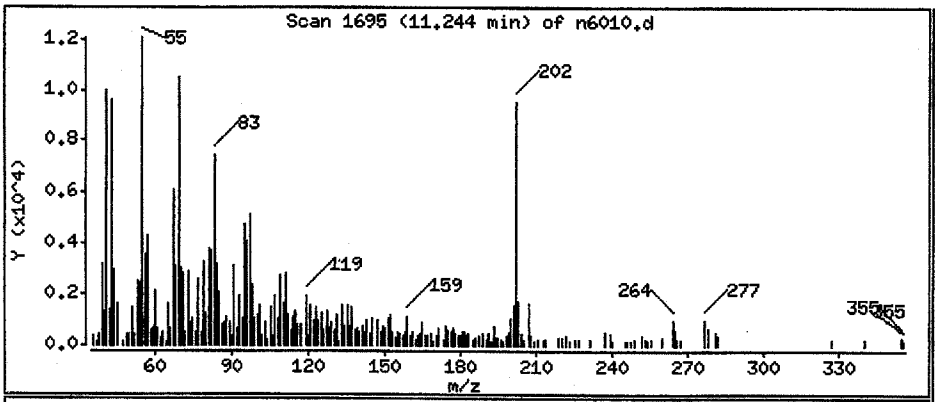
Operator:

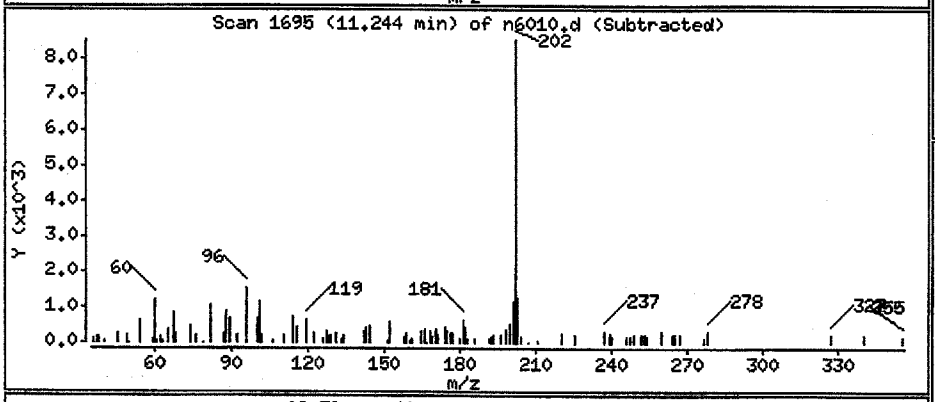
Column phase: SLB-5MS

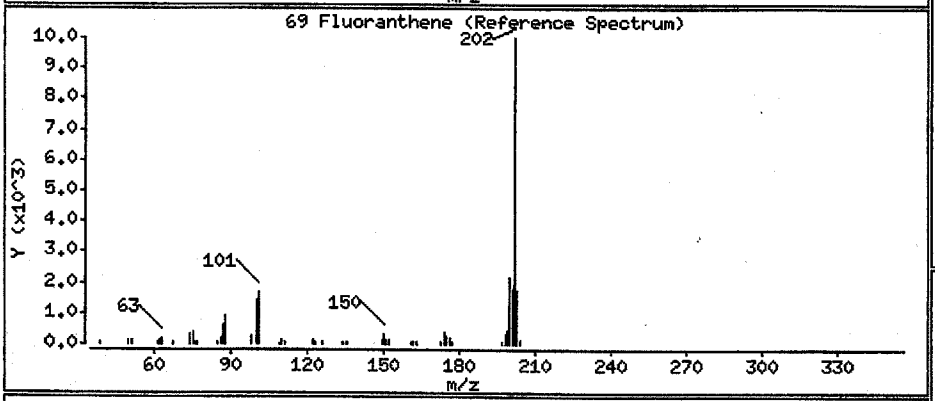
Column diameter: 0.25

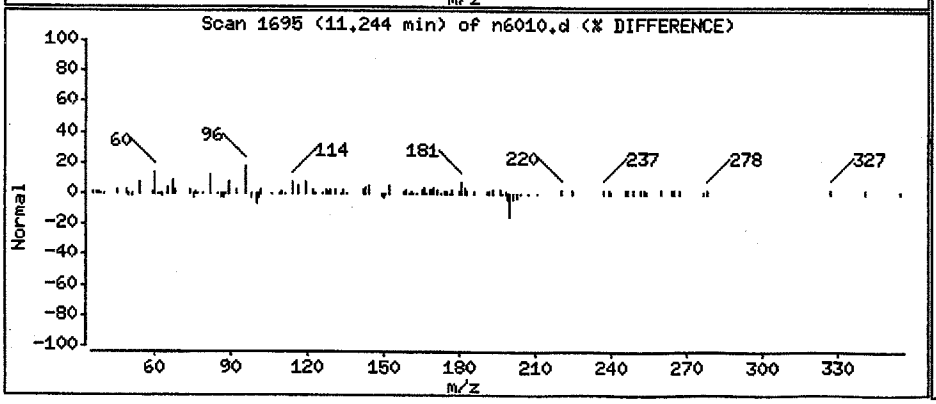
69 Fluoranthene

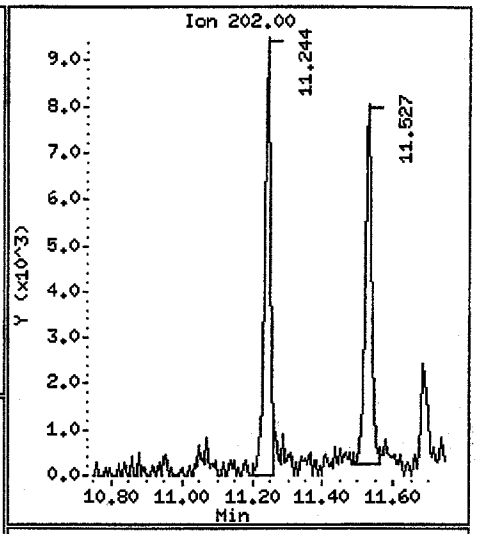
Concentration: 11 ug/Kg

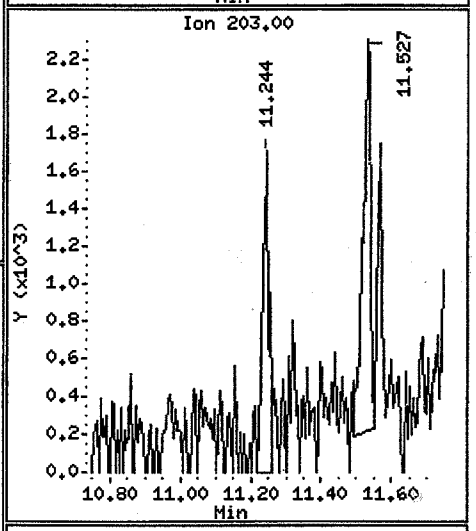


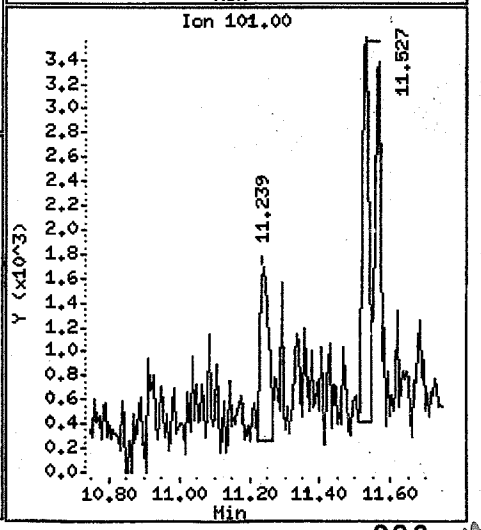












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

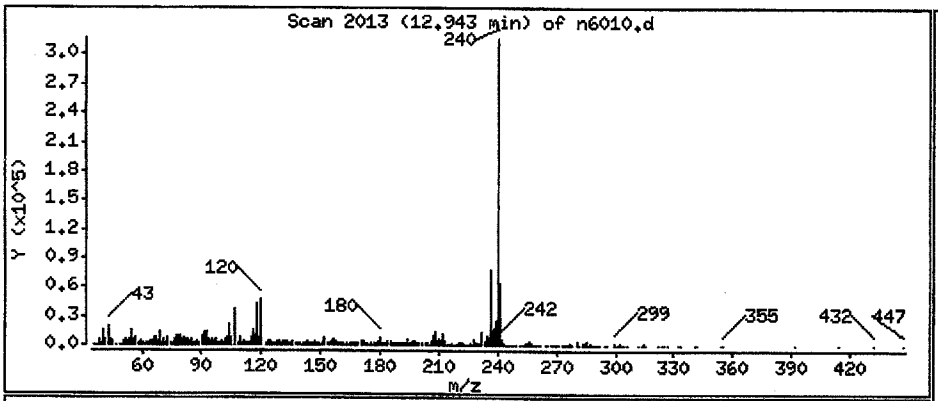
Operator:

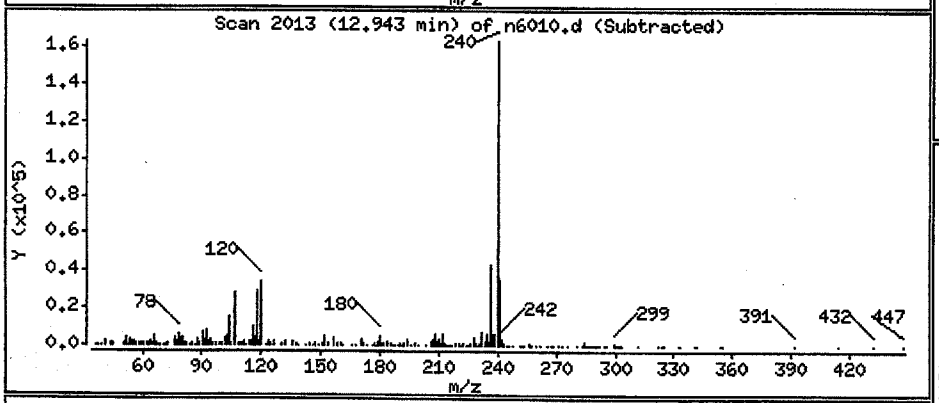
Column phase: SLB-5MS

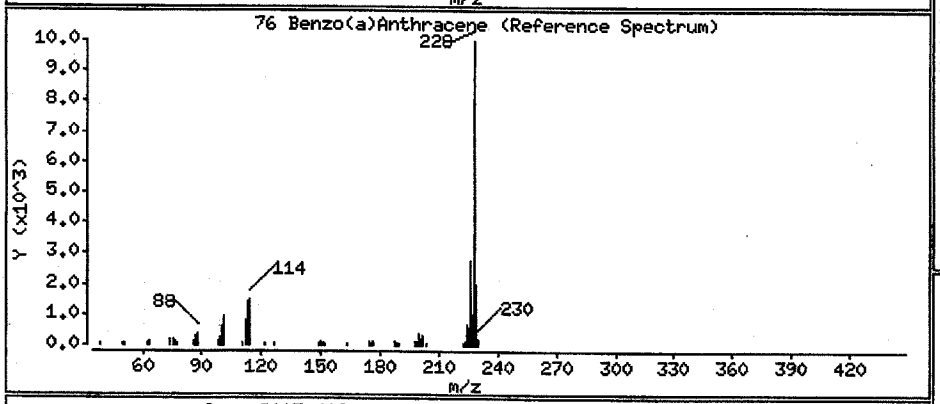
Column diameter: 0.25

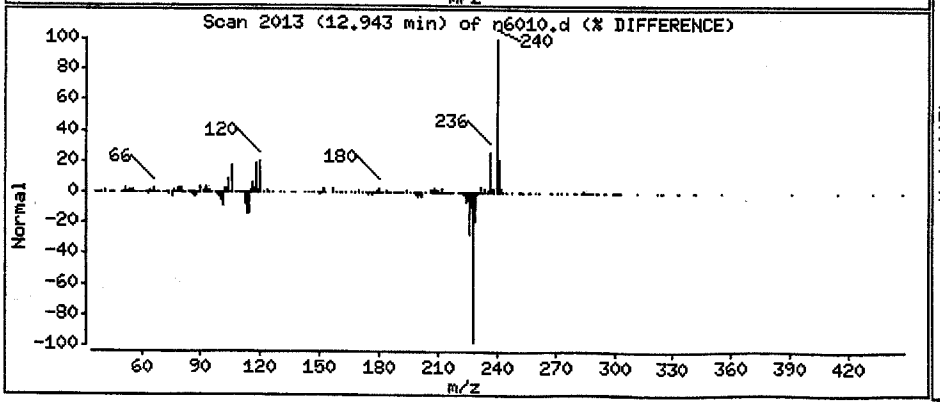
76 Benzo(a)Anthracene

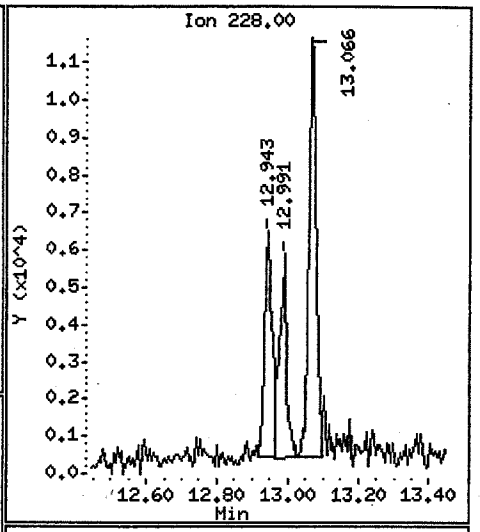
Concentration: 10 ug/Kg

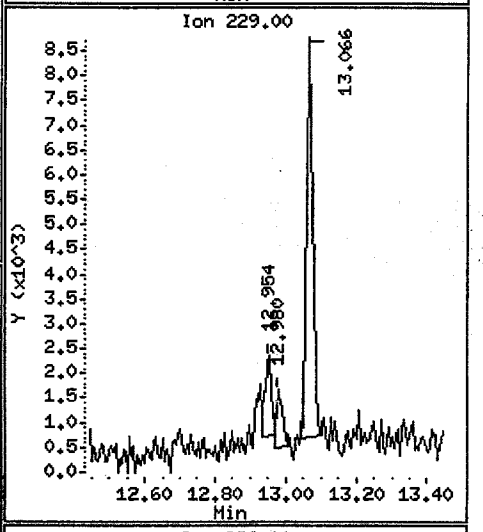


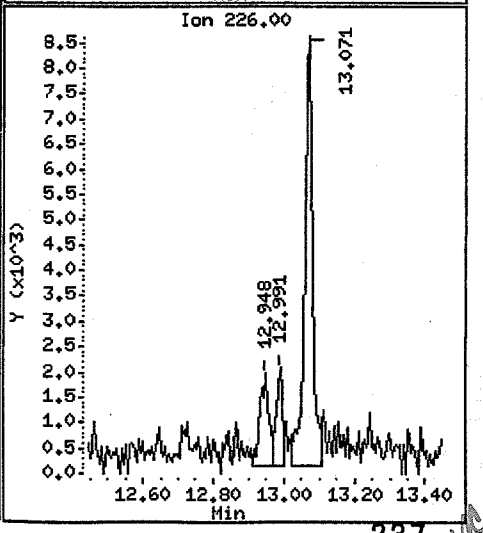












227

Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

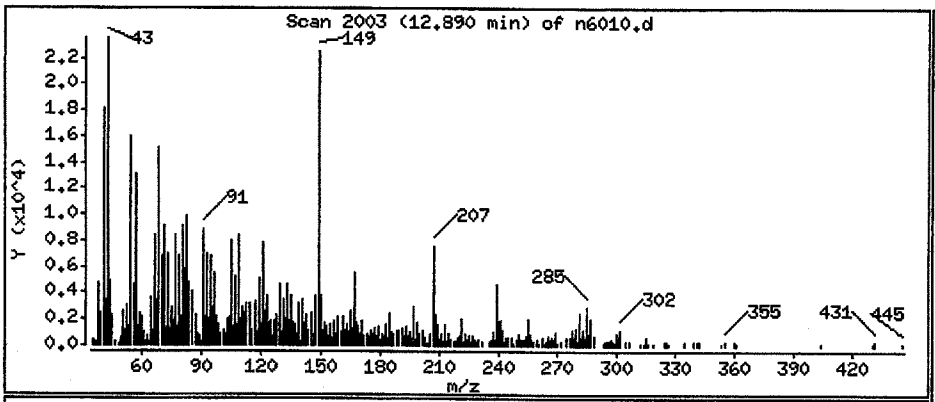
Operator:

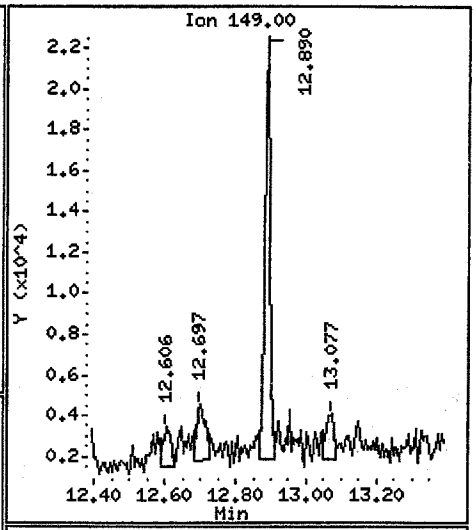
Column phase: SLB-5MS

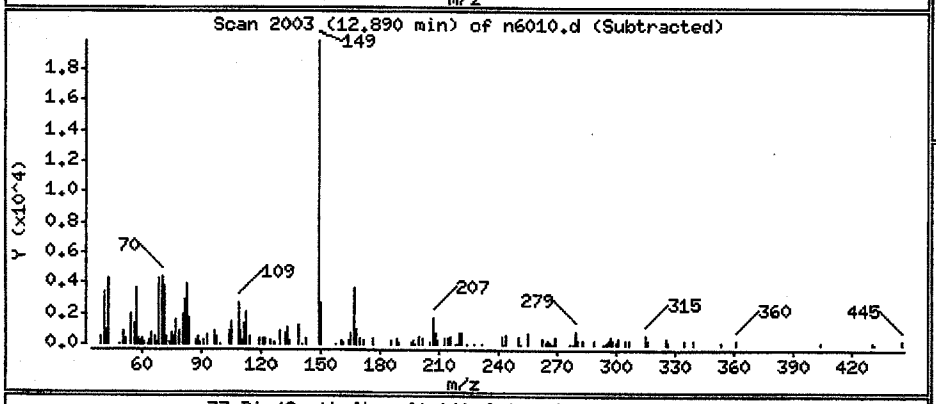
Column diameter: 0.25

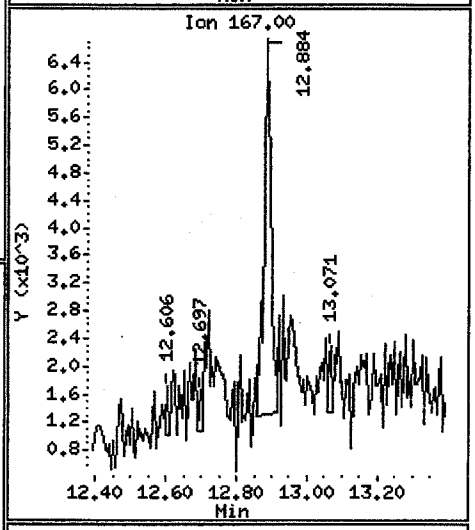
77 Bis(2-ethylhexyl)phthalate

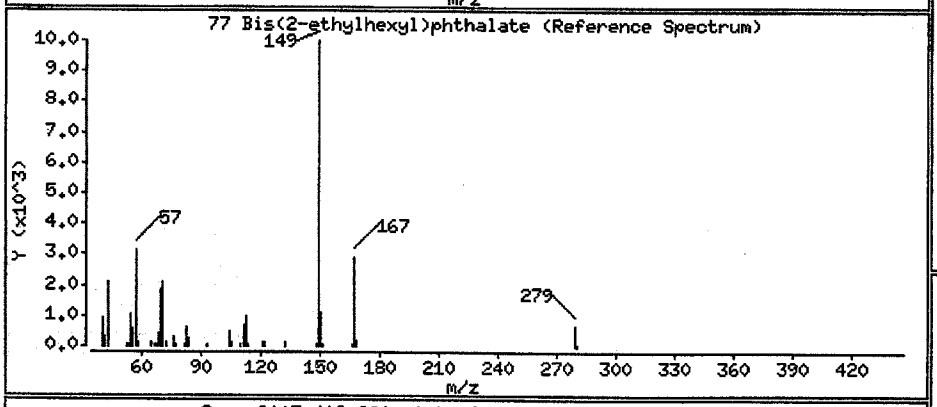
Concentration: 35 ug/Kg

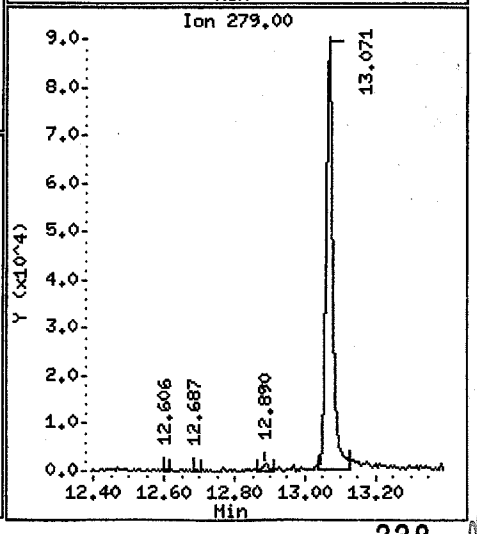


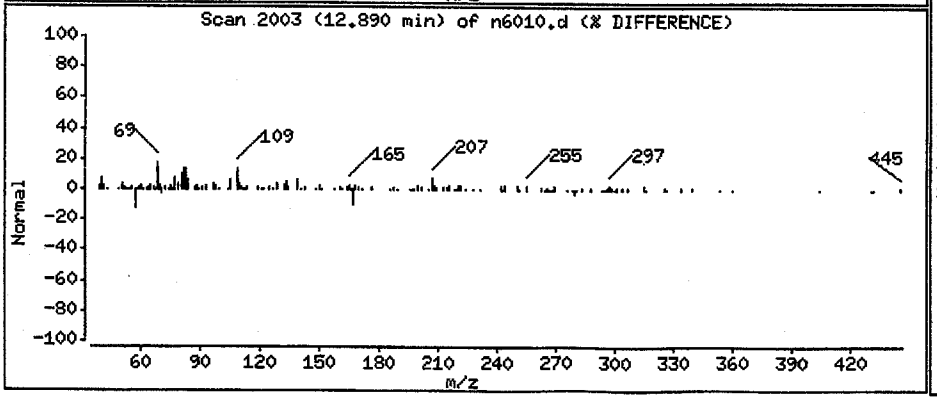












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

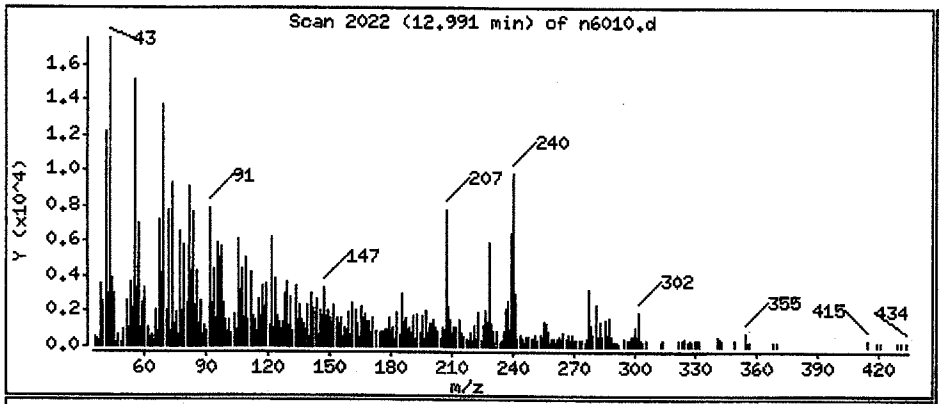
Operator:

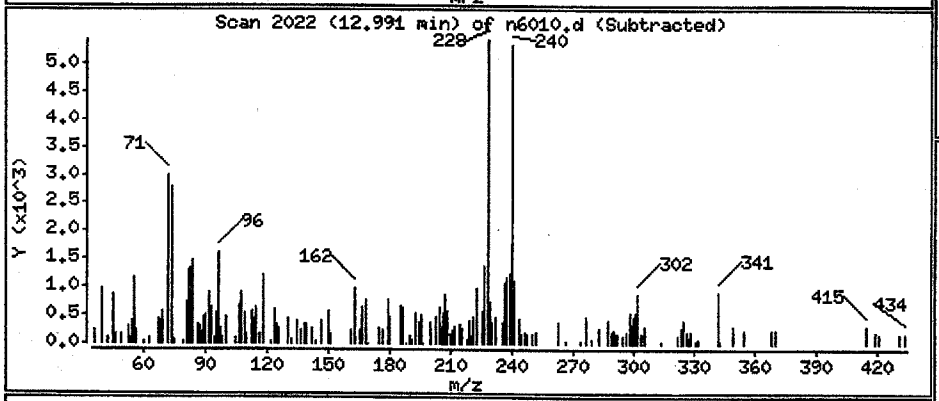
Column phase: SLB-5MS

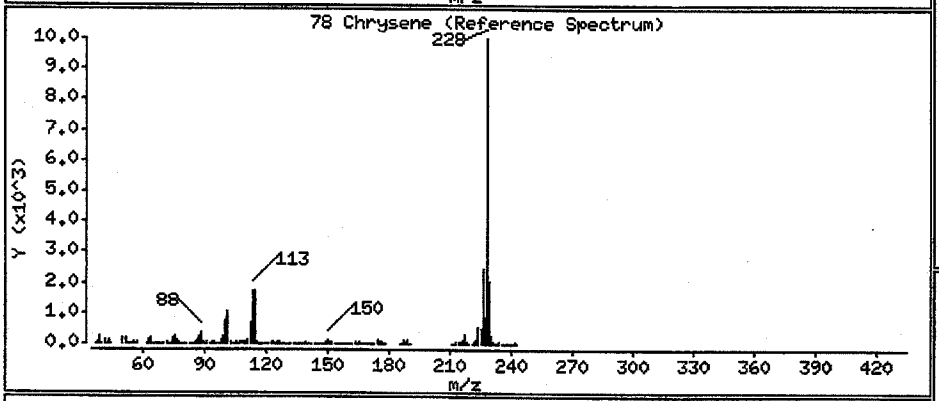
Column diameter: 0.25

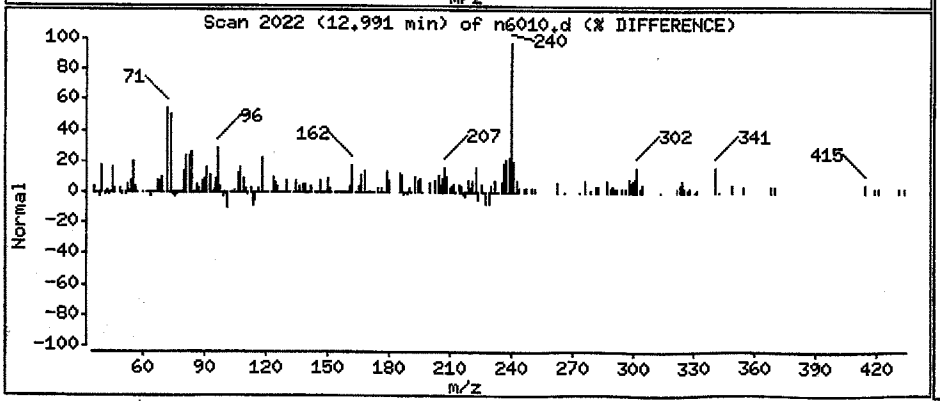
78 Chrysene

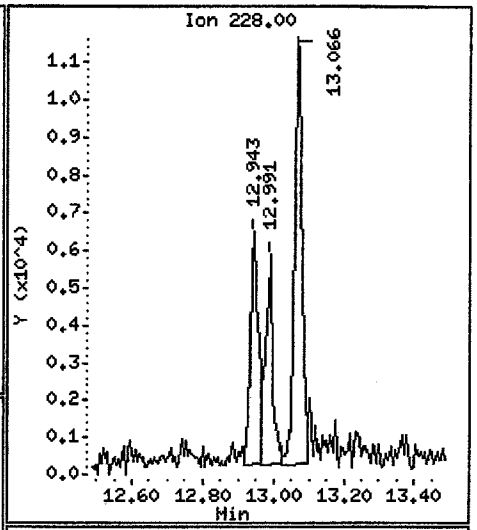
Concentration: 9.8 ug/Kg

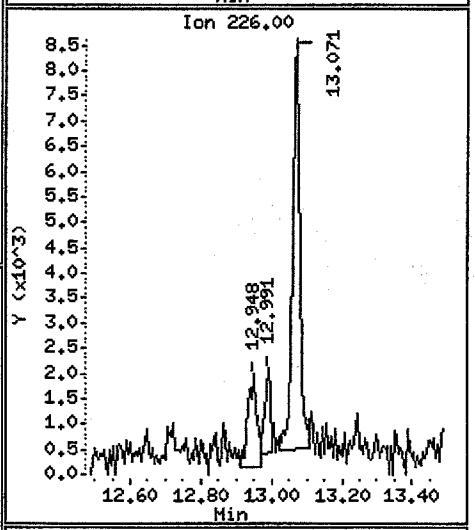


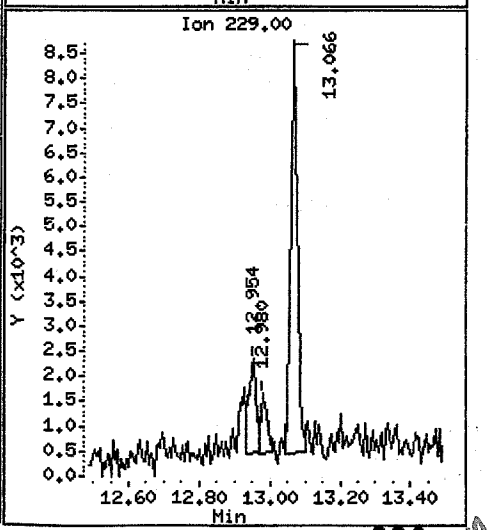












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

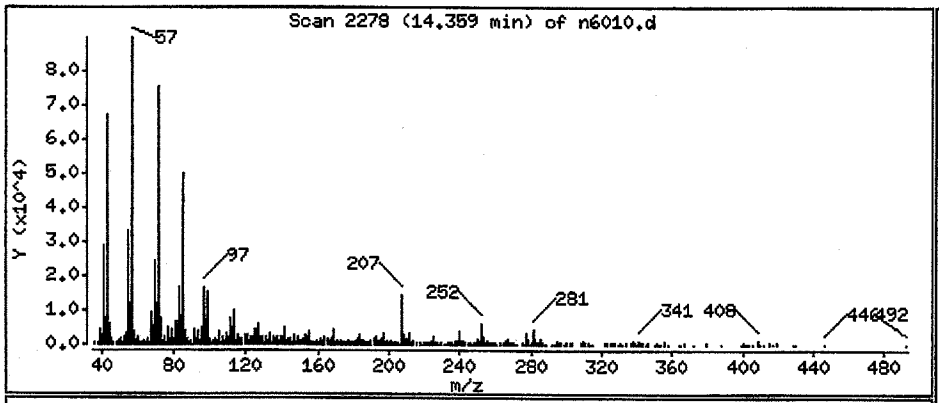
Operator:

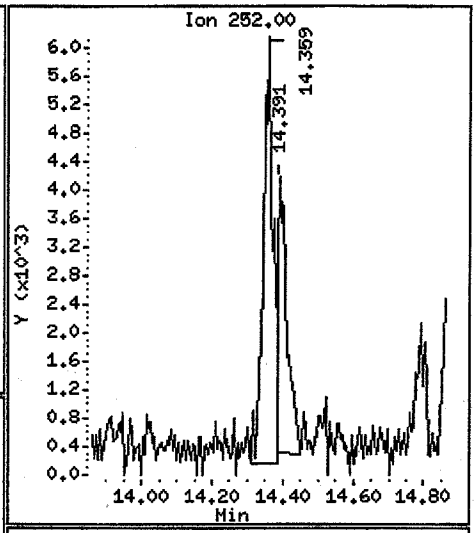
Column phase: SLB-5MS

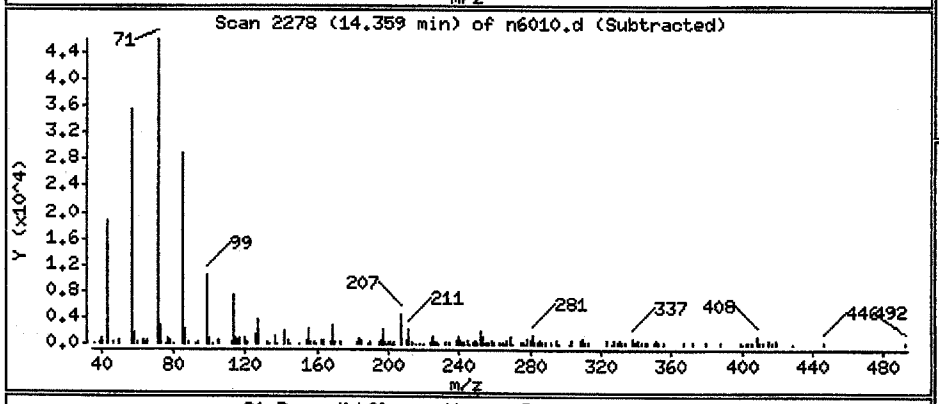
Column diameter: 0.25

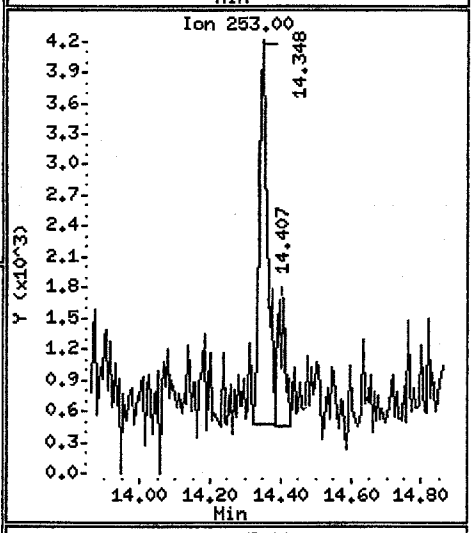
81 Benzo(b)fluoranthene

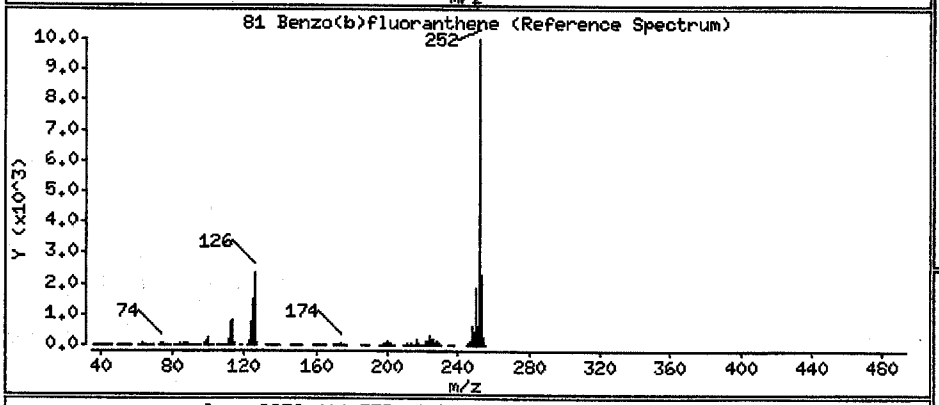
Concentration: 13 ug/Kg

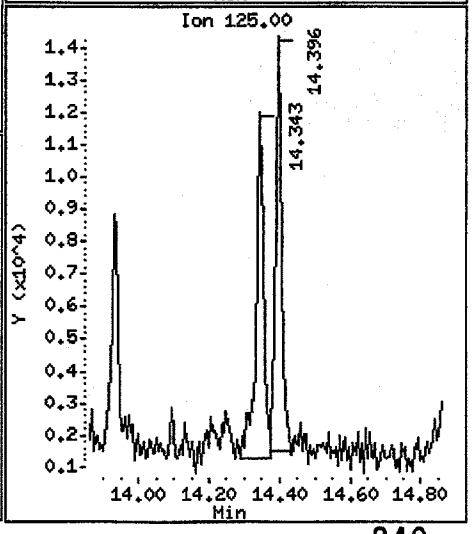


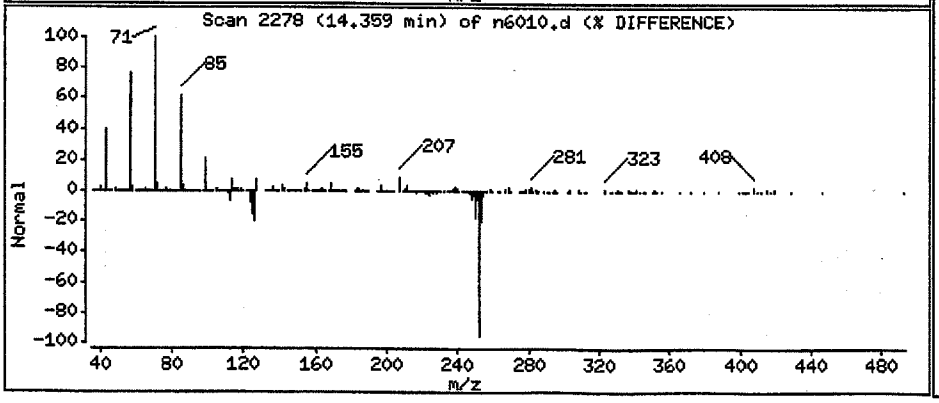












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

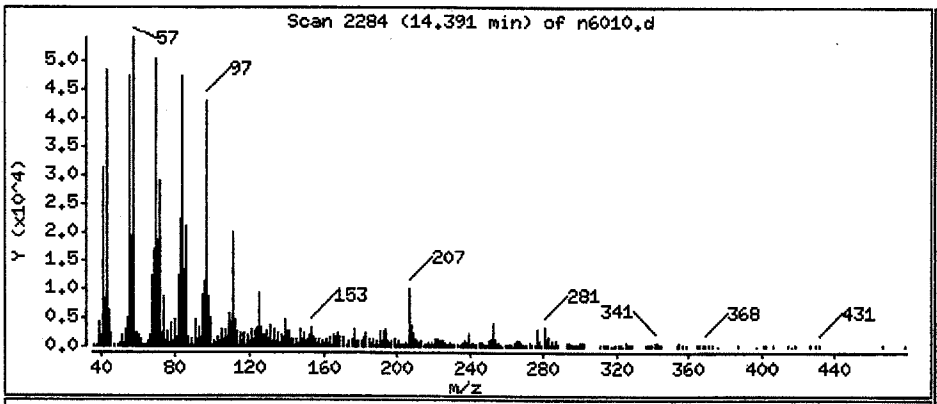
Operator:

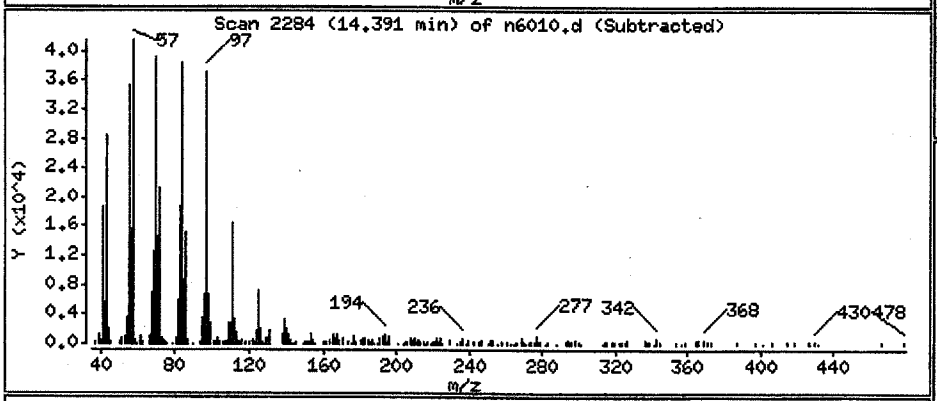
Column phase: SLB-5MS

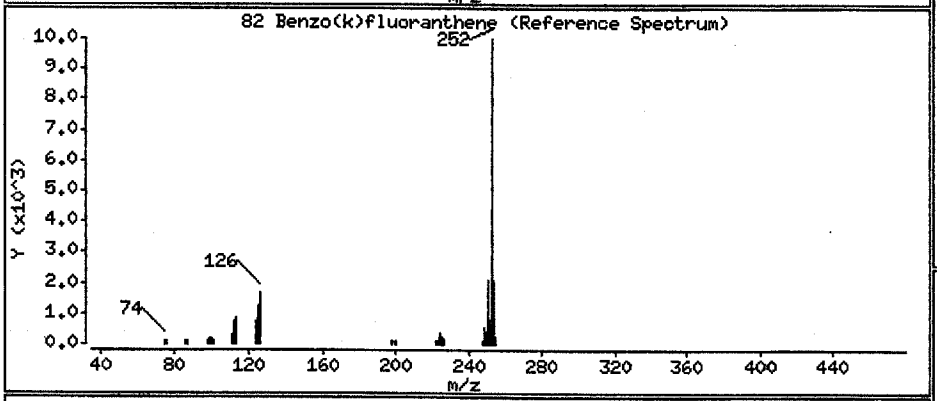
Column diameter: 0.25

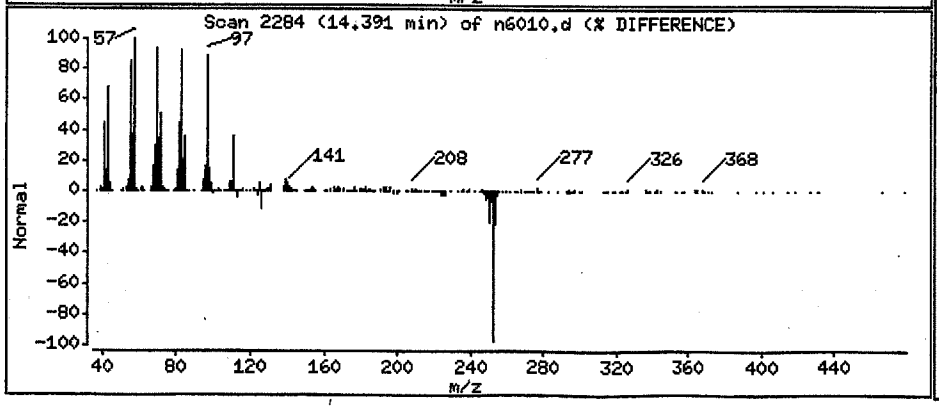
82 Benzo(k)fluoranthene

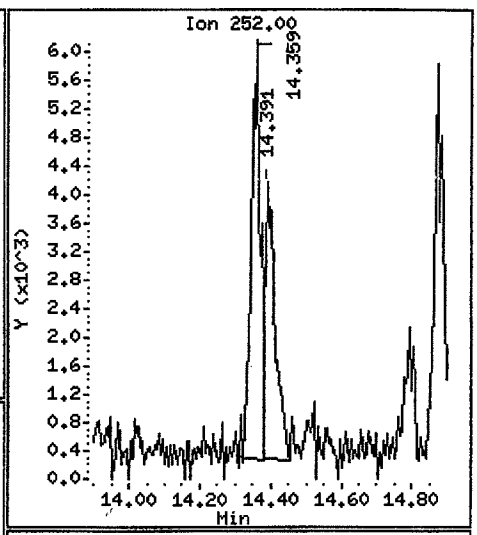
Concentration: 8.6 ug/Kg

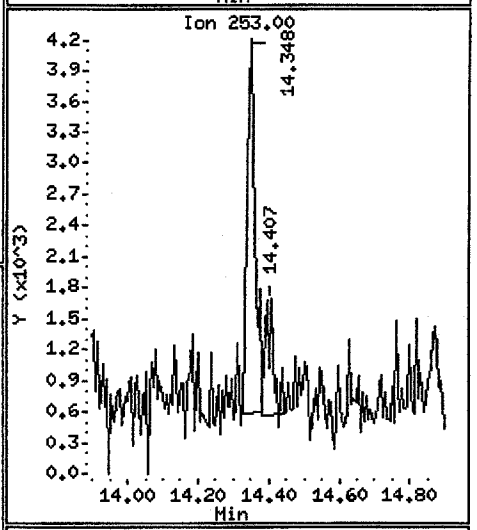


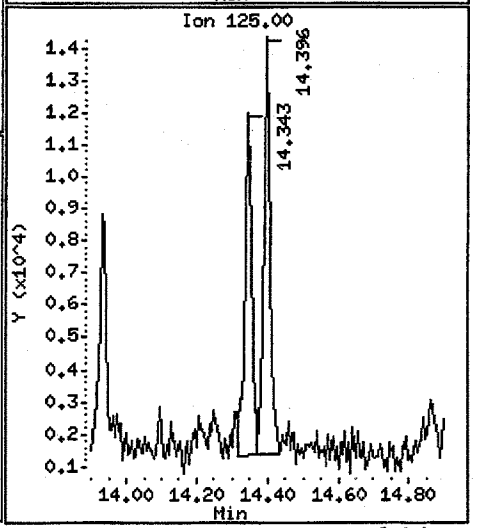












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

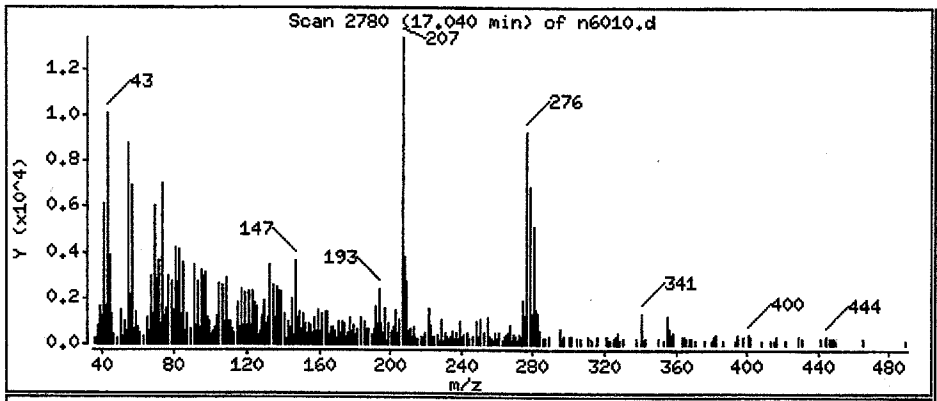
Operator:

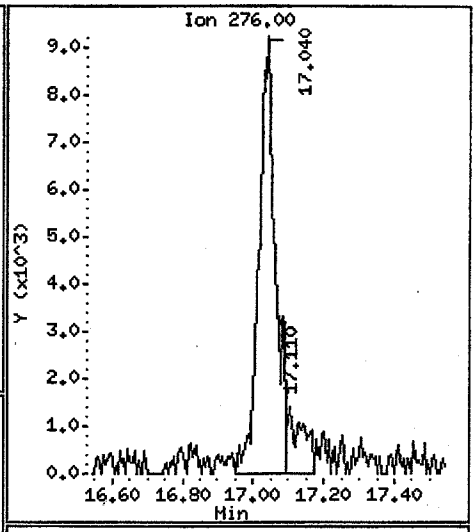
Column phase: SLB-5MS

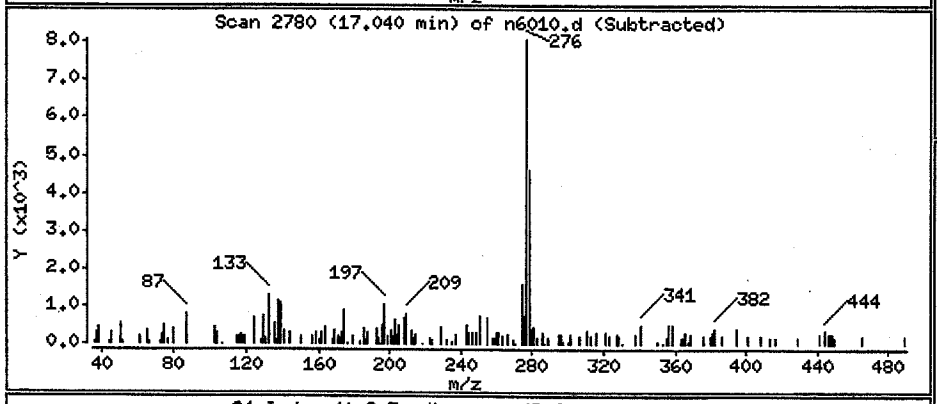
Column diameter: 0.25

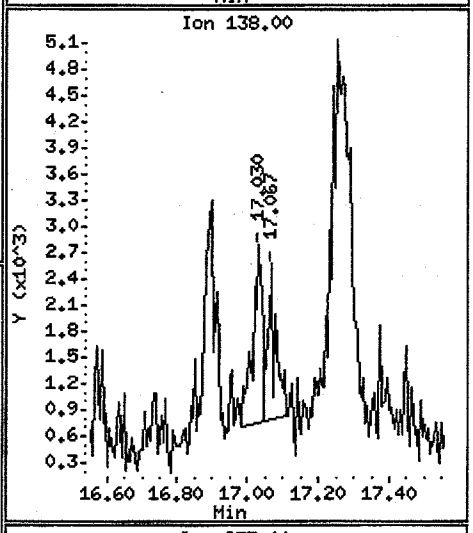
84 Indeno(1,2,3-cd)pyrene

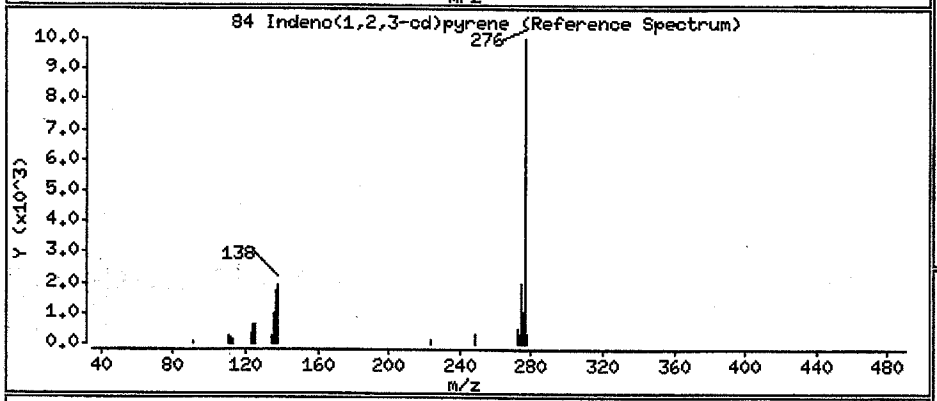
Concentration: 30 ug/Kg

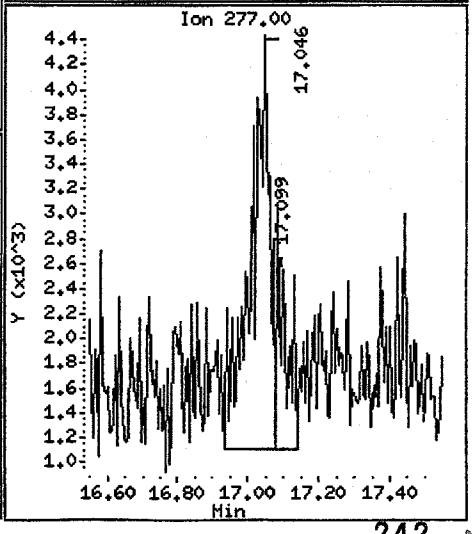


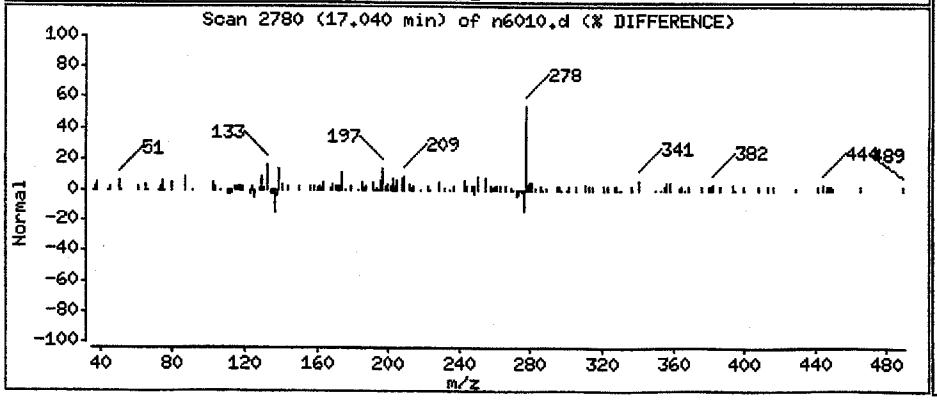












Data File: /chem/SM/MSN5973.i/1n030807.b/n6010.d

Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

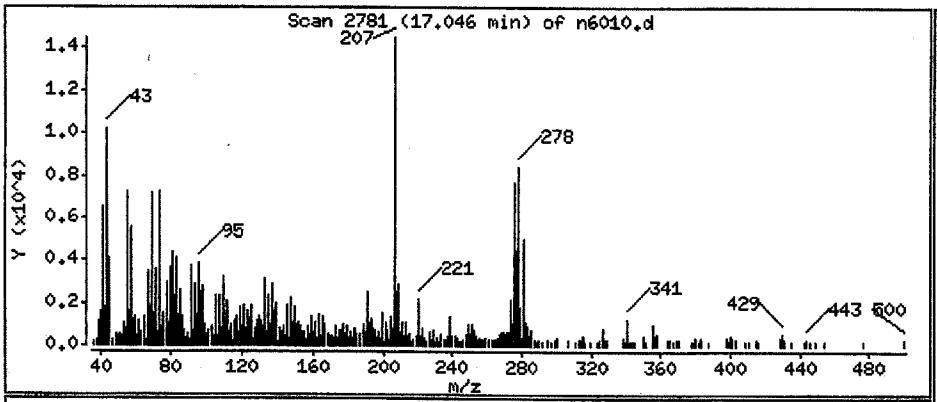
Operator:

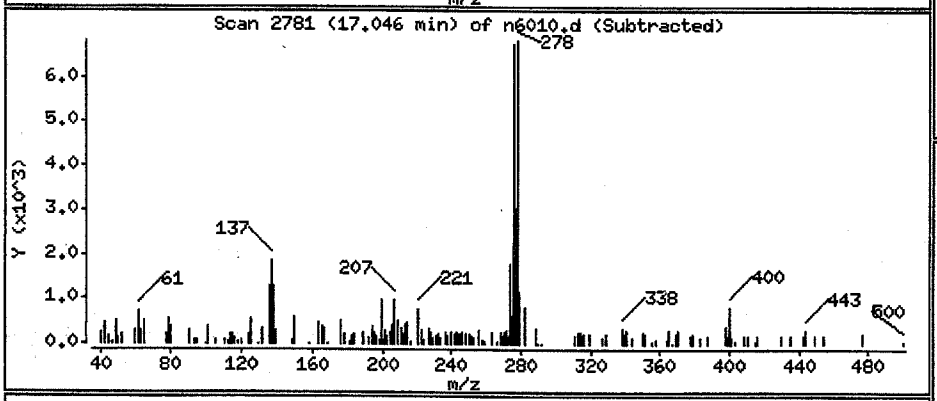
Column phase: SLB-5MS

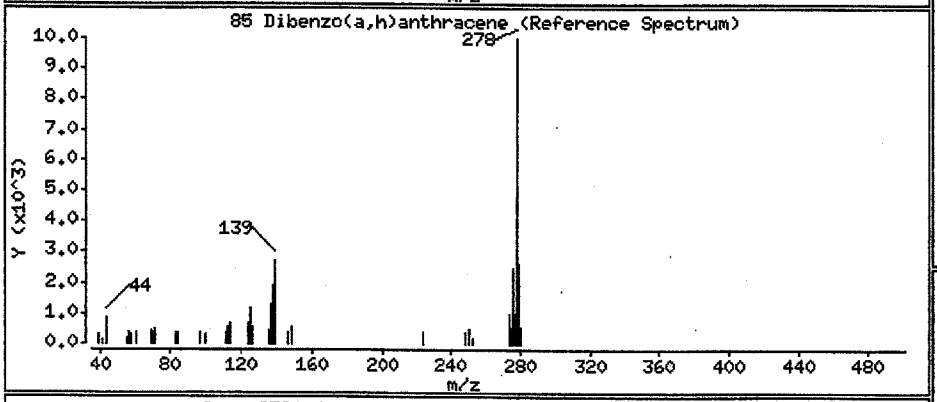
Column diameter: 0.25

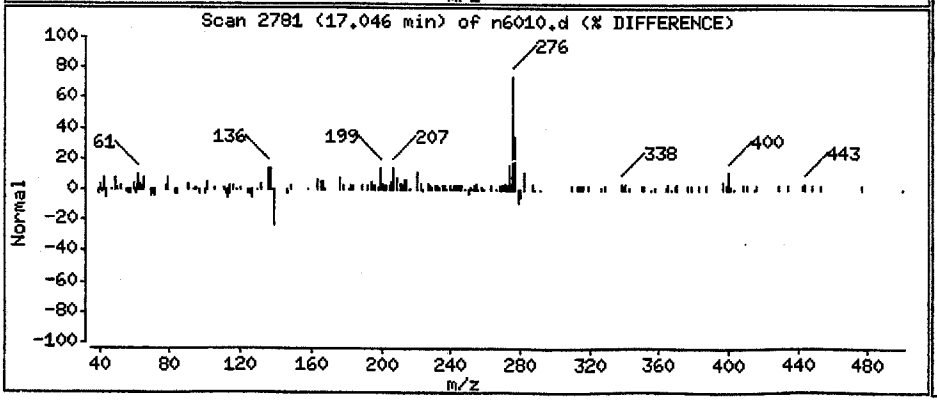
85 Dibenzo(a,h)anthracene

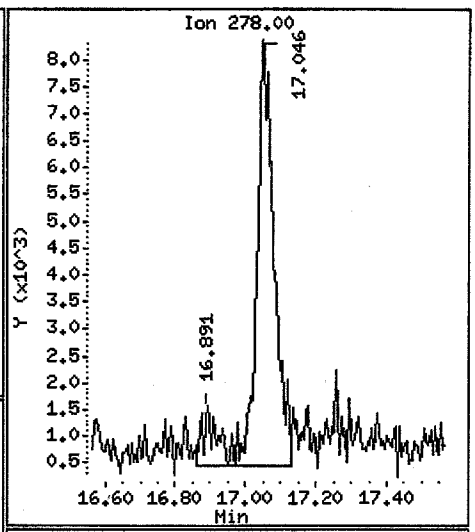
Concentration: 33 ug/Kg

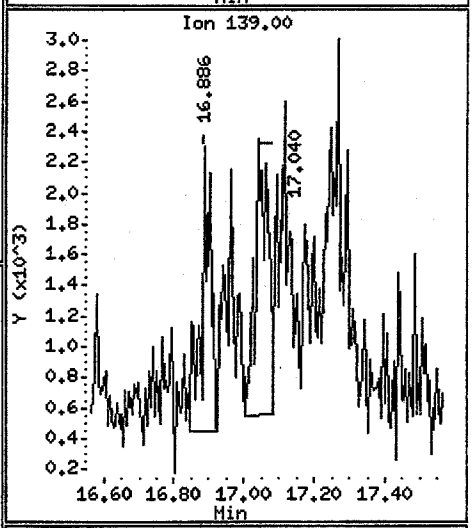


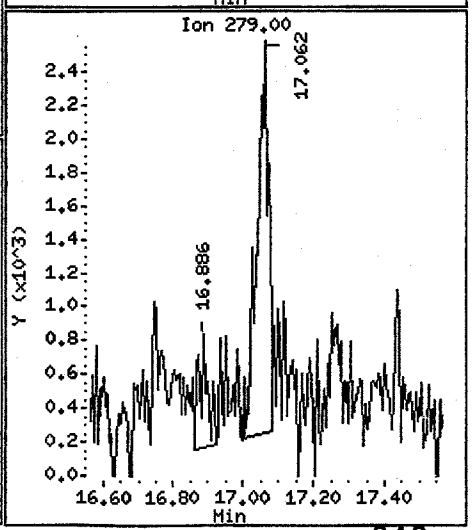












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Date : 08-MAR-2007 12:39

Client ID: WFF1-MW6-0-0.5

Instrument: MSN5973.i

Sample Info: 680-24460-A-4-C

Volume Injected (uL): 1.0

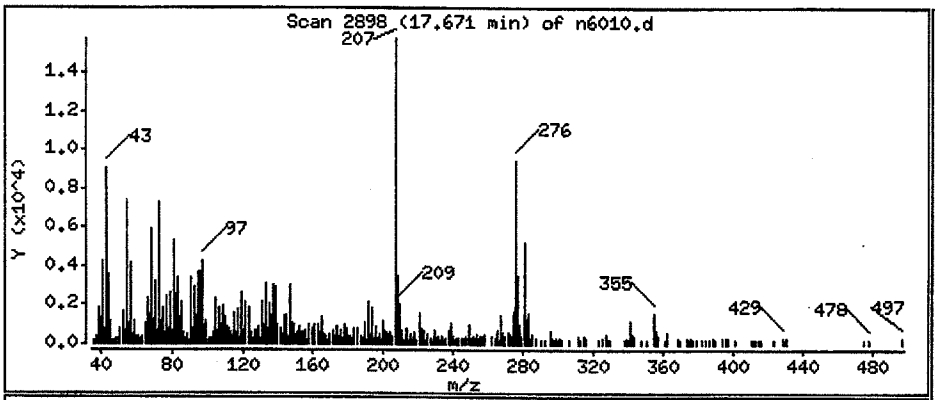
Operator:

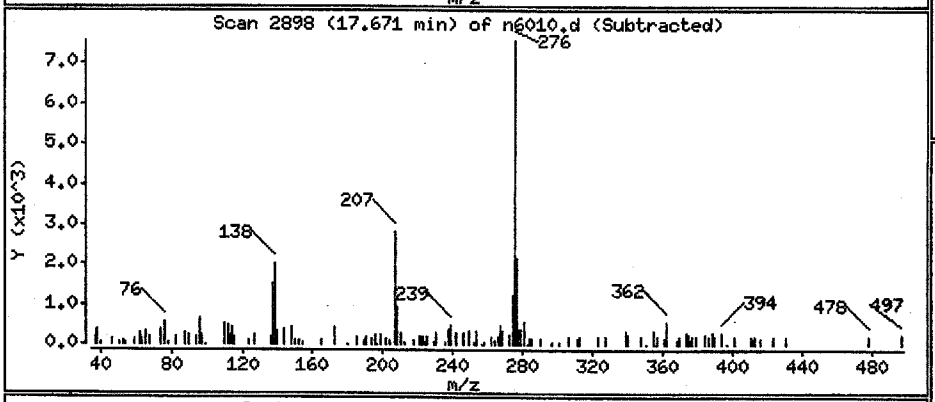
Column phase: SLB-5MS

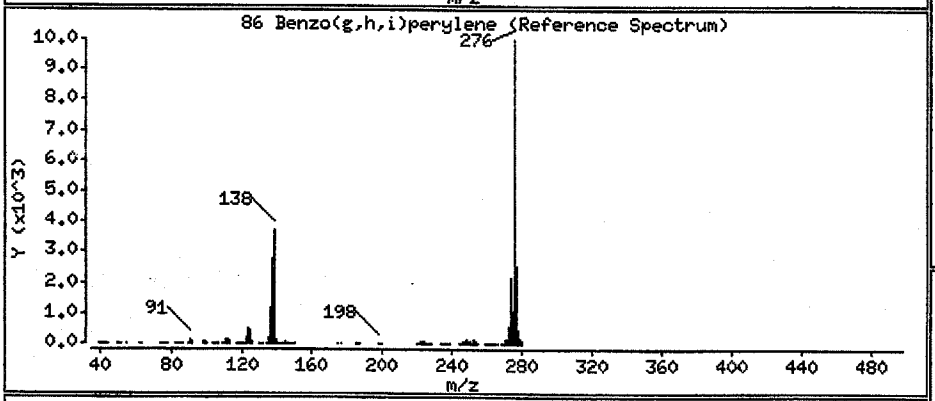
Column diameter: 0.25

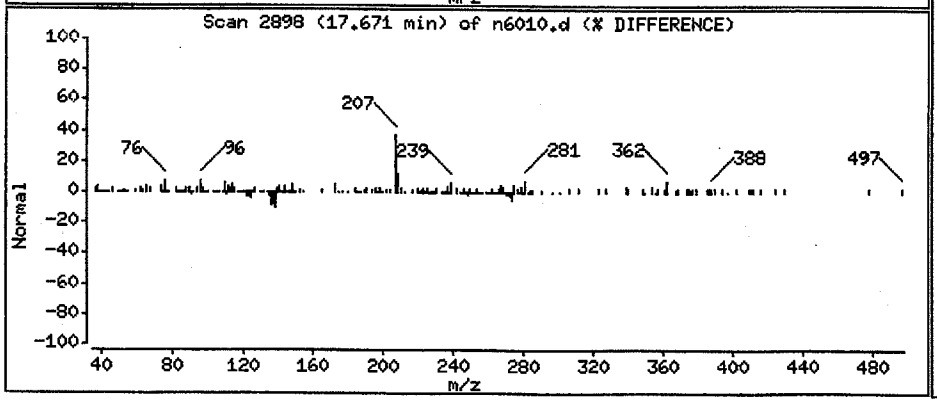
86 Benzo(g,h,i)perylene

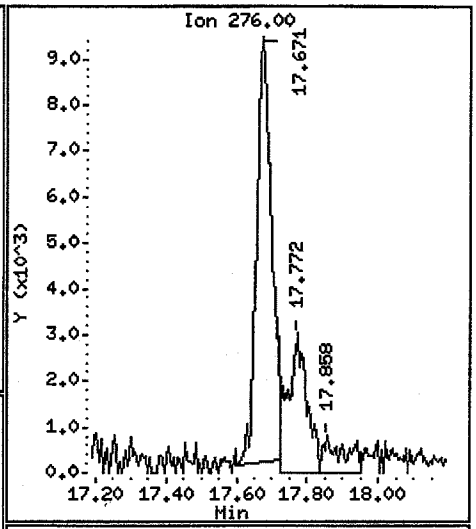
Concentration: 35 ug/Kg

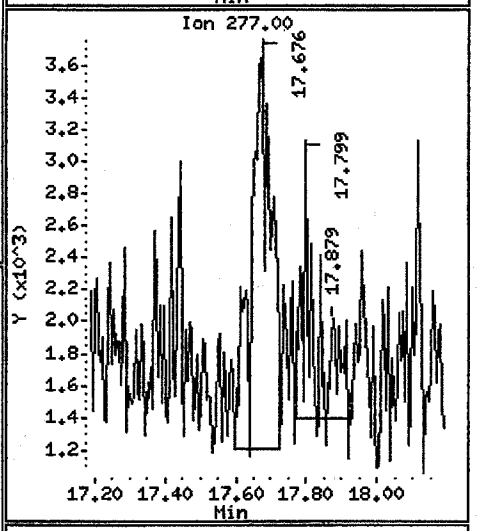


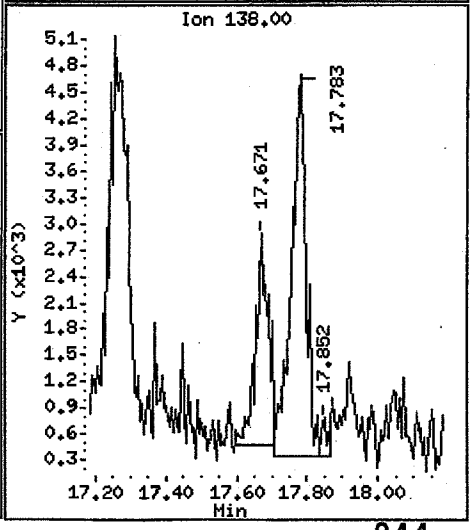












ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: MB 680-69131/20-AA

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: MB 680-69131/20-AA

Sample wt/vol: 30.00 (g) | Lab File ID: n6005.d

Level: (low/med) Low | Date Received:

% Moisture: | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
83-32-9	Acenaphthene	330	U
208-96-8	Acenaphthylene	330	U
120-12-7	Anthracene	330	U
56-55-3	Benzo[a]anthracene	330	U
50-32-8	Benzo[a]pyrene	330	U
205-99-2	Benzo[b]fluoranthene	330	U
191-24-2	Benzo[g,h,i]perylene	330	U
207-08-9	Benzo[k]fluoranthene	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
108-60-1	bis(chloroisopropyl) ether	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	330	U
101-55-3	4-Bromophenyl phenyl ether	330	U
85-68-7	Butyl benzyl phthalate	330	U
86-74-8	Carbazole	330	U
106-47-8	4-Chloroaniline	660	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-58-7	2-Chloronaphthalene	330	U
95-57-8	2-Chlorophenol	330	U
7005-72-3	4-Chlorophenyl phenyl ether	330	U
218-01-9	Chrysene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
132-64-9	Dibenzofuran	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
120-83-2	2,4-Dichlorophenol	330	U
84-66-2	Diethyl phthalate	48	J
105-67-9	2,4-Dimethylphenol	330	U
131-11-3	Dimethyl phthalate	330	U
84-74-2	Di-n-butyl phthalate	330	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: MB 680-69131/20-AA

Lab Name: STL Savannah | Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid | Lab Sample ID: MB 680-69131/20-AA

Sample wt/vol: 30.00 (g) | Lab File ID: n6005.d

Level: (low/med) Low | Date Received:

% Moisture: | Date Extracted: 03/07/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1700	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
117-84-0	Di-n-octyl phthalate	330	U
206-44-0	Fluoranthene	330	U
86-73-7	Fluorene	330	U
118-74-1	Hexachlorobenzene	330	U
87-68-3	Hexachlorobutadiene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
67-72-1	Hexachloroethane	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	330	U
78-59-1	Isophorone	330	U
91-57-6	2-Methylnaphthalene	330	U
95-48-7	2-Methylphenol	330	U
15831-10-4	3 & 4 Methylphenol	330	U
91-20-3	Naphthalene	330	U
88-74-4	2-Nitroaniline	1700	U
99-09-2	3-Nitroaniline	1700	U
100-01-6	4-Nitroaniline	1700	U
98-95-3	Nitrobenzene	330	U
88-75-5	2-Nitrophenol	330	U
100-02-7	4-Nitrophenol	1700	U
621-64-7	N-Nitrosodi-n-propylamine	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	330	U
108-95-2	Phenol	330	U
129-00-0	Pyrene	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date(s): 02/16/07 02/16/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1011 1225

LAB FILE ID: RRF10: EQ259 RRF20: EQ258 RRF50: EQ257
RRF80: EQ254 RRF100: EQ256 RRF200: EQ255

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF100	RRF200
1,4-Dioxane	64000	140022	411360	401464	580004	926939
Pyridine	1.4387	1.4996	1.6093	1.5300	1.5245	1.6432
N-Nitrosodimethylamine	1.0768	1.0743	1.1392	1.0657	1.0433	1.1373
Aniline	1.8969	1.8462	2.0538	1.6486	1.8778	1.7663
Phenol	1.7816	1.7565	1.7633	1.8187	1.7230	1.8003
Bis(2-chloroethyl)ether	0.9666	0.9410	0.9954	0.9018	0.9013	0.9568
2-Chlorophenol	1.6482	1.6445	1.6512	1.5711	1.5270	1.5829
1,3-Dichlorobenzene	1.8341	1.7785	1.7767	1.6978	1.6982	1.7420
1,4-Dichlorobenzene	1.8461	1.7968	1.7470	1.7603	1.6828	1.7469
Benzyl Alcohol	0.9812	0.9982	1.1197	1.0048	1.0027	1.0377
1,2-Dichlorobenzene	1.7443	1.7025	1.6492	1.5558	1.5080	1.5515
2-Methylphenol	1.1807	1.1483	1.1820	1.0619	1.0537	1.0990
N-Nitroso-di-n-propylamine	0.9210	0.8751	0.9368	0.8110	0.8042	0.8039
3&4-Methylphenol	1.7109	1.6315	1.6373	1.5265	1.4872	1.5151
Hexachloroethane	0.7085	0.6671	0.7142	0.6888	0.6811	0.7077
Nitrobenzene	0.3346	0.3280	0.3483	0.3208	0.3110	0.3044
Isophorone	0.6059	0.5867	0.6438	0.6074	0.5832	0.5790
2-Nitrophenol	0.1971	0.1917	0.2244	0.2028	0.2039	0.2060
2,4-Dimethylphenol	0.3303	0.3213	0.3392	0.3188	0.3113	0.3082
Bis(2-chloroethoxy)methane	0.3815	0.3711	0.3837	0.3583	0.3521	0.3403
Benzoic acid	81509	139952	986651	730610	1118321	1926863
2,4-Dichlorophenol	0.3047	0.2948	0.3170	0.3036	0.2927	0.2898
1,2,4-Trichlorobenzene	0.3413	0.3364	0.3290	0.3191	0.3072	0.2972
Naphthalene	1.1340	1.0757	1.0755	1.0255	0.9937	0.9781
4-Chloroaniline	0.4543	0.4545	0.4803	0.4339	0.4330	0.4304
Hexachlorobutadiene	0.1782	0.1730	0.1770	0.1671	0.1660	0.1596
4-Chloro-3-methylphenol	0.3077	0.3135	0.3367	0.3100	0.3069	0.3053
2-Methylnaphthalene	0.7946	0.7733	0.7866	0.7255	0.7196	0.6947
1-Methylnaphthalene	0.7921	0.7687	0.7780	0.7141	0.7134	0.6934
Hexachlorocyclopentadiene	0.2818	0.2540	0.3533	0.2904	0.3106	0.2994
2,4,6-Trichlorophenol	0.3587	0.3567	0.3929	0.3606	0.3525	0.3441
2,4,5-Trichlorophenol	0.3845	0.3925	0.4119	0.3869	0.3710	0.3587
2-Chloronaphthalene	1.2877	1.2244	1.2095	1.1415	1.0837	1.0501
2-Nitroaniline	0.3002	0.3083	0.3688	0.3237	0.3278	0.3252
Dimethylphthalate	1.4403	1.3800	1.4955	1.3760	1.3567	1.3022
2,6-Dinitrotoluene	0.2750	0.2882	0.3479	0.3113	0.3125	0.3117
Acenaphthylene	2.0149	1.9651	1.9873	1.8577	1.7883	1.7337
3-Nitroaniline	0.3499	0.3314	0.4067	0.3458	0.3615	0.3622
Acenaphthene	1.2497	1.1888	1.2540	1.1209	1.1143	1.1046
2,4-Dinitrophenol	0.0749	0.0759	0.1784	0.1206	0.1620	0.1627
4-Nitrophenol	0.2148	0.2032	0.2869	0.2278	0.2553	0.2501

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date(s): 02/16/07 02/16/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1011 1225

LAB FILE ID: RRF10: EQ259 RRF20: EQ258 RRF50: EQ257
RRF80: EQ254 RRF100: EQ256 RRF200: EQ255

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF100	RRF200
Dibenzofuran	1.7704	1.7149	1.6920	1.5431	1.5135	1.4413
2,4-Dinitrotoluene	0.3751	0.3923	0.4838	0.4155	0.4393	0.4209
Diethylphthalate	1.5037	1.4517	1.5633	1.4169	1.4355	1.3736
Fluorene	1.4636	1.3900	1.3901	1.2560	1.2642	1.2096
4-Chlorophenyl-phenylether	0.6942	0.6637	0.6718	0.6078	0.6112	0.5767
4-Nitroaniline	0.3528	0.3524	0.4282	0.3438	0.3775	0.3761
4,6-Dinitro-2-methylphenol	36335	57471	489030	301057	581652	846742
N-Nitrosodiphenylamine	0.5913	0.5710	0.5941	0.5476	0.5205	0.5224
1,2-Diphenylhydrazine	0.7412	0.7152	0.7230	0.6803	0.6405	0.6324
4-Bromophenyl-phenylether	0.2055	0.2046	0.2131	0.1947	0.1902	0.1855
Hexachlorobenzene	0.2251	0.2157	0.2201	0.1985	0.1980	0.1931
Pentachlorophenol	0.1042	0.1070	0.1520	0.1257	0.1365	0.1361
Phenanthrene	1.1935	1.1335	1.1343	1.0394	1.0207	0.9889
Anthracene	1.2213	1.1937	1.1629	1.0627	1.0424	1.0077
Carbazole	1.1918	1.1245	1.1738	1.0430	1.0437	1.0151
Di-n-Butylphthalate	1.4567	1.4075	1.5348	1.3840	1.3881	1.2668
Fluoranthene	1.3409	1.2916	1.2884	1.1418	1.1560	1.0937
Benzidine	0.8277	0.5838	0.7714	0.4544	0.6513	0.5294
Pyrene	1.5289	1.5021	1.4772	1.4784	1.3489	1.3989
Butylbenzylphthalate	0.6944	0.7153	0.8144	0.7924	0.7606	0.7748
3,3'-Dichlorobenzidine	0.5396	0.3859	0.5018	0.4357	0.4468	0.4265
Benzo(a)Anthracene	1.3528	1.3024	1.3204	1.2326	1.2272	1.2390
Bis(2-ethylhexyl)phthalate	0.9423	0.9837	1.1225	1.0940	1.0649	1.0619
Chrysene	1.2963	1.2770	1.3226	1.1911	1.1864	1.1815
Di-n-octylphthalate	1.5481	1.5972	1.9621	1.8002	1.8160	1.8132
Benzo(b)fluoranthene	1.6109	1.5403	1.5810	1.4777	1.5188	1.4880
Benzo(k)fluoranthene	1.5806	1.7041	1.5409	1.6316	1.4626	1.4642
Benzo(a)pyrene	1.4583	1.4286	1.4650	1.3851	1.3630	1.3598
Indeno(1,2,3-cd)pyrene	1.4650	1.2888	1.5798	1.0930	1.2900	1.2417
Dibenzo(a,h)anthracene	1.4687	1.4389	1.4369	1.2000	1.2698	1.2322
Benzo(g,h,i)perylene	1.4986	1.4189	1.4719	1.1973	1.3040	1.2614
2-Fluorophenol	1.4801	1.4808	1.5759	1.5460	1.5129	1.6380
Phenol-d5	1.8298	1.8017	1.8907	1.7544	1.6923	1.7892
Nitrobenzene-d5	0.3945	0.3887	0.3746	0.3837	0.3770	0.3765
2-Fluorobiphenyl	1.5099	1.4245	1.4108	1.3290	1.2683	1.2148
2,4,6-Tribromophenol	0.1780	0.1747	0.2043	0.1758	0.1864	0.1787
Terphenyl-d14	1.0986	1.0877	1.0500	1.0383	0.9538	0.9776

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date(s): 02/16/07 02/16/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1011 1225

COMPOUND	CURVE	COEFFICIENTS A0	COEFFICIENTS A1	%RSD OR R^2
1,4-Dioxane	LINR	0.00000000	1.61827832	0.9934535
Pyridine	AVRG		1.5409	4.831
N-Nitrosodimethylamine	AVRG		1.0894	3.636
Aniline	AVRG		1.8483	7.342
Phenol	AVRG		1.7739	1.915
Bis(2-chloroethyl)ether	AVRG		0.9438	3.943
2-Chlorophenol	AVRG		1.6041	3.212
1,3-Dichlorobenzene	AVRG		1.7546	3.009
1,4-Dichlorobenzene	AVRG		1.7633	3.107
Benzyl Alcohol	AVRG		1.0241	4.913
1,2-Dichlorobenzene	AVRG		1.6186	5.826
2-Methylphenol	AVRG		1.1210	5.130
N-Nitroso-di-n-propylamine	AVRG		0.8587	7.081
3&4-Methylphenol	AVRG		1.5847	5.546
Hexachloroethane	AVRG		0.6946	2.671
Nitrobenzene	AVRG		0.3245	4.936
Isophorone	AVRG		0.6010	4.008
2-Nitrophenol	AVRG		0.2043	5.458
2,4-Dimethylphenol	AVRG		0.3215	3.621
Bis(2-chloroethoxy)methane	AVRG		0.3645	4.721
Benzoic acid	LINR	0.00000000	3.53121988	0.9901753
2,4-Dichlorophenol	AVRG		0.3004	3.359
1,2,4-Trichlorobenzene	AVRG		0.3217	5.339
Naphthalene	AVRG		1.0471	5.610
4-Chloroaniline	AVRG		0.4477	4.307
Hexachlorobutadiene	AVRG		0.1701	4.209
4-Chloro-3-methylphenol	AVRG		0.3133	3.764
2-Methylnaphthalene	AVRG		0.7490	5.491
1-Methylnaphthalene	AVRG		0.7433	5.540
Hexachlorocyclopentadiene	AVRG		0.2983	11.095
2,4,6-Trichlorophenol	AVRG		0.3609	4.635
2,4,5-Trichlorophenol	AVRG		0.3843	4.746
2-Chloronaphthalene	AVRG		1.1662	7.755
2-Nitroaniline	AVRG		0.3257	7.296
Dimethylphthalate	AVRG		1.3918	4.846
2,6-Dinitrotoluene	AVRG		0.3078	8.111
Acenaphthylene	AVRG		1.8912	6.099
3-Nitroaniline	AVRG		0.3596	7.152
Acenaphthene	AVRG		1.1721	5.853
2,4-Dinitrophenol	AVRG		0.1291	35.478
4-Nitrophenol	AVRG		0.2397	12.755

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date(s): 02/16/07 02/16/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1011 1225

COMPOUND	CURVE	COEFFICIENTS A0	COEFFICIENTS A1	%RSD OR R^2	
Dibenzofuran	AVRG		1.6125	8.118	
2,4-Dinitrotoluene	AVRG		0.4211	9.032	
Diethylphthalate	AVRG		1.4575	4.606	
Fluorene	AVRG		1.3289	7.476	
4-Chlorophenyl-phenylether	AVRG		0.6376	7.132	
4-Nitroaniline	AVRG		0.3718	8.293	
4,6-Dinitro-2-methylphenol	LINR	0.00000000	8.00031072	0.9921220	
N-Nitrosodiphenylamine	AVRG		0.5578	5.869	
1,2-Diphenylhydrazine	AVRG		0.6888	6.556	
4-Bromophenyl-phenylether	AVRG		0.1989	5.273	
Hexachlorobenzene	AVRG		0.2084	6.475	
Pentachlorophenol	AVRG		0.1269	14.604	
Phenanthrene	AVRG		1.0850	7.372	
Anthracene	AVRG		1.1151	7.950	
Carbazole	AVRG		1.0986	6.822	
Di-n-Butylphthalate	AVRG		1.4063	6.308	
Fluoranthene	AVRG		1.2187	8.252	
Benzidine	AVRG		0.6363	22.486	<-
Pyrene	AVRG		1.4557	4.672	
Butylbenzylphthalate	AVRG		0.7586	6.046	
3,3'-Dichlorobenzidine	AVRG		0.4561	12.152	
Benzo(a)Anthracene	AVRG		1.2791	4.160	
Bis(2-ethylhexyl)phthalate	AVRG		1.0449	6.548	
Chrysene	AVRG		1.2425	5.090	
Di-n-octylphthalate	AVRG		1.7561	8.811	
Benzo(b)fluoranthene	AVRG		1.5361	3.402	
Benzo(k)fluoranthene	AVRG		1.5640	6.084	
Benzo(a)pyrene	AVRG		1.4100	3.335	
Indeno(1,2,3-cd)pyrene	AVRG		1.3264	12.965	
Dibenzo(a,h)anthracene	AVRG		1.3411	8.942	
Benzo(g,h,i)perylene	AVRG		1.3587	8.985	
2-Fluorophenol	AVRG		1.5390	3.978	
Phenol-d5	AVRG		1.7930	3.752	
Nitrobenzene-d5	AVRG		0.3825	2.064	
2-Fluorobiphenyl	AVRG		1.3596	8.036	
2,4,6-Tribromophenol	AVRG		0.1830	6.130	
Terphenyl-d14	AVRG		1.0343	5.626	

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date: 02/16/07 Time: 1248

Lab File ID: EQ260 Init. Calib. Date(s): 02/08/07 02/16/07

Init. Calib. Times: 0948 1533

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
1,4-Dioxane	80.0000	71.7085	0.55389		-10.4		LINR
Pyridine	1.54088		1.44084		-6.5		AVRG
N-Nitrosodimethylamine	1.08942		1.10456		1.4		AVRG
Aniline	1.84826		1.83601		-0.7		AVRG
Phenol	1.77391		1.76241		-0.6	20.0	AVRG
Bis(2-chloroethyl)ether	0.94384		0.79906		-15.3		AVRG
2-Chlorophenol	1.60414		1.60997		0.4		AVRG
1,3-Dichlorobenzene	1.75456		1.58183		-9.8		AVRG
1,4-Dichlorobenzene	1.76330		1.59342		-9.6	20.0	AVRG
Benzyl Alcohol	1.02405		1.00932		-1.4		AVRG
1,2-Dichlorobenzene	1.61856		1.50728		-6.9		AVRG
2-Methylphenol	1.12095		1.08273		-3.4		AVRG
N-Nitroso-di-n-propylamine	0.85868		0.83247	0.05	-3.1		AVRG
3&4-Methylphenol	1.58472		1.35130		-14.7		AVRG
Hexachloroethane	0.69458		0.63138		-9.1		AVRG
Nitrobenzene	0.32452		0.30583		-5.8		AVRG
Isophorone	0.60097		0.50258		-16.4		AVRG
2-Nitrophenol	0.20430		0.19574		-4.2	20.0	AVRG
2,4-Dimethylphenol	0.32151		0.31227		-2.9		AVRG
Bis(2-chloroethoxy)methane	0.36450		0.33198		-8.9		AVRG
Benzoic acid	80.0000	78.6642	0.27846		-1.7		LINR
2,4-Dichlorophenol	0.30042		0.27570		-8.2	20.0	AVRG
1,2,4-Trichlorobenzene	0.32171		0.28065		-12.8		AVRG
Naphthalene	1.04708		0.95107		-9.2		AVRG
4-Chloroaniline	0.44773		0.40272		-10.1		AVRG
Hexachlorobutadiene	0.17014		0.15033		-11.6	20.0	AVRG
4-Chloro-3-methylphenol	0.31332		0.30722		-1.9	20.0	AVRG
2-Methylnaphthalene	0.74905		0.66158		-11.7		AVRG
1-Methylnaphthalene	0.74329		0.65485		-11.9		AVRG
Hexachlorocyclopentadiene	0.29825		0.25646	0.05	-14.0		AVRG
2,4,6-Trichlorophenol	0.36093		0.34255		-5.1	20.0	AVRG
2,4,5-Trichlorophenol	0.38425		0.35838		-6.7		AVRG
2-Chloronaphthalene	1.16616		1.17090		0.4		AVRG
2-Nitroaniline	0.32567		0.31293		-3.9		AVRG
Dimethylphthalate	1.39177		1.22971		-11.6		AVRG
2,6-Dinitrotoluene	0.30777		0.30099		-2.2		AVRG
Acenaphthylene	1.89117		1.62312		-14.2		AVRG
3-Nitroaniline	0.35958		0.35352		-1.7		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date: 02/16/07 Time: 1248

Lab File ID: EQ260 Init. Calib. Date(s): 02/08/07 02/16/07

Init. Calib. Times: 0948 1533

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
Acenaphthene	1.17208		1.08619		-7.3	20.0	AVRG
2,4-Dinitrophenol	0.12907		0.16675	0.05	29.2		AVRG
4-Nitrophenol	0.23966		0.25208	0.05	5.2		AVRG
Dibenzofuran	1.61251		1.43011		-11.3		AVRG
2,4-Dinitrotoluene	0.42113		0.38018		-9.7		AVRG
Diethylphthalate	1.45745		1.31625		-9.7		AVRG
Fluorene	1.32892		1.19289		-10.2		AVRG
4-Chlorophenyl-phenylether	0.63756		0.56576		-11.3		AVRG
4-Nitroaniline	0.37179		0.36900		-0.8		AVRG
4,6-Dinitro-2-methylphenol	80.0000	81.9363	0.12802		2.4		LINR
N-Nitrosodiphenylamine	0.55781		0.60205		7.9	20.0	AVRG
1,2-Diphenylhydrazine	0.68878		0.58188		-15.5		AVRG
4-Bromophenyl-phenylether	0.19893		0.17197		-13.6		AVRG
Hexachlorobenzene	0.20841		0.18233		-12.5		AVRG
Pentachlorophenol	0.12694		0.11805		-7.0	20.0	AVRG
Phenanthrene	1.08503		0.96177		-11.4		AVRG
Anthracene	1.11511		0.98000		-12.1		AVRG
Carbazole	1.09865		0.98179		-10.6		AVRG
Di-n-Butylphthalate	1.40631		1.23963		-11.9		AVRG
Fluoranthene	1.21874		1.02332		-16.0	20.0	AVRG
Benzidine	0.63634		0.68022		6.9		AVRG
Pyrene	1.45574		1.24831		-14.2		AVRG
Butylbenzylphthalate	0.75864		0.67422		-11.1		AVRG
3,3'-Dichlorobenzidine	0.45606		0.45455		-0.3		AVRG
Benzo(a)Anthracene	1.27908		1.14073		-10.8		AVRG
Bis(2-ethylhexyl)phthalate	1.04487		0.92437		-11.5		AVRG
Chrysene	1.24251		1.12059		-9.8		AVRG
Di-n-octylphthalate	1.75614		1.59780		-9.0	20.0	AVRG
Benzo(b)fluoranthene	1.53611		1.33148		-13.3		AVRG
Benzo(k)fluoranthene	1.56399		1.30369		-16.6		AVRG
Benzo(a)pyrene	1.40996		1.22498		-13.1	20.0	AVRG
Indeno(1,2,3-cd)pyrene	1.32638		1.41466		6.7		AVRG
Dibenzo(a,h)anthracene	1.34108		1.22138		-8.9		AVRG
Benzo(g,h,i)perylene	1.35870		1.27519		-6.1		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date: 03/08/07 Time: 0803

Lab File ID: EQ324 Init. Calib. Date(s): 02/16/07 02/16/07

Init. Calib. Times: 1011 1225

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
1,4-Dioxane	80.0000	85.3580	0.65933		6.7		LINR
Pyridine	1.54088		1.48137		-3.9		AVRG
N-Nitrosodimethylamine	1.08942		1.05095		-3.5		AVRG
Aniline	1.84826		1.41111		-23.7		AVRG
Phenol	1.77391		1.84101		3.8	20.0	AVRG
Bis(2-chloroethyl)ether	0.94384		0.98485		4.3		AVRG
2-Chlorophenol	1.60414		1.68642		5.1		AVRG
1,3-Dichlorobenzene	1.75456		1.75942		0.3		AVRG
1,4-Dichlorobenzene	1.76330		1.80075		2.1	20.0	AVRG
Benzyl Alcohol	1.02405		1.03533		1.1		AVRG
1,2-Dichlorobenzene	1.61856		1.62669		0.5		AVRG
2-Methylphenol	1.12095		1.15991		3.5		AVRG
N-Nitroso-di-n-propylamine	0.85868		1.07405	0.05	25.1		AVRG
3&4-Methylphenol	1.58472		1.68357		6.2		AVRG
Hexachloroethane	0.69458		0.72930		5.0		AVRG
Nitrobenzene	0.32452		0.34549		6.5		AVRG
Isophorone	0.60097		0.66518		10.7		AVRG
2-Nitrophenol	0.20430		0.21612		5.8	20.0	AVRG
2,4-Dimethylphenol	0.32151		0.30544		-5.0		AVRG
Bis(2-chloroethoxy)methane	0.36450		0.38637		6.0		AVRG
Benzoic acid	80.0000	73.0056	0.25843		-8.7		LINR
2,4-Dichlorophenol	0.30042		0.29994		-0.2	20.0	AVRG
1,2,4-Trichlorobenzene	0.32171		0.32479		1.0		AVRG
Naphthalene	1.04708		1.07832		3.0		AVRG
4-Chloroaniline	0.44773		0.41880		-6.5		AVRG
Hexachlorobutadiene	0.17014		0.17033		0.1	20.0	AVRG
4-Chloro-3-methylphenol	0.31332		0.34432		9.9	20.0	AVRG
2-Methylnaphthalene	0.74905		0.77691		3.7		AVRG
1-Methylnaphthalene	0.74329		0.77517		4.3		AVRG
Hexachlorocyclopentadiene	0.29825		0.29310	0.05	-1.7		AVRG
2,4,6-Trichlorophenol	0.36093		0.35519		-1.6	20.0	AVRG
2,4,5-Trichlorophenol	0.38425		0.40373		5.1		AVRG
2-Chloronaphthalene	1.16616		1.16411		-0.2		AVRG
2-Nitroaniline	0.32567		0.35062		7.7		AVRG
Dimethylphthalate	1.39177		1.46455		5.2		AVRG
2,6-Dinitrotoluene	0.30777		0.33096		7.5		AVRG
Acenaphthylene	1.89117		1.90983		1.0		AVRG
3-Nitroaniline	0.35958		0.36243		0.8		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date: 03/08/07 Time: 0803

Lab File ID: EQ324 Init. Calib. Date(s): 02/16/07 02/16/07

Init. Calib. Times: 1011 1225

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
Acenaphthene	1.17208		1.17490		0.2	20.0	AVRG
2,4-Dinitrophenol	0.12907		0.13790	0.05	6.8		AVRG
4-Nitrophenol	0.23966		0.28307	0.05	18.1		AVRG
Dibenzofuran	1.61251		1.62300		0.7		AVRG
2,4-Dinitrotoluene	0.42113		0.44774		6.3		AVRG
Diethylphthalate	1.45745		1.56612		7.5		AVRG
Fluorene	1.32892		1.36056		2.4		AVRG
4-Chlorophenyl-phenylether	0.63756		0.64673		1.4		AVRG
4-Nitroaniline	0.37179		0.37254		0.2		AVRG
4,6-Dinitro-2-methylphenol	80.0000	75.6012	0.11812		-5.5		LINR
N-Nitrosodiphenylamine	0.55781		0.55557		-0.4	20.0	AVRG
1,2-Diphenylhydrazine	0.68878		0.73807		7.2		AVRG
4-Bromophenyl-phenylether	0.19893		0.20184		1.5		AVRG
Hexachlorobenzene	0.20841		0.21077		1.1		AVRG
Pentachlorophenol	0.12694		0.11685		-7.9	20.0	AVRG
Phenanthrene	1.08503		1.09488		0.9		AVRG
Anthracene	1.11511		1.12780		1.1		AVRG
Carbazole	1.09865		1.11303		1.3		AVRG
Di-n-Butylphthalate	1.40631		1.52818		8.7		AVRG
Fluoranthene	1.21874		1.25650		3.1	20.0	AVRG
Benzidine	0.63634		0.47296		-25.7		AVRG
Pyrene	1.45574		1.45760		0.1		AVRG
Butylbenzylphthalate	0.75864		0.80270		5.8		AVRG
3,3'-Dichlorobenzidine	0.45606		0.50862		11.5		AVRG
Benzo(a)Anthracene	1.27908		1.29888		1.5		AVRG
Bis(2-ethylhexyl)phthalate	1.04487		1.15195		10.2		AVRG
Chrysene	1.24251		1.22925		-1.1		AVRG
Di-n-octylphthalate	1.75614		1.98039		12.8	20.0	AVRG
Benzo(b)fluoranthene	1.53611		1.51531		-1.4		AVRG
Benzo(k)fluoranthene	1.56399		1.54918		-0.9		AVRG
Benzo(a)pyrene	1.40996		1.42474		1.0	20.0	AVRG
Indeno(1,2,3-cd)pyrene	1.32638		1.49037		12.4		AVRG
Dibenzo(a,h)anthracene	1.34108		1.40633		4.9		AVRG
Benzo(g,h,i)perylene	1.35870		1.38473		1.9		AVRG
2-Fluorophenol	1.53896		1.45905		-5.2		AVRG
Phenol-d5	1.79304		1.85228		3.3		AVRG
Nitrobenzene-d5	0.38248		0.40648		6.3		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: MSE5973 Calibration Date: 03/08/07 Time: 0803

Lab File ID: EQ324 Init. Calib. Date(s): 02/16/07 02/16/07

Init. Calib. Times: 1011 1225

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
2-Fluorobiphenyl	1.35955		1.35172		-0.6		AVRG
2,4,6-Tribromophenol	0.18297		0.19031		4.0		AVRG
Terphenyl-d14	1.03432		1.04071		0.6		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

STL SAVANNAH

8081/8082 PESTICIDE/PCB

Data file : /chem/SG/SGJECD1.i/1J030507.b/jc05030.d
Lab Smp Id: WFF1-SS1 Client Smp ID: 680-24460-A-17-A
Inj Date : 06-MAR-2007 04:05
Operator : Inst ID: SGJECD1.i
Smp Info : 680-24460-A-17-A~1J030507~68647
Misc Info : 680-24460-A-17-A
Comment :
Method : /chem/SG/SGJECD1.i/1J030507.b/j-b808182-e1.m
Meth Date : 07-Mar-2007 10:31 kellarj Quant Type: ISTD
Cal Date : 13-FEB-2007 05:10 Cal File: jb12033.d
Als bottle: 30
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: tl05.sub
Target Version: 3.50 Sample Matrix: SOLID

Concentration Formula: Amt * DF * Vt/Ws * 100/(100 - M) * A * E * CpndVariabl

Name	Value	Description
DF	2.00000	Dilution Factor
Vt	10.00000	Volume of final extract
Ws	30.08000	Weight of sample extract
M	19.03670	% Moisture
A	1000.00000	g to kg conversion
E	1.00000	ug to mg conversion (1 if no conversion)

Cpnd Variable Local Compound Variable

	RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/kg)	TARGET RANGE	RATIO
*	1 Bromonitrobenzene				CAS #:		
	3.739	3.740 (1.000)	43342433	0.10000		80.00- 120.00	100.00
$	2 Tetrachloro-m-xylene				CAS #: 877-09-8		
	5.234	5.235 (1.400)	5339936	0.01315	11	80.00- 120.00	100.00
	14 4,4'-DDE				CAS #: 72-55-9		
	10.828	10.829 (2.896)	3124453	0.00734	6.0	80.00- 120.00	100.00(a)
	15 Dieldrin				CAS #: 60-57-1		
	11.503	11.494 (3.076)	4110616	0.00690	5.7	80.00- 120.00	100.00(a)

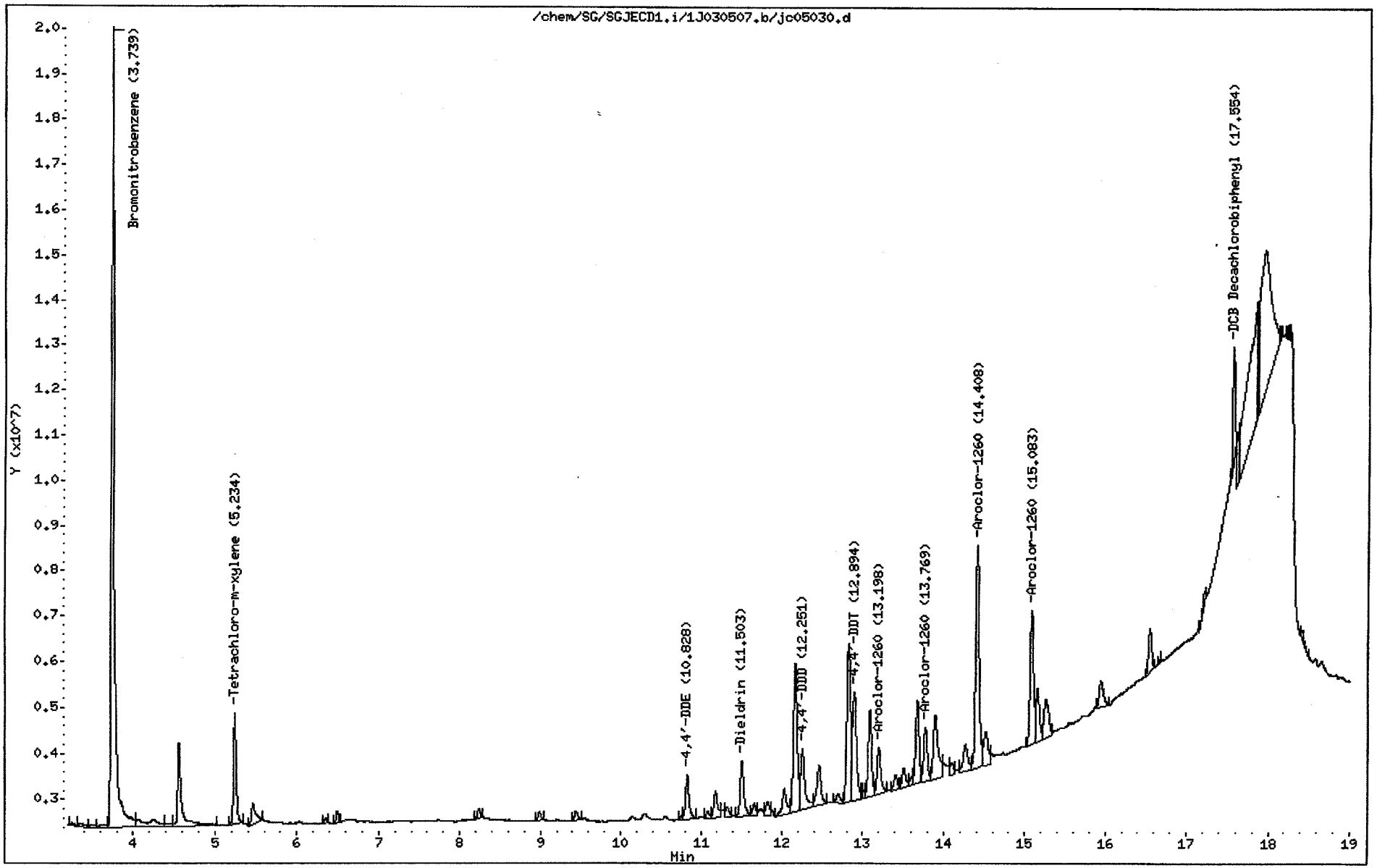
RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/kg)	TARGET RANGE	RATIO
17 4,4'-DDD				CAS #: 72-54-8		
12.251	12.254 (3.276)	4886349	0.01461	12	80.00- 120.00	100.00
19 4,4'-DDT				CAS #: 50-29-3		
12.894	12.902 (3.448)	8205241	0.02432	20	80.00- 120.00	100.00
$ 24 DCB Decachlorobiphenyl				CAS #: 2051-24-3		
17.554	17.559 (4.694)	4517189	0.01152	9.5	80.00- 120.00	100.00(M)
32 Aroclor-1260				CAS #: 11096-82-5		
13.198	13.199 (3.529)	3328116	0.23132	190	80.00- 120.00	100.00
13.769	13.769 (3.682)	3661340	0.31468	260	57.84- 97.84	110.01
14.408	14.409 (3.853)	15287181	0.36079	300	228.25- 268.25	459.33
15.083	15.084 (4.033)	8965943	0.46898	390	97.16- 137.16	269.40
	Average of Peak Concentrations =			290		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: /chem/SG/SGJECD1.i/1J030507.b/jc05030.d
Date : 06-MAR-2007 04:05
Client ID: 680-24460-A-17-A
Sample Info: 680-24460-A-17-A^1J030507^68647
Volume Injected (uL): 2.0
Column phase: RTX CLP I

Instrument: SGJECD1.i
Operator:
Column diameter: 0.32

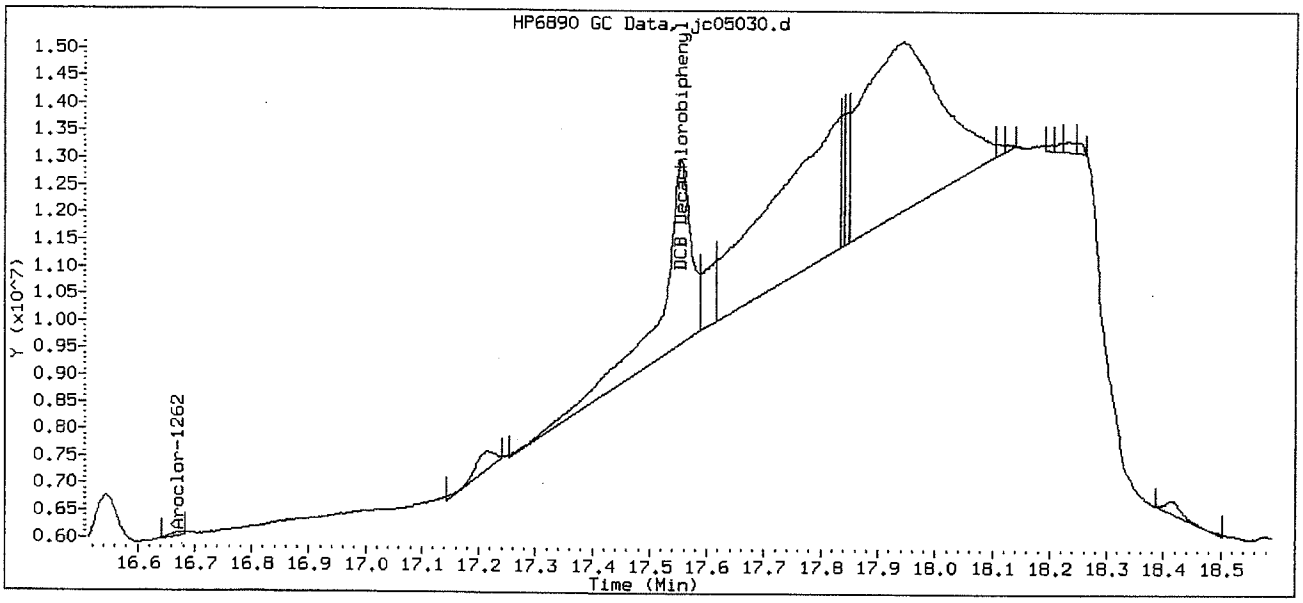


MANUAL INTEGRATION REPORT

Data File Name: jc05030.d
Client Sample ID: 680-24460-A-17-A
Compound Name: DCB Decachlorobiphenyl

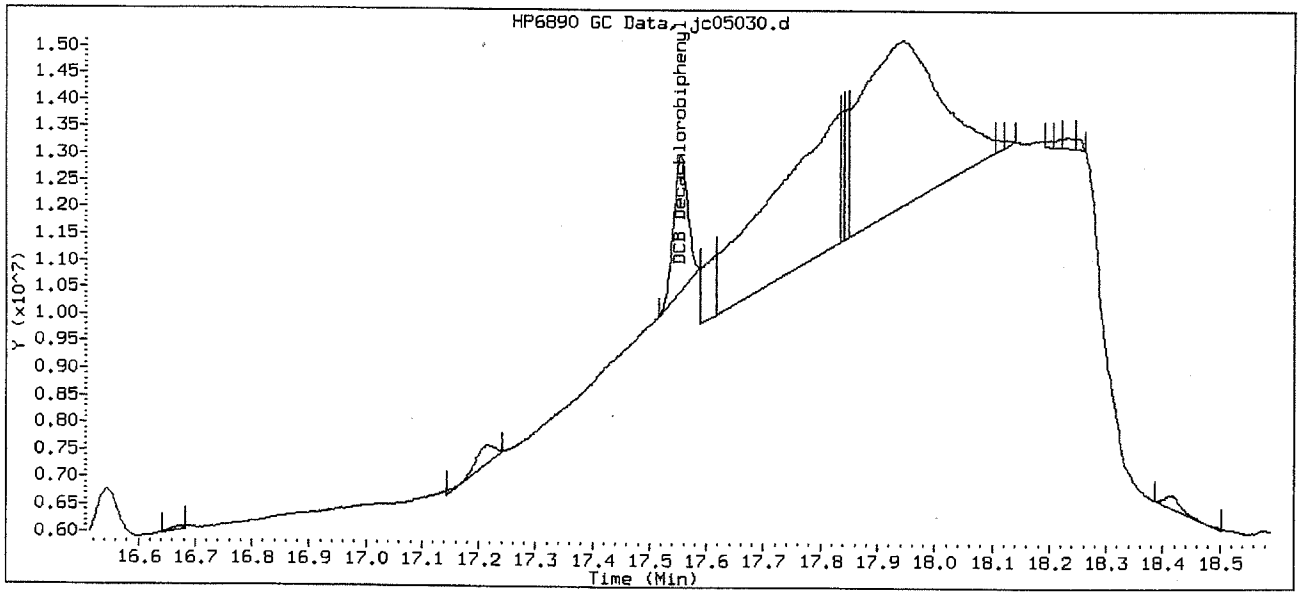
Inj. Date and Time: 06-MAR-2007 04:05
Instrument ID: SGJECD1.i
CAS #: 2051-24-3

Target Version: Target 3.50
Report Version: 1.2
Report Date: 03/12/2007 11:28



Original Integration:

RT = 17.5545 Area = 12236104



Final Integration:

RT = 17.5545 Area = 4517189

Analyst: kellarj
Manual Integration Reason: Baseline Event

JM
3-12-07

STL SAVANNAH

8081/8082 PESTICIDE/PCB

Data file : /chem/SG/SGJECD2.i/1J030507.b/jc05030.d
Lab Smp Id: WFF1-SS1 Client Smp ID: 680-24460-A-17-A
Inj Date : 06-MAR-2007 04:05
Operator : Inst ID: SGJECD2.i
Smp Info : 680-24460-A-17-A~1J030507~68647
Misc Info : 680-24460-A-17-A
Comment :
Method : /chem/SG/SGJECD2.i/1J030507.b/j-b808182-e2.m
Meth Date : 07-Mar-2007 10:50 kellarj Quant Type: ISTD
Cal Date : 13-FEB-2007 05:10 Cal File: jb12033.d
Als bottle: 30
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: tl05.sub
Target Version: 3.50 Sample Matrix: SOLID

Concentration Formula: Amt * DF * Vt/Ws * 100/(100 - M) * A * E * CpndVariabl

Name	Value	Description
DF	2.00000	Dilution Factor
Vt	10.00000	Volume of final extract
Ws	30.08000	Weight of sample extract
M	19.03670	% Moisture
A	1000.00000	g to kg conversion
E	1.00000	ug to mg conversion (1 if no conversion)

Cpnd Variable Local Compound Variable

			CONCENTRATIONS ON-COL	FINAL		
RT	EXP RT (REL RT)	RESPONSE	(ug/mL)	(ug/kg)	TARGET RANGE	RATIO
* 1 Bromonitrobenzene				CAS #:		
3.636	3.637 (1.000)	170563383	0.10000		80.00- 120.00	100.00
$ 2 Tetrachloro-m-xylene				CAS #: 877-09-8		
5.359	5.360 (1.474)	23286135	0.01430	12	80.00- 120.00	100.00
14 4,4'-DDE				CAS #: 72-55-9		
11.484	11.488 (3.159)	15247788	0.00686	5.6	80.00- 120.00	100.00(a)
15 Dieldrin				CAS #: 60-57-1		
11.792	11.802 (3.244)	2814328	0.00112	0.92	80.00- 120.00	100.00(a)

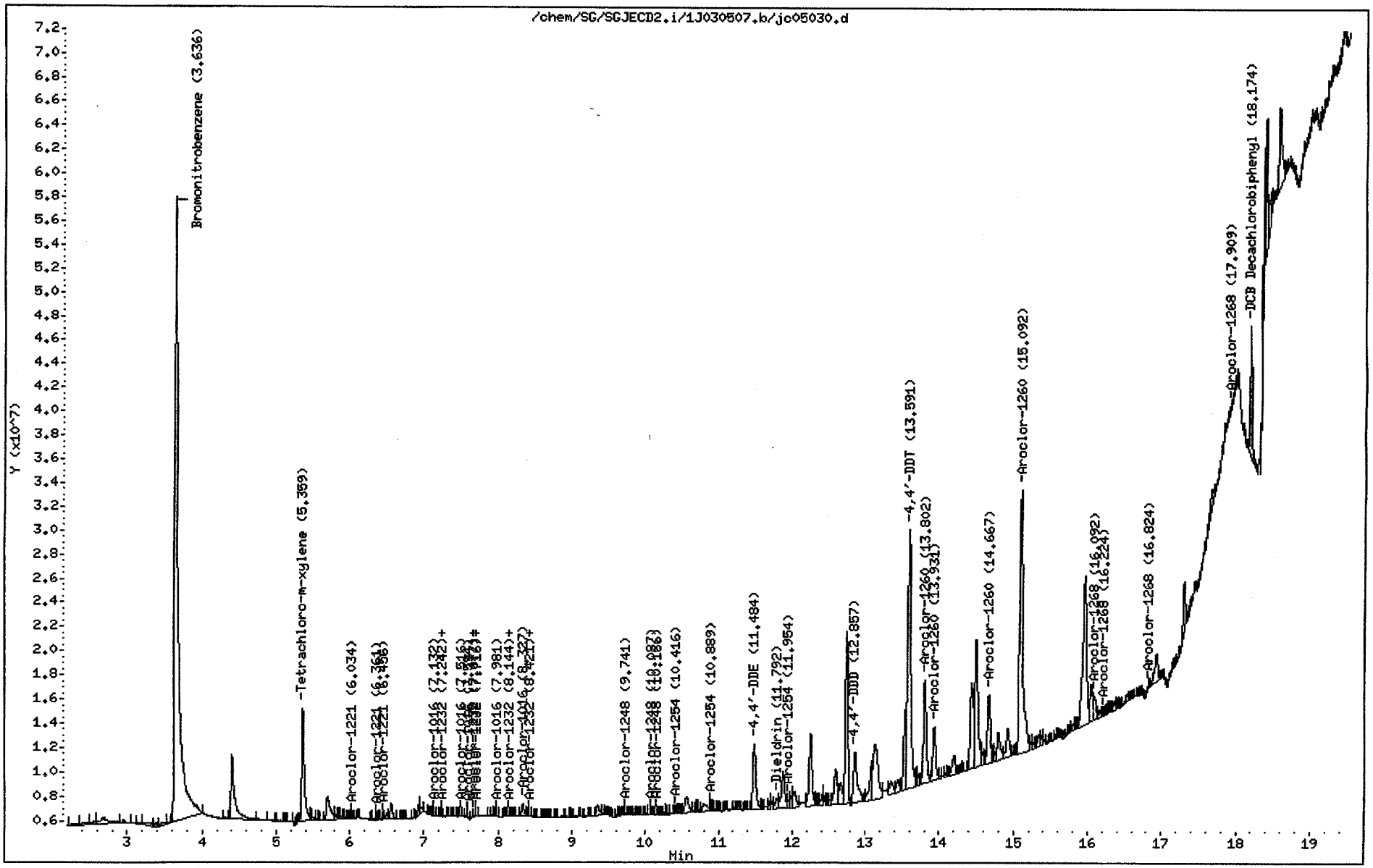
RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/kg)	TARGET RANGE	RATIO
17 4,4'-DDD				CAS #: 72-54-8		
12.857	12.860 (3.536)	15319269	0.00994	8.2	80.00- 120.00	100.00
19 4,4'-DDT				CAS #: 50-29-3		
13.591	13.595 (3.738)	67414759	0.04518	37	80.00- 120.00	100.00
$ 24 DCB Decachlorobiphenyl				CAS #: 2051-24-3		
18.174	18.193 (4.999)	18011498	0.01238	10	80.00- 120.00	100.00
32 Aroclor-1260				CAS #: 11096-82-5		
13.802	13.804 (3.796)	22780123	0.27970	230	80.00- 120.00	100.00
13.931	13.934 (3.832)	12128641	0.24829	200	38.56- 78.56	53.24
14.667	14.669 (4.034)	15246211	0.37915	310	36.16- 76.16	66.93
15.092	15.096 (4.151)	66132010	0.36090	300	192.30- 232.30	290.31
	Average of Peak Concentrations =			260		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/SG/SGJECD2.i/1J030507.b/jc05030.d
Date : 06-MAR-2007 04:05
Client ID: 680-24460-A-17-A
Sample Info: 680-24460-A-17-A^1J030507^68647
Volume Injected (uL): 2.0
Column phase: RTX CLP II

Instrument: SGJECD2.i
Operator:
Column diameter: 0.32



STL SAVANNAH

8081/8082 PESTICIDE/PCB

Data file : /chem/SG/SGJECD1.i/1J030507.b/jc05031.d
Lab Smp Id: WFF1-SS1-D Client Smp ID: 680-24460-A-18-A
Inj Date : 06-MAR-2007 04:28
Operator : Inst ID: SGJECD1.i
Smp Info : 680-24460-A-18-A~1J030507~68647
Misc Info : 680-24460-A-18-A
Comment :
Method : /chem/SG/SGJECD1.i/1J030507.b/j-b808182-e1.m
Meth Date : 07-Mar-2007 10:31 kellarj Quant Type: ISTD
Cal Date : 13-FEB-2007 05:10 Cal File: jb12033.d
Als bottle: 31
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: tl05.sub
Target Version: 3.50 Sample Matrix: SOLID

Concentration Formula: Amt * DF * Vt/Ws * 100/(100 - M) * A * E * CpndVariabl

Name	Value	Description
DF	2.00000	Dilution Factor
Vt	10.00000	Volume of final extract
Ws	30.01000	Weight of sample extract
M	18.51041	% Moisture
A	1000.00000	g to kg conversion
E	1.00000	ug to mg conversion (1 if no conversion)

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/kg)	TARGET RANGE	RATIO
* 1 Bromonitrobenzene				CAS #:		
3.740	3.740 (1.000)	47446989	0.10000		80.00- 120.00	100.00
$ 2 Tetrachloro-m-xylene				CAS #: 877-09-8		
5.235	5.235 (1.400)	6714203	0.01510	12	80.00- 120.00	100.00
14 4,4'-DDE				CAS #: 72-55-9		
10.826	10.829 (2.895)	3930253	0.00844	6.9	80.00- 120.00	100.00(a)
17 4,4'-DDD				CAS #: 72-54-8		
12.251	12.254 (3.276)	5337469	0.01458	12	80.00- 120.00	100.00

RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/kg)	TARGET RANGE	RATIO
19 4,4'-DDT				CAS #: 50-29-3		
12.893	12.902 (3.448)	8348885	0.02263	19	80.00- 120.00	100.00
$ 24 DCB Decachlorobiphenyl				CAS #: 2051-24-3		
17.553	17.559 (4.694)	6313606	0.01471	12	80.00- 120.00	100.00
32 Aroclor-1260				CAS #: 11096-82-5		
13.198	13.199 (3.529)	4055025	0.25747	210	80.00- 120.00	100.00
13.768	13.769 (3.682)	4131642	0.32438	270	57.84- 97.84	101.89
14.406	14.409 (3.852)	16988852	0.36626	300	228.25- 268.25	418.96
15.081	15.084 (4.033)	9901286	0.47310	390	97.16- 137.16	244.17
	Average of Peak Concentrations =			290		

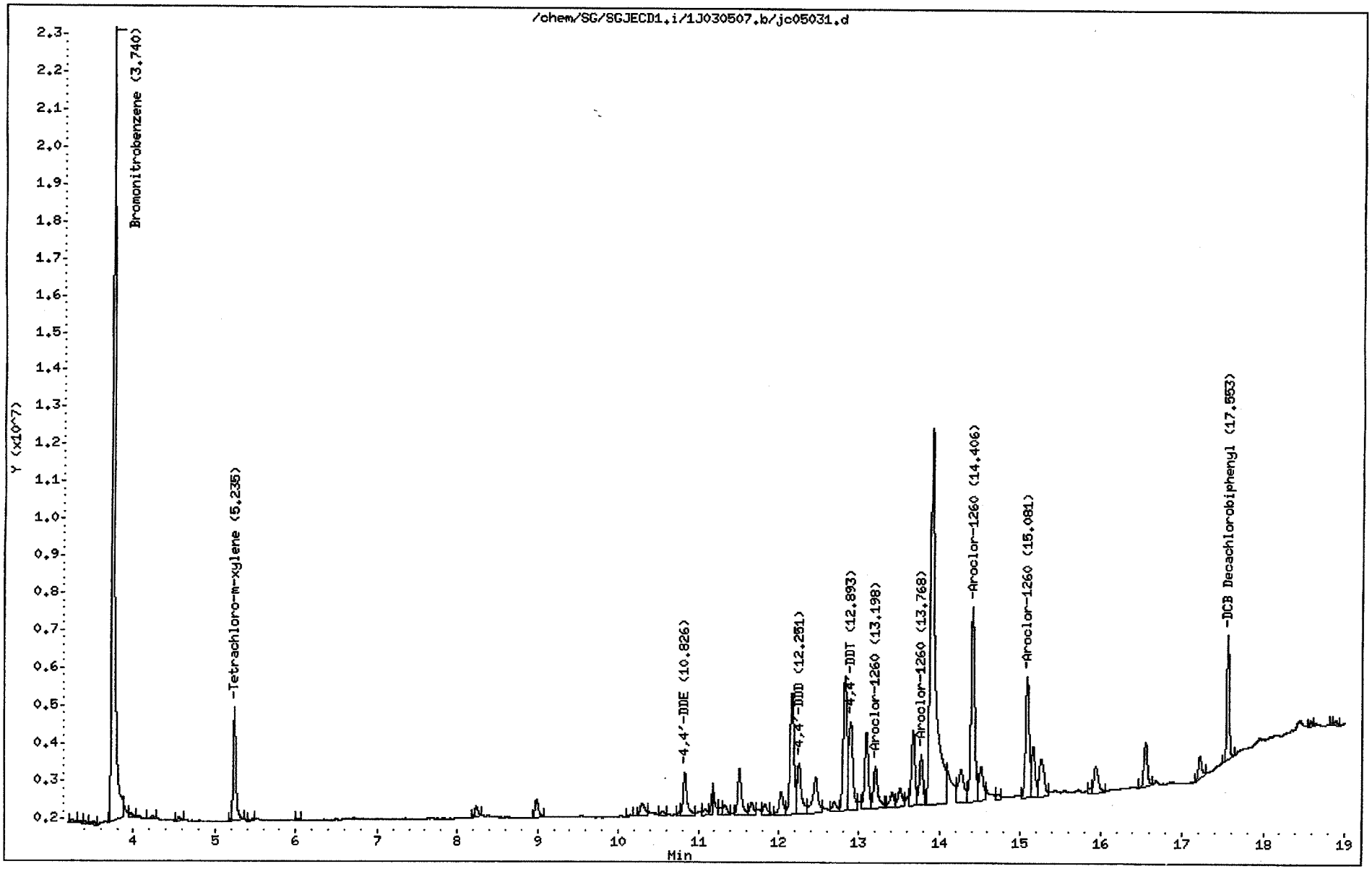
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

279

Data File: /chem/SG/SGJECD1.i/1J030507.b/jc05031.d
Date : 06-MAR-2007 04:28
Client ID: 680-24460-A-18-A
Sample Info: 680-24460-A-18-A^1J030507^68647
Volume Injected (uL): 2.0
Column phase: RTX CLP I

Instrument: SGJECD1.i
Operator:
Column diameter: 0.32



STL SAVANNAH

8081/8082 PESTICIDE/PCB

Data file : /chem/SG/SGJECD2.i/1J030507.b/jc05031.d
Lab Smp Id: WFF1-SS1-D Client Smp ID: 680-24460-A-18-A
Inj Date : 06-MAR-2007 04:28
Operator : Inst ID: SGJECD2.i
Smp Info : 680-24460-A-18-A~1J030507~68647
Misc Info : 680-24460-A-18-A
Comment :
Method : /chem/SG/SGJECD2.i/1J030507.b/j-b808182-e2.m
Meth Date : 07-Mar-2007 10:50 kellarj Quant Type: ISTD
Cal Date : 13-FEB-2007 05:10 Cal File: jb12033.d
Als bottle: 31
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: tl05.sub
Target Version: 3.50 Sample Matrix: SOLID

Concentration Formula: Amt * DF * Vt/Ws * 100/(100 - M) * A * E * CpndVariabl

Name	Value	Description
DF	2.00000	Dilution Factor
Vt	10.00000	Volume of final extract
Ws	30.01000	Weight of sample extract
M	18.51041	% Moisture
A	1000.00000	g to kg conversion
E	1.00000	ug to mg conversion (1 if no conversion)

Cpnd Variable Local Compound Variable

	RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/kg)	TARGET RANGE	RATIO
*	1 Bromonitrobenzene				CAS #:		
	3.636	3.637 (1.000)	203804659	0.10000		80.00- 120.00	100.00
$	2 Tetrachloro-m-xylene				CAS #: 877-09-8		
	5.357	5.360 (1.474)	29479864	0.01516	12	80.00- 120.00	100.00
	14 4,4'-DDE				CAS #: 72-55-9		
	11.484	11.488 (3.159)	16360835	0.00616	5.0	80.00- 120.00	100.00(a)
	17 4,4'-DDD				CAS #: 72-54-8		
	12.857	12.860 (3.536)	15672166	0.00851	7.0	80.00- 120.00	100.00(a)

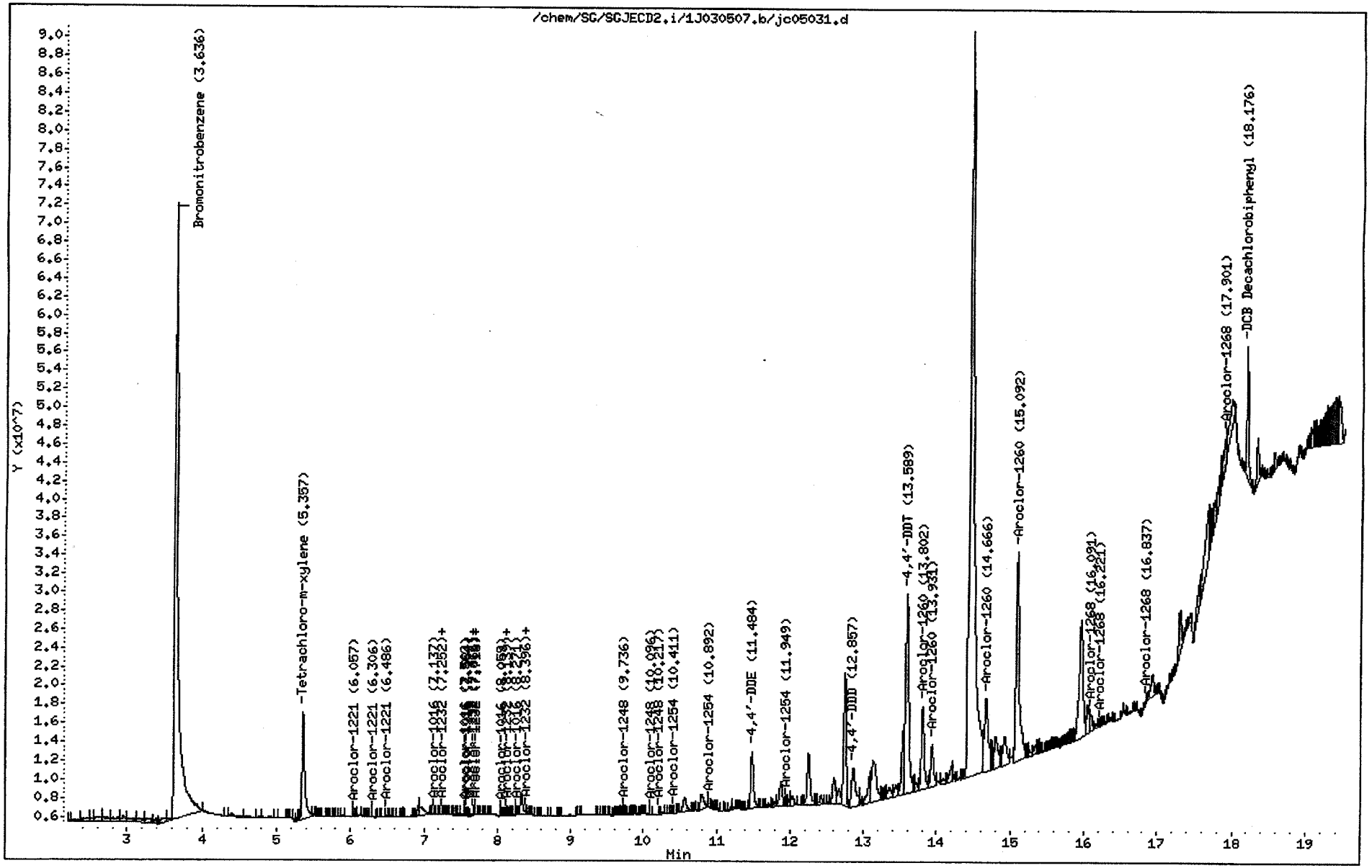
RT	EXP RT (REL RT)	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/kg)	TARGET RANGE	RATIO
19 4,4'-DDT				CAS #: 50-29-3		
13.589	13.595 (3.738)	65541047	0.03676	30	80.00- 120.00	100.00
$ 24 DCB Decachlorobiphenyl				CAS #: 2051-24-3		
18.176	18.193 (4.999)	21885438	0.01259	10	80.00- 120.00	100.00
32 Aroclor-1260				CAS #: 11096-82-5		
13.802	13.804 (3.796)	24582954	0.25261	210	80.00- 120.00	100.00
13.931	13.934 (3.832)	12787246	0.21907	180	38.56- 78.56	52.02
14.666	14.669 (4.034)	28135168	0.58556	480	36.16- 76.16	114.45
15.092	15.096 (4.151)	68192457	0.31144	250	192.30- 232.30	277.40
	Average of Peak Concentrations =			280		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/SG/SGJECD2.i/1J030507.b/jc05031.d
Date : 06-MAR-2007 04:28
Client ID: 680-24460-A-18-A
Sample Info: 680-24460-A-18-A^1J030507^68647
Volume Injected (uL): 2.0
Column phase: RTX CLP II

Instrument: SGJECD2.i
Operator:
Column diameter: 0.32



FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: SGJECD1 Calibration Date: 03/06/07 Time: 1326

Lab File ID: JC05039 Init. Calib. Date(s): 02/12/07 02/13/07

Init. Calib. Times: 1913 0619

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.53554		1.40865		-8.3	15.0	AVRG	
gamma-BHC (Lindane)	1.45887		1.28290		-12.1	15.0	AVRG	
beta-BHC	0.44276		0.37851		-14.5	15.0	AVRG	
Heptachlor	1.22711		1.08821		-11.3	15.0	AVRG	
delta-BHC	1.31877		1.21057		-8.2	15.0	AVRG	
Aldrin	1.59610		1.37055		-14.1	15.0	AVRG	
Heptachlor epoxide	1.46529		1.27223		-13.2	15.0	AVRG	
gamma-Chlordane	1.45306		1.24579		-14.3	15.0	AVRG	
alpha-Chlordane	1.46290		1.26387		-13.6	15.0	AVRG	
Endosulfan I	1.68854		1.58629		-6.1	15.0	AVRG	
4,4'-DDE	0.98192		0.94095		-4.2	15.0	AVRG	
Dieldrin	1.37525		1.23703		-10.1	15.0	AVRG	
Endrin	0.83462		0.75524		-9.5	15.0	AVRG	
4,4'-DDD	0.77139		0.93680		21.4	15.0	AVRG	<-
Endosulfan II	1.23457		1.14418		-7.3	15.0	AVRG	
4,4'-DDT	0.0400	0.0248	0.48300		-38.0	15.0	2ORD	<-
Endrin aldehyde	0.95769		0.84551		-11.7	15.0	AVRG	
Endosulfan sulfate	1.11596		1.02836		-7.8	15.0	AVRG	
Methoxychlor	0.32072		0.29786		-7.1	15.0	AVRG	
Endrin ketone	1.35215		1.17896		-12.8	15.0	AVRG	
Tetrachloro-m-xylene	0.93723		0.90214		-3.7	15.0	AVRG	
DCB Decachlorobiphenyl	0.90480		0.90767		0.3	15.0	AVRG	

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 11.35
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: SGJECD1 Calibration Date: 03/06/07 Time: 1326

Init. Calib. Date(s): 02/12/07 02/12/07

Init. Calib. Times: 1913 2108

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	METHOD RT	RT WINDOW FROM	TO
alpha-BHC	6.378	6.328	6.428
gamma-BHC (Lindane)	7.027	6.977	7.077
beta-BHC	7.227	7.177	7.277
Heptachlor	7.965	7.915	8.015
delta-BHC	7.578	7.528	7.628
Aldrin	8.580	8.530	8.630
Heptachlor epoxide	10.000	9.950	10.050
gamma-Chlordane	10.290	10.240	10.340
alpha-Chlordane	10.602	10.552	10.652
Endosulfan I	10.918	10.868	10.968
4,4'-DDE	10.825	10.775	10.875
Dieldrin	11.488	11.438	11.538
Endrin	12.032	11.982	12.082
4,4'-DDD	12.250	12.200	12.300
Endosulfan II	12.575	12.525	12.625
4,4'-DDT	12.900	12.850	12.950
Endrin aldehyde	13.583	13.533	13.633
Endosulfan sulfate	14.618	14.568	14.668
Methoxychlor	14.083	14.033	14.133
Endrin ketone	15.268	15.218	15.318
Tetrachloro-m-xylene	5.233	5.183	5.283
DCB Decachlorobiphenyl	17.550	17.500	17.600

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: SGJECD2 Calibration Date: 03/06/07 Time: 1326

Lab File ID: JC05039 Init. Calib. Date(s): 02/12/07 02/13/07

Init. Calib. Times: 1913 0619

GC Column: RTX CLP II ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.68280		1.65706		-1.5	15.0	AVRG	
gamma-BHC (Lindane)	1.57356		1.50720		-4.2	15.0	AVRG	
beta-BHC	0.42953		0.42568		-0.9	15.0	AVRG	
Heptachlor	1.58194		1.45691		-7.9	15.0	AVRG	
delta-BHC	1.25530		1.23860		-1.3	15.0	AVRG	
Aldrin	1.65469		1.54625		-6.6	15.0	AVRG	
Heptachlor epoxide	1.53494		1.42188		-7.4	15.0	AVRG	
gamma-Chlordane	1.53694		1.46356		-4.8	15.0	AVRG	
alpha-Chlordane	1.51254		1.40138		-7.3	15.0	AVRG	
Endosulfan I	1.44488		1.36527		-5.5	15.0	AVRG	
4,4'-DDE	1.30280		1.29487		-0.6	15.0	AVRG	
Dieldrin	1.47293		1.41687		-3.8	15.0	AVRG	
Endrin	0.99444		0.94540		-4.9	15.0	AVRG	
4,4'-DDD	0.90354		1.05375		16.6	15.0	AVRG	<-
Endosulfan II	1.31280		1.30789		-0.4	15.0	AVRG	
4,4'-DDT	0.87487		0.62411		-28.7	15.0	AVRG	<-
Endrin aldehyde	0.96955		0.92775		-4.3	15.0	AVRG	
Endosulfan sulfate	1.16843		1.11696		-4.4	15.0	AVRG	
Methoxychlor	0.45028		0.37797		-16.1	15.0	AVRG	<-
Endrin ketone	1.32864		1.24958		-5.9	15.0	AVRG	
Tetrachloro-m-xylene	0.95444		1.01451		6.3	15.0	AVRG	
DCB Decachlorobiphenyl	0.85309		0.70811		-17.0	15.0	AVRG	<-

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 7.11
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Instrument ID: SGJECD2 Calibration Date: 03/06/07 Time: 1326

Init. Calib. Date(s): 02/12/07 02/12/07

Init. Calib. Times: 1913 2108

GC Column: RTX CLP II ID: 0.32 (mm)

COMPOUND	METHOD RT	RT WINDOW FROM	TO
alpha-BHC	6.604	6.554	6.654
gamma-BHC (Lindane)	7.329	7.279	7.379
beta-BHC	7.521	7.471	7.571
Heptachlor	8.196	8.146	8.246
delta-BHC	8.103	8.053	8.153
Aldrin	8.883	8.833	8.933
Heptachlor epoxide	10.233	10.183	10.283
gamma-Chlordane	10.683	10.633	10.733
alpha-Chlordane	11.028	10.978	11.078
Endosulfan I	11.144	11.094	11.194
4,4'-DDE	11.483	11.433	11.533
Dieldrin	11.796	11.746	11.846
Endrin	12.508	12.458	12.558
4,4'-DDD	12.854	12.804	12.904
Endosulfan II	13.021	12.971	13.071
4,4'-DDT	13.589	13.539	13.639
Endrin aldehyde	13.828	13.778	13.878
Endosulfan sulfate	14.483	14.433	14.533
Methoxychlor	15.258	15.208	15.308
Endrin ketone	15.729	15.679	15.779
Tetrachloro-m-xylene	5.356	5.306	5.406
DCB Decachlorobiphenyl	18.143	18.093	18.193

SURROGATE COMPOUND RECOVERY
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Lab Name: STL Savannah Job No.: 680-24460-1

SDG No.: 68024460

Matrix: Solid

GC Column (1): CLP II ID: 0.32 (mm) GC Column (2): _____ ID: ____

SAMPLE ID	(DCB1)	(TCX1)	DCB2	TCX2
680-24460-19	40	69		
LCS 680-68647/21-AA	79	54		
MB 680-68647/20-AA	80	95		
WFF1-MW2-0-0.5	65	35		
WFF1-MW2-0.5-2	57	36		
WFF1-MW2-19-21	58	15 X		14X
WFF1-MW6-0-0.5	64	55		
WFF1-MW6-0.5-2	77	27 X		29X
WFF1-MW6-2-4	60	31		
WFF1-MW7-0.-0.5	42	56		
WFF1-MW7-0.5-2	57	31		
WFF1-MW5-0-0.5	50	33		
WFF1MW5-0.5-2	39	15 X		16X
WFF1-MW5-2-4	48	20 X		22X
WFF1-MW4-0-0.5	48	29 X		29X
WFF1-MW4-0.5-2	52	17 X		17X
WFF1-MW4-3-5	49	19 X		19X
WFF1-SS1	50	57		
WFF1-SS1-D	59	61		
WFF1-SS6	36	69		

SUR (DCB1) =DCB Decachlorobiphenyl QC LIMITS (30-150)
SUR (TCX1) =Tetrachloro-m-xylene (30-150)

Column to be used to flag recovery values

FORM 10
PEST-PCB IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 680-24460-A-4-A

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Lab Sample ID: WFF1-MW6-0-0.5 Date(s) Analyzed: 03/05/07 03/05/07

Instrument ID (1): SGJECD1 Instrument ID (2): SGJECD2

GC Column(1): RTX CLP I ID: 0.32(mm) GC Column(2): RTX CLP II ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDE	1	10.83	10.78	10.88	14	
	2	11.48	11.44	11.54	11	24.0
4,4'-DDD	1	12.25	12.20	12.30	0.72	
	2	12.87	12.81	12.91	1.9	90.1
4,4'-DDT	1	12.90	12.85	12.95	8.0	
	2	13.59	13.54	13.64	7.3	9.2
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM 10
PEST-PCB IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 680-24460-A-17-

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Lab Sample ID: WFF1-SS1 Date(s) Analyzed: 03/06/07 03/06/07

Instrument ID (1): SGJECD1 Instrument ID (2): SGJECD2

GC Column(1): RTX CLP I ID: 0.32(mm) GC Column(2): RTX CLP II ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDE	1	10.83	10.78	10.88	6.0	
	2	11.48	11.44	11.54	5.6	6.9
Dieldrin	1	11.50	11.44	11.54	5.7	
	2	11.79	11.75	11.85	0.92	144.4
4,4'-DDD	1	12.25	12.20	12.30	12	
	2	12.86	12.81	12.91	8.2	37.6
4,4'-DDT	1	12.89	12.85	12.95	20	
	2	13.59	13.54	13.64	37	59.6
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM 10
PEST-PCB IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 680-24460-A-18-

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Lab Sample ID: WFF1-SS1-D Date(s) Analyzed: 03/06/07 03/06/07

Instrument ID (1): SGJECD1 Instrument ID (2): SGJECD2

GC Column(1): RTX CLP I ID: 0.32(mm) GC Column(2): RTX CLP II ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDE	1	10.83	10.78	10.88	6.9	
	2	11.48	11.44	11.54	5.0	31.9
4,4'-DDD	1	12.25	12.20	12.30	12	
	2	12.86	12.81	12.91	7.0	52.6
4,4'-DDT	1	12.89	12.85	12.95	19	
	2	13.59	13.54	13.64	30	44.9
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM 10
PEST-PCB IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 680-24460-19

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Lab Sample ID: WFF1-SS6 Date(s) Analyzed: 03/06/07 03/06/07

Instrument ID (1): SGJECD1 Instrument ID (2): SGJECD2

GC Column(1): RTX CLP I ID: 0.32(mm) GC Column(2): RTX CLP II ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDE	1	10.82	10.78	10.88	11	
	2	11.48	11.44	11.54	8.6	24.5
Dieldrin	1	11.50	11.44	11.54	3.9	
	2	11.79	11.75	11.85	0.46	157.8
4,4'-DDD	1	12.25	12.20	12.30	9.9	
	2	12.86	12.81	12.91	6.2	46.0
4,4'-DDT	1	12.90	12.85	12.95	27	
	2	13.59	13.54	13.64	43	45.7
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM 3
SOLID PEST-PCB MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Matrix Spike - Sample ID: 680-24460-19
WFFI-SS6

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/kg)	MS CONCENTRATION (ug/kg)	MS % REC #	QC. LIMITS REC.
alpha-BHC	4.1	0.0	3.4	83	23-127
gamma-BHC (Lindane)	4.1	0.0	3.1	76	16-144
beta-BHC	4.1	0.0	5.1	124	22-134
Heptachlor	4.1	0.0	2.6	63	19-150
delta-BHC	4.1	0.0	2.8	68	43-123
Aldrin	4.1	0.0	2.5	61	26-139
Heptachlor epoxide	4.1	0.0	2.6	63	43-132
gamma-Chlordane	4.1	0.0	3.6	88	37-152
alpha-Chlordane	4.1	0.0	2.5	61	42-125
Endosulfan I	4.1	0.0	2.5	61	31-124
4,4'-DDE	8.1	11	11	0*	35-122
Dieldrin	8.1	0.46	5.2	58	29-146
Endrin	8.1	0.0	7.4	91	45-148
4,4'-DDD	8.1	6.2	12	72	35-149
Endosulfan II	8.1	0.0	3.6	44	31-127
4,4'-DDT	8.1	27	15	-148*	24-171
Endrin aldehyde	8.1	0.0	3.5	43	36-123
Endosulfan sulfate	8.1	0.0	4.0	49*	55-136
Methoxychlor	8.1	0.0	5.0	62	13-208
Endrin ketone	8.1	0.0	4.0	49	47-156

Reg 2 QA/QC

93-15

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
SOLID PEST-PCB MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024460

Matrix Spike - Sample ID: 680-24460-19

OFFI-886

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENTRATION (ug/kg)	MSD % REC #	% RPD$#	QC LIMITS RPD	QC LIMITS REC.
alpha-BHC	4.1	2.3	56	38	50	23-127
gamma-BHC (Lindane)	4.1	2.3	56	30	50	16-144
beta-BHC	4.1	3.9	95	27	50	22-134
Heptachlor	4.1	2.0	49	26	50	19-150
delta-BHC	4.1	2.4	58	15	50	43-123
Aldrin	4.1	1.9	46	27	50	26-139
Heptachlor epoxide	4.1	2.0	49	26	50	43-132
gamma-Chlordane	4.1	2.4	58	40	50	37-152
alpha-Chlordane	4.1	2.5	61	0	50	42-125
Endosulfan I	4.1	2.2	54	13	50	31-124
4,4'-DDE	8.1	9.4	-20*	16*	5	35-122
Dieldrin	8.1	4.3	47	19	50	29-146
Endrin	8.1	6.3	78	16	50	45-148
4,4'-DDD	8.1	15	109	22	50	35-149
Endosulfan II	8.1	3.4	42	5.7	50	31-127
4,4'-DDT	8.1	26	-12*	54*	50	24-171
Endrin aldehyde	8.1	3.5	43	0	50	36-123
Endosulfan sulfate	8.1	3.9	48*	2.5	50	55-136
Methoxychlor	8.1	4.2	52	17	50	13-208
Endrin ketone	8.1	3.1	38*	25	50	47-156

Reg 3 QA/QC

23-154

$ %RPD calculated using the spike and spike duplicate concentrations as per SW846 8000B

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 20 outside limits
Spike Recovery: 7 out of 40 outside limits

COMMENTS: _____

Serial Number 94413

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WWF - WWTP - #1		VA

STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Page	0057557	

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Theresa Offner	770-325-7961	

CLIENT NAME	CLIENT E-MAIL
Weston Solutions	Teresa.Offner@Weston

CLIENT ADDRESS: 5430 Metric Pl Ste 100 Norcross GA 30092

COMPANY CONTRACTING THIS WORK (if applicable):

MATRIX TYPE (COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT,...))

REQUIRED ANALYSIS: VOC; SVOC, Pest, PCB; Cyanide; Metals / Mercury

PRESERVATIVE

PAGE 1 OF

STANDARD REPORT DELIVERY ⊗
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	SOLID OR SEMISOLID	VOC	SVOC, Pest, PCB	Cyanide	Metals / Mercury	REMARKS
2/19/07	1210	WFF1-MW2-0-0.5	X	X	X	X	X	
	1220	WFF1-MW2-0.5-2	X	X	X	X	X	
	1400	WFF1-MW2-19-21	X	X	X	X	X	
2/20/07	0745	WFF1-MW6-0-0.5	X	X	X	X	X	
	0755	WFF1-MW6-0.5-2	X	X	X	X	X	
	0815	WFF1-MW6-2-4	X	X	X	X	X	
	0950	WFF1-MW7-0-0.5	X	X	X	X	X	
	1000	WFF1-MW7-0.5-2	X	X	X	X	X	
	1055	WFF1-MW5-0-0.5	X	X	X	X	X	
	1105	WFF1-MW5-0.5-2	X	X	X	X	X	
	1125	WFF1-MW5-2-4	X	X	X	X	X	
	1245	WFF1-MW4-0-0.5	X	X	X	X	X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/20/07	1440						
RECEIVED BY: (SIGNATURE) Amelia Kennedy	DATE 2/20/07	TIME 1440	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
	022107	0917	YES ○ NO ○		680-24460	

STL8240-680 (12/02)

Serial Number 94414

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

(X) **STL Savannah**
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WWF - WWTP - #1		VA
STL (LAB) PROJECT MANAGER	**P.O. NUMBER**	**CONTRACT NO.**
Abbie Page	0057557	
CLIENT (SITE) PM	**CLIENT PHONE**	**CLIENT FAX**
Teresa Offner	770 325 7561	
CLIENT NAME	**CLIENT E-MAIL**	
Weston Solutions	Teresa.Offner@WestonSolutions.com	
CLIENT ADDRESS		
5430 Metric Pl Ste 100, Norcross GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF

STANDARD REPORT DELIVERY (X)
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX TYPE: AQUEOUS (WATER)	MATRIX TYPE: SOLID OR SEMISOLID	MATRIX TYPE: AIR	MATRIX TYPE: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	REQUIRED ANALYSIS: SVOC, Pest/PCB	REQUIRED ANALYSIS: Cyanide	REQUIRED ANALYSIS: Metals/Mercury	REMARKS
		PRESERVATIVE										
2/20/07	1300	WFF1-MW4-0.5-2			X			X	X	X	X	
	1330	WFF1-MW4-3-5			X			X	X	X	X	
	0940	WFF1-SS2			X			X	X	X	X	
	1045	WFF1-SS3			X			X	X	X	X	
	1345	WFF1-SS1			X			X	X	X	X	
	1345	WFF1-SS1-D			X			X	X	X	X	FIELD DUPLICATE
	1345	WFF1-SS6			X			X	X	X	X	
	—	TB-1		X				X				
		TB-2		X				X				

TEMP. 1.9 / 1.6 / 2.9

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/20/07	1440						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Amelia Kennedy	2/20/07	1440						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
	022107	0917	YES ( ) NO ( )		680-24460	

STL 8240-680 (12/02)

Weston Solutions, Inc.
5430 Metric Place
Suite 100
Norcross, GA 30092
770-325-7900 • FAX 770-325-7950
www.westonsolutions.com

Memorandum
Norcross Office

DATE: April 23, 2007

TO: Teresa Offner, Project Manager

FROM: Paula MacLaren, Environmental Scientist

RE: Inorganic Data Validation and Usability Report
Wallops Island Flight Facility, VA Old Waste Water Treatment Plant No.1
Site Investigation – Sampling Event
Contract Number (No.) W91236-05-D-0036
Laboratory Sample Delivery Group (SDG) No. 680-24532

OVERVIEW

Severn Trent Laboratories, Inc. analyzed 7 soil samples, 2 sediment samples, 2 water samples, and 2 QC samples collected by Weston Solutions, Inc., (WESTON) at the Old Waste Water Treatment Plant No. 1 located at Wallops Island Flight Facility, Virginia, on February 20-22, 2007. The sample identifications are presented below:

Soil/Sediment Samples		Aqueous Samples	QC Samples
WFFI-MW1-0-0.5	WFFI-SS3-A	WFFI-SW1	Rinsate 1
WFFI-MW1-0.5-2	WFFI-SS8	WFFI-WW01	Rinsate 2
WFFI-MW1-18-20	WFFI-SD1		
WFFI-MW3-4-6	WFFI-SD2		
WFFI-SS2-A			

The samples were analyzed for the following parameters:

- Target analyte list (TAL) metals; *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846), Methods 6010B, 7470A, and 7471A
- Total cyanide; SW-846 Method 9012A

SUMMARY

WESTON performed data validation in accordance with the *U.S. Environmental Protection Agency (USEPA) Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses,* April 1993. This report only addresses quality assurance/quality control

(QA/QC) problems which affect data usability in meeting site objectives.

- Case narrative and deliverables compliance
- Holding Time, sample preservation and storage
- Field sample identity and laboratory sample identity comparison
- QC accuracy and precision acceptance criteria
- Solid sample moisture contents and dry weight
- Instrument calibration
- Instrument linearity
- Initial and continuing calibration blank checks
- Laboratory method blank, field QC blanks
- Continuing calibration verification
- Inductively coupled plasma (ICP) Interference check samples
- Laboratory control sample percent recovery
- Matrix spike and matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD)
- ICP serial dilution QC check sample
- Laboratory duplicates and percent RPD
- Method detection limits (MDL) and reporting limits (RL)
- Qualitative and quantitative analyte identification
- Field duplicate samples
- Chain-of-custody (COC)
- Overall assessment of data

The laboratory deliverable report met the requirements and format of a full EPA Contract Laboratory Program (CLP) data deliverable package. The following QA/QC sample analysis observations were noted:

MAJOR PROBLEMS

- No major problems resulting in the rejection of sample data were found.

MINOR PROBLEMS

ICP TAL Metals Analysis:

- The laboratory water method blank showed sodium and zinc contamination at 359 micrograms per liter (ug/L) and 4.3 ug/L, respectively. Sample raw data was evaluated against the blank concentrations to determine if their reported values were affected; concentrations less than 5 times the blank concentration. No sample sodium data was impacted. Water samples with reported zinc concentrations at less than five times the blank concentration were qualified as

having possible laboratory contamination (B) and are considered invalid. These samples are presented below:

WFFI-SW1
Rinsate 1
Rinsate 2

- The water CCB QC check sample series showed barium, cadmium, chromium, and magnesium contamination. Associated sample barium, cadmium, and magnesium results were either not detected or greater than 5 times the CCB and determined not to be impacted. Samples with concentrations less than 5 times the corresponding CCB for chromium were qualified (B) as having possible laboratory contamination and are considered invalid. These samples are presented below:

WFFI-SW1	(chromium)
WFFI-WW01	(chromium)
Rinsate 1	(chromium)

- The soil CCB QC check sample series showed chromium and copper contamination. Sample raw data was evaluated against the blank concentrations to determine if their reported values were affected; concentrations less than 5 times the blank concentration. Associated sample chromium and copper results were either not detected or greater than 5 times the CCB concentration and determined not to be impacted. No sample data qualifiers were applied.

- The laboratory soil method blank showed potassium contamination at 2.6 milligrams per kilogram (mg/kg). Sample raw data was evaluated against the blank concentration to determine if their reported values were affected; concentrations less than 5 times the blank concentration. Sample potassium results were greater than 5 times the blank concentrations and, therefore, determined not to be impacted. The laboratory, however, qualified all soil sample data as having laboratory contamination (B). Therefore, the soil data qualifier (B) for potassium has been removed from the following samples:

WFFI-MW1-0-0.5	WFFI-SD2
WFFI-MW1-0.5-2	WFFI-SS2-A
WFFI-MW1-18-20	WFFI-SS3-A
WFFI-MW3-4-6	WFFI-SS8
WFFI-SD1	

- The field rinsate blank (Rinsate 1) showed calcium (210 J ug/L), iron (2100 ug/L), magnesium (12 J ug/L), and nickel (5.9 J ug/L) contamination.. Field rinsate blank sample Rinsate 2 showed calcium (130 J ug/L) contamination. Sample raw data was evaluated against the field blank concentrations to determine if their reported values were affected; concentrations less than 5 times the rinsate blank concentration. Samples with reported concentrations at less than five

times the rinsate blank concentration were qualified as having possible field contamination (B) and are considered invalid. The site sample is presented below:

WFFI-MW3-4-6 (soil) (nickel)

- The contract required quantitation limit (CRQL) check standard (CRI) percent recoveries for arsenic (81 and 82 percent), iron (75 and 84 percent), and lead (74 percent) exceeded the recommended QA/QC lower control limit of 90 percent. The following samples with reported concentrations above the method detection limit but less than or equal to 2 times these metal CRQLs were qualified as biased low (L). In addition, samples with the above metals of interest reported as not detected were qualified as biased low (UL).

Solid Matrix		Water Matrix	
WFFI-MW3-4-6	(arsenic)	WFFI-SW1	(arsenic, lead)
WFFI-MW1-18-20	(arsenic, lead)	WFFI-WW01	(arsenic)
WFFI-SD1	(arsenic)	Rinsate 1	(arsenic, lead)
		Rinsate 2	(arsenic, iron, lead)

- The CRQL check standard (CRI) percent recoveries for selenium, and thallium exceeded the recommended QA/QC upper control limit of 110 percent. No selenium or thallium concentrations, however, were detected in site samples. Therefore, no data qualifiers were required.

- ICP metals MS/MSD analysis was performed on site soil sample WFFI-MW3-4-6. The MS and MSD percent recoveries for aluminum and iron exceeded the QA/QC recommendation of 75 to 125 percent. The sample aluminum and iron concentrations, however, were greater than four times their spiked concentrations, and therefore, these matrix spike recovery limits do not apply. No data qualifiers were applied to site soil sample results.

- ICP metals MS/MSD analysis was performed on site water sample WFFI-SW1. The MS percent recovery for iron (70 percent) was below the QA/QC recommendation of 75 to 125 percent. The sample iron concentration, however, was greater than four times the spiked concentration, and therefore, the matrix spike recovery limits do not apply. All MSD percent recoveries were within QA/QC limits. No data qualifiers were applied to site water sample results.

- Field duplicate sample set WFFI-SS1/WFFI-SS1-D showed barium at the QA/QC limit of 35 RPD. No data qualifiers were applied to site samples. All other metals were within 20 RPD.

Mercury Analysis:

- A mercury CCB QC check sample showed 0.097 micrograms per liter (ug/L) mercury contamination. Associated site water sample WFFI-WW01 was qualified as having possible laboratory contamination (B) and is considered invalid.

- The soil CRQL check standard (CRI) mercury percent recovery (51 percent) exceeded the recommended QA/QC lower control limit of 80 percent. The following samples with reported mercury concentrations above the method detection limit but less than or equal to 2 times the mercury CRQL were qualified as biased low (L). In addition, samples with mercury reported as not detected were qualified as biased low (UL).

WFFI-MW1-0-0.5	WFFI-SD2
WFFI-MW1-0-5-2	WFFI-SS2-A
WFFI-MW1-18-20	WFFI-SS3-A
WFFI-MW3-4-6	WFFI-SS8
WFFI-SD1	

- Mercury MS/MSD analysis was performed on water sample Rinsate-2. This field QC sample is not representative of site matrices, and, therefore, not evaluated. MS/MSD analysis was also performed on site water sample WFFI-MW3 (laboratory data package 680-24622). Site water sample matrix interferences were evaluated against this analysis. All mercury MS/MSD percent recoveries were within QA/QC limits. No data qualifiers were applied to site water sample results.

Cyanide Analysis:

- Cyanide MS/MSD analysis was performed on water sample WFFI-MW3 from laboratory data package 680-24622. Site water sample matrix interferences were evaluated against this analysis. All cyanide MS/MSD percent recoveries were within QA/QC limits. No data qualifiers were applied to site water sample results.

NOTES

- Samples were received by the laboratory slightly below the QA/QC recommended preservative temperature of 4°C±2°C; 0.1, 1.0, and 1.1°C. Based on this observation, it has been determined that no impact to sample data had occurred.

- Due to the limited information concerning cyanide holding times for soil samples, the water sample holding time of 14-days as referenced in *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (April 1993), were applied for soil samples.

- In the raw ICP data sheets, sample Rinsate-1 was misidentified as laboratory sample 680-24532-1L. Several ICP raw data sheets were corrected to 680-24532-16, Rinsate 1 sample.

- When there are several QC data qualifiers applied to a value, the hierarchy of qualifiers is followed: R, B, L, K, J.

The laboratory has provided additional information in their case narrative. Based on the evaluation of all information provided in the analytical data package, the results are highly usable with the data validation qualifiers as noted. The sample data is presented in the corresponding Form Is.

ATTACHMENTS

Appendix A – Glossary of Data Qualifier Codes
Appendix B – Data Summary Tables
Appendix C – Laboratory Reported Results
Appendix D – Support Documentation

APPENDIX A

Glossary of Data Qualifier Codes
(Inorganic)

DATA QUALIFIER CODES
(Inorganic Analyses)

Codes Related To Identification

(confidence concerning presence or absence of compounds):

U = The analyte was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

R = The data are unusable. (Note: The analyte may or may not be present.)

Codes Related To Quantitation

(can be used for both positive results and sample quantitation limits):

J = The associated value is an estimated quantity

UJ = The analyte was analyzed for, but was not detected. The associated detection limit is an estimate and may be inaccurate or imprecise.

K = The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L = The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL = The analyte was not detected, and the actual quantitation limit is probably higher than reported.

APPENDIX B

Data Summary Tables
(Inorganic)

TABLE 1
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6	WFFI-SS2-A
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3	90.5
CRQL	Analyte					
20	Aluminum	**8100**	**6100**	**4300**	**5600**	**5000**
6.0	Antimony	2.1 U	2.2 U	2.1 U	2.1 U	2.0 U
1.0	Arsenic	**3.5**	**2.1**	1.0 UL	1.1 UL	**2.0**
20	Barium	**66**	**23**	**19**	**16**	**18**
0.5	Beryllium	**0.44**	**0.21 J**	**0.10 J**	**0.18 J**	**0.17 J**
0.5	Cadmium	0.52 U	0.55 U	0.52 U	0.53 U	0.50 U
500	Calcium	**42000**	**490**	**160**	**3000**	**220**
1.0	Chromium	**11**	**6.4**	**5.6**	**6.9**	**5.6**
5.0	Cobalt	**2.4**	**1.2**	**0.46 J**	**0.79 J**	**1.2**
2.5	Copper	**4.8**	**2.1 J**	**2.1**	**1.9 J**	**1.8 J**
10	Iron	**6300**	**3600**	**1800**	**2500**	**3400**
1.0	Lead	**7.3**	**3.3**	**1.2 L**	**3.1**	**2.8**
500	Magnesium	**970**	**370**	**240**	**370**	**360**
1.5	Manganese	**320**	**66**	**23**	**23**	**60**
0.1	Mercury	**0.037 L**	**0.018 L**	0.022 UL	**0.010 JL**	**0.020 L**
4.0	Nickel	**4.9**	**2.5 J**	**1.3 J**	**2.2 B**	**2.7 J**
500	Potassium	**450**	**310**	**250**	**300**	**280**
3.5	Selenium	2.6 U	2.7 U	2.6 U	2.7 U	2.5 U
1.0	Silver	1.0 U	1.1 U	1.0 U	1.1 U	1.0 U
500	Sodium	**480**	**74 J**	**66 J**	**93 J**	**58 J**
2.5	Thallium	2.6 U	2.7 U	2.6 U	2.7 U	2.5 U
5.0	Vanadium	**14**	**7.9**	**4.9**	**6.9**	**7.8**
6.0	Zinc	**22**	**16**	**4.9**	**10**	**10**
2.5	Total Cyanide	0.57 U	0.57 U	0.55 U	0.59 U	0.53 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 2
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS3-A	WFFI-SS8	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/22/2007	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.2	87.7	76.6	81.3
CRQL	Analyte				
20	Aluminum	**6300**	**10000**	**3400**	**5500**
6.0	Antimony	2.0 U	2.1 U	2.5 U	2.4 U
1.0	Arsenic	**2.2**	**4.8**	**1.4 L**	**2.7**
20	Barium	**25**	**50**	**16**	**23**
0.5	Beryllium	**0.21 J**	**0.37 J**	**0.11 J**	**0.18 J**
0.5	Cadmium	**0.29 J**	0.52 U	0.62 U	0.59 U
500	Calcium	**320**	**750**	**200**	**650**
1.0	Chromium	**7.1**	**12**	**4.2**	**6.8**
5.0	Cobalt	**1.3**	**2.5**	**0.74 J**	**1.9**
2.5	Copper	**3.7**	**4.2**	**1.3 J**	**2.9**
10	Iron	**3900**	**7500**	**2600**	**4100**
1.0	Lead	**7.9**	**8.9**	**4.0**	**7.9**
500	Magnesium	**420**	**860**	**260**	**440**
1.5	Manganese	**70**	**130**	**44**	**95**
0.1	Mercury	**0.024 L**	**0.071 L**	**0.0093 L**	**0.044 L**
4.0	Nickel	**3.1 J**	**6.1**	**1.8 J**	**3.1 J**
500	Potassium	**320**	**520**	**220**	**320**
3.5	Selenium	2.5 U	2.6 U	3.1 U	3.0 U
1.0	Silver	1.0 U	1.0 U	1.2 U	1.2 U
500	Sodium	**63 J**	**71 J**	**71 J**	**60 J**
2.5	Thallium	2.5 U	2.6 U	3.1 U	3.0 U
5.0	Vanadium	**9.3**	**16**	**5.9**	**8.8**
6.0	Zinc	**72**	**34**	**9.6**	**20**
2.5	Total Cyanide	0.54 U	0.56 U	0.62 U	0.60 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/kg	Milligram per kilogram
Bold	Reported value is above lab method detection limit

TABLE 3
DATA SUMMARY FORM: INORGANICS

WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	QC	QC
	Dilution Factor	1.0	1.0	1.0	1.0
CRQL	Analyte				
200	Aluminum	**2500**	**240**	200 U	200 U
60	Antimony	20 U	20 U	20 U	20 U
10	Arsenic	10 UL	10 UL	10 UL	10 UL
200	Barium	**31**	**100**	10 U	10 U
5.0	Beryllium	4.0 U	4.0 U	4.0 U	4.0 U
5.0	Cadmium	5.0 U	5.0 U	5.0 U	5.0 U
5000	Calcium	**8800**	**27000**	**210 J**	**130 J**
10	Chromium	**2.9 B**	**5.1 B**	**3.4 B**	10 U
50	Cobalt	**3.5 J**	10 U	10 U	10 U
25	Copper	20 U	**4.4 J**	20 U	20 U
100	Iron	**7200**	**15000**	**2100**	50 UL
10.0	Lead	5.0 UL	**29**	5.0 UL	5.0 UL
5000	Magnesium	**1200**	**2800**	**12 J**	500 U
15	Manganese	**460**	**170**	**23**	10 U
0.2	Mercury	0.20 U	**0.13 B**	0.20 U	0.20 U
40	Nickel	40 U	40 U	**5.9 J**	40 U
5000	Potassium	**1600**	**10000**	1000 U	1000 U
35	Selenium	10 U	10 U	10 U	10 U
10	Silver	10 U	10 U	10 U	10 U
5000	Sodium	**6300**	**8800**	1000 U	1000 U
25	Thallium	25 U	25 U	25 U	25 U
50	Vanadium	**3.5 J**	**1.8 J**	10 U	10 U
60	Zinc	**18 B**	**98**	**4.9 B**	**4.4 B**
10	Total Cyanide	10 U	10 U	10 U	10 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above lab method detection limit

APPENDIX C

Laboratory Reported Results
(Inorganic)

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW1-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-3

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 86

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8100			P
7440-36-0	Antimony	2.1	U		P
7440-38-2	Arsenic	3.5			P
7440-39-3	Barium	66			P
7440-41-7	Beryllium	0.44			P
7440-43-9	Cadmium	0.52	U		P
7440-70-2	Calcium	42000			P
7440-47-3	Chromium	11			P
7440-48-4	Cobalt	2.4			P
7440-50-8	Copper	4.8			P
7439-89-6	Iron	6300			P
7439-92-1	Lead	7.3			P
7439-95-4	Magnesium	970			P
7439-96-5	Manganese	320			P
7440-02-0	Nickel	4.9			P
7440-09-7	Potassium	450		B	P
7782-49-2	Selenium	2.6	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	480			P
7440-28-0	Thallium	2.6	U		P
7440-62-2	Vanadium	14			P
7440-66-6	Zinc	22			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B - Removed due to sample concentration greater than 5 times laboratory blank contamination.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW1-0-0.5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-3

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 86

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.037		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRDL QC check, percent recovery below 80%.

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW1-0-0.5

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-3

Date Received: 02/23/2007 925 % Solids: 85.8

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.57	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW1-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-4

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 85

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6100			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	2.1			P
7440-39-3	Barium	23			P
7440-41-7	Beryllium	0.21	J		P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	490			P
7440-47-3	Chromium	6.4			P
7440-48-4	Cobalt	1.2			P
7440-50-8	Copper	2.1	J		P
7439-89-6	Iron	3600			P
7439-92-1	Lead	3.3			P
7439-95-4	Magnesium	370			P
7439-96-5	Manganese	66 65			P
7440-02-0	Nickel	2.5	J		P
7440-09-7	Potassium	310		B	P
7782-49-2	Selenium	2.7	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	74	J		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	7.9			P
7440-66-6	Zinc	16			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B-Removed due to sample concentration greater than 5 times laboratory blank contaminant

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW1-0.5-2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-4

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 85

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.018	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L- Biased low, ORX QC check sample percent recovery below 80%

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW1-0.5-2

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-4

Date Received: 02/23/2007 925 % Solids: 84.5

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.57	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW1-18-20

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-6

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 88

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4300			P
7440-36-0	Antimony	2.1	U		P
7440-38-2	Arsenic	1.0	U	L	P
7440-39-3	Barium	19			P
7440-41-7	Beryllium	0.10	J		P
7440-43-9	Cadmium	0.52	U		P
7440-70-2	Calcium	160			P
7440-47-3	Chromium	5.6			P
7440-48-4	Cobalt	0.46	J		P
7440-50-8	Copper	2.1			P
7439-89-6	Iron	1800			P
7439-92-1	Lead	1.2		L	P
7439-95-4	Magnesium	240			P
7439-96-5	Manganese	23			P
7440-02-0	Nickel	1.3	J		P
7440-09-7	Potassium	250		B	P
7782-49-2	Selenium	2.6	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	66	J		P
7440-28-0	Thallium	2.6	U		P
7440-62-2	Vanadium	4.9			P
7440-66-6	Zinc	4.9			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI % recovery below 90%.
B - Reported due to sample concentration greater than 5 times laboratory blank concentration.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW1-18-20

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-6

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 88

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.022	U	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; ORL & check sample percent recovery below 80%.

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW1-18-20

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-6

Date Received: 02/23/2007 925 % Solids: 88.0

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.55	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

COPY

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW3-4-6

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-2

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5600			P
7440-36-0	Antimony	2.1	U		P
7440-38-2	Arsenic	1.1	U	L	P
7440-39-3	Barium	16			P
7440-41-7	Beryllium	0.18	J		P
7440-43-9	Cadmium	0.53	U		P
7440-70-2	Calcium	3000			P
7440-47-3	Chromium	6.9			P
7440-48-4	Cobalt	0.79	J		P
7440-50-8	Copper	1.9	J		P
7439-89-6	Iron	2500			P
7439-92-1	Lead	3.1			P
7439-95-4	Magnesium	370			P
7439-96-5	Manganese	23			P
7440-02-0	Nickel	2.2	J	B'	P
7440-09-7	Potassium	300		B	P
7782-49-2	Selenium	2.7	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	93	J		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	6.9			P
7440-66-6	Zinc	10			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI % recovery below 90%.

B - Removed due to sample concentration greater than 10 times laboratory blank contamination.

B' - Present in Rinsate (1 of 1 samples). concentration less than RL.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW3-4-6

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-2

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.010	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low, CRDL QC check, percent recovery, below 80%.

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW3-4-6

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-2

Date Received: 02/23/2007 925 % Solids: 84.3

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.59	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS2-A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-10

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5000			P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	2.0			P
7440-39-3	Barium	18			P
7440-41-7	Beryllium	0.17	J		P
7440-43-9	Cadmium	0.50	U		P
7440-70-2	Calcium	220			P
7440-47-3	Chromium	5.6			P
7440-48-4	Cobalt	1.2			P
7440-50-8	Copper	1.8	J		P
7439-89-6	Iron	3400			P
7439-92-1	Lead	2.8			P
7439-95-4	Magnesium	360			P
7439-96-5	Manganese	60			P
7440-02-0	Nickel	2.7	J		P
7440-09-7	Potassium	280		B	P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	58	J		P
7440-28-0	Thallium	2.5	U		P
7440-62-2	Vanadium	7.8			P
7440-66-6	Zinc	10			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B-Removed due to sample concentration greater than 10 times laboratory blank contaminant.

STL SAVANNAH

C

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS2-A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-10

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.020		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - biased low; CRDL QC check sample percent recovery below 80%.

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS2-A

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-10

Date Received: 02/23/2007 925 % Solids: 90.5

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.53	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS3-A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-11

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6300			P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	2.2			P
7440-39-3	Barium	25			P
7440-41-7	Beryllium	0.21	J		P
7440-43-9	Cadmium	0.29	J		P
7440-70-2	Calcium	320			P
7440-47-3	Chromium	7.1			P
7440-48-4	Cobalt	1.3			P
7440-50-8	Copper	3.7			P
7439-89-6	Iron	3900			P
7439-92-1	Lead	7.9			P
7439-95-4	Magnesium	420			P
7439-96-5	Manganese	70			P
7440-02-0	Nickel	3.1	J		P
7440-09-7	Potassium	320		B	P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	63	J		P
7440-28-0	Thallium	2.5	U		P
7440-62-2	Vanadium	9.3			P
7440-66-6	Zinc	72			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B- Removed due to sample concentration greater than laboratory blank contamination.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS3-A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-11

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 90

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.024		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low, CRDL QC check sample percent recovery below 80%

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS3-A

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-11

Date Received: 02/23/2007 925 % Solids: 90.2

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.54	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS8

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-14

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 88

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10000			P
7440-36-0	Antimony	2.1	U		P
7440-38-2	Arsenic	4.8			P
7440-39-3	Barium	50			P
7440-41-7	Beryllium	0.37	J		P
7440-43-9	Cadmium	0.52	U		P
7440-70-2	Calcium	750			P
7440-47-3	Chromium	12			P
7440-48-4	Cobalt	2.5			P
7440-50-8	Copper	4.2			P
7439-89-6	Iron	7500			P
7439-92-1	Lead	8.9			P
7439-95-4	Magnesium	860			P
7439-96-5	Manganese	130			P
7440-02-0	Nickel	6.1			P
7440-09-7	Potassium	520		B	P
7782-49-2	Selenium	2.6	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	71	J		P
7440-28-0	Thallium	2.6	U		P
7440-62-2	Vanadium	16			P
7440-66-6	Zinc	34			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B-Reported due to sample concentration greater than 5 times the concentration found in the blank contaminant.

pch

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS8

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-14

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 88

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.071		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - biased low, CRDL QC check sample percent recovery below 80%.

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS8

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-14

Date Received: 02/23/2007 925 % Solids: 87.7

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.56	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-SD1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-7

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 77

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3400			P
7440-36-0	Antimony	2.5	U		P
7440-38-2	Arsenic	1.4		L	P
7440-39-3	Barium	16			P
7440-41-7	Beryllium	0.11	J		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	200			P
7440-47-3	Chromium	4.2			P
7440-48-4	Cobalt	0.74	J		P
7440-50-8	Copper	1.3	J		P
7439-89-6	Iron	2600			P
7439-92-1	Lead	4.0			P
7439-95-4	Magnesium	260			P
7439-96-5	Manganese	44			P
7440-02-0	Nickel	1.8	J		P
7440-09-7	Potassium	220		B	P
7782-49-2	Selenium	3.1	U		P
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	71	J		P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	5.9			P
7440-66-6	Zinc	9.6			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI percent recovery below 90%.
B - Reported due to sample concentration greater than 5 times laboratory blank contaminant.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-SD1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-7

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 77

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.0093	J	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CRDL QC check sample percent recovery below 80%

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SD1

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-7

Date Received: 02/23/2007 925 % Solids: 76.6

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.62	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SD2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-8

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5500			P
7440-36-0	Antimony	2.4	U		P
7440-38-2	Arsenic	2.7			P
7440-39-3	Barium	23			P
7440-41-7	Beryllium	0.18	J		P
7440-43-9	Cadmium	0.59	U		P
7440-70-2	Calcium	650			P
7440-47-3	Chromium	6.8			P
7440-48-4	Cobalt	1.9			P
7440-50-8	Copper	2.9			P
7439-89-6	Iron	4100			P
7439-92-1	Lead	7.9			P
7439-95-4	Magnesium	440			P
7439-96-5	Manganese	95			P
7440-02-0	Nickel	3.1	J		P
7440-09-7	Potassium	320		B	P
7782-49-2	Selenium	3.0	U		P
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	60	J		P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	8.8			P
7440-66-6	Zinc	20			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B- Removed due to sample concentration greater than 5 times laboratory blank contaminant.

STL SAVANNAH

C

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SD2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Lab Sample ID: 680-24532-8

Level (low/med): LOW Date Received: 2/23/2007

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.044		L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Rinsed bw; CRA & check, sample percent recovery below 80%

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SD2

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Lab Sample ID: 680-24532-8

Date Received: 02/23/2007 925 % Solids: 81.3

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.60	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SW1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-5

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2500			P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U	L	P
7440-39-3	Barium	31			P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	8800			P
7440-47-3	Chromium	2.9	J	B	P
7440-48-4	Cobalt	3.5	J		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	7200			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	1200			P
7439-96-5	Manganese	460			P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	1600			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	6300		B	P
7440-28-0	Thallium	25	U		P
7440-62-2	Vanadium	3.5	J		P
7440-66-6	Zinc	18	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

L - Biased low, CRi percent recovery below 90%.

B - Present in laboratory blank, sample concentration less than 5 times laboratory blank concentration (Zinc at 4.3ug/L, Chromium at 2.0ug/L).

B - Removed due to sample concentration greater than 5 times the laboratory blank concentration

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SW1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-5

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SW1

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water Lab Sample ID: 680-24532-5

Date Received: 02/23/2007 925 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-WW01

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-9

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	240			P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U	L	P
7440-39-3	Barium	100			P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	27000			P
7440-47-3	Chromium	5.1	J	B	P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	4.4	J		P
7439-89-6	Iron	15000			P
7439-92-1	Lead	29			P
7439-95-4	Magnesium	2800			P
7439-96-5	Manganese	170			P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	10000			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	8800		B	P
7440-28-0	Thallium	25	U		P
7440-62-2	Vanadium	1.8	J		P
7440-66-6	Zinc	98		B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI percent recovery below 90%.

B - Present in laboratory blank (CCB) at 2.0 ug/L absolute

B - Removed due to sample concentration greater than 5 times

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-WW01

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-9

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J	B	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B - Mercury present in laboratory blank (CCB at 0.097 ug/L).

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-WW01

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water Lab Sample ID: 680-24532-9

Date Received: 02/23/2007 925 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 1 ✓

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-16 ✓

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L ✓

CAS No.	Analyte	Concentration ✓	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U	L	P
7440-39-3	Barium	10	U		P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	210	J		P
7440-47-3	Chromium	3.4	J	B	P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	2100			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	12	J		P
7439-96-5	Manganese	23			P
7440-02-0	Nickel	5.9	J		P
7440-09-7	Potassium	1000	U		P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	25	U		P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	4.9	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CCi percent recover below 90%.
B - Present in laboratory blanks (Chromium is 0.8 at 1.6 ug/L; Zinc in method blank at 4.3 ug/L).

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-16

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: RINSATE 1

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water Lab Sample ID: 680-24532-16

Date Received: 02/23/2007 925 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-12

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U	L	P
7440-39-3	Barium	10	U		P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	130	J		P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	50	U	L	P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	500	U		P
7439-96-5	Manganese	10	U		P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	1000	U		P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	25	U		P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	4.4	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI percent recovery below 90%.
B - Present in laboratory blank (zinc at 4.3 ug/L).

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Lab Sample ID: 680-24532-12

Level (low/med): LOW Date Received: 2/23/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: RINSATE 2

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water Lab Sample ID: 680-24532-12

Date Received: 02/23/2007 925 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

APPENDIX D

Support Documentation
(Inorganic)

STL SAVANNAH

METALS

-3-

BLANKS

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG NO.: 68024532

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.000	U	200.000	U	200.000	U	200.000	U	200.000	U	P
Antimony	20.000	U	20.000	U	20.000	U	20.000	U	20.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Barium	10.000	U	10.000	U	10.000	U	1.462	J	10.000	U	P
Beryllium	4.000	U	4.000	U	4.000	U	4.000	U	4.000	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Calcium	500.000	U	500.000	U	500.000	U	500.000	U	500.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	1.973	J	10.000	U	P
Cobalt	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Copper	20.000	U	20.000	U	20.000	U	20.000	U	20.000	U	P
Iron	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Lead	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Magnesium	500.000	U	500.000	U	500.000	U	500.000	U	500.000	U	P
Manganese	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	40.000	U	P
Potassium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	1000.000	U	P
Selenium	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Sodium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	359.033	J	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Vanadium	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Zinc	20.000	U	20.000	U	20.000	U	20.000	U	4.312	J	P

Comments: LIQ

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.000	U	200.000	U	200.000	U			P
Antimony			20.000	U	20.000	U	20.000	U			P
Arsenic			10.000	U	10.000	U	10.000	U			P
Barium			1.259	J	10.000	U	10.000	U			P
Beryllium			4.000	U	4.000	U	4.000	U			P
Cadmium			5.000	U	2.825	J	5.000	U			P
Calcium			500.000	U	500.000	U	500.000	U			P
Chromium			1.840	J	1.565	J	10.000	U			P
Cobalt			10.000	U	10.000	U	10.000	U			P
Copper			20.000	U	20.000	U	20.000	U			P
Iron			50.000	U	50.000	U	50.000	U			P
Lead			5.000	U	5.000	U	5.000	U			P
Magnesium			500.000	U	500.000	U	500.000	U			P
Manganese			10.000	U	10.000	U	10.000	U			P
Nickel			40.000	U	40.000	U	40.000	U			P
Potassium			1000.000	U	1000.000	U	1000.000	U			P
Selenium			10.000	U	10.000	U	10.000	U			P
Silver			10.000	U	10.000	U	10.000	U			P
Sodium			1000.000	U	1000.000	U	1000.000	U			P
Thallium			25.000	U	25.000	U	25.000	U			P
Vanadium			10.000	U	10.000	U	10.000	U			P
Zinc			20.000	U	20.000	U	20.000	U			P

Comments: LIQ

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.000	U							P
Antimony			20.000	U							P
Arsenic			10.000	U							P
Barium			10.000	U							P
Beryllium			4.000	U							P
Cadmium			5.000	U							P
Calcium			500.000	U							P
Chromium			1.126	J							P
Cobalt			10.000	U							P
Copper			20.000	U							P
Iron			50.000	U							P
Lead			5.000	U							P
Magnesium			10.169	J							P
Manganese			10.000	U							P
Nickel			40.000	U							P
Potassium			1000.000	U							P
Selenium			10.000	U							P
Silver			10.000	U							P
Sodium			1000.000	U							P
Thallium			25.000	U							P
Vanadium			10.000	U							P
Zinc			20.000	U							P

Comments: LIQ

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.000	U	200.000	U	200.000	U	200.000	U	20.000	U	P
Antimony	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Barium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Beryllium	4.000	U	4.000	U	4.000	U	4.000	U	0.400	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Calcium	500.000	U	500.000	U	500.000	U	500.000	U	50.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Cobalt	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Copper	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P
Iron	50.000	U	50.000	U	50.000	U	50.000	U	5.000	U	P
Lead	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Magnesium	500.000	U	500.000	U	500.000	U	500.000	U	50.000	U	P
Manganese	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	4.000	U	P
Potassium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	2.571	J	P
Selenium	10.000	U	10.000	U	10.000	U	10.000	U	2.500	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Sodium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	100.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	2.500	U	P
Vanadium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Zinc	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P

Comments: SOIL

STL SAVANNAH

METALS
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG No.: 68024532

AA CRDL Standard Source: _____

ICP CRDL Standard Source: SPEX/CPI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum				200.0	201.65	101	209.85	105
Antimony				20.0	20.62	103	20.98	105
Arsenic				10.0	8.21	82	8.11	81
Barium				10.0	10.26	103	10.30	103
Beryllium				4.0	4.14	104	4.17	104
Cadmium				5.0	5.08	102	5.19	104
Calcium				500.0	506.79	101	508.92	102
Chromium				10.0	10.34	103	10.57	106
Cobalt				10.0	9.88	99	10.00	100
Copper				20.0	20.43	102	20.20	101
Iron				50.0	37.29	75	41.96	84
Lead				5.0	3.70	74	4.63	93
Magnesium				500.0	508.04	102	504.60	101
Manganese				10.0	10.31	103	10.33	103
Nickel				40.0	41.62	104	41.47	104
Potassium				1000.0	1066.18	107	1090.33	109
Selenium				10.0	14.97	150	11.93	119
Silver				10.0	9.88	99	9.98	100
Sodium				500.0	464.85	93	543.78	109
Thallium				25.0	27.83	111	28.08	112
Vanadium				10.0	9.42	94	9.49	95
Zinc				20.0	21.19	106	21.17	106

Comments: SOIL

STL SAVANNAH

METALS
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG No.: 68024532

AA CRDL Standard Source: _____

ICP CRDL Standard Source: SPEX/CPI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum				200.0	201.65	101	209.85	105
Antimony				20.0	20.62	103	20.98	105
Arsenic				10.0	8.21	82	8.11	81
Barium				10.0	10.26	103	10.30	103
Beryllium				4.0	4.14	104	4.17	104
Cadmium				5.0	5.08	102	5.19	104
Calcium				500.0	506.79	101	508.92	102
Chromium				10.0	10.34	103	10.57	106
Cobalt				10.0	9.88	99	10.00	100
Copper				20.0	20.43	102	20.20	101
Iron				50.0	37.29	75	41.96	84
Lead				5.0	3.70	74	4.63	93
Magnesium				500.0	508.04	102	504.60	101
Manganese				10.0	10.31	103	10.33	103
Nickel				40.0	41.62	104	41.47	104
Potassium				1000.0	1066.18	107	1090.33	109
Selenium				10.0	14.97	150	11.93	119
Silver				10.0	9.88	99	9.98	100
Sodium				500.0	464.85	93	543.78	109
Thallium				25.0	27.83	111	28.08	112
Vanadium				10.0	9.42	94	9.49	95
Zinc				20.0	21.19	106	21.17	106

Comments: LIQ

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3-4-6S

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 84.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		6638.8989		5602.0630		213.68	485		P
Antimony	75 - 125	46.2537		2.1368	U	53.42	87		P
Arsenic	75 - 125	194.7555		1.0684	U	213.68	91		P
Barium	75 - 125	227.5918		15.7938		213.68	99		P
Beryllium	75 - 125	5.3789		0.1847	J	5.34	97		P
Cadmium	75 - 125	4.9036		0.5342	U	5.34	92		P
Calcium		3584.5811		3029.1150		534.19	104		P
Chromium	75 - 125	27.5826		6.9322		21.37	97		P
Cobalt	75 - 125	51.8232		0.7903	J	53.42	96		P
Copper	75 - 125	28.7293		1.9383	J	26.71	100		P
Iron		2907.1411		2541.3960		106.84	342		P
Lead	75 - 125	52.8720		3.0684		53.42	93		P
Magnesium	75 - 125	924.3372		371.3929		534.19	104		P
Manganese	75 - 125	77.0095		22.7273		53.42	102		P
Nickel	75 - 125	52.9965		2.2319	J	53.42	95		P
Potassium	75 - 125	827.3780		304.4665		534.19	98		P
Selenium	75 - 125	191.3663		2.6710	U	213.68	90		P
Silver	75 - 125	4.9437		1.0684	U	5.34	93		P
Sodium	75 - 125	563.6550		92.6629	J	534.19	88		P
Thallium	75 - 125	202.5247		2.6710	U	213.68	95		P
Vanadium	75 - 125	58.4583		6.8693		53.42	97		P
Zinc	75 - 125	59.0982		9.9968		53.42	92		P

Comments: SOIL

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3-4-6SD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 84.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		6038.1729		5602.0630		213.68	204		P
Antimony	75 - 125	47.2624		2.1368	U	53.42	88		P
Arsenic	75 - 125	198.0741		1.0684	U	213.68	93		P
Barium	75 - 125	226.8704		15.7938		213.68	99		P
Beryllium	75 - 125	5.4650		0.1847		5.34	99		P
Cadmium	75 - 125	5.0029		0.5342	U	5.34	94		P
Calcium		2859.6780		3029.1150		534.19	-32		P
Chromium	75 - 125	27.1877		6.9322		21.37	95		P
Cobalt	75 - 125	52.7619		0.7903		53.42	97		P
Copper	75 - 125	28.7162		1.9383		26.71	100		P
Iron		2367.2649		2541.3960		106.84	-163		P
Lead	75 - 125	52.3867		3.0684		53.42	92		P
Magnesium	75 - 125	853.9181		371.3929		534.19	90		P
Manganese	75 - 125	70.8332		22.7273		53.42	90		P
Nickel	75 - 125	53.5042		2.2319		53.42	96		P
Potassium	75 - 125	793.0753		304.4665		534.19	91		P
Selenium	75 - 125	194.1031		2.6710	U	213.68	91		P
Silver	75 - 125	5.0625		1.0684	U	5.34	95		P
Sodium	75 - 125	575.3036		92.6629		534.19	90		P
Thallium	75 - 125	206.0511		2.6710	U	213.68	96		P
Vanadium	75 - 125	58.8199		6.8693		53.42	97		P
Zinc	75 - 125	57.1348		9.9968		53.42	88		P

Comments: SOIL

STL SAVANNAH

METALS
-5B-
POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3-4-6A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		53675.66		52434.96		2000.0	62		P
Antimony		474.42		20.00	U	500.0	95		P
Arsenic		1938.78		10.00	U	2000.0	97		P
Barium		2204.55		147.83		2000.0	103		P
Beryllium		52.55		1.73	J	50.0	102		P
Cadmium		48.60		5.00	U	50.0	97		P
Calcium		33243.74		28352.33		5000.0	98		P
Chromium		265.22		64.88		200.0	100		P
Cobalt		508.05		7.40	J	500.0	100		P
Copper		278.72		18.14	J	250.0	104		P
Iron		24242.09		23787.31		1000.0	45		P
Lead		515.49		28.72		500.0	97		P
Magnesium		8716.08		3476.21		5000.0	105		P
Manganese		734.26		212.73		500.0	104		P
Nickel		517.65		20.89	J	500.0	99		P
Potassium		8061.43		2849.79		5000.0	104		P
Selenium		1899.62		10.00	U	2000.0	95		P
Silver		48.65		10.00	U	50.0	97		P
Sodium		5863.24		867.32	J	5000.0	100		P
Thallium		2003.20		25.00	U	2000.0	100		P
Vanadium		564.61		64.30		500.0	100		P
Zinc		594.21		93.57		500.0	100		P

Comments: SOIL

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SW1S

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	4416.0308		2541.5481		2000.00	94		P
Antimony	75 - 125	462.9370		20.0000	U	500.00	93		P
Arsenic	75 - 125	1865.4740		10.0000	U	2000.00	93		P
Barium	75 - 125	2000.5590		31.1388		2000.00	98		P
Beryllium	75 - 125	47.6300		4.0000	U	50.00	95		P
Cadmium	75 - 125	46.9671		5.0000	U	50.00	94		P
Calcium	75 - 125	13771.3799		8835.2363		5000.00	99		P
Chromium	75 - 125	194.7075		2.9123	J	200.00	96		P
Cobalt	75 - 125	482.1448		3.5225	J	500.00	96		P
Copper	75 - 125	247.5919		20.0000	U	250.00	99		P
Iron		7933.1230		7232.0791		1000.00	70		P
Lead	75 - 125	470.5676		5.0000	U	500.00	94		P
Magnesium	75 - 125	6302.7222		1215.8970		5000.00	102		P
Manganese	75 - 125	948.4504		463.2686		500.00	97		P
Nickel	75 - 125	480.2426		40.0000	U	500.00	96		P
Potassium	75 - 125	6972.9712		1565.8850		5000.00	108		P
Selenium	75 - 125	1838.6200		10.0000	U	2000.00	92		P
Silver	75 - 125	44.3176		10.0000	U	50.00	89		P
Sodium	75 - 125	11296.1299		6313.7090		5000.00	100		P
Thallium	75 - 125	1933.5389		25.0000	U	2000.00	97		P
Vanadium	75 - 125	482.7328		3.5377	J	500.00	96		P
Zinc	75 - 125	495.7610		18.4088	J	500.00	95		P

Comments: LIQ

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SW1SD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	4522.7139		2541.5481		2000.00	99		P
Antimony	75 - 125	490.2447		20.0000	U	500.00	98		P
Arsenic	75 - 125	1994.5811		10.0000	U	2000.00	100		P
Barium	75 - 125	2130.1819		31.1388		2000.00	105		P
Beryllium	75 - 125	51.2253		4.0000	U	50.00	102		P
Cadmium	75 - 125	49.8744		5.0000	U	50.00	100		P
Calcium	75 - 125	13831.9600		8835.2363		5000.00	100		P
Chromium	75 - 125	208.9129		2.9123		200.00	103		P
Cobalt	75 - 125	516.6855		3.5225		500.00	103		P
Copper	75 - 125	263.6134		20.0000	U	250.00	105		P
Iron		8038.3828		7232.0791		1000.00	81		P
Lead	75 - 125	504.3395		5.0000	U	500.00	101		P
Magnesium	75 - 125	6277.9219		1215.8970		5000.00	101		P
Manganese	75 - 125	987.0077		463.2686		500.00	105		P
Nickel	75 - 125	515.7549		40.0000	U	500.00	103		P
Potassium	75 - 125	6883.0391		1565.8850		5000.00	106		P
Selenium	75 - 125	1967.2700		10.0000	U	2000.00	98		P
Silver	75 - 125	47.8091		10.0000	U	50.00	96		P
Sodium	75 - 125	11281.3604		6313.7090		5000.00	99		P
Thallium	75 - 125	2070.8530		25.0000	U	2000.00	104		P
Vanadium	75 - 125	515.9299		3.5377		500.00	102		P
Zinc	75 - 125	531.5228		18.4088		500.00	103		P

Comments: LIQ

STL SAVANNAH

METALS
-5B-
POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: WFF1-SW1A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		4516.05		2541.55		2000.0	99		P
Antimony		492.73		20.00	U	500.0	99		P
Arsenic		1995.12		10.00	U	2000.0	100		P
Barium		2139.03		31.14		2000.0	105		P
Beryllium		51.19		4.00	U	50.0	102		P
Cadmium		49.75		5.00	U	50.0	99		P
Calcium		14163.31		8835.24		5000.0	107		P
Chromium		209.43		2.91	J	200.0	103		P
Cobalt		516.46		3.52	J	500.0	103		P
Copper		265.49		20.00	U	250.0	106		P
Iron		8069.20		7232.08		1000.0	84		P
Lead		504.37		5.00	U	500.0	101		P
Magnesium		6587.99		1215.90		5000.0	107		P
Manganese		983.73		463.27		500.0	104		P
Nickel		516.90		40.00	U	500.0	103		P
Potassium		7263.98		1565.89		5000.0	114		P
Selenium		1969.47		10.00	U	2000.0	98		P
Silver		49.48		10.00	U	50.0	99		P
Sodium		11610.82		6313.71		5000.0	106		P
Thallium		2075.01		25.00	U	2000.0	104		P
Vanadium		516.53		3.54	J	500.0	103		P
Zinc		535.54		18.41	J	500.0	103		P

Comments: LJQ

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Mercury			0.0970	J	-0.0897	J					CV

Comments: LIQ

STL SAVANNAH

METALS
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG No.: 68024532

AA CRDL Standard Source: _____

ICP CRDL Standard Source:

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.200	0.102	51.0					

Comments: SOIL

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

RINSATE 2S

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury	80 - 120	0.9951		0.2000	U	1.000	99.5		CV

Comments: CIQ

pcw

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

RINSATE 2SD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury	80 - 120	1.1820		0.2000	U	1.000	118.2		CV

Comments: LIQ

STL SAVANNAH

METALS
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: RINSATE 2A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024532

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury		0.876		0.200	U	1.0	87.6		CV

Comments: CIQ

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3S

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury	80 - 120	1.0530		0.2000	U	1.000	105.3		CV

Comments: LIQ

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3SD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury	80 - 120	1.0040		0.2000	U	1.000	100.4		CV

Comments: UIQ

STL SAVANNAH

METALS
-5B-
POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Mercury		0.954		0.200	U	1.0	95.4		CV

Comments: LIQ

MATRIX SPIKE SAMPLE RECOVERY GENERAL CHEMISTRY

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid

Method	Sample ID	Analyte	Result	Unit	Spike Amount	Percent Rec.	Limits	Qual	RPD	RPD Limit	Qual
Batch ID: 68775	Date: 3/2/2007 7:26		Prep Batch: 68716		Date: 3/1/2007 7:30						
9012A	680-24622-11	Cyanide, Total	0.53	mg/Kg				U			
9012A	680-24622-11	Cyanide, Total	1.65	mg/Kg	1.62	102	75-125				
9012A	680-24622-11	Cyanide, Total	1.65	mg/Kg	1.65	100	75-125		0	30	
9012A	680-24622-8	Cyanide, Total	0.010	mg/L				U			
9012A	680-24622-8	Cyanide, Total	0.0322	mg/L	0.0305	106	85-115				
9012A	680-24622-8	Cyanide, Total	0.0325	mg/L	0.0305	107	85-115		1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA-IN

Serial Number 94411

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WWF - WWTP #1		VA
STL (LAB) PROJECT MANAGER: ABBIE PAGE	P.O. NUMBER: 0057557	CONTRACT NO.
CLIENT (SITE) PM: THERESA OFFNER	CLIENT PHONE: 770-325-7961	CLIENT FAX
CLIENT NAME: WESTON SOLUTIONS	CLIENT E-MAIL: THERESA.OFFNER@WESTONSOLUTIONS.COM	
CLIENT ADDRESS: 5430 METRIC PL (STE 100) NORCROSS, GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE ____ OF ____

STANDARD REPORT DELIVERY ⊘
DATE DUE ____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE ____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC, PEST, PCB	CYANIDE	METALS/MERCURY	NUMBER OF CONTAINERS SUBMITTED (GLCF) (GLCF) (GLCF)	REMARKS
2/20/07	1510	WFF1-SS4			X			X	X	X	X		MS/MSD
	1525	WFF1-MW3-4-6			X			X	X	X	X		
2/21/07	0910	WFF1-MW1-0-0.5			X			X	X	X	X		
	0920	WFF1-MW1-0.5-2			X			X	X	X	X		
	1100	WFF1-SW1		X				X	X	X	X		
	1130	WFF1-MW1-18-20			X			X	X	X	X		
	1135	WFF1-SD1			X			X	X	X	X		
	1155	WFF1-SD2			X			X	X	X	X		
	1420	WFF1-WW01		X				X	X	X	X		
	1550	WFF1-SS2-A			X			X	X	X	X		
	1605	WFF1-SS3-A			X			X	X	X	X		
	1635	RINSATE 2		X				X	X	X	X		HAND AUGER RINSE BLANK

PRESERVATIVE

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/22/07	1340		2/22/07	1630			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	2/22/07	1340						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
	022307	0925	YES ○ NO ○		680-24532	

Serial Number 93811

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFF - WWTP #1		VA
STL (LAB) PROJECT MANAGER: ABBIE PAGE	P.O. NUMBER: 0057557	CONTRACT NO.
CLIENT (SITE) PM: THERESA OFFNER	CLIENT PHONE: 770-325-7961	CLIENT FAX
CLIENT NAME: WESTON SOLUTIONS	CLIENT E-MAIL: THERESA.OFFNER@WESTONSOLUTIONS.COM	
CLIENT ADDRESS: 5430 METRIC PL (STE 100) NORCROSS, GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE ____ OF ____

STANDARD REPORT DELIVERY ☒

DATE DUE ____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE ____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: SVOC, PEST, PCB, HERB, METALS, METC	REQUIRED ANALYSIS: TCLP VOA	REQUIRED ANALYSIS: IGNIT, PH, REACTIVE CYANIDE, REACTIVE SULFIDE	REQUIRED ANALYSIS: VOC	REQUIRED ANALYSIS: SVOC, PEST/PCB	REQUIRED ANALYSIS: CYANIDE	REQUIRED ANALYSIS: METALS / MERC	REMARKS
								NUMBER OF CONTAINERS SUBMITTED							
2/22/07	1035	SOIL CUTTINGS			X			X	X	X					
1	1300	WFF1-SS8			X						X	X	X	X	
	—	TB-3		X							X				
2/20/07	1620	RINSATE 1 ☆									X	X	X	X	

1.0/1.1/0.1
TEMP. 3.0/2.8

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
T.C. [illegible]	2/22/07	1340	Amelia Kennedy	2/22/07	1630			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Amelia Kennedy	2/22/07	1340						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
[illegible]	022307	0925	YES ○ NO ○		680-24532	☆ Analyze per Theresa Offner 2-26-07

STL8240-680 (12/02)

Weston Solutions, Inc.
5430 Metric Place
Suite 100
Norcross, GA 30092
770-325-7900 • FAX 770-325-7950
www.westonsolutions.com

Memorandum
Norcross Office

DATE: April 25, 2007

TO: Teresa Offner, Project Manager

FROM: Paula MacLaren, Environmental Scientist

RE: Organic Data Validation and Usability Report
Wallops Island Flight Facility, VA - Old Waste Water Treatment Plant No. 1
Site Investigation – Sampling Event
Contract Number (No.) W91236-05-D-0036
Laboratory Sample Delivery Group (SDG) No. 680-24532

OVERVIEW

Severn Trent Laboratories, Inc. analyzed 8 soil samples, 2 sediment samples, 2 water samples, and 3 field quality control (QC) samples collected by Weston Solutions, Inc., (WESTON) at the Old Waste Water Treatment Plant No. 1 located at Wallops Island Flight Facility, Virginia, on February 20 through 22, 2007. The sample identifications are presented below:

Soil/Sediment Samples		Aqueous Samples	QC Samples
WFFI-MWI-0-0.5	WFFI-SS3-A	WFFI-SW1	Rinsate 1
WFFI-MWI-0.5-2	WFFI-SS4	WFFI-WW01	Rinsate 2
WFFI-MWI-18-20	WFFI-SS8		TB-3
WFFI-MW3-4-6	WFFI-SD1		
WFFI-SS2-A	WFFI-SD2		

The samples were analyzed for the following parameters:

- Volatile organic compounds (VOCs) target compound list (TCL); *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846), Method 8260B
- Semivolatile organic compounds (SVOCs) TCL; SW-846 Method 8270C
- Organochlorine pesticide TCL; SW-846 Method 8081A
- Polychlorinated biphenyls (PCBs) TCL; SW-846 Method 8082

SUMMARY

WESTON performed data validation in accordance with the *U.S. Environmental Protection Agency (USEPA) Region III Modifications To National Functional Guidelines for Organic Data Review Multi-*

Media, Multi-Concentration, September 1994. This report only addresses quality assurance/quality control (QA/QC) problems which affect data usability in meeting site objectives. The following quality assurance/quality control (QA/QC) criteria were reviewed:

- Holding times, sample preservation and storage
- Sample condition upon laboratory receipt
- Field and laboratory sample identification comparison
- Sample preparation
- Method detection limits (MDL) and reporting limits (RL)
- Instrument performance checks
- 4,4'-DDT and endrin breakdown evaluation
- Instrument calibration
- Initial and continuing calibration verification summaries
- Initial and continuing calibration blank summaries
- Internal standards
- Method blanks
- Ambient, equipment, and trip blanks (as applicable)
- System monitoring compound spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD)
- Laboratory control sample (LCS)
- Qualitative and quantitative compound identification
- Second column confirmation (as applicable)
- Tentatively identified compounds
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The laboratory deliverable reports met the requirements and format of a contract laboratory program (CLP) for organic compounds data deliverable package. The following QA/QC sample analysis observations were noted:

MAJOR PROBLEMS

- No major problems resulting in the rejection of sample data were found.

MINOR PROBLEMS

Volatile Organic Analyses:

- Initial calibration performed on instrument MSL5972 (solid analyses) performed on February 15, 2007, showed chloroethane percent relative standard deviation (RSD) slightly exceeding the QA/QC acceptance criteria of 30.0 percent; at 30.6 %. Chloroethane was not detected in any of the associated samples therefore, no data qualifiers were applied.

- Initial calibration verification (ICV) QC check sample on instrument MSL5972 (solid analyses) performed on February 15, 2007, showed chloroethane exceeding the percent drift (%D) of 25.0; 58.1 %D. The relative response factor (RRF) was within acceptance criteria. Chloroethane was

not detected in any of the associated samples, therefore, no data qualifiers were applied.

- The continuing calibration verification (CCV) QC check sample on instrument MSL5972 (solid sample analyses) performed on March 2, 2007, showed acetone exceeding the recommended QA/QC limit of 25.0 %D; at 34.8 %D. Acetone was detected in all SDG soil and sediment samples, therefore, acetone results have been qualified as estimated (J) for the following site soil and sediment samples:

WFFI-MW1-0-0.5	WFFI-SS4
WFFI-MW1-0.5-2	WFFI-SS8
WFFI-MW1-18-20	WFFI-SD1
WFFI-MW3-4-6	WFFI-SD2

- Initial calibration performed on instrument MSP5973 (water analyses) on February 23, 2007 showed bromomethane % RSD exceeding the QA/QC acceptance criteria of 30.0 percent; at 41 %. Bromomethane was not detected in any of the associated samples, therefore, no data qualifiers were applied.

- Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on site soil sample WFFI-SS4. Chloroethane MS percent recovery (151 percent) exceeded the laboratory limit of 20 to 140 percent indicating a possible high bias in sample data due to matrix interference. This compound was not detected in sample WFFI-SS4, therefore, no data qualifier was applied. It should be noted that no acceptance criteria for chloroethane has been established under the *Region III Modifications To National Functional Guidelines.*

  In addition, MS/MSD analytical precision, measured as relative percent difference (RPD), exceeded the US EPA Region 3 recommended QA/QC ranges for benzene, 1,1-dichloroethene, toluene, and trichloroethene. These compounds were not detected within sample WFFI-SS4, therefore, they have been qualified as estimated (UJ).

- The site QC trip blank sample, TB-3, showed methylene chloride contamination at 0.45 ug/L. This contaminant, however, was not detected in any of the associated site samples. No data qualifiers were applied.

- Rinsate 1 field QC sample, collected on February 20, 2007 showed 5.1 µg/L toluene indicating possible field contamination. Toluene was not detected in any associated site aqueous samples.

- Rinsate 2 field QC sample, collected on February 21, 2007, showed 5.0 ug/L toluene and 7.3 ug/L methyl isobutyl ketone contamination. These compounds were not detected in the associated site aqueous samples. Therefore no data qualifiers were applied.

Semivolatile Organic Analysis:

- The laboratory extracted and analyzed site samples within the technical holding time of 14-days for soil samples and 7-days for water samples for the initial sample analyses. Sample surrogate

spiked component percent recoveries were within *Region III Modifications To National Functional Guidelines* established acceptance criteria for all samples except for soil sample WFFI-SS2-A (2-fluorophenol at 24 %), and water sample SRRI-WW01 (2-fluorobiphenyl at 33 %); several samples were below laboratory limits.

Due to surrogate component percent recoveries below the laboratory limits, the laboratory re-extracted and re-analyzed all site water samples 6 to 7 days outside their technical holding times; re-extracted and re-analyzed site soil samples WFFI-SS2 and WFFI-SD2 1-day outside their technical holding times. The re-analyses data concurred with the initial sample results. After evaluation of both sets of data, it has been determined that the initial analysis performed on these site samples is the best data to report. No data qualifiers were applied.

- Initial calibration performed on instrument MSG5973 on February 20, 2007, showed pentachlorophenol percent relative standard deviation (48.4 % RSD) exceeding the QA/QC acceptance criteria of 30.0. It has been determined that the high end of the curve was outside the linearity criteria. Pentachlorophenol was not detected in site water samples. Based on this evaluation, no data qualifiers were required.

- The CCV QC check sample on instrument MST5973 on March 2, 2007 at 0836, showed pyridine exceeding the recommended QA/QC limit of ±25.0 %D; at -32.4. The relative response factor (RRF) was within acceptance criteria of 0.05. Pyridine was not detected in the associated site soil samples, therefore, no data qualifiers were applied.

- Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on soil sample WFFI-SS8. The MS analysis showed phenol (23%), 2-chlorophenol (23%), 1,4-dichlorobenzene (19%), n-nitrosodi-n-propylamine (22%), 1,2,4-trichlorobenzene (22%), acenaphthene (26%) and pyrene (32%) below *Region III Modifications To National Functional Guidelines* recommended QA/QC lower limits. In addition, three out of six surrogate spiked component percent recoveries exceeded their lower limits. The MSD analysis showed percent recoveries for 1,4-dichlorobenzene (24%), n-nitrosodi-n-propylamine (30 %) and 1,2,4-trichlorobenzene (27 %) below their QA/QC lower limits indicating possible matrix interference. In addition, 3 out of 6 internal standards for the MSD analysis had areas above the upper limit indicating strong matrix interferences. Analytical precision, measured as relative percent difference (RPD) showed 1,2,4-trichlorobenzene and acenaphthene exceeding the Region 3 limits. No semivolatile compounds were detected in soil sample WFFI-SS8. Based on the MS/MSD QC data, soil sample WFFI-SS8 data has been qualified as biased low (UL) due to matrix interference.

Pesticide/PCB Analysis:

- The continuing calibration sequence was not followed as recommended with bracketing at every 12-hour intervals. The next sequential continuing standard mixture analyzed after sample analyses was used to evaluate instrument performance.

- The continuing calibration standard mixture analyzed on columns SGMECD1 and SGMECD2 on March 6, 2007 at 0654 exceeded the recommended QA/QC range of ±25.0 %D for 4,4'-DDD

(41.1 %D, 32.9%D) and 4,4-DDT (-32.7 %D, 38.1%D). The following samples with reported positive 4,4'-DDD and 4,4-DDT concentrations have been qualified as estimated (J):

WFFI-SD1
WFFI-SD2

- The continuing calibration standard mixture analyzed on column SGMECD1 on March 7, 2007 at 0944 exceeded the recommended QA/QC range of ±25.0 %D for 4,4'-DDE (31.3 %D). The following samples with reported positive 4,4'-DDE concentrations have been qualified as estimated (J):

  WFFI-MW1-0-0.5
  WFFI-SD1
  WFFI-SD2

  In addition, this continuing calibration standard on column SGMEDC1 showed endrin aldehyde (-28.9%D) and methoxychlor (26.9%D) exceeding QA/QC guidance; SGMEDC2 showed heptachlor epoxide (-26.7% D) and endosulfan II (-37.1%D) exceeding QA/QC guidance. These compounds were not identified in any of the associated samples, therefore, no data qualifiers were applied.

- Water sample WFFI-WW01 had two surrogate spiked percent recoveries (from different columns) out of four below the QA/QC lower limit of 30 percent; they were, however, greater than 10 percent. Reported non-detected compounds in sample WFFI-WW01 have been qualified as estimated (UJ).

- Sample WFFI-SD2 analysis showed the agreement between the two columns exceeding the recommended QA/QC range of no greater than 40 RPD. In reviewing the raw data chromatograms, no anomalies were noted. The more conservative, higher 4,4'-DDD concentration, as recommended per method SW-846, has been reported for sample WFFI-SD2.

NOTES

- Soil samples WFFI-SS2-A and WFFI-SS3-A were analyzed for semivolatile, pesticide, and PCB compounds only.

- Samples were received by the laboratory slightly below the QA/QC recommended preservative temperature of 4°C±2°C; 0.1, 1.0, and 1.1°C. Based on this observation, it has been determined that no impact to sample data had occurred.

- The soil sample technical holding time for sample extraction/analysis was evaluated using the USEPA *National Functional Guideline* technical holding time of 14-days for preserved VOC analysis and 14-days to extraction and 40-days to analysis for SVOC and pesticide/PCB analyses.

- For pesticide/PCB analyses, instrument performance was monitored using the internal standard

bromonitrobenzene (BNB) as described in SW-846 method 8081A.

- Tentatively identified compounds (TICs) are not included in the data package.
- When there are several QC data qualifiers applied to a value, the hierarchy of qualifiers is followed; R, B, L, K, J.

The laboratory has provided additional information in their case narrative. Based on the evaluation of all information provided in the analytical data package, the results are highly usable with the data validation qualifiers as noted. The sample data is presented in the following attachments.

ATTACHMENTS

Appendix A – Glossary of Data Qualifier Codes
Appendix B – Data Summary Tables
Appendix C – Laboratory Reported Results
Appendix D – Support Documentation

APPENDIX A

Glossary of Data Qualifier Codes
(Organic)

DATA QUALIFIER CODES
(Organic Analyses)

Codes Related To Identification

(Confidence concerning presence or absence of compounds):

U = the compound was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

R = the data are unusable. (Note: The compound may or may not be present.)

Codes Related To Quantitation

(Can be used for both positive results and sample quantitation limits):

J = the associated value is an estimated quantity

UJ = the compound was analyzed for, but was not detected. The associated detection limit is an estimate and may be inaccurate or imprecise.

K = the compound is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L = the compound is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL = the compound was not detected, and the actual quantitation limit is probably higher than reported.

APPENDIX B

Data Summary Tables
(Organic)

TABLE 1A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	Volatile Organic Compounds				
10	Acetone	**370 J**	**190 J**	**32 J**	**170 J**
5.0	Benzene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Bromoform	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Bromomethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Carbon disulfide	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Carbon tetrachloride	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chlorobenzene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chlorodibromomethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chloroform	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Chloromethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	cis-1,2-Dichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	cis-1,3-Dichloropropene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Dichlorobromomethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1-Dichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,2-Dichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1-Dichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,2-Dichloropropane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Ethylbenzene	4.9 U	4.8 U	5.1 U	4.8 U
10	2-Hexanone	24 U	24 U	25 U	24 U
5.0	Methylene Chloride	4.9 U	4.8 U	5.1 U	4.8 U
10	Methyl Ethyl Ketone	**23 J**	**14 J**	25 U	**46**
10	Methyl isobutyl ketone	**6.1 J**	24 U	**8.5 J**	24 U
5.0	Styrene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1,2,2-Tetrachloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Tetrachloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Toluene	**2.7 J**	4.8 U	5.1 U	**2.9 J**
5.0	trans-1,2-Dichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	trans-1,3-Dichloropropene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1,1-Trichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	1,1,2-Trichloroethane	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Trichloroethene	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Vinyl chloride	4.9 U	4.8 U	5.1 U	4.8 U
5.0	Xylenes, Total	9.7 U	9.7 U	10 U	**12**

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

TABLE 1B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	NA	NA	91.3	87.7
CRQL	**Volatile Organic Compounds**				
10	Acetone	NA	NA	**80 J**	**140 J**
5.0	Benzene	NA	NA	5.2 UJ	5.0 U
5.0	Bromoform	NA	NA	5.2 U	5.0 U
5.0	Bromomethane	NA	NA	5.2 U	5.0 U
5.0	Carbon disulfide	NA	NA	5.2 U	5.0 U
5.0	Carbon tetrachloride	NA	NA	5.2 U	5.0 U
5.0	Chlorobenzene	NA	NA	5.2 U	5.0 U
5.0	Chlorodibromomethane	NA	NA	5.2 U	5.0 U
5.0	Chloroethane	NA	NA	5.2 U	5.0 U
5.0	Chloroform	NA	NA	5.2 U	5.0 U
5.0	Chloromethane	NA	NA	5.2 U	5.0 U
5.0	cis-1,2-Dichloroethene	NA	NA	5.2 U	5.0 U
5.0	cis-1,3-Dichloropropene	NA	NA	5.2 U	5.0 U
5.0	Dichlorobromomethane	NA	NA	5.2 U	5.0 U
5.0	1,1-Dichloroethane	NA	NA	5.2 U	5.0 U
5.0	1,2-Dichloroethane	NA	NA	5.2 U	5.0 U
5.0	1,1-Dichloroethene	NA	NA	5.2 UJ	5.0 U
5.0	1,2-Dichloropropane	NA	NA	5.2 U	5.0 U
5.0	Ethylbenzene	NA	NA	5.2 U	5.0 U
10	2-Hexanone	NA	NA	26 U	25 U
5.0	Methylene Chloride	NA	NA	5.2 U	5.0 U
10	Methyl Ethyl Ketone	NA	NA	**15 J**	**16 J**
10	Methyl isobutyl ketone	NA	NA	26 U	25 U
5.0	Styrene	NA	NA	5.2 U	5.0 U
5.0	1,1,2,2-Tetrachloroethane	NA	NA	5.2 U	5.0 U
5.0	Tetrachloroethene	NA	NA	5.2 U	5.0 U
5.0	Toluene	NA	NA	5.2 UJ	5.0 U
5.0	trans-1,2-Dichloroethene	NA	NA	5.2 U	5.0 U
5.0	trans-1,3-Dichloropropene	NA	NA	5.2 U	5.0 U
5.0	1,1,1-Trichloroethane	NA	NA	5.2 U	5.0 U
5.0	1,1,2-Trichloroethane	NA	NA	5.2 U	5.0 U
5.0	Trichloroethene	NA	NA	5.2 UJ	5.0 U
5.0	Vinyl chloride	NA	NA	5.2 U	5.0 U
5.0	Xylenes, Total	NA	NA	10 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

TABLE 1C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Volatile Organic Compounds**		
10	Acetone	**45 J**	**270 J**
5.0	Benzene	5.3 U	5.2 U
5.0	Bromoform	5.3 U	5.2 U
5.0	Bromomethane	5.3 U	5.2 U
5.0	Carbon disulfide	5.3 U	5.2 U
5.0	Carbon tetrachloride	5.3 U	5.2 U
5.0	Chlorobenzene	5.3 U	5.2 U
5.0	Chlorodibromomethane	5.3 U	5.2 U
5.0	Chloroethane	5.3 U	5.2 U
5.0	Chloroform	5.3 U	5.2 U
5.0	Chloromethane	5.3 U	5.2 U
5.0	cis-1,2-Dichloroethene	5.3 U	5.2 U
5.0	cis-1,3-Dichloropropene	5.3 U	5.2 U
5.0	Dichlorobromomethane	5.3 U	5.2 U
5.0	1,1-Dichloroethane	5.3 U	5.2 U
5.0	1,2-Dichloroethane	5.3 U	5.2 U
5.0	1,1-Dichloroethene	5.3 U	5.2 U
5.0	1,2-Dichloropropane	5.3 U	5.2 U
5.0	Ethylbenzene	5.3 U	5.2 U
10	2-Hexanone	26 U	26 U
5.0	Methylene Chloride	5.3 U	5.2 U
10	Methyl Ethyl Ketone	26 U	**18 J**
10	Methyl isobutyl ketone	26 U	26 U
5.0	Styrene	5.3 U	5.2 U
5.0	1,1,2,2-Tetrachloroethane	5.3 U	5.2 U
5.0	Tetrachloroethene	5.3 U	5.2 U
5.0	Toluene	5.3 U	5.2 U
5.0	trans-1,2-Dichloroethene	5.3 U	5.2 U
5.0	trans-1,3-Dichloropropene	5.3 U	5.2 U
5.0	1,1,1-Trichloroethane	5.3 U	5.2 U
5.0	1,1,2-Trichloroethane	5.3 U	5.2 U
5.0	Trichloroethene	5.3 U	5.2 U
5.0	Vinyl chloride	5.3 U	5.2 U
5.0	Xylenes, Total	11 U	10 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

TABLE 1D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2	TB-3
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007	2/22/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
CRQL	Volatile Organic Compounds					
25	Acetone	25 U	**8.9 J**	25 U	25 U	25 U
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	**0.53 J**	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	5.0 U	5.0 U	**0.45 J**
10	Methyl Ethyl Ketone	10 U	**3.8 J**	10 U	10 U	10 U
10	Methyl isobutyl ketone	10 U	10 U	10 U	**7.3 J**	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U	**5.1**	**5.0**	1.0 U
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above laboratory method detection limit

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	Semivolatile Organic Compounds				
330	Acenaphthene	380 U	390 U	370 U	390 U
330	Acenaphthylene	380 U	390 U	370 U	390 U
330	Anthracene	380 U	390 U	370 U	390 U
330	Benzo[a]anthracene	380 U	390 U	370 U	390 U
330	Benzo[a]pyrene	380 U	390 U	370 U	390 U
330	Benzo[b]fluoranthene	380 U	390 U	370 U	390 U
330	Benzo[g,h,i]perylene	380 U	390 U	370 U	390 U
330	Benzo[k]fluoranthene	380 U	390 U	370 U	390 U
330	Bis(2-chloroethoxy)methane	380 U	390 U	370 U	390 U
330	Bis(2-chloroethyl)ether	380 U	390 U	370 U	390 U
330	bis(chloroisopropyl) ether	380 U	390 U	370 U	390 U
330	Bis(2-ethylhexyl) phthalate	380 U	390 U	370 U	390 U
330	4-Bromophenyl phenyl ether	380 U	390 U	370 U	390 U
330	Butyl benzyl phthalate	380 U	390 U	370 U	390 U
330	Carbazole	380 U	390 U	370 U	390 U
660	4-Chloroaniline	770 U	780 U	750 U	780 U
330	4-Chloro-3-methylphenol	380 U	390 U	370 U	390 U
330	2-Chloronaphthalene	380 U	390 U	370 U	390 U
330	2-Chlorophenol	380 U	390 U	370 U	390 U
330	4-Chlorophenyl phenyl ether	380 U	390 U	370 U	390 U
330	Chrysene	380 U	390 U	370 U	390 U
330	Dibenz(a,h)anthracene	380 U	390 U	370 U	390 U
330	Dibenzofuran	380 U	390 U	370 U	390 U
330	1,3-Dichlorobenzene	380 U	390 U	370 U	390 U
330	1,4-Dichlorobenzene	380 U	390 U	370 U	390 U
330	1,2-Dichlorobenzene	380 U	390 U	370 U	390 U
660	3,3'-Dichlorobenzidine	770 U	780 U	750 U	780 U
330	2,4-Dichlorophenol	2000 U	390 U	370 U	390 U
330	Diethyl phthalate	380 U	390 U	370 U	390 U
330	2,4-Dimethylphenol	380 U	390 U	370 U	390 U
330	Dimethyl phthalate	380 U	390 U	370 U	390 U
330	Di-n-butyl phthalate	380 U	390 U	370 U	390 U
1700	4,6-Dinitro-2-methylphenol	2000 U	2000 U	1900 U	2000 U
1700	2,4-Dinitrophenol	2000 U	2000 U	1900 U	2000 U
330	2,4-Dinitrotoluene	380 U	390 U	370 U	390 U
330	2,6-Dinitrotoluene	380 U	390 U	370 U	390 U
330	Di-n-octyl phthalate	380 U	390 U	370 U	390 U
330	Fluoranthene	380 U	390 U	370 U	390 U

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	380 U	390 U	370 U	390 U
330	Hexachlorobenzene	380 U	390 U	370 U	390 U
330	Hexachlorobutadiene	380 U	390 U	370 U	390 U
330	Hexachlorocyclopentadiene	380 U	390 U	370 U	390 U
330	Hexachloroethane	380 U	390 U	370 U	390 U
330	Indeno[1,2,3-cd]pyrene	380 U	390 U	370 U	390 U
330	Isophorone	380 U	390 U	370 U	390 U
330	2-Methylnaphthalene	380 U	390 U	370 U	390 U
330	2-Methylphenol	380 U	390 U	370 U	390 U
330	3 & 4 Methylphenol	380 U	390 U	370 U	390 U
330	Naphthalene	380 U	390 U	370 U	390 U
1700	2-Nitroaniline	2000 U	2000 U	1900 U	2000 U
1700	3-Nitroaniline	2000 U	2000 U	1900 U	2000 U
1700	4-Nitroaniline	2000 U	2000 U	1900 U	2000 U
330	Nitrobenzene	380 U	390 U	370 U	390 U
330	2-Nitrophenol	380 U	390 U	370 U	390 U
1700	4-Nitrophenol	2000 U	2000 U	1900 U	2000 U
330	N-Nitrosodi-n-propylamine	380 U	390 U	370 U	390 U
330	N-Nitrosodiphenylamine	380 U	390 U	370 U	390 U
1700	Pentachlorophenol	2000 U	2000 U	1900 U	2000 U
330	Phenanthrene	380 U	390 U	370 U	390 U
330	Phenol	380 U	390 U	370 U	390 U
330	Pyrene	380 U	390 U	370 U	390 U
330	1,2,4-Trichlorobenzene	380 U	390 U	370 U	390 U
330	2,4,6-Trichlorophenol	380 U	390 U	370 U	390 U
330	2,4,5-Trichlorophenol	380 U	390 U	370 U	390 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.5	90.2	NA	87.7
CRQL	Semivolatile Organic Compounds				
330	Acenaphthene	360 U	370 U	NA	380 UL
330	Acenaphthylene	360 U	370 U	NA	380 UL
330	Anthracene	360 U	370 U	NA	380 UL
330	Benzo[a]anthracene	360 U	370 U	NA	380 UL
330	Benzo[a]pyrene	360 U	370 U	NA	380 UL
330	Benzo[b]fluoranthene	360 U	370 U	NA	380 UL
330	Benzo[g,h,i]perylene	360 U	370 U	NA	380 UL
330	Benzo[k]fluoranthene	360 U	370 U	NA	380 UL
330	Bis(2-chloroethoxy)methar	360 U	370 U	NA	380 UL
330	Bis(2-chloroethyl)ether	360 U	370 U	NA	380 UL
330	bis(chloroisopropyl) ether	360 U	370 U	NA	380 UL
330	Bis(2-ethylhexyl) phthalate	360 U	370 U	NA	380 UL
330	4-Bromophenyl phenyl eth	360 U	370 U	NA	380 UL
330	Butyl benzyl phthalate	360 U	370 U	NA	380 UL
330	Carbazole	360 U	370 U	NA	380 UL
660	4-Chloroaniline	730 U	730 U	NA	750 UL
330	4-Chloro-3-methylphenol	360 U	370 U	NA	380 UL
330	2-Chloronaphthalene	360 U	370 U	NA	380 UL
330	2-Chlorophenol	360 U	370 U	NA	380 UL
330	4-Chlorophenyl phenyl eth	360 U	370 U	NA	380 UL
330	Chrysene	360 U	370 U	NA	380 UL
330	Dibenz(a,h)anthracene	360 U	370 U	NA	380 UL
330	Dibenzofuran	360 U	370 U	NA	380 UL
330	1,3-Dichlorobenzene	360 U	370 U	NA	380 UL
330	1,4-Dichlorobenzene	360 U	370 U	NA	380 UL
330	1,2-Dichlorobenzene	360 U	370 U	NA	380 UL
660	3,3'-Dichlorobenzidine	730 U	730 U	NA	750 UL
330	2,4-Dichlorophenol	360 U	370 U	NA	380 UL
330	Diethyl phthalate	360 U	370 U	NA	380 UL
330	2,4-Dimethylphenol	360 U	370 U	NA	380 UL
330	Dimethyl phthalate	360 U	370 U	NA	380 UL
330	Di-n-butyl phthalate	360 U	370 U	NA	380 UL
1700	4,6-Dinitro-2-methylpheno	1900 U	1900 U	NA	1900 UL
1700	2,4-Dinitrophenol	1900 U	1900 U	NA	1900 UL
330	2,4-Dinitrotoluene	360 U	370 U	NA	380 UL
330	2,6-Dinitrotoluene	360 U	370 U	NA	380 UL
330	Di-n-octyl phthalate	360 U	370 U	NA	380 UL
330	Fluoranthene	360 U	370 U	NA	380 UL

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.5	90.2	NA	87.7
CRQL	**Semivolatile Organic Compounds**				
330	Fluorene	360 U	370 U	NA	380 UL
330	Hexachlorobenzene	360 U	370 U	NA	380 UL
330	Hexachlorobutadiene	360 U	370 U	NA	380 UL
330	Hexachlorocyclopentadien	360 U	370 U	NA	380 UL
330	Hexachloroethane	360 U	370 U	NA	380 UL
330	Indeno[1,2,3-cd]pyrene	360 U	370 U	NA	380 UL
330	Isophorone	360 U	370 U	NA	380 UL
330	2-Methylnaphthalene	360 U	370 U	NA	380 UL
330	2-Methylphenol	360 U	370 U	NA	380 UL
330	3 & 4 Methylphenol	360 U	370 U	NA	380 UL
330	Naphthalene	360 U	370 U	NA	380 UL
1700	2-Nitroaniline	1900 U	1900 U	NA	1900 UL
1700	3-Nitroaniline	1900 U	1900 U	NA	1900 UL
1700	4-Nitroaniline	1900 U	1900 U	NA	1900 UL
330	Nitrobenzene	360 U	370 U	NA	380 UL
330	2-Nitrophenol	360 U	370 U	NA	380 UL
1700	4-Nitrophenol	1900 U	1900 U	NA	1900 UL
330	N-Nitrosodi-n-propylamine	360 U	370 U	NA	380 UL
330	N-Nitrosodiphenylamine	360 U	370 U	NA	380 UL
1700	Pentachlorophenol	1900 U	1900 U	NA	1900 UL
330	Phenanthrene	360 U	370 U	NA	380 UL
330	Phenol	360 U	370 U	NA	380 UL
330	Pyrene	360 U	370 U	NA	380 UL
330	1,2,4-Trichlorobenzene	360 U	370 U	NA	380 UL
330	2,4,6-Trichlorophenol	360 U	370 U	NA	380 UL
330	2,4,5-Trichlorophenol	360 U	370 U	NA	380 UL

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Semivolatile Organic Compounds**		
330	Acenaphthene	430 U	410 U
330	Acenaphthylene	430 U	410 U
330	Anthracene	430 U	410 U
330	Benzo[a]anthracene	430 U	410 U
330	Benzo[a]pyrene	430 U	410 U
330	Benzo[b]fluoranthene	430 U	410 U
330	Benzo[g,h,i]perylene	430 U	410 U
330	Benzo[k]fluoranthene	430 U	410 U
330	Bis(2-chloroethoxy)methan	430 U	410 U
330	Bis(2-chloroethyl)ether	430 U	410 U
330	bis(chloroisopropyl) ether	430 U	410 U
330	Bis(2-ethylhexyl) phthalate	430 U	410 U
330	4-Bromophenyl phenyl ethe	430 U	410 U
330	Butyl benzyl phthalate	430 U	410 U
330	Carbazole	430 U	410 U
660	4-Chloroaniline	860 U	810 U
330	4-Chloro-3-methylphenol	430 U	410 U
330	2-Chloronaphthalene	430 U	410 U
330	2-Chlorophenol	430 U	410 U
330	4-Chlorophenyl phenyl ethe	430 U	410 U
330	Chrysene	430 U	410 U
330	Dibenz(a,h)anthracene	430 U	410 U
330	Dibenzofuran	430 U	410 U
330	1,3-Dichlorobenzene	430 U	410 U
330	1,4-Dichlorobenzene	430 U	410 U
330	1,2-Dichlorobenzene	430 U	410 U
660	3,3'-Dichlorobenzidine	860 U	810 U
330	2,4-Dichlorophenol	430 U	410 U
330	Diethyl phthalate	430 U	410 U
330	2,4-Dimethylphenol	430 U	410 U
330	Dimethyl phthalate	430 U	410 U
330	Di-n-butyl phthalate	430 U	410 U
1700	4,6-Dinitro-2-methylphenol	2200 U	2100 U
1700	2,4-Dinitrophenol	2200 U	2100 U
330	2,4-Dinitrotoluene	430 U	410 U
330	2,6-Dinitrotoluene	430 U	410 U
330	Di-n-octyl phthalate	430 U	410 U
330	Fluoranthene	430 U	410 U

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Semivolatile Organic Compounds**		
330	Fluorene	430 U	410 U
330	Hexachlorobenzene	430 U	410 U
330	Hexachlorobutadiene	430 U	410 U
330	Hexachlorocyclopentadiene	430 U	410 U
330	Hexachloroethane	430 U	410 U
330	Indeno[1,2,3-cd]pyrene	430 U	410 U
330	Isophorone	430 U	410 U
330	2-Methylnaphthalene	430 U	410 U
330	2-Methylphenol	430 U	410 U
330	3 & 4 Methylphenol	430 U	410 U
330	Naphthalene	430 U	410 U
1700	2-Nitroaniline	2200 U	2100 U
1700	3-Nitroaniline	2200 U	2100 U
1700	4-Nitroaniline	2200 U	2100 U
330	Nitrobenzene	430 U	410 U
330	2-Nitrophenol	430 U	410 U
1700	4-Nitrophenol	2200 U	2100 U
330	N-Nitrosodi-n-propylamine	430 U	410 U
330	N-Nitrosodiphenylamine	430 U	410 U
1700	Pentachlorophenol	2200 U	2100 U
330	Phenanthrene	430 U	410 U
330	Phenol	430 U	410 U
330	Pyrene	430 U	410 U
330	1,2,4-Trichlorobenzene	430 U	410 U
330	2,4,6-Trichlorophenol	430 U	410 U
330	2,4,5-Trichlorophenol	430 U	410 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1060	1020	1060	1020
CRQL	Semivolatile Organic Compounds				
10	Acenaphthene	9.4 U	9.8 U	9.4 U	9.8 U
10	Acenaphthylene	9.4 U	9.8 U	9.4 U	9.8 U
10	Anthracene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[a]anthracene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[a]pyrene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[b]fluoranthene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[g,h,i]perylene	9.4 U	9.8 U	9.4 U	9.8 U
10	Benzo[k]fluoranthene	9.4 U	9.8 U	9.4 U	9.8 U
10	Bis(2-chloroethoxy)methane	9.4 U	9.8 U	9.4 U	9.8 U
10	Bis(2-chloroethyl)ether	9.4 U	9.8 U	9.4 U	9.8 U
10	bis(chloroisopropyl) ether	9.4 U	9.8 U	9.4 U	9.8 U
10	Bis(2-ethylhexyl) phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	4-Bromophenyl phenyl ether	9.4 U	9.8 U	9.4 U	9.8 U
10	Butyl benzyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	Carbazole	9.4 U	9.8 U	9.4 U	9.8 U
20	4-Chloroaniline	19 U	20 U	19 U	20 U
10	4-Chloro-3-methylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Chloronaphthalene	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Chlorophenol	9.4 U	9.8 U	9.4 U	9.8 U
10	4-Chlorophenyl phenyl ether	9.4 U	9.8 U	9.4 U	9.8 U
10	Chrysene	9.4 U	9.8 U	9.4 U	9.8 U
10	Dibenz(a,h)anthracene	9.4 U	9.8 U	9.4 U	9.8 U
10	Dibenzofuran	9.4 U	9.8 U	9.4 U	9.8 U
10	1,3-Dichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	1,4-Dichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	1,2-Dichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
20	3,3'-Dichlorobenzidine	19 U	20 U	19 U	20 U
10	2,4-Dichlorophenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Diethyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	2,4-Dimethylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Dimethyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	Di-n-butyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
50	4,6-Dinitro-2-methylphenol	47 U	49 U	47 U	49 U
50	2,4-Dinitrophenol	47 U	49 U	47 U	49 U
10	2,4-Dinitrotoluene	9.4 U	9.8 U	9.4 U	9.8 U
10	2,6-Dinitrotoluene	9.4 U	9.8 U	9.4 U	9.8 U
10	Di-n-octyl phthalate	9.4 U	9.8 U	9.4 U	9.8 U
10	Fluoranthene	9.4 U	**1.5 J**	9.4 U	9.8 U
10	Fluorene	9.4 U	9.8 U	9.4 U	9.8 U

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1060	1020	1060	1020
CRQL	Semivolatile Organic Compounds				
10	Hexachlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	Hexachlorobutadiene	9.4 U	9.8 U	9.4 U	9.8 U
10	Hexachlorocyclopentadiene	9.4 U	9.8 U	9.4 U	9.8 U
10	Hexachloroethane	9.4 U	9.8 U	9.4 U	9.8 U
10	Indeno[1,2,3-cd]pyrene	9.4 U	9.8 U	9.4 U	9.8 U
10	Isophorone	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Methylnaphthalene	9.4 U	9.8 U	9.4 U	9.8 U
10	2-Methylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	3 & 4 Methylphenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Naphthalene	9.4 U	9.8 U	9.4 U	9.8 U
50	2-Nitroaniline	47 U	49 U	47 U	49 U
50	3-Nitroaniline	47 U	49 U	47 U	49 U
50	4-Nitroaniline	47 U	49 U	47 U	49 U
10	Nitrobenzene	9.4 U	9.8 U	9.4 U	9.8 U
50	2-Nitrophenol	9.4 U	9.8 U	9.4 U	9.8 U
50	4-Nitrophenol	47 U	49 U	47 U	49 U
10	N-Nitrosodi-n-propylamine	9.4 U	9.8 U	9.4 U	9.8 U
10	N-Nitrosodiphenylamine	9.4 U	9.8 U	9.4 U	9.8 U
50	Pentachlorophenol	47 U	49 U	47 U	49 U
10	Phenanthrene	9.4 U	**0.91 J**	9.4 U	9.8 U
10	Phenol	9.4 U	9.8 U	9.4 U	9.8 U
10	Pyrene	9.4 U	**1.2 J**	9.4 U	9.8 U
10	1,2,4-Trichlorobenzene	9.4 U	9.8 U	9.4 U	9.8 U
10	2,4,6-Trichlorophenol	9.4 U	9.8 U	9.4 U	9.8 U
10	2,4,5-Trichlorophenol	9.4 U	9.8 U	9.4 U	9.8 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

Sample CRQL = Non-adjusted CRQL (1000ml ÷ sample volume)

TABLE 3A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1-0-0.5	WFFI-MW1-0.5-2	WFFI-MW1-18-20	WFFI-MW3-4-6
	Sample Date	2/21/2007	2/21/2007	2/21/2007	2/20/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	85.8	84.5	88.0	84.3
CRQL	**Pesticide Compounds**				
1.7	Aldrin	2.0 U	2.0 U	1.9 U	2.0 U
1.7	alpha-BHC	2.0 U	2.0 U	1.9 U	2.0 U
1.7	beta-BHC	2.0 U	2.0 U	1.9 U	2.0 U
1.7	Chlordane (technical)	20 U	20 U	19 U	20 U
3.3	4,4'-DDD	3.8 U	3.9 U	3.7 U	3.9 U
3.3	4,4'-DDE	**2.4 J**	3.9 U	3.7 U	3.9 U
3.3	4,4'-DDT	3.8 U	3.9 U	3.7 U	3.9 U
1.7	delta-BHC	2.0 U	2.0 U	1.9 U	2.0 U
3.3	Dieldrin	3.8 U	3.9 U	3.7 U	3.9 U
1.7	Endosulfan I	2.0 U	2.0 U	1.9 U	2.0 U
3.3	Endosulfan II	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endosulfan sulfate	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endrin	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endrin aldehyde	3.8 U	3.9 U	3.7 U	3.9 U
3.3	Endrin ketone	3.8 U	3.9 U	3.7 U	3.9 U
1.7	gamma-BHC (Lindane)	2.0 U	2.0 U	1.9 U	2.0 U
1.7	Heptachlor	2.0 U	2.0 U	1.9 U	2.0 U
1.7	Heptachlor epoxide	2.0 U	2.0 U	1.9 U	2.0 U
17	Methoxychlor	20 U	20 U	19 U	20 U
33	PCB-1016	38 U	39 U	37 U	39 U
67	PCB-1221	78 U	78 U	75 U	79 U
33	PCB-1232	38 U	39 U	37 U	39 U
33	PCB-1242	38 U	39 U	37 U	39 U
33	PCB-1248	38 U	39 U	37 U	39 U
33	PCB-1254	38 U	39 U	37 U	39 U
33	PCB-1260	38 U	39 U	37 U	39 U
170	Toxaphene	200 U	200 U	190 U	200 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS2-A	WFFI-SS3-A	WFFI-SS4	WFFI-SS8
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	90.5	90.2	NA	87.7
CRQL	**Pesticides Compounds**				
1.7	Aldrin	1.9 U	1.9 U	NA	1.9 U
1.7	alpha-BHC	1.9 U	1.9 U	NA	1.9 U
1.7	beta-BHC	1.9 U	1.9 U	NA	1.9 U
1.7	Chlordane (technical)	19 U	19 U	NA	19 U
3.3	4,4'-DDD	3.6 U	3.6 U	NA	3.7 U
3.3	4,4'-DDE	3.6 U	3.6 U	NA	3.7 U
3.3	4,4'-DDT	3.6 U	3.6 U	NA	3.7 U
1.7	delta-BHC	1.9 U	1.9 U	NA	1.9 U
3.3	Dieldrin	3.6 U	3.6 U	NA	3.7 U
1.7	Endosulfan I	1.9 U	1.9 U	NA	1.9 U
3.3	Endosulfan II	3.6 U	3.6 U	NA	3.7 U
3.3	Endosulfan sulfate	3.6 U	3.6 U	NA	3.7 U
3.3	Endrin	3.6 U	3.6 U	NA	3.7 U
3.3	Endrin aldehyde	3.6 U	3.6 U	NA	3.7 U
3.3	Endrin ketone	3.6 U	3.6 U	NA	3.7 U
1.7	gamma-BHC (Lindane)	1.9 U	1.9 U	NA	1.9 U
1.7	Heptachlor	1.9 U	1.9 U	NA	1.9 U
1.7	Heptachlor epoxide	1.9 U	1.9 U	NA	1.9 U
17	Methoxychlor	19 U	19 U	NA	19 U
33	PCB-1016	36 U	36 U	NA	37 U
67	PCB-1221	74 U	74 U	NA	75 U
33	PCB-1232	36 U	36 U	NA	37 U
33	PCB-1242	36 U	36 U	NA	37 U
33	PCB-1248	36 U	36 U	NA	37 U
33	PCB-1254	36 U	36 U	NA	37 U
33	PCB-1260	36 U	36 U	NA	37 U
170	Toxaphene	190 U	190 U	NA	190 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
NA	Not analyzed
Bold	Reported valaue is above laboratory method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SEDIMENT SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SD1	WFFI-SD2
	Sample Date	2/21/2007	2/21/2007
	Location	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0
	Percent Solids	76.6	81.3
CRQL	**Pesticides/PCBs**		
1.7	Aldrin	2.2 U	2.1 U
1.7	alpha-BHC	2.2 U	2.1 U
1.7	beta-BHC	2.2 U	2.1 U
1.7	Chlordane (technical)	22 U	21 U
3.3	4,4'-DDD	4.3 U	**2.7 J**
3.3	4,4'-DDE	**1.8 J**	**2.6 J**
3.3	4,4'-DDT	**0.77 J**	**1.6 J**
1.7	delta-BHC	2.2 U	2.1 U
3.3	Dieldrin	4.3 U	4.0 U
1.7	Endosulfan I	2.2 U	2.1 U
3.3	Endosulfan II	4.3 U	4.0 U
3.3	Endosulfan sulfate	4.3 U	4.0 U
3.3	Endrin	4.3 U	4.0 U
3.3	Endrin aldehyde	4.3 U	4.0 U
3.3	Endrin ketone	4.3 U	4.0 U
1.7	gamma-BHC (Lindane)	2.2 U	2.1 U
1.7	Heptachlor	2.2 U	2.1 U
1.7	Heptachlor epoxide	2.2 U	2.1 U
17	Methoxychlor	22 U	21 U
33	PCB-1016	43 U	40 U
67	PCB-1221	87 U	81 U
33	PCB-1232	43 U	40 U
33	PCB-1242	43 U	40 U
33	PCB-1248	43 U	40 U
33	PCB-1254	43 U	40 U
33	PCB-1260	43 U	40 U
170	Toxaphene	220 U	210 U

Notes: B - Present in laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/Kg - Microgram per kilogram
Bold - Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SW1	WFFI-WW01	RINSATE 1	RINSATE 2
	Sample Date	2/21/2007	2/21/2007	2/20/2007	2/21/2007
	Location	WWTP#1	WWTP#1	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1040	1020	1020	1060
CRQL	**Pesticides Compounds**				
0.050	Aldrin	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	alpha-BHC	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	beta-BHC	0.048 U	0.049 UJ	0.049 U	0.047 U
0.50	Chlordane (technical)	0.48 U	0.49 UJ	0.49 U	0.47 U
0.10	4,4'-DDD	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	4,4'-DDE	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	4,4'-DDT	0.096 U	0.098 UJ	0.098 U	0.094 U
0.50	delta-BHC	0.048 U	0.049 UJ	0.049 U	0.047 U
0.10	Dieldrin	0.096 U	0.098 UJ	0.098 U	0.094 U
0.050	Endosulfan I	0.048 U	0.049 UJ	0.049 U	0.047 U
0.10	Endosulfan II	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endosulfan sulfate	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endrin	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endrin aldehyde	0.096 U	0.098 UJ	0.098 U	0.094 U
0.10	Endrin ketone	0.096 U	0.098 UJ	0.098 U	0.094 U
0.050	gamma-BHC (Lindane)	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	Heptachlor	0.048 U	0.049 UJ	0.049 U	0.047 U
0.050	Heptachlor epoxide	0.048 U	0.049 UJ	0.049 U	0.047 U
0.50	Methoxychlor	0.48 U	0.49 UJ	0.49 U	0.47 U
1.0	PCB-1016	0.96 U	0.98 UJ	0.98 U	0.94 U
2.0	PCB-1221	1.9 U	2.0 UJ	2.0 U	1.9 U
1.0	PCB-1232	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1242	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1248	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1254	0.96 U	0.98 UJ	0.98 U	0.94 U
1.0	PCB-1260	0.96 U	0.98 UJ	0.98 U	0.94 U
5.0	Toxaphene	4.8 U	4.9 UJ	4.9 U	4.7 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Micrograms per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported concentrations above laboratory detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Volume)

APPENDIX C

Laboratory Reported Results
(Organic)

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW1-0-0.5

Lab Name: STL Savannah | Job No.:680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-3

Sample wt/vol: 6.0 (g) | Lab File ID: 10093.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 14.2 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	370	J
71-43-2	Benzene	4.9	U
75-25-2	Bromoform	4.9	U
74-83-9	Bromomethane	4.9	U
75-15-0	Carbon disulfide	4.9	U
56-23-5	Carbon tetrachloride	4.9	U
108-90-7	Chlorobenzene	4.9	U
124-48-1	Chlorodibromomethane	4.9	U
75-00-3	Chloroethane	4.9	U
67-66-3	Chloroform	4.9	U
74-87-3	Chloromethane	4.9	U
156-59-2	cis-1,2-Dichloroethene	4.9	U
10061-01-5	cis-1,3-Dichloropropene	4.9	U
75-27-4	Dichlorobromomethane	4.9	U
107-06-2	1,2-Dichloroethane	4.9	U
75-34-3	1,1-Dichloroethane	4.9	U
75-35-4	1,1-Dichloroethene	4.9	U
78-87-5	1,2-Dichloropropane	4.9	U
100-41-4	Ethylbenzene	4.9	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.9	U
78-93-3	Methyl Ethyl Ketone	23	J
108-10-1	methyl isobutyl ketone	6.1	J
100-42-5	Styrene	4.9	U
79-34-5	1,1,2,2-Tetrachloroethane	4.9	U
127-18-4	Tetrachloroethene	4.9	U
108-88-3	Toluene	2.7	J
156-60-5	trans-1,2-Dichloroethene	4.9	U
10061-02-6	trans-1,3-Dichloropropene	4.9	U
79-00-5	1,1,2-Trichloroethane	4.9	U
71-55-6	1,1,1-Trichloroethane	4.9	U
79-01-6	Trichloroethene	4.9	U
75-01-4	Vinyl chloride	4.9	U
1330-20-7	Xylenes, Total	9.7	U

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW1-0.5-2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-4

Sample wt/vol: 6.1 (g) | Lab File ID: 10094.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 15.5 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	190	
71-43-2	Benzene	4.8	U
75-25-2	Bromoform	4.8	U
74-83-9	Bromomethane	4.8	U
75-15-0	Carbon disulfide	4.8	U
56-23-5	Carbon tetrachloride	4.8	U
108-90-7	Chlorobenzene	4.8	U
124-48-1	Chlorodibromomethane	4.8	U
75-00-3	Chloroethane	4.8	U
67-66-3	Chloroform	4.8	U
74-87-3	Chloromethane	4.8	U
156-59-2	cis-1,2-Dichloroethene	4.8	U
10061-01-5	cis-1,3-Dichloropropene	4.8	U
75-27-4	Dichlorobromomethane	4.8	U
107-06-2	1,2-Dichloroethane	4.8	U
75-34-3	1,1-Dichloroethane	4.8	U
75-35-4	1,1-Dichloroethene	4.8	U
78-87-5	1,2-Dichloropropane	4.8	U
100-41-4	Ethylbenzene	4.8	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.8	U
78-93-3	Methyl Ethyl Ketone	14	J
108-10-1	methyl isobutyl ketone	24	U
100-42-5	Styrene	4.8	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	U
127-18-4	Tetrachloroethene	4.8	U
108-88-3	Toluene	4.8	U
156-60-5	trans-1,2-Dichloroethene	4.8	U
10061-02-6	trans-1,3-Dichloropropene	4.8	U
79-00-5	1,1,2-Trichloroethane	4.8	U
71-55-6	1,1,1-Trichloroethane	4.8	U
79-01-6	Trichloroethene	4.8	U
75-01-4	Vinyl chloride	4.8	U
1330-20-7	Xylenes, Total	9.7	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW1-18-20

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-6

Sample wt/vol: 5.6 (g) | Lab File ID: 10095.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 12.0 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	32	J
71-43-2	Benzene	5.1	U
75-25-2	Bromoform	5.1	U
74-83-9	Bromomethane	5.1	U
75-15-0	Carbon disulfide	5.1	U
56-23-5	Carbon tetrachloride	5.1	U
108-90-7	Chlorobenzene	5.1	U
124-48-1	Chlorodibromomethane	5.1	U
75-00-3	Chloroethane	5.1	U
67-66-3	Chloroform	5.1	U
74-87-3	Chloromethane	5.1	U
156-59-2	cis-1,2-Dichloroethene	5.1	U
10061-01-5	cis-1,3-Dichloropropene	5.1	U
75-27-4	Dichlorobromomethane	5.1	U
107-06-2	1,2-Dichloroethane	5.1	U
75-34-3	1,1-Dichloroethane	5.1	U
75-35-4	1,1-Dichloroethene	5.1	U
78-87-5	1,2-Dichloropropane	5.1	U
100-41-4	Ethylbenzene	5.1	U
591-78-6	2-Hexanone	25	U
75-09-2	Methylene Chloride	5.1	U
78-93-3	Methyl Ethyl Ketone	25	U
108-10-1	methyl isobutyl ketone	8.5	J
100-42-5	Styrene	5.1	U
79-34-5	1,1,2,2-Tetrachloroethane	5.1	U
127-18-4	Tetrachloroethene	5.1	U
108-88-3	Toluene	5.1	U
156-60-5	trans-1,2-Dichloroethene	5.1	U
10061-02-6	trans-1,3-Dichloropropene	5.1	U
79-00-5	1,1,2-Trichloroethane	5.1	U
71-55-6	1,1,1-Trichloroethane	5.1	U
79-01-6	Trichloroethene	5.1	U
75-01-4	Vinyl chloride	5.1	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET

Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW3-4-6

Lab Name: STL Savannah | Job No.:680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-2

Sample wt/vol: 6.2 (g) | Lab File ID: 10092.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 15.7 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	170	
71-43-2	Benzene	4.8	U
75-25-2	Bromoform	4.8	U
74-83-9	Bromomethane	4.8	U
75-15-0	Carbon disulfide	4.8	U
56-23-5	Carbon tetrachloride	4.8	U
108-90-7	Chlorobenzene	4.8	U
124-48-1	Chlorodibromomethane	4.8	U
75-00-3	Chloroethane	4.8	U
67-66-3	Chloroform	4.8	U
74-87-3	Chloromethane	4.8	U
156-59-2	cis-1,2-Dichloroethene	4.8	U
10061-01-5	cis-1,3-Dichloropropene	4.8	U
75-27-4	Dichlorobromomethane	4.8	U
107-06-2	1,2-Dichloroethane	4.8	U
75-34-3	1,1-Dichloroethane	4.8	U
75-35-4	1,1-Dichloroethene	4.8	U
78-87-5	1,2-Dichloropropane	4.8	U
100-41-4	Ethylbenzene	4.8	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.8	U
78-93-3	Methyl Ethyl Ketone	46	
108-10-1	methyl isobutyl ketone	24	U
100-42-5	Styrene	4.8	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	U
127-18-4	Tetrachloroethene	4.8	U
108-88-3	Toluene	2.9	J
156-60-5	trans-1,2-Dichloroethene	4.8	U
10061-02-6	trans-1,3-Dichloropropene	4.8	U
79-00-5	1,1,2-Trichloroethane	4.8	U
71-55-6	1,1,1-Trichloroethane	4.8	U
79-01-6	Trichloroethene	4.8	U
75-01-4	Vinyl chloride	4.8	U
1330-20-7	Xylenes, Total	12	

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS4

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-1

Sample wt/vol: 5.3 (g) | Lab File ID: 10091.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 8.7 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
67-64-1	Acetone	80		JJ
71-43-2	Benzene	5.2	U	
75-25-2	Bromoform	5.2	U	
74-83-9	Bromomethane	5.2	U	
75-15-0	Carbon disulfide	5.2	U	
56-23-5	Carbon tetrachloride	5.2	U	
108-90-7	Chlorobenzene	5.2	U	
124-48-1	Chlorodibromomethane	5.2	U	
75-00-3	Chloroethane	5.2	U	
67-66-3	Chloroform	5.2	U	
74-87-3	Chloromethane	5.2	U	
156-59-2	cis-1,2-Dichloroethene	5.2	U	
10061-01-5	cis-1,3-Dichloropropene	5.2	U	
75-27-4	Dichlorobromomethane	5.2	U	
107-06-2	1,2-Dichloroethane	5.2	U	
75-34-3	1,1-Dichloroethane	5.2	U	
75-35-4	1,1-Dichloroethene	5.2	U	J
78-87-5	1,2-Dichloropropane	5.2	U	
100-41-4	Ethylbenzene	5.2	U	
591-78-6	2-Hexanone	26	U	
75-09-2	Methylene Chloride	5.2	U	
78-93-3	Methyl Ethyl Ketone	15	J	
108-10-1	methyl isobutyl ketone	26	U	
100-42-5	Styrene	5.2	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.2	U	
127-18-4	Tetrachloroethene	5.2	U	
108-88-3	Toluene	5.2	U	J
156-60-5	trans-1,2-Dichloroethene	5.2	U	
10061-02-6	trans-1,3-Dichloropropene	5.2	U	
79-00-5	1,1,2-Trichloroethane	5.2	U	
71-55-6	1,1,1-Trichloroethane	5.2	U	
79-01-6	Trichloroethene	5.2	U	J
75-01-4	Vinyl chloride	5.2	U	
1330-20-7	Xylenes, Total	10	U	

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS8

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-14

Sample wt/vol: 5.7 (g) | Lab File ID: 10098.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 12.3 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	140	
71-43-2	Benzene	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Chlorodibromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-27-4	Dichlorobromomethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	25	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	16	J
108-10-1	methyl isobutyl ketone	25	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	5.0	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SD1

Lab Name: STL Savannah | Job No.:680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-7

Sample wt/vol: 6.2 (g) | Lab File ID: 10096.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 23.4 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	45	J
71-43-2	Benzene	5.3	U
75-25-2	Bromoform	5.3	U
74-83-9	Bromomethane	5.3	U
75-15-0	Carbon disulfide	5.3	U
56-23-5	Carbon tetrachloride	5.3	U
108-90-7	Chlorobenzene	5.3	U
124-48-1	Chlorodibromomethane	5.3	U
75-00-3	Chloroethane	5.3	U
67-66-3	Chloroform	5.3	U
74-87-3	Chloromethane	5.3	U
156-59-2	cis-1,2-Dichloroethene	5.3	U
10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-27-4	Dichlorobromomethane	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U
75-35-4	1,1-Dichloroethene	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U
100-41-4	Ethylbenzene	5.3	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.3	U
78-93-3	Methyl Ethyl Ketone	26	U
108-10-1	methyl isobutyl ketone	26	U
100-42-5	Styrene	5.3	U
79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
127-18-4	Tetrachloroethene	5.3	U
108-88-3	Toluene	5.3	U
156-60-5	trans-1,2-Dichloroethene	5.3	U
10061-02-6	trans-1,3-Dichloropropene	5.3	U
79-00-5	1,1,2-Trichloroethane	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U
79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl chloride	5.3	U
1330-20-7	Xylenes, Total	11	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SD2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-8

Sample wt/vol: 5.9 (g) | Lab File ID: 10097.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 18.7 | Date Analyzed: 03/02/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	270	
71-43-2	Benzene	5.2	U
75-25-2	Bromoform	5.2	U
74-83-9	Bromomethane	5.2	U
75-15-0	Carbon disulfide	5.2	U
56-23-5	Carbon tetrachloride	5.2	U
108-90-7	Chlorobenzene	5.2	U
124-48-1	Chlorodibromomethane	5.2	U
75-00-3	Chloroethane	5.2	U
67-66-3	Chloroform	5.2	U
74-87-3	Chloromethane	5.2	U
156-59-2	cis-1,2-Dichloroethene	5.2	U
10061-01-5	cis-1,3-Dichloropropene	5.2	U
75-27-4	Dichlorobromomethane	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U
75-35-4	1,1-Dichloroethene	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U
100-41-4	Ethylbenzene	5.2	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.2	U
78-93-3	Methyl Ethyl Ketone	18	J
108-10-1	methyl isobutyl ketone	26	U
100-42-5	Styrene	5.2	U
79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
127-18-4	Tetrachloroethene	5.2	U
108-88-3	Toluene	5.2	U
156-60-5	trans-1,2-Dichloroethene	5.2	U
10061-02-6	trans-1,3-Dichloropropene	5.2	U
79-00-5	1,1,2-Trichloroethane	5.2	U
71-55-6	1,1,1-Trichloroethane	5.2	U
79-01-6	Trichloroethene	5.2	U
75-01-4	Vinyl chloride	5.2	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SW1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-5

Sample wt/vol: 5 (mL) | Lab File ID: p2461.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	0.53	J
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-WW01

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-9

Sample wt/vol: 5 (mL) | Lab File ID: p2462.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	8.9	J
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	3.8	J
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: RINSATE 1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-16

Sample wt/vol: 5 (mL) | Lab File ID: p2465.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	5.1	
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: RINSATE 2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-12

Sample wt/vol: 5 (mL) | Lab File ID: p2463.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	7.3	J
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	5.0	
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: TB-3

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-15

Sample wt/vol: 5 (mL) | Lab File ID: p2464.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Analyzed: 03/01/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	0.45	J
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1-0-0.5

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-3

Sample wt/vol: 30.15 (g) | Lab File ID: t1454.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 14.2 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	770	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	380	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1-0-0.5

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-3

Sample wt/vol: 30.15 (g) | Lab File ID: t1454.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 14.2 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
15831-10-4	3 & 4 Methylphenol	380	U
84-66-2	Diethyl phthalate	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	770	U
56-55-3	Benzo[a]anthracene	380	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
218-01-9	Chrysene	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
86-74-8	Carbazole	380	U
108-60-1	bis(chloroisopropyl) ether	380	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1-0.5-2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-4

Sample wt/vol: 30.02 (g) | Lab File ID: t1455.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 15.5 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	390	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1-0.5-2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-4

Sample wt/vol: 30.02 (g) | Lab File ID: t1455.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 15.5 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
15831-10-4	3 & 4 Methylphenol	390	U
84-66-2	Diethyl phthalate	390	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	780	U
56-55-3	Benzo[a]anthracene	390	U
117-81-7	Bis(2-ethylhexyl) phthalate	390	U
218-01-9	Chrysene	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo[b]fluoranthene	390	U
207-08-9	Benzo[k]fluoranthene	390	U
50-32-8	Benzo[a]pyrene	390	U
193-39-5	Indeno[1,2,3-cd]pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo[g,h,i]perylene	390	U
86-74-8	Carbazole	390	U
108-60-1	bis(chloroisopropyl) ether	390	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1-18-20

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-6

Sample wt/vol: 30.08 (g) | Lab File ID: t1470.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 12.0 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	370	U
111-44-4	Bis(2-chloroethyl)ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	750	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	370	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1-18-20

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-6

Sample wt/vol: 30.08 (g) | Lab File ID: t1470.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 12.0 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
15831-10-4	3 & 4 Methylphenol	370	U
84-66-2	Diethyl phthalate	370	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	750	U
56-55-3	Benzo[a]anthracene	370	U
117-81-7	Bis(2-ethylhexyl) phthalate	370	U
218-01-9	Chrysene	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo[b]fluoranthene	370	U
207-08-9	Benzo[k]fluoranthene	370	U
50-32-8	Benzo[a]pyrene	370	U
193-39-5	Indeno[1,2,3-cd]pyrene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo[g,h,i]perylene	370	U
86-74-8	Carbazole	370	U
108-60-1	bis(chloroisopropyl) ether	370	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW3-4-6

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-2

Sample wt/vol: 30.08 (g) | Lab File ID: t1453.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 15.7 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	390	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW3-4-6

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-2

Sample wt/vol: 30.08 (g) | Lab File ID: t1453.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 15.7 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
15831-10-4	3 & 4 Methylphenol	390	U
84-66-2	Diethyl phthalate	390	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	780	U
56-55-3	Benzo[a]anthracene	390	U
117-81-7	Bis(2-ethylhexyl) phthalate	390	U
218-01-9	Chrysene	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo[b]fluoranthene	390	U
207-08-9	Benzo[k]fluoranthene	390	U
50-32-8	Benzo[a]pyrene	390	U
193-39-5	Indeno[1,2,3-cd]pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo[g,h,i]perylene	390	U
86-74-8	Carbazole	390	U
108-60-1	bis(chloroisopropyl) ether	390	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS2-A

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-10

Sample wt/vol: 30.09 (g) | Lab File ID: t1459.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 9.5 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	360	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS2-A

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-10

Sample wt/vol: 30.09 (g) | Lab File ID: t1459.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 9.5 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
15831-10-4	3 & 4 Methylphenol	360	U
84-66-2	Diethyl phthalate	360	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butyl benzyl phthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo[a]anthracene	360	U
117-81-7	Bis(2-ethylhexyl) phthalate	360	U
218-01-9	Chrysene	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo[b]fluoranthene	360	U
207-08-9	Benzo[k]fluoranthene	360	U
50-32-8	Benzo[a]pyrene	360	U
193-39-5	Indeno[1,2,3-cd]pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo[g,h,i]perylene	360	U
86-74-8	Carbazole	360	U
108-60-1	bis(chloroisopropyl) ether	360	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS3-A

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-11

Sample wt/vol: 30.06 (g) | Lab File ID: t1473.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 9.8 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	370	U
111-44-4	Bis(2-chloroethyl)ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	370	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS3-A

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-11

Sample wt/vol: 30.06 (g) | Lab File ID: t1473.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 9.8 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
15831-10-4	3 & 4 Methylphenol	370	U
84-66-2	Diethyl phthalate	370	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo[a]anthracene	370	U
117-81-7	Bis(2-ethylhexyl) phthalate	370	U
218-01-9	Chrysene	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo[b]fluoranthene	370	U
207-08-9	Benzo[k]fluoranthene	370	U
50-32-8	Benzo[a]pyrene	370	U
193-39-5	Indeno[1,2,3-cd]pyrene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo[g,h,i]perylene	370	U
86-74-8	Carbazole	370	U
108-60-1	bis(chloroisopropyl) ether	370	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS8

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-14

Sample wt/vol: 30.05 (g) | Lab File ID: t1462.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 12.3 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	750	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	380	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS8

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-14

Sample wt/vol: 30.05 (g) | Lab File ID: t1462.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 12.3 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
15831-10-4	3 & 4 Methylphenol	380	U
84-66-2	Diethyl phthalate	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	750	U
56-55-3	Benzo[a]anthracene	380	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
218-01-9	Chrysene	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
86-74-8	Carbazole	380	U
108-60-1	bis(chloroisopropyl) ether	380	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SD1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-7

Sample wt/vol: 30.02 (g) | Lab File ID: t1457.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 23.4 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	430	U
111-44-4	Bis(2-chloroethyl)ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
621-64-7	N-Nitrosodi-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	Bis(2-chloroethoxy)methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	860	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl phthalate	430	U
208-96-8	Acenaphthylene	430	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	430	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	430	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SD1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-7

Sample wt/vol: 30.02 (g) | Lab File ID: t1457.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 23.4 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
15831-10-4	3 & 4 Methylphenol	430	U
84-66-2	Diethyl phthalate	430	U
7005-72-3	4-Chlorophenyl phenyl ether	430	U
86-73-7	Fluorene	430	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine	430	U
101-55-3	4-Bromophenyl phenyl ether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	430	U
120-12-7	Anthracene	430	U
84-74-2	Di-n-butyl phthalate	430	U
206-44-0	Fluoranthene	430	U
129-00-0	Pyrene	430	U
85-68-7	Butyl benzyl phthalate	430	U
91-94-1	3,3'-Dichlorobenzidine	860	U
56-55-3	Benzo[a]anthracene	430	U
117-81-7	Bis(2-ethylhexyl) phthalate	430	U
218-01-9	Chrysene	430	U
117-84-0	Di-n-octyl phthalate	430	U
205-99-2	Benzo[b]fluoranthene	430	U
207-08-9	Benzo[k]fluoranthene	430	U
50-32-8	Benzo[a]pyrene	430	U
193-39-5	Indeno[1,2,3-cd]pyrene	430	U
53-70-3	Dibenz(a,h)anthracene	430	U
191-24-2	Benzo[g,h,i]perylene	430	U
86-74-8	Carbazole	430	U
108-60-1	bis(chloroisopropyl) ether	430	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SD2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-8

Sample wt/vol: 30.06 (g) | Lab File ID: t1458.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 18.7 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	410 ~~400~~	U
111-44-4	Bis(2-chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
621-64-7	N-Nitrosodi-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	Bis(2-chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	810	U
87-68-3	Hexachlorobutadiene	410 400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl phthalate	410 400	U
208-96-8	Acenaphthylene	410 400	U
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	410 400	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	410 400	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SD2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-8

Sample wt/vol: 30.06 (g) | Lab File ID: t1458.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: 18.7 | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1.0 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
15831-10-4	3 & 4 Methylphenol	400	U
84-66-2	Diethyl phthalate	400	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-butyl phthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butyl benzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	810	U
56-55-3	Benzo[a]anthracene	400	U
117-81-7	Bis(2-ethylhexyl) phthalate	400	U
218-01-9	Chrysene	400	U
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo[b]fluoranthene	400	U
207-08-9	Benzo[k]fluoranthene	400	U
50-32-8	Benzo[a]pyrene	400	U
193-39-5	Indeno[1,2,3-cd]pyrene	400	U
53-70-3	Dibenz(a,h)anthracene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U
86-74-8	Carbazole	400	U
108-60-1	bis(chloroisopropyl) ether	400	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SW1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-5

Sample wt/vol: 1060 (mL) | Lab File ID: g8104.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.4	U
111-44-4	Bis(2-chloroethyl)ether	9.4	U
95-57-8	2-Chlorophenol	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
95-48-7	2-Methylphenol	9.4	U
621-64-7	N-Nitrosodi-n-propylamine	9.4	U
67-72-1	Hexachloroethane	9.4	U
98-95-3	Nitrobenzene	9.4	U
78-59-1	Isophorone	9.4	U
88-75-5	2-Nitrophenol	9.4	U
105-67-9	2,4-Dimethylphenol	9.4	U
111-91-1	Bis(2-chloroethoxy)methane	9.4	U
120-83-2	2,4-Dichlorophenol	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
91-20-3	Naphthalene	9.4	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.4	U
59-50-7	4-Chloro-3-methylphenol	9.4	U
91-57-6	2-Methylnaphthalene	9.4	U
77-47-4	Hexachlorocyclopentadiene	9.4	U
88-06-2	2,4,6-Trichlorophenol	9.4	U
95-95-4	2,4,5-Trichlorophenol	9.4	U
91-58-7	2-Chloronaphthalene	9.4	U
88-74-4	2-Nitroaniline	47	U
131-11-3	Dimethyl phthalate	9.4	U
208-96-8	Acenaphthylene	9.4	U
99-09-2	3-Nitroaniline	47	U
83-32-9	Acenaphthene	9.4	U
51-28-5	2,4-Dinitrophenol	47	U
100-02-7	4-Nitrophenol	47	U
132-64-9	Dibenzofuran	9.4	U

ORGANIC ANALYSIS DATA SHEET

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SW1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-5

Sample wt/vol: 1060 (mL) | Lab File ID: g8104.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.4	U
606-20-2	2,6-Dinitrotoluene	9.4	U
15831-10-4	3 & 4 Methylphenol	9.4	U
84-66-2	Diethyl phthalate	9.4	U
7005-72-3	4-Chlorophenyl phenyl ether	9.4	U
86-73-7	Fluorene	9.4	U
100-01-6	4-Nitroaniline	47	U
534-52-1	4,6-Dinitro-2-methylphenol	47	U
86-30-6	N-Nitrosodiphenylamine	9.4	U
101-55-3	4-Bromophenyl phenyl ether	9.4	U
118-74-1	Hexachlorobenzene	9.4	U
87-86-5	Pentachlorophenol	47	U
85-01-8	Phenanthrene	9.4	U
120-12-7	Anthracene	9.4	U
84-74-2	Di-n-butyl phthalate	9.4	U
206-44-0	Fluoranthene	9.4	U
129-00-0	Pyrene	9.4	U
85-68-7	Butyl benzyl phthalate	9.4	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.4	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.4	U
218-01-9	Chrysene	9.4	U
117-84-0	Di-n-octyl phthalate	9.4	U
205-99-2	Benzo[b]fluoranthene	9.4	U
207-08-9	Benzo[k]fluoranthene	9.4	U
50-32-8	Benzo[a]pyrene	9.4	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.4	U
53-70-3	Dibenz(a,h)anthracene	9.4	U
191-24-2	Benzo[g,h,i]perylene	9.4	U
86-74-8	Carbazole	9.4	U
108-60-1	bis(chloroisopropyl) ether	9.4	U

ORGANIC ANALYSIS DATA SHEET

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-WW01

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-9

Sample wt/vol: 1020 (mL) | Lab File ID: g8105.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.8	U
111-44-4	Bis(2-chloroethyl)ether	9.8	U
95-57-8	2-Chlorophenol	9.8	U
541-73-1	1,3-Dichlorobenzene	9.8	U
106-46-7	1,4-Dichlorobenzene	9.8	U
95-50-1	1,2-Dichlorobenzene	9.8	U
95-48-7	2-Methylphenol	9.8	U
621-64-7	N-Nitrosodi-n-propylamine	9.8	U
67-72-1	Hexachloroethane	9.8	U
98-95-3	Nitrobenzene	9.8	U
78-59-1	Isophorone	9.8	U
88-75-5	2-Nitrophenol	9.8	U
105-67-9	2,4-Dimethylphenol	9.8	U
111-91-1	Bis(2-chloroethoxy)methane	9.8	U
120-83-2	2,4-Dichlorophenol	9.8	U
120-82-1	1,2,4-Trichlorobenzene	9.8	U
91-20-3	Naphthalene	9.8	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	9.8	U
59-50-7	4-Chloro-3-methylphenol	9.8	U
91-57-6	2-Methylnaphthalene	9.8	U
77-47-4	Hexachlorocyclopentadiene	9.8	U
88-06-2	2,4,6-Trichlorophenol	9.8	U
95-95-4	2,4,5-Trichlorophenol	9.8	U
91-58-7	2-Chloronaphthalene	9.8	U
88-74-4	2-Nitroaniline	49	U
131-11-3	Dimethyl phthalate	9.8	U
208-96-8	Acenaphthylene	9.8	U
99-09-2	3-Nitroaniline	49	U
83-32-9	Acenaphthene	9.8	U
51-28-5	2,4-Dinitrophenol	49	U
100-02-7	4-Nitrophenol	49	U
132-64-9	Dibenzofuran	9.8	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-WW01

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-9

Sample wt/vol: 1020 (mL) | Lab File ID: g8105.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.8	U
606-20-2	2,6-Dinitrotoluene	9.8	U
15831-10-4	3 & 4 Methylphenol	9.8	U
84-66-2	Diethyl phthalate	9.8	U
7005-72-3	4-Chlorophenyl phenyl ether	9.8	U
86-73-7	Fluorene	9.8	U
100-01-6	4-Nitroaniline	49	U
534-52-1	4,6-Dinitro-2-methylphenol	49	U
86-30-6	N-Nitrosodiphenylamine	9.8	U
101-55-3	4-Bromophenyl phenyl ether	9.8	U
118-74-1	Hexachlorobenzene	9.8	U
87-86-5	Pentachlorophenol	49	U
85-01-8	Phenanthrene	0.91	J
120-12-7	Anthracene	9.8	U
84-74-2	Di-n-butyl phthalate	9.8	U
206-44-0	Fluoranthene	1.5	J
129-00-0	Pyrene	1.2	J
85-68-7	Butyl benzyl phthalate	9.8	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	9.8	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.8	U
218-01-9	Chrysene	9.8	U
117-84-0	Di-n-octyl phthalate	9.8	U
205-99-2	Benzo[b]fluoranthene	9.8	U
207-08-9	Benzo[k]fluoranthene	9.8	U
50-32-8	Benzo[a]pyrene	9.8	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.8	U
53-70-3	Dibenz(a,h)anthracene	9.8	U
191-24-2	Benzo[g,h,i]perylene	9.8	U
86-74-8	Carbazole	9.8	U
108-60-1	bis(chloroisopropyl) ether	9.8	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: RINSATE 1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-16

Sample wt/vol: 1060 (mL) | Lab File ID: g8107.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.4	U
111-44-4	Bis(2-chloroethyl)ether	9.4	U
95-57-8	2-Chlorophenol	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
95-48-7	2-Methylphenol	9.4	U
621-64-7	N-Nitrosodi-n-propylamine	9.4	U
67-72-1	Hexachloroethane	9.4	U
98-95-3	Nitrobenzene	9.4	U
78-59-1	Isophorone	9.4	U
88-75-5	2-Nitrophenol	9.4	U
105-67-9	2,4-Dimethylphenol	9.4	U
111-91-1	Bis(2-chloroethoxy)methane	9.4	U
120-83-2	2,4-Dichlorophenol	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
91-20-3	Naphthalene	9.4	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.4	U
59-50-7	4-Chloro-3-methylphenol	9.4	U
91-57-6	2-Methylnaphthalene	9.4	U
77-47-4	Hexachlorocyclopentadiene	9.4	U
88-06-2	2,4,6-Trichlorophenol	9.4	U
95-95-4	2,4,5-Trichlorophenol	9.4	U
91-58-7	2-Chloronaphthalene	9.4	U
88-74-4	2-Nitroaniline	47	U
131-11-3	Dimethyl phthalate	9.4	U
208-96-8	Acenaphthylene	9.4	U
99-09-2	3-Nitroaniline	47	U
83-32-9	Acenaphthene	9.4	U
51-28-5	2,4-Dinitrophenol	47	U
100-02-7	4-Nitrophenol	47	U
132-64-9	Dibenzofuran	9.4	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: RINSATE 1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-16

Sample wt/vol: 1060 (mL) | Lab File ID: g8107.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.4	U
606-20-2	2,6-Dinitrotoluene	9.4	U
15831-10-4	3 & 4 Methylphenol	9.4	U
84-66-2	Diethyl phthalate	9.4	U
7005-72-3	4-Chlorophenyl phenyl ether	9.4	U
86-73-7	Fluorene	9.4	U
100-01-6	4-Nitroaniline	47	U
534-52-1	4,6-Dinitro-2-methylphenol	47	U
86-30-6	N-Nitrosodiphenylamine	9.4	U
101-55-3	4-Bromophenyl phenyl ether	9.4	U
118-74-1	Hexachlorobenzene	9.4	U
87-86-5	Pentachlorophenol	47	U
85-01-8	Phenanthrene	9.4	U
120-12-7	Anthracene	9.4	U
84-74-2	Di-n-butyl phthalate	9.4	U
206-44-0	Fluoranthene	9.4	U
129-00-0	Pyrene	9.4	U
85-68-7	Butyl benzyl phthalate	9.4	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.4	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.4	U
218-01-9	Chrysene	9.4	U
117-84-0	Di-n-octyl phthalate	9.4	U
205-99-2	Benzo[b]fluoranthene	9.4	U
207-08-9	Benzo[k]fluoranthene	9.4	U
50-32-8	Benzo[a]pyrene	9.4	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.4	U
53-70-3	Dibenz(a,h)anthracene	9.4	U
191-24-2	Benzo[g,h,i]perylene	9.4	U
86-74-8	Carbazole	9.4	U
108-60-1	bis(chloroisopropyl) ether	9.4	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: RINSATE 2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-12

Sample wt/vol: 1020 (mL) | Lab File ID: g8106.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.8	U
111-44-4	Bis(2-chloroethyl)ether	9.8	U
95-57-8	2-Chlorophenol	9.8	U
541-73-1	1,3-Dichlorobenzene	9.8	U
106-46-7	1,4-Dichlorobenzene	9.8	U
95-50-1	1,2-Dichlorobenzene	9.8	U
95-48-7	2-Methylphenol	9.8	U
621-64-7	N-Nitrosodi-n-propylamine	9.8	U
67-72-1	Hexachloroethane	9.8	U
98-95-3	Nitrobenzene	9.8	U
78-59-1	Isophorone	9.8	U
88-75-5	2-Nitrophenol	9.8	U
105-67-9	2,4-Dimethylphenol	9.8	U
111-91-1	Bis(2-chloroethoxy)methane	9.8	U
120-83-2	2,4-Dichlorophenol	9.8	U
120-82-1	1,2,4-Trichlorobenzene	9.8	U
91-20-3	Naphthalene	9.8	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	9.8	U
59-50-7	4-Chloro-3-methylphenol	9.8	U
91-57-6	2-Methylnaphthalene	9.8	U
77-47-4	Hexachlorocyclopentadiene	9.8	U
88-06-2	2,4,6-Trichlorophenol	9.8	U
95-95-4	2,4,5-Trichlorophenol	9.8	U
91-58-7	2-Chloronaphthalene	9.8	U
88-74-4	2-Nitroaniline	49	U
131-11-3	Dimethyl phthalate	9.8	U
208-96-8	Acenaphthylene	9.8	U
99-09-2	3-Nitroaniline	49	U
83-32-9	Acenaphthene	9.8	U
51-28-5	2,4-Dinitrophenol	49	U
100-02-7	4-Nitrophenol	49	U
132-64-9	Dibenzofuran	9.8	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: RINSATE 2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-12

Sample wt/vol: 1020 (mL) | Lab File ID: g8106.d

Level: (low/med) Low | Date Received: 02/23/2007

% Moisture: | Date Extracted: 02/26/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 02/27/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.8	U
606-20-2	2,6-Dinitrotoluene	9.8	U
15831-10-4	3 & 4 Methylphenol	9.8	U
84-66-2	Diethyl phthalate	9.8	U
7005-72-3	4-Chlorophenyl phenyl ether	9.8	U
86-73-7	Fluorene	9.8	U
100-01-6	4-Nitroaniline	49	U
534-52-1	4,6-Dinitro-2-methylphenol	49	U
86-30-6	N-Nitrosodiphenylamine	9.8	U
101-55-3	4-Bromophenyl phenyl ether	9.8	U
118-74-1	Hexachlorobenzene	9.8	U
87-86-5	Pentachlorophenol	49	U
85-01-8	Phenanthrene	9.8	U
120-12-7	Anthracene	9.8	U
84-74-2	Di-n-butyl phthalate	9.8	U
206-44-0	Fluoranthene	9.8	U
129-00-0	Pyrene	9.8	U
85-68-7	Butyl benzyl phthalate	9.8	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	9.8	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.8	U
218-01-9	Chrysene	9.8	U
117-84-0	Di-n-octyl phthalate	9.8	U
205-99-2	Benzo[b]fluoranthene	9.8	U
207-08-9	Benzo[k]fluoranthene	9.8	U
50-32-8	Benzo[a]pyrene	9.8	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.8	U
53-70-3	Dibenz(a,h)anthracene	9.8	U
191-24-2	Benzo[g,h,i]perylene	9.8	U
86-74-8	Carbazole	9.8	U
108-60-1	bis(chloroisopropyl) ether	9.8	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW1-0-0.5

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-3

Sample wt/vol: 30.02 (g) | Lab File ID: mc05055.d

% Moisture: 14.2 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	2.4	J
50-29-3	4,4'-DDT	3.8	U
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
53494-70-5	Endrin ketone	3.8	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	78	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
8001-35-2	Toxaphene	200	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW1-0.5-2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-4

Sample wt/vol: 30.41 (g) | Lab File ID: mc05056.d

% Moisture: 15.5 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.9	U
72-55-9	4,4'-DDE	3.9	U
50-29-3	4,4'-DDT	3.9	U
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
53494-70-5	Endrin ketone	3.9	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	39	U
11104-28-2	PCB-1221	78	U
11141-16-5	PCB-1232	39	U
53469-21-9	PCB-1242	39	U
12672-29-6	PCB-1248	39	U
11097-69-1	PCB-1254	39	U
11096-82-5	PCB-1260	39	U
8001-35-2	Toxaphene	200	U

ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW1-18-20

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-6

Sample wt/vol: 30.25 (g) | Lab File ID: mc05057.d

% Moisture: 12.0 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.7	U
72-55-9	4,4'-DDE	3.7	U
50-29-3	4,4'-DDT	3.7	U
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.7	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
72-20-8	Endrin	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
53494-70-5	Endrin ketone	3.7	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	37	U
11104-28-2	PCB-1221	75	U
11141-16-5	PCB-1232	37	U
53469-21-9	PCB-1242	37	U
12672-29-6	PCB-1248	37	U
11097-69-1	PCB-1254	37	U
11096-82-5	PCB-1260	37	U
8001-35-2	Toxaphene	190	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW3-4-6

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-2

Sample wt/vol: 30.13 (g) | Lab File ID: mc05053.d

% Moisture: 15.7 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.9	U
72-55-9	4,4'-DDE	3.9	U
50-29-3	4,4'-DDT	3.9	U
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
53494-70-5	Endrin ketone	3.9	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	39	U
11104-28-2	PCB-1221	79	U
11141-16-5	PCB-1232	39	U
53469-21-9	PCB-1242	39	U
12672-29-6	PCB-1248	39	U
11097-69-1	PCB-1254	39	U
11096-82-5	PCB-1260	39	U
8001-35-2	Toxaphene	200	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS2-A

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-10

Sample wt/vol: 30.20 (g) | Lab File ID: mc05060.d

% Moisture: 9.5 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.6	U
72-55-9	4,4'-DDE	3.6	U
50-29-3	4,4'-DDT	3.6	U
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.6	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.6	U
1031-07-8	Endosulfan sulfate	3.6	U
72-20-8	Endrin	3.6	U
7421-93-4	Endrin aldehyde	3.6	U
53494-70-5	Endrin ketone	3.6	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	36	U
11104-28-2	PCB-1221	74	U
11141-16-5	PCB-1232	36	U
53469-21-9	PCB-1242	36	U
12672-29-6	PCB-1248	36	U
11097-69-1	PCB-1254	36	U
11096-82-5	PCB-1260	36	U
8001-35-2	Toxaphene	190	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS3-A

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-11

Sample wt/vol: 30.09 (g) | Lab File ID: mc05061.d

% Moisture: 9.8 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.6	U
72-55-9	4,4'-DDE	3.6	U
50-29-3	4,4'-DDT	3.6	U
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.6	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.6	U
1031-07-8	Endosulfan sulfate	3.6	U
72-20-8	Endrin	3.6	U
7421-93-4	Endrin aldehyde	3.6	U
53494-70-5	Endrin ketone	3.6	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	36	U
11104-28-2	PCB-1221	74	U
11141-16-5	PCB-1232	36	U
53469-21-9	PCB-1242	36	U
12672-29-6	PCB-1248	36	U
11097-69-1	PCB-1254	36	U
11096-82-5	PCB-1260	36	U
8001-35-2	Toxaphene	190	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS8

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-14

Sample wt/vol: 30.43 (g) | Lab File ID: mc05063.d

% Moisture: 12.3 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.7	U
72-55-9	4,4'-DDE	3.7	U
50-29-3	4,4'-DDT	3.7	U
309-00-2	Aldrin	1.9	U
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
57-74-9	Chlordane (technical)	19	U
319-86-8	delta-BHC	1.9	U
60-57-1	Dieldrin	3.7	U
959-98-8	Endosulfan I	1.9	U
33213-65-9	Endosulfan II	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
72-20-8	Endrin	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
53494-70-5	Endrin ketone	3.7	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
72-43-5	Methoxychlor	19	U
12674-11-2	PCB-1016	37	U
11104-28-2	PCB-1221	75	U
11141-16-5	PCB-1232	37	U
53469-21-9	PCB-1242	37	U
12672-29-6	PCB-1248	37	U
11097-69-1	PCB-1254	37	U
11096-82-5	PCB-1260	37	U
8001-35-2	Toxaphene	190	U

ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SD1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-7

Sample wt/vol: 30.16 (g) | Lab File ID: mc05058.d

% Moisture: 23.4 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	4.3	U M
72-55-9	4,4'-DDE	1.8	J
50-29-3	4,4'-DDT	0.77	J
309-00-2	Aldrin	2.2	U
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
57-74-9	Chlordane (technical)	22	U
319-86-8	delta-BHC	2.2	U
60-57-1	Dieldrin	4.3	U
959-98-8	Endosulfan I	2.2	U
33213-65-9	Endosulfan II	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
72-20-8	Endrin	4.3	U
7421-93-4	Endrin aldehyde	4.3	U
53494-70-5	Endrin ketone	4.3	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
72-43-5	Methoxychlor	22	U
12674-11-2	PCB-1016	43	U
11104-28-2	PCB-1221	87	U
11141-16-5	PCB-1232	43	U
53469-21-9	PCB-1242	43	U
12672-29-6	PCB-1248	43	U
11097-69-1	PCB-1254	43	U
11096-82-5	PCB-1260	43	U
8001-35-2	Toxaphene	220	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SD2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid | Lab Sample ID: 680-24532-8

Sample wt/vol: 30.45 (g) | Lab File ID: mc05059.d

% Moisture: 18.7 | Date Received: 02/23/2007

Extraction Method: 3550B | Date Extracted: 02/27/2007

Concentrated Extract Volume: 10.0 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	1.3	JP
72-55-9	4,4'-DDE	2.6	J
50-29-3	4,4'-DDT	1.6	J
309-00-2	Aldrin	2.1	U
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
57-74-9	Chlordane (technical)	21	U
319-86-8	delta-BHC	2.1	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
53494-70-5	Endrin ketone	4.0	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
72-43-5	Methoxychlor	21	U
12674-11-2	PCB-1016	40	U
11104-28-2	PCB-1221	81	U
11141-16-5	PCB-1232	40	U
53469-21-9	PCB-1242	40	U
12672-29-6	PCB-1248	40	U
11097-69-1	PCB-1254	40	U
11096-82-5	PCB-1260	40	U
8001-35-2	Toxaphene	210	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SW1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-5

Sample wt/vol: 1040 (mL) | Lab File ID: mc05040.d

% Moisture: | Date Received: 02/23/2007

Extraction Method: 3520C | Date Extracted: 02/26/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.096	U
72-55-9	4,4'-DDE	0.096	U
50-29-3	4,4'-DDT	0.096	U
309-00-2	Aldrin	0.048	U
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
57-74-9	Chlordane (technical)	0.48	U
319-86-8	delta-BHC	0.048	U
60-57-1	Dieldrin	0.096	U
959-98-8	Endosulfan I	0.048	U
33213-65-9	Endosulfan II	0.096	U
1031-07-8	Endosulfan sulfate	0.096	U
72-20-8	Endrin	0.096	U
7421-93-4	Endrin aldehyde	0.096	U
53494-70-5	Endrin ketone	0.096	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
72-43-5	Methoxychlor	0.48	U
12674-11-2	PCB-1016	0.96	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.96	U
53469-21-9	PCB-1242	0.96	U
12672-29-6	PCB-1248	0.96	U
11097-69-1	PCB-1254	0.96	U
11096-82-5	PCB-1260	0.96	U
8001-35-2	Toxaphene	4.8	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-WW01

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-9

Sample wt/vol: 1020 (mL) | Lab File ID: mc05041.d

% Moisture: | Date Received: 02/23/2007

Extraction Method: 3520C | Date Extracted: 02/26/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.098	U
72-55-9	4,4'-DDE	0.098	U
50-29-3	4,4'-DDT	0.098	U
309-00-2	Aldrin	0.049	U
319-84-6	alpha-BHC	0.049	U
319-85-7	beta-BHC	0.049	U
57-74-9	Chlordane (technical)	0.49	U
319-86-8	delta-BHC	0.049	U
60-57-1	Dieldrin	0.098	U
959-98-8	Endosulfan I	0.049	U
33213-65-9	Endosulfan II	0.098	U
1031-07-8	Endosulfan sulfate	0.098	U
72-20-8	Endrin	0.098	U
7421-93-4	Endrin aldehyde	0.098	U
53494-70-5	Endrin ketone	0.098	U
58-89-9	gamma-BHC (Lindane)	0.049	U
76-44-8	Heptachlor	0.049	U
1024-57-3	Heptachlor epoxide	0.049	U
72-43-5	Methoxychlor	0.49	U
12674-11-2	PCB-1016	0.98	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	0.98	U
53469-21-9	PCB-1242	0.98	U
12672-29-6	PCB-1248	0.98	U
11097-69-1	PCB-1254	0.98	U
11096-82-5	PCB-1260	0.98	U
8001-35-2	Toxaphene	4.9	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: RINSATE 1

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-16

Sample wt/vol: 1020 (mL) | Lab File ID: mc05043.d

% Moisture: | Date Received: 02/23/2007

Extraction Method: 3520C | Date Extracted: 02/26/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.098	U
72-55-9	4,4'-DDE	0.098	U
50-29-3	4,4'-DDT	0.098	U
309-00-2	Aldrin	0.049	U
319-84-6	alpha-BHC	0.049	U
319-85-7	beta-BHC	0.049	U
57-74-9	Chlordane (technical)	0.49	U
319-86-8	delta-BHC	0.049	U
60-57-1	Dieldrin	0.098	U
959-98-8	Endosulfan I	0.049	U
33213-65-9	Endosulfan II	0.098	U
1031-07-8	Endosulfan sulfate	0.098	U
72-20-8	Endrin	0.098	U
7421-93-4	Endrin aldehyde	0.098	U
53494-70-5	Endrin ketone	0.098	U
58-89-9	gamma-BHC (Lindane)	0.049	U
76-44-8	Heptachlor	0.049	U
1024-57-3	Heptachlor epoxide	0.049	U
72-43-5	Methoxychlor	0.49	U
12674-11-2	PCB-1016	0.98	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	0.98	U
53469-21-9	PCB-1242	0.98	U
12672-29-6	PCB-1248	0.98	U
11097-69-1	PCB-1254	0.98	U
11096-82-5	PCB-1260	0.98	U
8001-35-2	Toxaphene	4.9	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: RINSATE 2

Lab Name: STL Savannah | Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water | Lab Sample ID: 680-24532-12

Sample wt/vol: 1060 (mL) | Lab File ID: mc05042.d

% Moisture: | Date Received: 02/23/2007

Extraction Method: 3520C | Date Extracted: 02/26/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.094	U
72-55-9	4,4'-DDE	0.094	U
50-29-3	4,4'-DDT	0.094	U
309-00-2	Aldrin	0.047	U
319-84-6	alpha-BHC	0.047	U
319-85-7	beta-BHC	0.047	U
57-74-9	Chlordane (technical)	0.47	U
319-86-8	delta-BHC	0.047	U
60-57-1	Dieldrin	0.094	U
959-98-8	Endosulfan I	0.047	U
33213-65-9	Endosulfan II	0.094	U
1031-07-8	Endosulfan sulfate	0.094	U
72-20-8	Endrin	0.094	U
7421-93-4	Endrin aldehyde	0.094	U
53494-70-5	Endrin ketone	0.094	U
58-89-9	gamma-BHC (Lindane)	0.047	U
76-44-8	Heptachlor	0.047	U
1024-57-3	Heptachlor epoxide	0.047	U
72-43-5	Methoxychlor	0.47	U
12674-11-2	PCB-1016	0.94	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.94	U
53469-21-9	PCB-1242	0.94	U
12672-29-6	PCB-1248	0.94	U
11097-69-1	PCB-1254	0.94	U
11096-82-5	PCB-1260	0.94	U
8001-35-2	Toxaphene	4.7	U

APPENDIX D

Support Documentation
(Organic)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date(s): 02/15/07 02/15/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1436 1712

LAB FILE ID: RRF1: LQ010 RRF2: LQ011 RRF3: LQ012
RRF4: LQ013 RRF5: LQ014 RRF6: LQ017

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6
DICHLORODIFLUOROMETHANE	1.6071	1.3901	1.5410	1.3434	1.5619	1.5106
CHLOROMETHANE	1.5043	1.8264	1.8904	1.4224	1.4886	1.4794
VINYL CHLORIDE	1.1398	1.0810	1.2221	1.1854	1.1467	1.0778
BROMOMETHANE	0.4033	0.3458	0.3546	0.3466	0.3399	0.4248
CHLOROETHANE	3429	5586	9577	19038	36241	
TRICHLOROFLUOROMETHANE	1.3419	1.0992	1.1901	1.1435	1.2087	1.2789
TRICHLOROTRIFLUOROETHANE(113	0.7503	0.6856	0.7429	0.7077	0.7173	0.7429
1 1-DICHLOROETHENE	0.5574	0.5209	0.5728	0.5054	0.5279	0.5406
ACETONE	1356	2463	5226	9728	19140	69726
CARBON DISULFIDE	2.1749	1.9039	2.0345	2.0358	2.1112	2.2224
METHYLENE CHLORIDE	0.6613	0.6213	0.6550	0.6018	0.6275	0.6367
trans-1 2-DICHLOROETHENE	0.6894	0.6133	0.6589	0.6188	0.6061	0.6605
METHYL T-BUTYL ETHER	1.6582	1.6190	1.6631	1.5248	1.5459	1.6434
1 1-DICHLOROETHANE	1.2093	1.0904	1.1820	1.1115	1.1664	1.1786
VINYL ACETATE	1.7402	1.4712	1.5753	1.4362	1.4768	1.6310
cis-1 2-DICHLOROETHENE	0.6650	0.5537	0.6225	0.5654	0.5992	0.6526
2 2-DICHLOROPROPANE	0.9645	0.8416	0.9250	0.8034	0.8749	0.9554
2-BUTANONE	0.4441	0.4067	0.3625	0.3416	0.3339	0.3171
BROMOCHLOROMETHANE	5464	18352	45775	85344	188175	
CHLOROFORM	1.7969	1.6077	1.7039	1.6091	1.6783	1.7186
1 1 1-TRICHLOROETHANE	0.5559	0.4846	0.5324	0.5031	0.5376	0.5331
1 1-DICHLOROPROPENE	0.6027	0.5614	0.6172	0.5581	0.5908	0.5405
CARBON TETRACHLORIDE	0.3476	0.3265	0.3842	0.3598	0.3945	0.3828
BENZENE	1.7853	1.5774	1.6972	1.5256	1.5126	1.5456
1 2-DICHLOROETHANE	0.5471	0.4910	0.5349	0.4954	0.5095	0.5122
TRICHLOROETHENE	0.3167	0.2980	0.3367	0.3080	0.3314	0.3191
1 2-DICHLOROPROPANE	0.4710	0.4244	0.4453	0.4240	0.4370	0.4234
DIBROMOMETHANE	0.2439	0.2319	0.2459	0.2237	0.2404	0.2373
BROMODICHLOROMETHANE	0.4616	0.4564	0.4908	0.4450	0.4732	0.4903
2-CHLOROETHYL VINYL ETHER	0.0286	0.0322	0.0368	0.0320	0.0343	0.0336
cis-1,3-DICHLOROPROPENE	0.5969	0.5794	0.5852	0.5836	0.6019	0.5976
4-METHYL-2-PENTANONE (MIBK)	0.5284	0.5317	0.5237	0.4712	0.5178	0.5073
TOLUENE	0.9709	0.8657	0.9360	0.8629	0.9145	0.8879
trans-1,3-DICHLOROPROPENE	0.5106	0.4662	0.5150	0.4822	0.4943	0.5144
1 1 2-TRICHLOROETHANE	0.2775	0.2782	0.2868	0.2628	0.2776	0.2691
TETRACHLOROETHENE	0.4738	0.4431	0.4670	0.4433	0.4740	0.4493
1 3-DICHLOROPROPANE	0.5727	0.5535	0.5794	0.5132	0.5338	0.5541
2-HEXANONE	0.7841	0.8211	0.7793	0.6853	0.7346	0.6683
DIBROMOCHLOROMETHANE	0.5291	0.5108	0.5346	0.5051	0.5431	0.5618
1 2-DIBROMOETHANE	0.3183	0.3036	0.3259	0.2903	0.3028	0.3067
CHLOROBENZENE	1.8058	1.6344	1.7015	1.6536	1.6747	1.5297

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date(s): 02/15/07 02/15/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1436 1712

LAB FILE ID: RRF1: LQ010 RRF2: LQ011 RRF3: LQ012
RRF4: LQ013 RRF5: LQ014 RRF6: LQ017

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6
1 1 1 2-TETRACHLOROETHANE	0.5242	0.4860	0.5000	0.4912	0.4970	0.5026
ETHYL BENZENE	3.5455	3.0306	3.1356	3.1633	3.2718	3.1120
m,p-XYLENE	1.1573	1.0904	1.1267	1.0517	1.0999	0.9378
o-XYLENE	1.1514	1.0558	1.0599	1.0170	1.0442	0.9493
STYRENE	1.8242	1.8089	1.7593	1.6863	1.7912	1.5929
BROMOFORM	0.2938	0.3213	0.3197	0.3116	0.3342	0.3380
ISOPROPYLBENZENE	3.0068	2.8838	2.6140	2.6799	2.8561	2.5453
BROMOBENZENE	0.6162	0.5831	0.5694	0.5245	0.5713	0.5640
1 1 2 2-TETRACHLOROETHANE	0.7655	0.8823	0.8103	0.7330	0.7391	0.7372
1 2 3-TRICHLOROPROPANE	0.1677	0.1905	0.1701	0.1607	0.1602	0.1560
n-PROPYLBENZENE	0.6674	0.6568	0.6494	0.5847	0.6646	0.6413
2-CHLOROTOLUENE	0.5866	0.5924	0.5815	0.5506	0.5765	0.5215
1 3 5-TRIMETHYLBENZENE	2.2271	2.1943	2.2669	2.0139	2.2808	2.1167
4-CHLOROTOLUENE	0.6029	0.5981	0.5849	0.5265	0.5753	0.5411
tert-BUTYLBENZENE	1.7996	1.6688	1.7023	1.6342	1.5779	1.5880
1 2 4-TRIMETHYLBENZENE	2.2759	2.1453	2.2369	2.1349	2.2025	2.0789
sec-BUTYLBENZENE	3.1873	3.0949	3.2704	3.0020	3.0601	2.9168
1 3-DICHLOROBENZENE	1.0942	1.1463	1.1203	1.0148	0.9810	1.0276
p-ISOPROPYLTOLUENE	2.3304	2.2525	2.1998	1.9909	2.0375	2.0181
1 4-DICHLOROBENZENE	1.1566	1.1420	1.0922	0.9660	0.9577	0.9605
1 2-DICHLOROBENZENE	0.9804	0.9985	0.9897	0.8924	0.9154	0.9169
n-BUTYLBENZENE	2.7365	2.7230	2.7099	2.4788	2.5525	2.5435
1 2-DIBROMO-3-CHLOROPROPANE	0.0827	0.0993	0.1020	0.0903	0.0971	0.0947
1 2 4-TRICHLOROBENZENE	0.7432	0.7916	0.6981	0.6168	0.6507	0.6435
HEXACHLOROBUTADIENE	0.3505	0.3709	0.3655	0.3056	0.3262	0.3200
NAPHTHALENE	19000	36265	81262	131951	263502	499657
1 2 3-TRICHLOROBENZENE	0.6451	0.7270	0.6394	0.5611	0.5977	0.5793
1,3-DICHLOROPROPENE (total)	0.5537	0.5228	0.5501	0.5329	0.5481	0.5560
XYLENE (total)	1.1553	1.0789	1.1044	1.0402	1.0813	0.9417
1,2-DICHLOROETHENE (total)	0.6772	0.5835	0.6407	0.5921	0.6026	0.6565
METHYL ACETATE	8664	14698	30578	52988	104889	199166
CYCLOHEXANE	0.7964	0.6966	0.7636	0.7114	0.7362	0.7200
METHYL CYCLOHEXANE	0.5872	0.5846	0.6472	0.5988	0.6147	0.5972
BUTADIENE	1.1402	1.0664	1.1166	1.1661	1.0809	0.9931
DIBROMOFLUOROMETHANE	1.0017	0.9085	0.9722	0.9124	0.9344	0.9600
TOLUENE-d8	1.2706	1.2010	1.3126	1.1804	1.2658	1.2092
4-BROMOFLUOROBENZENE	1.0252	0.9245	0.9585	0.8328	0.9169	0.8613

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date(s): 02/15/07 02/15/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1436 1712

COMPOUND	CURVE	COEFFICIENTS A0	COEFFICIENTS A1	%RSD OR R^2
DICHLORODIFLUOROMETHANE	AVRG		1.4924	6.920
CHLOROMETHANE	AVRG		1.6019	12.585
VINYL CHLORIDE	AVRG		1.1422	4.980
BROMOMETHANE	AVRG		0.3692	9.673
CHLOROETHANE	LINR	0.00000000	4.31903105	0.9931983
TRICHLOROFLUOROMETHANE	AVRG		1.2104	7.320
TRICHLOROTRIFLUOROETHANE(113	AVRG		0.7245	3.484
1 1-DICHLOROETHENE	AVRG		0.5375	4.597
ACETONE	LINR	0.00000000	20.7338339	0.9948031
CARBON DISULFIDE	AVRG		2.0804	5.492
METHYLENE CHLORIDE	AVRG		0.6339	3.480
trans-1 2-DICHLOROETHENE	AVRG		0.6411	5.182
METHYL T-BUTYL ETHER	AVRG		1.6091	3.698
1 1-DICHLOROETHANE	AVRG		1.1564	3.948
VINYL ACETATE	AVRG		1.5551	7.485
cis-1 2-DICHLOROETHENE	AVRG		0.6097	7.435
2 2-DICHLOROPROPANE	AVRG		0.8941	7.250
2-BUTANONE	AVRG		0.3677	13.197
BROMOCHLOROMETHANE	LINR	0.00000000	0.86417088	0.9951724
CHLOROFORM	AVRG		1.6857	4.259
1 1 1-TRICHLOROETHANE	AVRG		0.5244	4.933
1 1-DICHLOROPROPENE	AVRG		0.5784	5.120
CARBON TETRACHLORIDE	AVRG		0.3659	7.086
BENZENE	AVRG		1.6073	6.823
1 2-DICHLOROETHANE	AVRG		0.5150	4.273
TRICHLOROETHENE	AVRG		0.3183	4.510
1 2-DICHLOROPROPANE	AVRG		0.4375	4.260
DIBROMOMETHANE	AVRG		0.2372	3.485
BROMODICHLOROMETHANE	AVRG		0.4695	3.962
2-CHLOROETHYL VINYL ETHER	AVRG		0.0329	8.330
cis-1,3-DICHLOROPROPENE	AVRG		0.5908	1.548
4-METHYL-2-PENTANONE (MIBK)	AVRG		0.5133	4.358
TOLUENE	AVRG		0.9063	4.678
trans-1,3-DICHLOROPROPENE	AVRG		0.4971	4.010
1 1 2-TRICHLOROETHANE	AVRG		0.2753	3.025
TETRACHLOROETHENE	AVRG		0.4584	3.236
1 3-DICHLOROPROPANE	AVRG		0.5511	4.453
2-HEXANONE	AVRG		0.7455	8.059
DIBROMOCHLOROMETHANE	AVRG		0.5308	3.943
1 2-DIBROMOETHANE	AVRG		0.3079	4.077
CHLOROBENZENE	AVRG		1.6666	5.408

31% RSD (high end of curve)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date(s): 02/15/07 02/15/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1436 1712

COMPOUND	CURVE	COEFFICIENTS A0	COEFFICIENTS A1	%RSD OR R^2
1 1 1 2-TETRACHLOROETHANE	AVRG		0.5002	2.643
ETHYL BENZENE	AVRG		3.2098	5.675
m,p-XYLENE	AVRG		1.0773	7.145
o-XYLENE	AVRG		1.0463	6.281
STYRENE	AVRG		1.7438	5.082
BROMOFORM	AVRG		0.3198	5.013
ISOPROPYLBENZENE	AVRG		2.7643	6.455
BROMOBENZENE	AVRG		0.5714	5.194
1 1 2 2-TETRACHLOROETHANE	AVRG		0.7779	7.555
1 2 3-TRICHLOROPROPANE	AVRG		0.1675	7.407
n-PROPYLBENZENE	AVRG		0.6440	4.758
2-CHLOROTOLUENE	AVRG		0.5682	4.760
1 3 5-TRIMETHYLBENZENE	AVRG		2.1833	4.655
4-CHLOROTOLUENE	AVRG		0.5715	5.443
tert-BUTYLBENZENE	AVRG		1.6618	4.956
1 2 4-TRIMETHYLBENZENE	AVRG		2.1791	3.334
sec-BUTYLBENZENE	AVRG		3.0886	4.112
1 3-DICHLOROBENZENE	AVRG		1.0640	6.160
p-ISOPROPYLTOLUENE	AVRG		2.1382	6.615
1 4-DICHLOROBENZENE	AVRG		1.0458	9.080
1 2-DICHLOROBENZENE	AVRG		0.9489	4.818
n-BUTYLBENZENE	AVRG		2.6240	4.261
1 2-DIBROMO-3-CHLOROPROPANE	AVRG		0.0944	7.382
1 2 4-TRICHLOROBENZENE	AVRG		0.6907	9.666
HEXACHLOROBUTADIENE	AVRG		0.3398	7.772
NAPHTHALENE	LINR	0.00000000	0.79893119	0.9982047
1 2 3-TRICHLOROBENZENE	AVRG		0.6249	9.584
1,3-DICHLOROPROPENE (total)	AVRG		0.5439	2.417
XYLENE (total)	AVRG		1.0670	6.756
1,2-DICHLOROETHENE (total)	AVRG		0.6254	6.099
METHYL ACETATE	LINR	0.00000000	1.48241344	0.9986003
CYCLOHEXANE	AVRG		0.7374	5.005
METHYL CYCLOHEXANE	AVRG		0.6050	3.844
BUTADIENE	AVRG		1.0939	5.628
DIBROMOFLUOROMETHANE	AVRG		0.9482	3.839
TOLUENE-d8	AVRG		1.2399	4.095
4-BROMOFLUOROBENZENE	AVRG		0.9199	7.472

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date: 02/15/07 Time: 1757

Lab File ID: LQ019 Init. Calib. Date(s): 02/15/07 02/15/07

Init. Calib. Times: 1436 1712

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DICHLORODIFLUOROMETHANE	1.49236		1.39948	0.01	-6.2		AVRG
CHLOROMETHANE	1.60192		1.23063	0.1	-23.2		AVRG
VINYL CHLORIDE	1.14215		0.94055	0.01	-17.7	20.0	AVRG
BROMOMETHANE	0.36917		0.39420	0.01	6.8		AVRG
CHLOROETHANE	50.0000	79.0316	0.36597	0.01	58.1		LINR
TRICHLOROFLUOROMETHANE	1.21039		1.13700	0.01	-6.1		AVRG
TRICHLOROTRIFLUOROETHANE(113	0.72446		0.70531	0.01	-2.6		AVRG
1 1-DICHLOROETHENE	0.53750		0.52060	0.01	-3.1	20.0	AVRG
ACETONE	100.0000	122.4541	0.05906	0.01	22.5		LINR
CARBON DISULFIDE	2.08045		1.91225	0.01	-8.1		AVRG
METHYLENE CHLORIDE	0.63394		0.61343	0.01	-3.2		AVRG
trans-1 2-DICHLOROETHENE	0.64115		0.62304	0.01	-2.8		AVRG
METHYL T-BUTYL ETHER	1.60907		1.58846	0.01	-1.3		AVRG
1 1-DICHLOROETHANE	1.15638		1.15690	0.1	0.0		AVRG
VINYL ACETATE	1.55512		1.39700	0.01	-10.2		AVRG
cis-1 2-DICHLOROETHENE	0.60973		0.58457	0.01	-4.1		AVRG
2 2-DICHLOROPROPANE	0.89412		0.80655	0.01	-9.8		AVRG
2-BUTANONE	0.36766		0.32248	0.01	-12.3		AVRG
BROMOCHLOROMETHANE	50.0000	25.0901	0.58067	0.01	-49.8		LINR
CHLOROFORM	1.68575		1.62130	0.01	-3.8	20.0	AVRG
1 1 1-TRICHLOROETHANE	0.52444		0.49508	0.01	-5.6		AVRG
1 1-DICHLOROPROPENE	0.57843		0.56042	0.01	-3.1		AVRG
CARBON TETRACHLORIDE	0.36590		0.36926	0.01	0.9		AVRG
BENZENE	1.60730		1.53798	0.01	-4.3		AVRG
1 2-DICHLOROETHANE	0.51503		0.50777	0.01	-1.4		AVRG
TRICHLOROETHENE	0.31830		0.31074	0.01	-2.4		AVRG
1 2-DICHLOROPROPANE	0.43753		0.42637	0.01	-2.6	20.0	AVRG
DIBROMOMETHANE	0.23719		0.23802	0.01	0.4		AVRG
BROMODICHLOROMETHANE	0.46954		0.44949	0.01	-4.3		AVRG
2-CHLOROETHYL VINYL ETHER	0.03291		0.03104	0.01	-5.7		AVRG
cis-1,3-DICHLOROPROPENE	0.59075		0.57245	0.01	-3.1		AVRG
4-METHYL-2-PENTANONE (MIBK)	0.51334		0.50872	0.01	-0.9		AVRG
TOLUENE	0.90632		0.89746	0.01	-1.0	20.0	AVRG
trans-1,3-DICHLOROPROPENE	0.49712		0.47630	0.01	-4.2		AVRG
1 1 2-TRICHLOROETHANE	0.27534		0.26208	0.01	-4.8		AVRG
TETRACHLOROETHENE	0.45842		0.45336	0.01	-1.1		AVRG
1 3-DICHLOROPROPANE	0.55112		0.49356	0.01	-10.4		AVRG
2-HEXANONE	0.74546		0.68519	0.01	-8.1		AVRG

*%Drift is reported for linear and 2nd order curves and %D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date: 02/15/07 Time: 1757

Lab File ID: LQ019 Init. Calib. Date(s): 02/15/07 02/15/07

Init. Calib. Times: 1436 1712

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOCHLOROMETHANE	0.53076		0.52583	0.01	-0.9		AVRG
1 2-DIBROMOETHANE	0.30794		0.29640	0.01	-3.8		AVRG
CHLOROBENZENE	1.66661		1.60485	0.3	-3.7		AVRG
1 1 1 2-TETRACHLOROETHANE	0.50017		0.46262	0.01	-7.5		AVRG
ETHYL BENZENE	3.20981		3.06362	0.01	-4.6	20.0	AVRG
m,p-XYLENE	1.07731		1.05428	0.01	-2.1		AVRG
o-XYLENE	1.04627		0.97603	0.01	-6.7		AVRG
STYRENE	1.74378		1.71028	0.01	-1.9		AVRG
BROMOFORM	0.31978		0.30946	0.1	-3.2		AVRG
ISOPROPYLBENZENE	2.76431		2.60885	0.01	-5.6		AVRG
BROMOBENZENE	0.57141		0.53417	0.01	-6.5		AVRG
1 1 2 2-TETRACHLOROETHANE	0.77790		0.72893	0.3	-6.3		AVRG
1 2 3-TRICHLOROPROPANE	0.16755		0.15863	0.01	-5.3		AVRG
n-PROPYLBENZENE	0.64404		0.59260	0.01	-8.0		AVRG
2-CHLOROTOLUENE	0.56820		0.54295	0.01	-4.4		AVRG
1 3 5-TRIMETHYLBENZENE	2.18327		2.06533	0.01	-5.4		AVRG
4-CHLOROTOLUENE	0.57150		0.54744	0.01	-4.2		AVRG
tert-BUTYLBENZENE	1.66180		1.66408	0.01	0.1		AVRG
1 2 4-TRIMETHYLBENZENE	2.17907		2.11385	0.01	-3.0		AVRG
sec-BUTYLBENZENE	3.08859		2.90027	0.01	-6.1		AVRG
1 3-DICHLOROBENZENE	1.06403		0.99364	0.01	-6.6		AVRG
p-ISOPROPYLTOLUENE	2.13820		2.11918	0.01	-0.9		AVRG
1 4-DICHLOROBENZENE	1.04584		0.98645	0.01	-5.7		AVRG
1 2-DICHLOROBENZENE	0.94886		0.89942	0.01	-5.2		AVRG
n-BUTYLBENZENE	2.62404		2.35427	0.01	-10.3		AVRG
1 2-DIBROMO-3-CHLOROPROPANE	0.09435		0.08390	0.005	-11.1		AVRG
1 2 4-TRICHLOROBENZENE	0.69065		0.61881	0.01	-10.4		AVRG
HEXACHLOROBUTADIENE	0.33978		0.29299	0.01	-13.8		AVRG
NAPHTHALENE	50.0000	47.9605	1.20062	0.01	-4.1		LINR
1 2 3-TRICHLOROBENZENE	0.62493		0.55774	0.01	-10.8		AVRG
1,3-DICHLOROPROPENE (total)	0.54394		0.52437	0.01	-3.6		AVRG
XYLENE (total)	1.06697		1.02820	0.01	-3.6		AVRG
1,2-DICHLOROETHENE (total)	0.62545		0.60381	0.01	-3.5		AVRG
METHYL ACETATE	50.0000	51.4218	0.69376	0.01	2.8		LINR
CYCLOHEXANE	0.73736		0.70149	0.01	-4.9		AVRG
METHYL CYCLOHEXANE	0.60495		0.60716	0.01	0.4		AVRG
BUTADIENE	1.09389		0.95295	0.01	-12.9		AVRG
DIBROMOFLUOROMETHANE	0.94819		0.89671	0.01	-5.4		AVRG
TOLUENE-d8	1.23992		1.21038	0.01	-2.4		AVRG
4-BROMOFLUOROBENZENE	0.91988		0.83678	0.01	-9.0		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date: 03/02/07 Time: 1337

Lab File ID: LQ076 Init. Calib. Date(s): 02/15/07 02/15/07

Init. Calib. Times: 1436 1712

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DICHLORODIFLUOROMETHANE	1.49236		1.21320	0.01	-18.7		AVRG
CHLOROMETHANE	1.60192		1.34124	0.1	-16.3		AVRG
VINYL CHLORIDE	1.14215		1.12195	0.01	-1.8	20.0	AVRG
BROMOMETHANE	0.36917		0.29358	0.01	-20.5		AVRG
CHLOROETHANE	50.0000	53.1130	0.23546	0.01	6.2		2ORD
TRICHLOROFLUOROMETHANE	1.21039		1.17038	0.01	-3.3		AVRG
TRICHLOROTRIFLUOROETHANE(113	0.72446		0.71079	0.01	-1.9		AVRG
1 1-DICHLOROETHENE	0.53750		0.63591	0.01	18.3	20.0	AVRG
ACETONE	100.0000	134.8450	0.06504	0.01	34.8		LINR
CARBON DISULFIDE	2.08045		1.94683	0.01	-6.4		AVRG
METHYLENE CHLORIDE	0.63394		0.59267	0.01	-6.5		AVRG
trans-1 2-DICHLOROETHENE	0.64115		0.65081	0.01	1.5		AVRG
METHYL T-BUTYL ETHER	1.60907		1.56803	0.01	-2.6		AVRG
1 1-DICHLOROETHANE	1.15638		1.12027	0.1	-3.1		AVRG
VINYL ACETATE	1.55512		1.50879	0.01	-3.0		AVRG
cis-1 2-DICHLOROETHENE	0.60973		0.67075	0.01	10.0		AVRG
2 2-DICHLOROPROPANE	0.89412		0.83746	0.01	-6.3		AVRG
2-BUTANONE	0.36766		0.35284	0.01	-4.0		AVRG
BROMOCHLOROMETHANE	50.0000	26.5507	0.61448	0.01	-46.9		LINR
CHLOROFORM	1.68575		1.64721	0.01	-2.3	20.0	AVRG
1 1 1-TRICHLOROETHANE	0.52444		0.43594	0.01	-16.9		AVRG
1 1-DICHLOROPROPENE	0.57843		0.50280	0.01	-13.1		AVRG
CARBON TETRACHLORIDE	0.36590		0.30335	0.01	-17.1		AVRG
BENZENE	1.60730		1.34734	0.01	-16.2		AVRG
1 2-DICHLOROETHANE	0.51503		0.43058	0.01	-16.4		AVRG
TRICHLOROETHENE	0.31830		0.27545	0.01	-13.5		AVRG
1 2-DICHLOROPROPANE	0.43753		0.38544	0.01	-11.9	20.0	AVRG
DIBROMOMETHANE	0.23719		0.20502	0.01	-13.6		AVRG
BROMODICHLOROMETHANE	0.46954		0.40279	0.01	-14.2		AVRG
2-CHLOROETHYL VINYL ETHER	0.03291		0.02804	0.01	-14.8		AVRG
cis-1,3-DICHLOROPROPENE	0.59075		0.48479	0.01	-17.9		AVRG
4-METHYL-2-PENTANONE (MIBK)	0.51334		0.43377	0.01	-15.5		AVRG
TOLUENE	0.90632		0.76716	0.01	-15.4	20.0	AVRG
trans-1,3-DICHLOROPROPENE	0.49712		0.44946	0.01	-9.6		AVRG
1 1 2-TRICHLOROETHANE	0.27534		0.23467	0.01	-14.8		AVRG
TETRACHLOROETHENE	0.45842		0.45339	0.01	-1.1		AVRG
1 3-DICHLOROPROPANE	0.55112		0.46781	0.01	-15.1		AVRG
2-HEXANONE	0.74546		0.70652	0.01	-5.2		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSL5972 Calibration Date: 03/02/07 Time: 1337

Lab File ID: LQ076 Init. Calib. Date(s): 02/15/07 02/15/07

Init. Calib. Times: 1436 1712

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOCHLOROMETHANE	0.53076		0.54131	0.01	2.0		AVRG
1 2-DIBROMOETHANE	0.30794		0.26745	0.01	-13.2		AVRG
CHLOROBENZENE	1.66661		1.57537	0.3	-5.5		AVRG
1 1 1 2-TETRACHLOROETHANE	0.50017		0.46136	0.01	-7.8		AVRG
ETHYL BENZENE	3.20981		3.05733	0.01	-4.8	20.0	AVRG
m,p-XYLENE	1.07731		1.05324	0.01	-2.2		AVRG
o-XYLENE	1.04627		1.06893	0.01	2.2		AVRG
STYRENE	1.74378		1.90731	0.01	9.4		AVRG
BROMOFORM	0.31978		0.33463	0.1	4.6		AVRG
ISOPROPYLBENZENE	2.76431		2.69777	0.01	-2.4		AVRG
BROMOBENZENE	0.57141		0.58582	0.01	2.5		AVRG
1 1 2 2-TETRACHLOROETHANE	0.77790		0.77262	0.3	-0.7		AVRG
1 2 3-TRICHLOROPROPANE	0.16755		0.15916	0.01	-5.0		AVRG
n-PROPYLBENZENE	0.64404		0.61586	0.01	-4.4		AVRG
2-CHLOROTOLUENE	0.56820		0.54945	0.01	-3.3		AVRG
1 3 5-TRIMETHYLBENZENE	2.18327		1.89499	0.01	-13.2		AVRG
4-CHLOROTOLUENE	0.57150		0.55567	0.01	-2.8		AVRG
tert-BUTYLBENZENE	1.66180		1.54332	0.01	-7.1		AVRG
1 2 4-TRIMETHYLBENZENE	2.17907		1.88336	0.01	-13.6		AVRG
sec-BUTYLBENZENE	3.08859		2.94740	0.01	-4.6		AVRG
1 3-DICHLOROBENZENE	1.06403		1.04669	0.01	-1.6		AVRG
p-ISOPROPYLTOLUENE	2.13820		1.77515	0.01	-17.0		AVRG
1 4-DICHLOROBENZENE	1.04584		1.01865	0.01	-2.6		AVRG
1 2-DICHLOROBENZENE	0.94886		0.91765	0.01	-3.3		AVRG
n-BUTYLBENZENE	2.62404		2.08571	0.01	-20.5		AVRG
1 2-DIBROMO-3-CHLOROPROPANE	0.09435		0.09748	0.005	3.3		AVRG
1 2 4-TRICHLOROBENZENE	0.69065		0.69777	0.01	1.0		AVRG
HEXACHLOROBUTADIENE	0.33978		0.34142	0.01	0.5		AVRG
NAPHTHALENE	50.0000	53.1944	1.33164	0.01	6.4		LINR
1 2 3-TRICHLOROBENZENE	0.62493		0.59838	0.01	-4.2		AVRG
1,3-DICHLOROPROPENE (total)	0.54394		0.46713	0.01	-14.1		AVRG
XYLENE (total)	1.06697		1.05847	0.01	-0.8		AVRG
1,2-DICHLOROETHENE (total)	0.62545		0.66078	0.01	5.6		AVRG
METHYL ACETATE	50.0000	62.6011	0.84458	0.01	25.2		LINR
CYCLOHEXANE	0.73736		0.77623	0.01	5.3		AVRG
METHYL CYCLOHEXANE	0.60495		0.58937	0.01	-2.6		AVRG
BUTADIENE	1.09389		1.15232	0.01	5.3		AVRG
DIBROMOFLUOROMETHANE	0.94819		0.91738	0.01	-3.2		AVRG
TOLUENE-d8	1.23992		1.10418	0.01	-10.9		AVRG
4-BROMOFLUOROBENZENE	0.91988		0.86206	0.01	-6.3		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSP5973 Calibration Date(s): 02/23/07 02/23/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1934 2131

LAB FILE ID: RRF1: PQ813 RRF2: PQ814 RRF3: PQ815
RRF4: PQ816 RRF5: PQ817 RRF6: PQ818

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6
1 1 1 2-TETRACHLOROETHANE	0.5141	0.4376	0.5298	0.5200	0.5610	0.5958
ETHYL BENZENE	2.9691	2.4412	2.9911	2.8836	3.1040	3.2460
STYRENE	1.8814	1.5680	1.9898	1.9537	2.1454	2.2668
BROMOFORM	1188	5402	13272	28675	84483	180237
ISOPROPYLBENZENE	2.7976	2.3673	3.0322	2.9475	3.2095	3.4027
m,p-XYLENE	1.1683	0.9544	1.1976	1.1807	1.2522	1.3078
BROMOBENZENE	0.7907	0.6486	0.7784	0.7649	0.8172	0.8601
o-XYLENE	1.0884	0.9077	1.1355	1.1311	1.2194	1.2728
1 1 2 2-TETRACHLOROETHANE	0.7312	0.5941	0.7633	0.7420	0.7890	0.8371
1 2 3-TRICHLOROPROPANE	0.2808	0.1971	0.2356	0.2311	0.2358	0.2540
n-PROPYLBENZENE	0.8276	0.6831	0.8958	0.8891	0.9658	0.9988
2-CHLOROTOLUENE	0.7543	0.5901	0.7600	0.7464	0.7850	0.8357
1 3 5-TRIMETHYLBENZENE	2.4815	2.0618	2.6828	2.6929	2.8938	3.0690
4-CHLOROTOLUENE	0.8153	0.6321	0.7799	0.7643	0.8041	0.8459
tert-BUTYLBENZENE	2.1307	1.7248	2.2998	2.2718	2.4926	2.6482
1 2 4-TRIMETHYLBENZENE	2.3262	2.0087	2.6178	2.5936	2.8396	2.9318
sec-BUTYLBENZENE	3.1907	2.6516	3.5644	3.6097	3.9237	4.1308
1 3-DICHLOROBENZENE	1.7428	1.3691	1.6934	1.6428	1.7130	1.8182
p-ISOPROPYLTOLUENE	11093	49599	127293	258791	731705	1413765
1 4-DICHLOROBENZENE	1.7216	1.3265	1.6627	1.6055	1.7030	1.7852
1 2-DICHLOROBENZENE	1.7129	1.3053	1.6007	1.5411	1.6101	1.6926
n-BUTYLBENZENE	10309	43589	113401	232356	663971	1258231
1 2-DIBROMO-3-CHLOROPROPANE	698	2423	6384	12759	37265	75872
1 2 4-TRICHLOROBENZENE	1.3116	0.8423	1.0900	1.0860	1.1706	1.2150
HEXACHLOROBUTADIENE	0.6809	0.4502	0.5642	0.5545	0.6014	0.6379
NAPHTHALENE	12582	39040	94235	194116	551566	1048880
1 2 3-TRICHLOROBENZENE	1.2068	0.8019	1.0386	1.0031	1.0962	1.1228
1,3-DICHLOROPROPENE (total)	0.4347	0.3582	0.4427	0.4322	0.4672	0.4916
1,2-DICHLOROETHENE (total)	0.9777	0.7332	0.8794	0.8612	0.9032	0.9350
XYLENE (total)	1.1416	0.9388	1.1769	1.1642	1.2413	1.2961
METHYL ACETATE	8150	16890	31647	58345	145780	283379
CYCLOHEXANE	0.5493	0.4268	0.5216	0.5069	0.5365	0.5491
METHYL CYCLOHEXANE	0.5491	0.4562	0.5693	0.5552	0.6139	0.6168
DIBROMOFLUOROMETHANE	0.7758	0.6386	0.7824	0.7243	0.7737	0.8023
TOLUENE-d8	1.2476	0.9885	1.1999	1.1698	1.2266	1.2491
4-BROMOFLUOROBENZENE	1.1095	0.7408	0.9028	0.8583	0.9097	0.9532

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSP5973 Calibration Date(s): 02/23/07 02/23/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1934 2131

RRF7: PQ819

COMPOUND	RRF7	CURVE	COEFFICIENTS A0	COEFFICIENTS A1	%RSD OR R^2
DICHLORODIFLUOROMETHANE	0.9999	AVRG		0.9519	9.391
CHLOROMETHANE	1.2013	AVRG		1.1943	14.144
VINYL CHLORIDE	1.1038	AVRG		1.0211	9.561
BROMOMETHANE	197183	LINR	0.00000000	2.90160944	0.9939535
CHLOROETHANE	317972	LINR	0.00000000	1.79382413	0.9954794
TRICHLOROFLUOROMETHANE	1.2400	AVRG		1.1467	8.598
TRICHLOROTRIFLUOROETHANE(113	0.8043	AVRG		0.7380	10.031
1 1-DICHLOROETHENE	0.7889	AVRG		0.7148	11.945
ACETONE	0.1254	AVRG		0.1243	6.010
CARBON DISULFIDE	2.5340	AVRG		2.3343	11.824
METHYLENE CHLORIDE	0.8759	AVRG		0.8212	8.675
trans-1 2-DICHLOROETHENE	0.9289	AVRG		0.8493	8.497
METHYL T-BUTYL ETHER	3.0501	AVRG		2.7058	10.084
1 1-DICHLOROETHANE	1.5318	AVRG		1.4531	7.033
VINYL ACETATE	2.0184	AVRG		1.8289	9.850
cis-1 2-DICHLOROETHENE	1.0204	AVRG		0.9406	10.746
2 2-DICHLOROPROPANE	1.1393	AVRG		1.0530	8.473
2-BUTANONE	0.5669	AVRG		0.5860	9.365
BROMOCHLOROMETHANE	0.9400	AVRG		0.8858	7.170
CHLOROFORM	1.5354	AVRG		1.4441	6.695
1 1 1-TRICHLOROETHANE	0.4208	AVRG		0.3919	9.490
1 1-DICHLOROPROPENE	0.4405	AVRG		0.4145	8.290
CARBON TETRACHLORIDE	0.3536	AVRG		0.3179	11.407
BENZENE	1.3079	AVRG		1.2767	7.534
1 2-DICHLOROETHANE	0.4076	AVRG		0.4023	6.366
TRICHLOROETHENE	0.3452	AVRG		0.3259	8.114
1 2-DICHLOROPROPANE	0.3593	AVRG		0.3513	6.248
DIBROMOMETHANE	0.2019	AVRG		0.1953	6.176
BROMODICHLOROMETHANE	0.4209	AVRG		0.3790	10.708
2-CHLOROETHYL VINYL ETHER	0.2741	AVRG		0.2419	12.234
cis-1,3-DICHLOROPROPENE	0.5184	AVRG		0.4683	9.881
4-METHYL-2-PENTANONE (MIBK)	0.3816	AVRG		0.3480	10.642
TOLUENE	0.8768	AVRG		0.8131	8.620
trans-1,3-DICHLOROPROPENE	0.4728	AVRG		0.4238	11.339
1 1 2-TRICHLOROETHANE	0.2913	AVRG		0.2740	7.200
TETRACHLOROETHENE	0.5624	AVRG		0.5270	8.052
1 3-DICHLOROPROPANE	0.5731	AVRG		0.5534	8.061
2-HEXANONE	0.4984	AVRG		0.4467	12.925
DIBROMOCHLOROMETHANE	546263	LINR	0.00000000	1.59568321	0.9987136
1 2-DIBROMOETHANE	0.3374	AVRG		0.3134	8.884
CHLOROBENZENE	1.7727	AVRG		1.7216	8.330

-41 %RSD

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 68025432

Instrument ID: MSP5973 Calibration Date(s): 02/23/07 02/23/07

Column: DB-624 ID: 0.18 (mm) Calibration Time(s): 1934 2131

RRF7: PQ819

COMPOUND	RRF7	CURVE	COEFFICIENTS A0	COEFFICIENTS A1	%RSD OR R^2
1 1 1 2-TETRACHLOROETHANE	0.5889	AVRG		0.5353	10.078
ETHYL BENZENE	3.1863	AVRG		2.9745	8.983
STYRENE	2.1945	AVRG		1.9999	11.781
BROMOFORM	392804	LINR	0.00000000	2.22514802	0.9972974
ISOPROPYLBENZENE	3.3619	AVRG		3.0170	11.952
m,p-XYLENE	1.2803	AVRG		1.1916	9.811
BROMOBENZENE	0.8450	AVRG		0.7864	8.893
o-XYLENE	1.2464	AVRG		1.1430	10.827
1 1 2 2-TETRACHLOROETHANE	0.8112	AVRG		0.7526	10.533
1 2 3-TRICHLOROPROPANE	0.2436	AVRG		0.2397	10.538
n-PROPYLBENZENE	0.9904	AVRG		0.8930	12.465
2-CHLOROTOLUENE	0.8208	AVRG		0.7560	10.666
1 3 5-TRIMETHYLBENZENE	3.0463	AVRG		2.7040	13.066
4-CHLOROTOLUENE	0.8326	AVRG		0.7820	9.195
tert-BUTYLBENZENE	2.6303	AVRG		2.3140	13.963
1 2 4-TRIMETHYLBENZENE	2.9995	AVRG		2.6167	13.512
sec-BUTYLBENZENE	4.1080	AVRG		3.5970	14.854
1 3-DICHLOROBENZENE	1.7724	AVRG		1.6788	8.797
p-ISOPROPYLTOLUENE	3093810	LINR	0.00000000	0.28159034	0.9992960
1 4-DICHLOROBENZENE	1.7578	AVRG		1.6518	9.398
1 2-DICHLOROBENZENE	1.6591	AVRG		1.5888	8.689
n-BUTYLBENZENE	2835641	LINR	0.00000000	0.30897975	0.9986813
1 2-DIBROMO-3-CHLOROPROPANE	171176	LINR	0.00000000	5.13503780	0.9973139
1 2 4-TRICHLOROBENZENE	1.3161	AVRG		1.1474	14.263
HEXACHLOROBUTADIENE	0.6473	AVRG		0.5909	13.006
NAPHTHALENE	2428677	LINR	0.00000000	0.36282881	0.9975529
1 2 3-TRICHLOROBENZENE	1.2016	AVRG		1.0673	13.072
1,3-DICHLOROPROPENE (total)	0.4956	AVRG		0.4460	10.443
1,2-DICHLOROETHENE (total)	0.9747	AVRG		0.8949	9.395
XYLENE (total)	1.2690	AVRG		1.1754	10.120
METHYL ACETATE	590933	LINR	0.00000000	0.94759150	0.9995340
CYCLOHEXANE	0.5479	AVRG		0.5197	8.468
METHYL CYCLOHEXANE	0.6268	AVRG		0.5696	10.377
DIBROMOFLUOROMETHANE	0.8302	AVRG		0.7610	8.253
TOLUENE-d8	1.2650	AVRG		1.1924	8.020
4-BROMOFLUOROBENZENE	0.9292	AVRG		0.9148	12.077

Matrix Spike
Volatile Organic Compounds by GC/MS

Lab Name: STL Savannah Job No.:680-24532-1

SDG No.:68024532

Matrix:Solid Level: Low

Matrix Spike-Client Sample ID:WFF1-SS4

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)		MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
Acetone	76.0	75		153	102	28-143
Benzene	38.0	4.9	U	33.3	88	79-118
Bromoform	38.0	4.9	U	39.8	105	62-137
Bromomethane	38.0	4.9	U	31.8	84	26-160
Carbon disulfide	38.0	4.9	U	31.6	83	32-157
Carbon tetrachloride	38.0	4.9	U	33.0	87	62-140
Chlorobenzene	38.0	4.9	U	33.4	88	81-120
Chlorodibromomethane	38.0	4.9	U	37.2	98	67-135
Chloroethane	38.0	4.9	U	57.4	151 F	20-140
Chloroform	38.0	4.9	U	34.6	91	77-125
Chloromethane	38.0	4.9	U	27.2	72	42-140
cis-1,2-Dichloroethene	38.0	4.9	U	38.2	100	69-131
cis-1,3-Dichloropropene	38.0	4.9	U	33.7	89	71-123
Dichlorobromomethane	38.0	4.9	U	34.4	90	74-128
1,2-Dichloroethane	38.0	4.9	U	35.3	93	65-133
1,1-Dichloroethane	38.0	4.9	U	32.8	86	43-157
1,1-Dichloroethene	38.0	4.9	U	38.4	101	52-143
1,2-Dichloropropane	38.0	4.9	U	35.1	92	77-118
Ethylbenzene	38.0	4.9	U	34.5	91	82-118
2-Hexanone	76.0	24	U	86.7	114	30-148
Methylene Chloride	38.0	4.9	U	31.3	82	54-150
Methyl Ethyl Ketone	76.0	14	J	81.8	89	30-149
methyl isobutyl ketone	76.0	24	U	94.5	124	29-150
Styrene	38.0	4.9	U	31.4	83	80-118
1,1,2,2-Tetrachloroethane	38.0	4.9	U	41.5	109	64-130
Tetrachloroethene	38.0	4.9	U	35.8	94	79-132
Toluene	38.0	4.9	U	33.6	88	80-118
trans-1,2-Dichloroethene	38.0	4.9	U	33.6	88	35-154
trans-1,3-Dichloropropene	38.0	4.9	U	34.7	91	75-126
1,1,2-Trichloroethane	38.0	4.9	U	36.8	97	76-120
1,1,1-Trichloroethane	38.0	4.9	U	32.0	84	58-139
Trichloroethene	38.0	4.9	U	32.8	86	80-122
Vinyl chloride	38.0	4.9	U	30.8	81	34-154
Xylenes, Total	114	9.7	U	102	89	74-122

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

3

Matrix Spike Duplicate
Volatile Organic Compounds by GC/MS

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Level: Low

Matrix Spike Duplicate-Client Sample ID: WFF1-SS4

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC
Acetone	99.5	210	135	31	50	28-143
Benzene	49.8	44.5	89	29	50	79-118
Bromoform	49.8	53.9	108	30	50	62-137
Bromomethane	49.8	35.0	70	9	50	26-160
Carbon disulfide	49.8	38.2	77	19	50	32-157
Carbon tetrachloride	49.8	44.5	89	30	50	62-140
Chlorobenzene	49.8	44.3	89	28	50	81-120
Chlorodibromomethane	49.8	51.6	104	32	50	67-135
Chloroethane	49.8	41.5	83	32	50	20-140
Chloroform	49.8	44.6	90	25	50	77-125
Chloromethane	49.8	36.0	72	28	50	42-140
cis-1,2-Dichloroethene	49.8	44.3	89	15	50	69-131
cis-1,3-Dichloropropene	49.8	47.8	96	35	50	71-123
Dichlorobromomethane	49.8	49.3	99	36	50	74-128
1,2-Dichloroethane	49.8	48.7	98	32	50	65-133
1,1-Dichloroethane	49.8	41.4	83	23	50	43-157
1,1-Dichloroethene	49.8	48.2	97	23	50	52-143
1,2-Dichloropropane	49.8	47.7	96	30	50	77-118
Ethylbenzene	49.8	45.7	92	28	50	82-118
2-Hexanone	99.5	141	142	48	50	30-148
Methylene Chloride	49.8	39.4	79	23	50	54-150
Methyl Ethyl Ketone	99.5	127	113	43	50	30-149
methyl isobutyl ketone	99.5	150	150	45	50	29-150
Styrene	49.8	41.8	84	28	50	80-118
1,1,2,2-Tetrachloroethane	49.8	58.8	118	35	50	64-130
Tetrachloroethene	49.8	44.9	90	23	50	79-132
Toluene	49.8	46.0	92	31	50	80-118
trans-1,2-Dichloroethene	49.8	41.8	84	22	50	35-154
trans-1,3-Dichloropropene	49.8	48.1	97	32	50	75-126
1,1,2-Trichloroethane	49.8	51.6	104	33	50	76-120
1,1,1-Trichloroethane	49.8	44.6	90	33	50	58-139
Trichloroethene	49.8	46.3	93	34	50	80-122
Vinyl chloride	49.8	42.5	85	32	50	34-154
Xylenes, Total	149	139	93	31	50	74-122

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: MSG5973 Calibration Date(s): 02/20/07 02/20/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1658 1918

LAB FILE ID: RRF10: GQ419 RRF20: GQ418 RRF50: GQ417
RRF80: GQ415 RRF100: GQ416 RRF200: GQ414A

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF100	RRF200
1,4-Dioxane	0.6418	0.5435	0.5518	0.5446	0.5280	0.5591
Pyridine	1.3791	1.3677	1.4937	1.4826	1.4644	1.5480
N-Nitrosodimethylamine	0.6425	0.5770	0.6124	0.6092	0.6085	0.6341
Aniline	2.0831	2.0058	2.2056	2.1290	1.9868	1.9478
Phenol	1.8117	1.7402	1.9003	1.8791	1.8300	1.9201
Bis(2-chloroethyl)ether	0.9535	0.9027	0.8993	0.9018	0.8560	0.8708
2-Chlorophenol	1.6095	1.6395	1.7071	1.6721	1.6453	1.7469
1,3-Dichlorobenzene	1.7996	1.7321	1.8072	1.8053	1.7656	1.8415
1,4-Dichlorobenzene	1.8291	1.7669	1.8320	1.8155	1.7670	1.8572
Benzyl Alcohol	0.9288	0.9126	1.0413	1.0388	1.0613	1.1120
1,2-Dichlorobenzene	1.7335	1.6859	1.6881	1.6862	1.6576	1.7440
2-Methylphenol	1.2582	1.2674	1.3190	1.2646	1.2423	1.3137
N-Nitroso-di-n-propylamine	0.9960	1.0049	1.0118	0.9629	0.9092	0.9092
3&4-Methylphenol	1.8483	1.8460	1.9631	1.9292	1.9163	2.0249
Hexachloroethane	0.6611	0.6375	0.6538	0.6588	0.6371	0.6724
Nitrobenzene	0.2734	0.2831	0.3193	0.3161	0.3086	0.3217
Isophorone	0.5912	0.5881	0.6414	0.6331	0.6167	0.6352
2-Nitrophenol	34927	65359	272379	391880	884170	1720927
2,4-Dimethylphenol	0.3004	0.3066	0.3313	0.3196	0.3195	0.3439
Bis(2-chloroethoxy)methane	0.3947	0.3955	0.4117	0.4017	0.3901	0.4042
Benzoic acid	29329	68179	397377	581558	1357220	2657563
2,4-Dichlorophenol	0.2651	0.2717	0.3092	0.3046	0.3053	0.3207
1,2,4-Trichlorobenzene	0.3226	0.3211	0.3292	0.3301	0.3234	0.3385
Naphthalene	1.1164	1.1043	1.1397	1.1317	1.1025	1.1313
4-Chloroaniline	0.4287	0.4540	0.4724	0.4710	0.4443	0.4385
Hexachlorobutadiene	0.1648	0.1599	0.1690	0.1667	0.1663	0.1757
4-Chloro-3-methylphenol	0.2780	0.2826	0.3109	0.3123	0.3073	0.3186
2-Methylnaphthalene	0.7624	0.7756	0.7876	0.7893	0.7677	0.7953
1-Methylnaphthalene	0.7843	0.7794	0.7859	0.7833	0.7684	0.7917
Hexachlorocyclopentadiene	46513	83540	302032	436896	945711	1834896
2,4,6-Trichlorophenol	0.2957	0.3072	0.3769	0.3689	0.3823	0.4143
2,4,5-Trichlorophenol	0.3454	0.3550	0.4116	0.3992	0.4003	0.4391
2-Chloronaphthalene	1.1915	1.1486	1.2335	1.1937	1.1795	1.2565
2-Nitroaniline	33501	64575	236397	358821	742105	1359384
Dimethylphthalate	1.3451	1.3369	1.4398	1.4509	1.3923	1.4731
2,6-Dinitrotoluene	30487	61878	239575	371942	778141	1460539
Acenaphthylene	1.8699	1.8344	2.0334	1.9866	1.9471	2.0415
3-Nitroaniline	45524	85069	316373	496800	982495	1776096
Acenaphthene	1.1315	1.0957	1.1754	1.1583	1.1417	1.2326
2,4-Dinitrophenol	6244	14141	71854	125921	316580	661389
4-Nitrophenol	25056	46245	185013	295163	589733	1048321

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: MSG5973 Calibration Date(s): 02/20/07 02/20/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1658 1918

LAB FILE ID: RRF10: GQ419 RRF20: GQ418 RRF50: GQ417
RRF80: GQ415 RRF100: GQ416 RRF200: GQ414A

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF100	RRF200
Dibenzofuran	1.7579	1.6987	1.7654	1.7635	1.7349	1.8465
2,4-Dinitrotoluene	38632	80470	323400	526341	1088895	1998994
Diethylphthalate	1.3627	1.3680	1.4188	1.5024	1.4009	1.4475
Fluorene	1.3975	1.3868	1.4633	1.4977	1.4835	1.5809
4-Chlorophenyl-phenylether	0.6659	0.6503	0.6844	0.6949	0.6899	0.7548
4-Nitroaniline	0.2671	0.2977	0.3513	0.3855	0.3602	0.3797
4,6-Dinitro-2-methylphenol	11965	25129	120083	212020	474071	916455
N-Nitrosodiphenylamine	0.5423	0.5361	0.5570	0.5445	0.5392	0.5735
1,2-Diphenylhydrazine	0.6588	0.6504	0.6797	0.6375	0.6237	0.6387
4-Bromophenyl-phenylether	0.2123	0.2051	0.2242	0.2127	0.2178	0.2366
Hexachlorobenzene	0.2459	0.2387	0.2504	0.2394	0.2392	0.2558
Pentachlorophenol	27866	60755	234974	397361	810275	1500216
Phenanthrene	1.1211	1.1062	1.1527	1.1267	1.0910	1.1426
Anthracene	1.0860	1.1144	1.1640	1.1581	1.1137	1.1590
Carbazole	1.0903	1.0963	1.1511	1.1589	1.1023	1.1429
Di-n-Butylphthalate	1.2123	1.3014	1.4177	1.4639	1.3889	1.2966
Fluoranthene	1.2119	1.2734	1.3199	1.3580	1.2863	1.3267
Benzidine	250944	369401	971996	1421573	2662917	4724749
Pyrene	1.3316	1.2972	1.3591	1.3557	1.2949	1.2152
Butylbenzylphthalate	0.5586	0.5911	0.6638	0.6722	0.6534	0.6634
3,3'-Dichlorobenzidine	0.5007	0.4197	0.4777	0.5016	0.4969	0.5578
Benzo(a)Anthracene	1.2945	1.2728	1.3703	1.3764	1.3561	1.3604
Bis(2-ethylhexyl)phthalate	0.7978	0.8553	0.9689	0.9797	0.9670	0.9500
Chrysene	1.2082	1.1893	1.2431	1.2301	1.1922	1.1711
Di-n-octylphthalate	1.2339	1.3482	1.6154	1.6323	1.5977	1.3089
Benzo(b)fluoranthene	1.4018	1.4125	1.6861	1.5181	1.5232	1.6419
Benzo(k)fluoranthene	1.6028	1.5731	1.5030	1.5703	1.6009	1.6249
Benzo(a)pyrene	1.3203	1.3650	1.4904	1.5021	1.4816	1.5949
Indeno(1,2,3-cd)pyrene	1.3241	1.4012	1.5635	1.5155	1.5598	1.7162
Dibenzo(a,h)anthracene	1.3721	1.3857	1.4975	1.4947	1.5356	1.7364
Benzo(g,h,i)perylene	1.3123	1.3580	1.4819	1.4605	1.4625	1.5867
2-Fluorophenol	1.3344	1.3786	1.5708	1.5564	1.5870	1.7130
Phenol-d5	1.8195	1.8532	2.0239	1.9671	1.9882	2.1171
Nitrobenzene-d5	0.2741	0.2829	0.3277	0.3231	0.3181	0.3385
2-Fluorobiphenyl	1.4344	1.3473	1.4740	1.4103	1.4166	1.5321
2,4,6-Tribromophenol	0.1744	0.1892	0.2163	0.2363	0.2316	0.2498
Terphenyl-d14	1.0325	0.9937	1.0591	1.0764	1.0536	1.0257

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: MSG5973 Calibration Date(s): 02/20/07 02/20/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1658 1918

COMPOUND	CURVE	COEFFICIENTS A0	A1	A2	%RSD OR R^2
1,4-Dioxane	AVRG		0.5615		7.251
Pyridine	AVRG		1.4559		4.794
N-Nitrosodimethylamine	AVRG		0.6139		3.744
Aniline	AVRG		2.0597		4.726
Phenol	AVRG		1.8469		3.604
Bis(2-chloroethyl)ether	AVRG		0.8974		3.736
2-Chlorophenol	AVRG		1.6701		2.993
1,3-Dichlorobenzene	AVRG		1.7919		2.118
1,4-Dichlorobenzene	AVRG		1.8113		2.038
Benzyl Alcohol	AVRG		1.0158		7.719
1,2-Dichlorobenzene	AVRG		1.6992		1.930
2-Methylphenol	AVRG		1.2775		2.454
N-Nitroso-di-n-propylamine	AVRG		0.9657		4.851
3&4-Methylphenol	AVRG		1.9213		3.573
Hexachloroethane	AVRG		0.6535		2.126
Nitrobenzene	AVRG		0.3037		6.730
Isophorone	AVRG		0.6176		3.749
2-Nitrophenol	LINR	0.00000000	5.20738820		0.9894607
2,4-Dimethylphenol	AVRG		0.3202		4.964
Bis(2-chloroethoxy)methane	AVRG		0.3996		1.946
Benzoic acid	2ORDR	0.00000000	4.14623757	-0.5874018	0.9972160
2,4-Dichlorophenol	AVRG		0.2961		7.543
1,2,4-Trichlorobenzene	AVRG		0.3275		1.992
Naphthalene	AVRG		1.1210		1.388
4-Chloroaniline	AVRG		0.4515		3.917
Hexachlorobutadiene	AVRG		0.1671		3.125
4-Chloro-3-methylphenol	AVRG		0.3016		5.621
2-Methylnaphthalene	AVRG		0.7797		1.680
1-Methylnaphthalene	AVRG		0.7822		1.002
Hexachlorocyclopentadiene	LINR	0.00000000	2.70848875		0.9861213
2,4,6-Trichlorophenol	AVRG		0.3576		12.938
2,4,5-Trichlorophenol	AVRG		0.3918		9.036
2-Chloronaphthalene	AVRG		1.2005		3.223
2-Nitroaniline	LINR	0.00000000	3.59110409		0.9948642
Dimethylphthalate	AVRG		1.4064		4.062
2,6-Dinitrotoluene	LINR	0.00000000	3.37122666		0.9903770
Acenaphthylene	AVRG		1.9522		4.371
3-Nitroaniline	LINR	0.00000000	2.72551181		0.9967874
Acenaphthene	AVRG		1.1559		4.001
2,4-Dinitrophenol	2ORDR	0.00000000	11.3353700	-6.0135012	0.9932018
4-Nitrophenol	LINR	0.00000000	4.60481997		0.9963954

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: MSG5973 Calibration Date(s): 02/20/07 02/20/07 ✓

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1658 1918

COMPOUND	CURVE	COEFFICIENTS A0	A1	A2	%RSD OR R^2
Dibenzofuran	AVRG		1.7611		2.772
2,4-Dinitrotoluene	LINR	0.00000000	2.44925314		0.9915157
Diethylphthalate	AVRG		1.4167		3.713
Fluorene	AVRG		1.4683		4.860
4-Chlorophenyl-phenylether	AVRG		0.6900		5.190
4-Nitroaniline	AVRG		0.3403		13.966
4,6-Dinitro-2-methylphenol	2ORDR	0.00000000	13.4046100	-7.5091269	0.9964557
N-Nitrosodiphenylamine	AVRG		0.5488		2.569
1,2-Diphenylhydrazine	AVRG		0.6481		3.017
4-Bromophenyl-phenylether	AVRG		0.2181		5.064
Hexachlorobenzene	AVRG		0.2449		2.894
Pentachlorophenol	LINR	0.00000000	6.02376833		0.9870086 → 48% RSD (omit high-end of curve → 24% RSD)
Phenanthrene	AVRG		1.1234		2.026
Anthracene	AVRG		1.1325		2.847
Carbazole	AVRG		1.1236		2.724
Di-n-Butylphthalate	AVRG		1.3468		6.900
Fluoranthene	AVRG		1.2960		3.938
Benzidine	LINR	0.00000000	1.95895467		0.9938497
Pyrene	AVRG		1.3090		4.092
Butylbenzylphthalate	AVRG		0.6337		7.440
3,3'-Dichlorobenzidine	AVRG		0.4924		9.062
Benzo(a)Anthracene	AVRG		1.3384		3.256
Bis(2-ethylhexyl)phthalate	AVRG		0.9198		8.163
Chrysene	AVRG		1.2057		2.240
Di-n-octylphthalate	AVRG		1.4561		12.252
Benzo(b)fluoranthene	AVRG		1.5306		7.580
Benzo(k)fluoranthene	AVRG		1.5792		2.693
Benzo(a)pyrene	AVRG		1.4591		6.848
Indeno(1,2,3-cd)pyrene	AVRG		1.5134		9.070
Dibenzo(a,h)anthracene	AVRG		1.5037		8.751
Benzo(g,h,i)perylene	AVRG		1.4437		6.726
2-Fluorophenol	AVRG		1.5234		9.285
Phenol-d5	AVRG		1.9615		5.619
Nitrobenzene-d5	AVRG		0.3107		8.373
2-Fluorobiphenyl	AVRG		1.4358		4.360
2,4,6-Tribromophenol	AVRG		0.2163		13.475
Terphenyl-d14	AVRG		1.0402		2.813

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: MST5973 Calibration Date: 03/02/07 Time: 0836

Lab File ID: TQ469 Init. Calib. Date(s): 02/28/07 02/28/07

Init. Calib. Times: 1243 1459

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
1,4-Dioxane	0.65485		0.74931		14.4		AVRG
Pyridine	1.91356		1.29392		-32.4		AVRG
N-Nitrosodimethylamine	0.85753		0.88053		2.7		AVRG
Aniline	2.59839		2.51295		-3.3		AVRG
Phenol	2.25422		2.22296		-1.4	20.0	AVRG
Bis(2-chloroethyl)ether	1.46178		1.46674		0.3		AVRG
2-Chlorophenol	1.67810		1.67277		-0.3		AVRG
1,3-Dichlorobenzene	1.79320		1.84140		2.7		AVRG
1,4-Dichlorobenzene	1.80935		1.84802		2.1	20.0	AVRG
Benzyl Alcohol	1.11785		1.11571		-0.2		AVRG
1,2-Dichlorobenzene	1.72131		1.75589		2.0		AVRG
2-Methylphenol	1.36071		1.32809		-2.4		AVRG
N-Nitroso-di-n-propylamine	1.31510		1.28210	0.05	-2.5		AVRG
3&4-Methylphenol	1.99331		1.95187		-2.1		AVRG
Hexachloroethane	0.71498		0.71112		-0.5		AVRG
Nitrobenzene	0.44251		0.44742		1.1		AVRG
Isophorone	0.81071		0.80942		-0.2		AVRG
2-Nitrophenol	0.21245		0.21211		-0.2	20.0	AVRG
2,4-Dimethylphenol	0.33420		0.33105		-0.9		AVRG
Bis(2-chloroethoxy)methane	0.49126		0.49694		1.2		AVRG
Benzoic acid	0.30914		0.29691		-4.0		AVRG
2,4-Dichlorophenol	0.32708		0.33371		2.0	20.0	AVRG
1,2,4-Trichlorobenzene	0.35673		0.36456		2.2		AVRG
Naphthalene	1.14559		1.16098		1.3		AVRG
4-Chloroaniline	0.48417		0.47572		-1.7		AVRG
Hexachlorobutadiene	0.20395		0.20963		2.8	20.0	AVRG
4-Chloro-3-methylphenol	0.35111		0.35021		-0.3	20.0	AVRG
2-Methylnaphthalene	0.76957		0.77631		0.9		AVRG
1-Methylnaphthalene	0.77197		0.76765		-0.6		AVRG
Hexachlorocyclopentadiene	0.37716		0.32269	0.05	-14.4		AVRG
2,4,6-Trichlorophenol	0.37478		0.38073		1.6	20.0	AVRG
2,4,5-Trichlorophenol	0.40784		0.41608		2.0		AVRG
2-Chloronaphthalene	1.17399		1.18807		1.2		AVRG
2-Nitroaniline	0.40953		0.40481		-1.2		AVRG
Dimethylphthalate	1.39967		1.37340		-1.9		AVRG
2,6-Dinitrotoluene	0.30858		0.30613		-0.8		AVRG
Acenaphthylene	1.85091		1.86488		0.8		AVRG
3-Nitroaniline	0.36458		0.36245		-0.6		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: MST5973 Calibration Date: 03/02/07 Time: 0836

Lab File ID: TQ469 Init. Calib. Date(s): 02/28/07 02/28/07

Init. Calib. Times: 1243 1459

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
Acenaphthene	1.13005		1.15042		1.8	20.0	AVRG
2,4-Dinitrophenol	0.17606		0.14219	0.05	-19.2		AVRG
4-Nitrophenol	0.30299		0.27672	0.05	-8.7		AVRG
Dibenzofuran	1.70266		1.71503		0.7		AVRG
2,4-Dinitrotoluene	0.42466		0.42310		-0.4		AVRG
Diethylphthalate	1.36920		1.34985		-1.4		AVRG
Fluorene	1.35557		1.36909		1.0		AVRG
4-Chlorophenyl-phenylether	0.67376		0.67590		0.3		AVRG
4-Nitroaniline	0.37368		0.34909		-6.6		AVRG
4,6-Dinitro-2-methylphenol	0.13285		0.11762		-11.5		AVRG
N-Nitrosodiphenylamine	0.53137		0.52006		-2.1	20.0	AVRG
1,2-Diphenylhydrazine	0.85632		0.82976		-3.1		AVRG
4-Bromophenyl-phenylether	0.22966		0.22517		-2.0		AVRG
Hexachlorobenzene	0.24179		0.23893		-1.2		AVRG
Pentachlorophenol	0.15714		0.15487		-1.4	20.0	AVRG
Phenanthrene	1.13240		1.11465		-1.6		AVRG
Anthracene	1.15547		1.12679		-2.5		AVRG
Carbazole	1.10414		1.07026		-3.1		AVRG
Di-n-Butylphthalate	1.29585		1.28592		-0.8		AVRG
Fluoranthene	1.30498		1.28537		-1.5	20.0	AVRG
Benzidine	80.0000	66.4056	0.35641		-17.0		LINR
Pyrene	1.30339		1.32368		1.6		AVRG
Butylbenzylphthalate	0.56131		0.57164		1.8		AVRG
3,3'-Dichlorobenzidine	0.44789		0.43099		-3.8		AVRG
Benzo(a)Anthracene	1.27101		1.26505		-0.5		AVRG
Bis(2-ethylhexyl)phthalate	0.78172		0.80062		2.4		AVRG
Chrysene	1.21111		1.22740		1.3		AVRG
Di-n-octylphthalate	80.0000	84.7079	1.38259		5.9	20.0	LINR
Benzo(b)fluoranthene	1.50710		1.68115		11.5		AVRG
Benzo(k)fluoranthene	1.49888		1.54463		3.1		AVRG
Benzo(a)pyrene	1.38387		1.42052		2.6	20.0	AVRG
Indeno(1,2,3-cd)pyrene	1.42050		1.17365		-17.4		AVRG
Dibenzo(a,h)anthracene	1.33912		1.21055		-9.6		AVRG
Benzo(g,h,i)perylene	1.36921		1.21205		-11.5		AVRG
2-Fluorophenol	1.62104		1.66638		2.8		AVRG
Phenol-d5	2.22920		2.22858		0.0		AVRG
Nitrobenzene-d5	0.44212		0.45305		2.5		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: MST5973 Calibration Date: 03/02/07 Time: 0836

Lab File ID: TQ469 Init. Calib. Date(s): 02/28/07 02/28/07

Init. Calib. Times: 1243 1459

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
2-Fluorobiphenyl	1.37203		1.40669		2.5		AVRG
2,4,6-Tribromophenol	0.22772		0.22790		0.1		AVRG
Terphenyl-d14	0.98075		0.99138		1.1		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

3

Matrix Spike

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Level: Low

Matrix Spike-Client Sample ID: WFF1-SS8

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)		MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
Phenol	3790	380	U	873	23 F	34-98
Bis(2-chloroethyl)ether	3790	380	U	759	20 F	30-98
2-Chlorophenol	3790	380	U	866	23 F	36-99
1,3-Dichlorobenzene	3790	380	U	725	19 F	34-90
1,4-Dichlorobenzene	3790	380	U	735	19 F	32-90
1,2-Dichlorobenzene	3790	380	U	774	20 F	35-93
2-Methylphenol	3790	380	U	915	24 F	38-107
N-Nitrosodi-n-propylamine	3790	380	U	826	22 F	24-108
Hexachloroethane	3790	380	U	664	18 F	31-88
Nitrobenzene	3790	380	U	805	21 F	33-106
Isophorone	3790	380	U	897	24 F	37-106
2-Nitrophenol	3790	380	U	812	21 F	38-104
2,4-Dimethylphenol	3790	380	U	976	26 F	40-112
Bis(2-chloroethoxy)methane	3790	380	U	921	24 F	38-106
2,4-Dichlorophenol	3790	380	U	985	26 F	43-108
1,2,4-Trichlorobenzene	3790	380	U	818	22 F	36-98
Naphthalene	3790	380	U	856	23 F	34-97
4-Chloroaniline	3790	750	U	963	25	7-103
Hexachlorobutadiene	3790	380	U	884	23 F	42-105
4-Chloro-3-methylphenol	3790	380	U	1060	28 F	39-113
2-Methylnaphthalene	3790	380	U	912	24 F	39-104
Hexachlorocyclopentadiene	3790	380	U	508	13 F	20-109
2,4,6-Trichlorophenol	3790	380	U	1050	28 F	44-113
2,4,5-Trichlorophenol	3790	380	U	1120	30 F	46-116
2-Chloronaphthalene	3790	380	U	938	25 F	41-110
2-Nitroaniline	3790	1900	U	1080	29 J F	38-124
Dimethyl phthalate	3790	380	U	1090	29 F	43-114
Acenaphthylene	3790	380	U	1030	27 F	41-112
3-Nitroaniline	3790	1900	U	1120	30 J	19-118
Acenaphthene	3790	380	U	998	26 F	36-108
2,4-Dinitrophenol	3790	1900	U	744	20 J	1-131
4-Nitrophenol	3790	1900	U	923	24 J	21-132
Dibenzofuran	3790	380	U	1030	27 F	44-108
2,4-Dinitrotoluene	3790	380	U	1110	29 F	32-128
2,6-Dinitrotoluene	3790	380	U	1060	28 F	38-128
3 & 4 Methylphenol	3790	380	U	918	24 F	37-106
Diethyl phthalate	3790	380	U	1100	29 F	41-118
4-Chlorophenyl phenyl ether	3790	380	U	1050	28 F	42-111
Fluorene	3790	380	U	1100	29 F	37-113
4-Nitroaniline	3790	1900	U	1080	28 J F	32-130

3

Matrix Spike

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.:680-24532-1

SDG No.:68024532

Matrix:Solid Level: Low

Matrix Spike-Client Sample ID:WFF1-SS8

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)		MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
4,6-Dinitro-2-methylphenol	3790	1900	U	989	26 J	11-142
N-Nitrosodiphenylamine	3790	380	U	1180	31	16-113
4-Bromophenyl phenyl ether	3790	380	U	973	26 F	38-106
Hexachlorobenzene	3790	380	U	1120	30 F	46-115
Pentachlorophenol	3790	1900	U	1180	31 J	27-116
Phenanthrene	3790	380	U	1150	30 F	47-114
Anthracene	3790	380	U	1150	30 F	46-115
Di-n-butyl phthalate	3790	380	U	1160	31 F	35-93
Fluoranthene	3790	380	U	1200	32 F	41-124
Pyrene	3790	380	U	1200	32 F	36-128
Butyl benzyl phthalate	3790	380	U	1240	33 F	43-127
3,3'-Dichlorobenzidine	3790	750	U	1180	31	1-118
Benzo[a]anthracene	3790	380	U	1200	32 F	46-116
Bis(2-ethylhexyl) phthalate	3790	380	U	1220	32	25-134
Chrysene	3790	380	U	1230	32 F	46-118
Di-n-octyl phthalate	3790	380	U	1260	33 F	43-129
Benzo[b]fluoranthene	3790	380	U	1070	28 F	35-122
Benzo[k]fluoranthene	3790	380	U	1190	31 F	36-124
Benzo[a]pyrene	3790	380	U	1180	31 F	37-120
Indeno[1,2,3-cd]pyrene	3790	380	U	1190	31 F	36-133
Dibenz(a,h)anthracene	3790	380	U	1130	30 F	41-124
Benzo[g,h,i]perylene	3790	380	U	1130	30 F	41-122
Carbazole	3790	380	U	1190	31 F	47-118
bis(chloroisopropyl) ether	3790	380	U	766	20	16-116

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

Matrix Spike Duplicate
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Level: Low

Matrix Spike Duplicate-Client Sample ID: WFF1-SS8

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC
Phenol	3800	1200	32 F	32	50	34-98
Bis(2-chloroethyl)ether	3800	990	26 F	27	50	30-98
2-Chlorophenol	3800	1190	31 F	32	50	36-99
1,3-Dichlorobenzene	3800	899	24 F	21	50	34-90
1,4-Dichlorobenzene	3800	929	24 F	23	50	32-90
1,2-Dichlorobenzene	3800	985	26 F	24	50	35-93
2-Methylphenol	3800	1290	34 F	34	50	38-107
N-Nitrosodi-n-propylamine	3800	1130	30	31	50	24-108
Hexachloroethane	3800	843	22 F	24	50	31-88
Nitrobenzene	3800	1040	27 F	25	50	33-106
Isophorone	3800	1160	30 F	25	50	37-106
2-Nitrophenol	3800	1080	28 F	29	50	38-104
2,4-Dimethylphenol	3800	1330	35 F	31	50	40-112
Bis(2-chloroethoxy)methane	3800	1200	32 F	26	50	38-106
2,4-Dichlorophenol	3800	1330	35 F	30	50	43-108
1,2,4-Trichlorobenzene	3800	1040	27 F	24	50	36-98
Naphthalene	3800	1090	29 F	24	50	34-97
4-Chloroaniline	3800	1220	32	23	50	7-103
Hexachlorobutadiene	3800	1090	29 F	21	50	42-105
4-Chloro-3-methylphenol	3800	1400	37 F	27	50	39-113
2-Methylnaphthalene	3800	1190	31 F	26	50	39-104
Hexachlorocyclopentadiene	3800	654	17 F	25	50	20-109
2,4,6-Trichlorophenol	3800	1410	37 F	29	50	44-113
2,4,5-Trichlorophenol	3800	1430	38 F	25	50	46-116
2-Chloronaphthalene	3800	1220	32 F	26	50	41-110
2-Nitroaniline	3800	1390	37 J F	25	50	38-124
Dimethyl phthalate	3800	1350	36 F	22	50	43-114
Acenaphthylene	3800	1360	36 F	27	50	41-112
3-Nitroaniline	3800	1390	37 J	21	50	19-118
Acenaphthene	3800	1330	35 F	28	50	36-108
2,4-Dinitrophenol	3800	964	25 J	26	50	1-131
4-Nitrophenol	3800	1150	30 J	22	50	21-132
Dibenzofuran	3800	1360	36 F	28	50	44-108
2,4-Dinitrotoluene	3800	1420	37	25	50	32-128
2,6-Dinitrotoluene	3800	1420	37 F	29	50	38-128
3 & 4 Methylphenol	3800	1300	34 F	34	50	37-106
Diethyl phthalate	3800	1370	36 F	22	50	41-118
4-Chlorophenyl phenyl ether	3800	1370	36 F	26	50	42-111
Fluorene	3800	1420	37	26	50	37-113
4-Nitroaniline	3800	1290	34 J	18	50	32-130

Matrix Spike Duplicate
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Solid Level: Low

Matrix Spike Duplicate-Client Sample ID: WFF1-SS8

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC
4,6-Dinitro-2-methylphenol	3800	1250	33 J	23	50	11-142
N-Nitrosodiphenylamine	3800	1410	37	17	50	16-113
4-Bromophenyl phenyl ether	3800	1220	32 F	22	50	38-106
Hexachlorobenzene	3800	1360	36 F	19	50	46-115
Pentachlorophenol	3800	1400	37 J	18	47 50	27-116 17-109
Phenanthrene	3800	1400	37 F	20	50	47-114
Anthracene	3800	1400	37 F	20	50	46-115
Di-n-butyl phthalate	3800	1380	36	17	50	35-93
Fluoranthene	3800	1450	38 F	19	50	41-124
Pyrene	3800	1420	37	16	36 50	36-128 35-142
Butyl benzyl phthalate	3800	1470	39 F	17	50	43-127
3,3'-Dichlorobenzidine	3800	1370	36	15	50	1-118
Benzo[a]anthracene	3800	1430	38 F	17	50	46-116
Bis(2-ethylhexyl) phthalate	3800	1430	38	16	50	25-134
Chrysene	3800	1470	39 F	18	50	46-118
Di-n-octyl phthalate	3800	1500	39 F	17	50	43-129
Benzo[b]fluoranthene	3800	1320	35	21	50	35-122
Benzo[k]fluoranthene	3800	1360	36	13	50	36-124
Benzo[a]pyrene	3800	1410	37	18	50	37-120
Indeno[1,2,3-cd]pyrene	3800	1520	40	25	50	36-133
Dibenz(a,h)anthracene	3800	1400	37 F	21	50	41-124
Benzo[g,h,i]perylene	3800	1410	37 F	22	50	41-122
Carbazole	3800	1410	37 F	18	50	47-118
bis(chloroisopropyl) ether	3800	996	26	26	50	16-116

Page 3 QA/QC

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD1 Calibration Date: 03/06/07 Time: 0654

Lab File ID: MC05045 Init. Calib. Date(s): 03/01/07 03/02/07

Init. Calib. Times: 1845 0527

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.17610		1.16585		-0.9	15.0	AVRG	
gamma-BHC (Lindane)	1.15657		1.17941		2.0	15.0	AVRG	
beta-BHC	0.46801		0.42387		-9.4	15.0	AVRG	
Heptachlor	1.06803		1.01520		-4.9	15.0	AVRG	
delta-BHC	1.02389		1.06278		3.8	15.0	AVRG	
Aldrin	1.14544		1.14676		0.1	15.0	AVRG	
Heptachlor epoxide	1.21053		1.13854		-5.9	15.0	AVRG	
gamma-Chlordane	1.18817		1.16024		-2.4	15.0	AVRG	
alpha-Chlordane	1.17579		1.16139		-1.2	15.0	AVRG	
Endosulfan I	1.44723		1.29100		-10.8	15.0	AVRG	
4,4'-DDE	0.78690		0.93000		18.2	15.0	AVRG	<-
Dieldrin	0.98439		1.03768		5.4	15.0	AVRG	
Endrin	0.75576		0.70944		-6.1	15.0	AVRG	
4,4'-DDD	0.58340		0.82318		41.1	15.0	AVRG	<-
Endosulfan II	0.99975		0.95024		-5.0	15.0	AVRG	
4,4'-DDT	0.70180		0.47232		-32.7	15.0	AVRG	<-
Endrin aldehyde	0.82600		0.78533		-4.9	15.0	AVRG	
Endosulfan sulfate	0.91024		0.90472		-0.6	15.0	AVRG	
Methoxychlor	0.26370		0.23524		-10.8	15.0	AVRG	
Endrin ketone	1.01723		1.02515		0.8	15.0	AVRG	
Tetrachloro-m-xylene	0.94615		1.10764		17.1	15.0	AVRG	<-
DCB Decachlorobiphenyl	0.95366		1.05171		10.3	15.0	AVRG	

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 8.84
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD1 Calibration Date: 03/06/07 Time: 0654

Init. Calib. Date(s): 03/01/07 03/01/07

Init. Calib. Times: 1845 2022

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	METHOD RT	RT WINDOW FROM	RT WINDOW TO
alpha-BHC	5.370	5.320	5.420
gamma-BHC (Lindane)	5.920	5.870	5.970
beta-BHC	6.093	6.043	6.143
Heptachlor	6.763	6.713	6.813
delta-BHC	6.413	6.363	6.463
Aldrin	7.317	7.267	7.367
Heptachlor epoxide	8.463	8.413	8.513
gamma-Chlordane	8.707	8.657	8.757
alpha-Chlordane	8.967	8.917	9.017
Endosulfan I	9.233	9.183	9.283
4,4'-DDE	9.127	9.077	9.177
Dieldrin	9.683	9.633	9.733
Endrin	10.103	10.053	10.153
4,4'-DDD	10.233	10.183	10.283
Endosulfan II	10.500	10.450	10.550
4,4'-DDT	10.710	10.660	10.760
Endrin aldehyde	11.217	11.167	11.267
Endosulfan sulfate	11.947	11.897	11.997
Methoxychlor	11.547	11.497	11.597
Endrin ketone	12.420	12.370	12.470
Tetrachloro-m-xylene	4.400	4.350	4.450
DCB Decachlorobiphenyl	14.143	14.093	14.193

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD2 ✓ Calibration Date: 03/06/07 Time: 0654

Lab File ID: MC05045 Init. Calib. Date(s): 03/01/07 03/02/07

Init. Calib. Times: 1845 0527

GC Column: RTX CLP II ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.31517		1.52320		15.8	15.0	AVRG	<-
gamma-BHC (Lindane)	1.27064		1.32386		4.2	15.0	AVRG	
beta-BHC	0.44708		0.45876		2.6	15.0	AVRG	
Heptachlor	1.55830		1.43936		-7.6	15.0	AVRG	
delta-BHC	0.77254		0.94916		22.9	15.0	AVRG	<-
Aldrin	1.30753		1.31791		0.8	15.0	AVRG	
Heptachlor epoxide	1.32488		1.23174		-7.0	15.0	AVRG	
gamma-Chlordane	1.31633		1.36026		3.3	15.0	AVRG	
alpha-Chlordane	1.25625		1.18540		-5.6	15.0	AVRG	
Endosulfan I	1.34681		1.23347		-8.4	15.0	AVRG	
4,4'-DDE	1.03479		1.11403		7.7	15.0	AVRG	
Dieldrin	1.17853		1.15203		-2.2	15.0	AVRG	
Endrin	0.82214		0.75758		-7.9	15.0	AVRG	
4,4'-DDD	0.59963		0.79705		32.9	15.0	AVRG	<-
Endosulfan II	1.33649		1.08701		-18.7	15.0	AVRG	<-
4,4'-DDT	0.81298		0.50334		-38.1	15.0	AVRG	<-
Endrin aldehyde	0.99005		0.87551		-11.6	15.0	AVRG	
Endosulfan sulfate	1.02070		0.95334		-6.6	15.0	AVRG	
Methoxychlor	0.33012		0.31807		-3.7	15.0	AVRG	
Endrin ketone	1.16394		1.11333		-4.3	15.0	AVRG	
Tetrachloro-m-xylene	0.86191		1.03483		20.1	15.0	AVRG	<-
DCB Decachlorobiphenyl	1.00760		0.99921		-0.8	15.0	AVRG	

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 10.58
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD2 Calibration Date: 03/06/07 Time: 0654

Init. Calib. Date(s): 03/01/07 03/01/07

Init. Calib. Times: 1845 2022

GC Column: RTX CLP II ID: 0.32 (mm)

COMPOUND	METHOD RT	RT WINDOW FROM	RT WINDOW TO
alpha-BHC	5.117	5.067	5.167
gamma-BHC (Lindane)	5.730	5.680	5.780
beta-BHC	5.897	5.847	5.947
Heptachlor	6.480	6.430	6.530
delta-BHC	6.407	6.357	6.457
Aldrin	7.057	7.007	7.107
Heptachlor epoxide	8.117	8.067	8.167
gamma-Chlordane	8.483	8.433	8.533
alpha-Chlordane	8.767	8.717	8.817
Endosulfan I	8.870	8.820	8.920
4,4'-DDE	9.127	9.077	9.177
Dieldrin	9.400	9.350	9.450
Endrin	9.957	9.907	10.007
4,4'-DDD	10.203	10.153	10.253
Endosulfan II	10.343	10.293	10.393
4,4'-DDT	10.747	10.697	10.797
Endrin aldehyde	10.933	10.883	10.983
Endosulfan sulfate	11.407	11.357	11.457
Methoxychlor	11.960	11.910	12.010
Endrin ketone	12.313	12.263	12.363
Tetrachloro-m-xylene	4.057	4.007	4.107
DCB Decachlorobiphenyl	14.473	14.423	14.523

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD1 Calibration Date: 03/07/07 Time: 0944

Lab File ID: MC05070 Init. Calib. Date(s): 03/01/07 03/02/07

Init. Calib. Times: 1845 0527

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.17610		1.34074		14.0	15.0	AVRG	
gamma-BHC (Lindane)	1.15657		1.24664		7.8	15.0	AVRG	
beta-BHC	0.46801		0.45216		-3.4	15.0	AVRG	
Heptachlor	1.06803		1.03563		-3.0	15.0	AVRG	
delta-BHC	1.02389		1.04654		2.2	15.0	AVRG	
Aldrin	1.14544		1.10864		-3.2	15.0	AVRG	
Heptachlor epoxide	1.21053		1.07193		-11.5	15.0	AVRG	
gamma-Chlordane	1.18817		1.21067		1.9	15.0	AVRG	
alpha-Chlordane	1.17579		1.13444		-3.5	15.0	AVRG	
Endosulfan I	1.44723		1.11878		-22.7	15.0	AVRG	<-
4,4'-DDE	0.78690		1.03334		31.3	15.0	AVRG	<-
Dieldrin	0.98439		0.92202		-6.3	15.0	AVRG	
Endrin	0.75576		0.78720		4.2	15.0	AVRG	
4,4'-DDD	0.58340		0.65560		12.4	15.0	AVRG	
Endosulfan II	0.99975		0.85751		-14.2	15.0	AVRG	
4,4'-DDT	0.70180		0.68571		-2.3	15.0	AVRG	
Endrin aldehyde	0.82600		0.58768		-28.9	15.0	AVRG	<-
Endosulfan sulfate	0.91024		0.86491		-5.0	15.0	AVRG	
Methoxychlor	0.26370		0.33474		26.9	15.0	AVRG	<-
Endrin ketone	1.01723		0.96050		-5.6	15.0	AVRG	
Tetrachloro-m-xylene	0.94615		1.13965		20.5	15.0	AVRG	<-
DCB Decachlorobiphenyl	0.95366		0.92862		-2.6	15.0	AVRG	

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 10.61
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD1 Calibration Date: 03/07/07 Time: 0944

Init. Calib. Date(s): 03/01/07 03/01/07

Init. Calib. Times: 1845 2022

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	METHOD RT	RT WINDOW FROM	RT WINDOW TO
alpha-BHC	5.380	5.330	5.430
gamma-BHC (Lindane)	5.933	5.883	5.983
beta-BHC	6.100	6.050	6.150
Heptachlor	6.777	6.727	6.827
delta-BHC	6.417	6.367	6.467
Aldrin	7.330	7.280	7.380
Heptachlor epoxide	8.473	8.423	8.523
gamma-Chlordane	8.720	8.670	8.770
alpha-Chlordane	8.977	8.927	9.027
Endosulfan I	9.243	9.193	9.293
4,4'-DDE	9.130	9.080	9.180
Dieldrin	9.693	9.643	9.743
Endrin	10.113	10.063	10.163
4,4'-DDD	10.230	10.180	10.280
Endosulfan II	10.507	10.457	10.557
4,4'-DDT	10.713	10.663	10.763
Endrin aldehyde	11.223	11.173	11.273
Endosulfan sulfate	11.953	11.903	12.003
Methoxychlor	11.543	11.493	11.593
Endrin ketone	12.427	12.377	12.477
Tetrachloro-m-xylene	4.413	4.363	4.463
DCB Decachlorobiphenyl	14.147	14.097	14.197

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD2 Calibration Date: 03/07/07 Time: 0944

Lab File ID: MC05070 Init. Calib. Date(s): 03/01/07 03/02/07

Init. Calib. Times: 1845 0527

GC Column: RTX CLP II ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.31517		1.27827		-2.8	15.0	AVRG	
gamma-BHC (Lindane)	1.27064		1.19347		-6.1	15.0	AVRG	
beta-BHC	0.44708		0.43816		-2.0	15.0	AVRG	
Heptachlor	1.55830		1.31128		-15.9	15.0	AVRG	<-
delta-BHC	0.77254		1.01857		31.8	15.0	AVRG	<-
Aldrin	1.30753		1.26574		-3.2	15.0	AVRG	
Heptachlor epoxide	1.32488		0.97106		-26.7	15.0	AVRG	<-
gamma-Chlordane	1.31633		1.43699		9.2	15.0	AVRG	
alpha-Chlordane	1.25625		1.09638		-12.7	15.0	AVRG	
Endosulfan I	1.34681		1.10862		-17.7	15.0	AVRG	<-
4,4'-DDE	1.03479		1.05955		2.4	15.0	AVRG	
Dieldrin	1.17853		1.01143		-14.2	15.0	AVRG	
Endrin	0.82214		0.79899		-2.8	15.0	AVRG	
4,4'-DDD	0.59963		0.73069		21.9	15.0	AVRG	<-
Endosulfan II	1.33649		0.84118		-37.1	15.0	AVRG	<-
4,4'-DDT	0.81298		0.81541		0.3	15.0	AVRG	
Endrin aldehyde	0.99005		0.76842		-22.4	15.0	AVRG	<-
Endosulfan sulfate	1.02070		0.91141		-10.7	15.0	AVRG	
Methoxychlor	0.33012		0.38513		16.7	15.0	AVRG	<-
Endrin ketone	1.16394		1.07587		-7.6	15.0	AVRG	
Tetrachloro-m-xylene	0.86191		0.96118		11.5	15.0	AVRG	
DCB Decachlorobiphenyl	1.00760		0.90779		-9.9	15.0	AVRG	

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 12.97
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Instrument ID: SGMECD2 Calibration Date: 03/07/07 Time: 0944

Init. Calib. Date(s): 03/01/07 03/01/07

Init. Calib. Times: 1845 2022

GC Column: RTX CLP II ID: 0.32 (mm)

COMPOUND	METHOD RT	RT WINDOW FROM	RT WINDOW TO
alpha-BHC	5.120	5.070	5.170
gamma-BHC (Lindane)	5.733	5.683	5.783
beta-BHC	5.897	5.847	5.947
Heptachlor	6.487	6.437	6.537
delta-BHC	6.407	6.357	6.457
Aldrin	7.060	7.010	7.110
Heptachlor epoxide	8.123	8.073	8.173
gamma-Chlordane	8.483	8.433	8.533
alpha-Chlordane	8.770	8.720	8.820
Endosulfan I	8.873	8.823	8.923
4,4'-DDE	9.127	9.077	9.177
Dieldrin	9.403	9.353	9.453
Endrin	9.960	9.910	10.010
4,4'-DDD	10.200	10.150	10.250
Endosulfan II	10.347	10.297	10.397
4,4'-DDT	10.743	10.693	10.793
Endrin aldehyde	10.933	10.883	10.983
Endosulfan sulfate	11.410	11.360	11.460
Methoxychlor	11.957	11.907	12.007
Endrin ketone	12.313	12.263	12.363
Tetrachloro-m-xylene	4.063	4.013	4.113
DCB Decachlorobiphenyl	14.473	14.423	14.523

2

SURROGATE COMPOUND RECOVERY

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Lab Name: STL Savannah Job No.: 680-24532-1

SDG No.: 68024532

Matrix: Water

GC Column (1): CLP II ID: 0.32 (mm) GC Column (2): _____ ID: ____

SAMPLE ID	(DCB1)	(TCX1)
WFF1-SW1	43	93
WFF1-WW01	25 X	51
RINSATE 2	56	92
RINSATE 1	43	92

DCB2 TCX2

25 X

	QC LIMITS
SUR (DCB1) =DCB Decachlorobiphenyl	(30-150)
SUR (TCX1) =Tetrachloro-m-xylene	(30-150)

Column to be used to flag recovery values

pcb

FORM 10
PEST-PCB IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 680-24532-A-8-A

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024532

Lab Sample ID: WFF1-SD2

Date(s) Analyzed: 03/06/07 03/06/07

Instrument ID (1): SGMECD1 Instrument ID (2): SGMECD2

GC Column(1): RTX CLP I ID: 0.32(mm) GC Column(2): RTX CLP II ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDE	1	9.12	9.08	9.18	2.5	
	2	9.13	9.08	9.18	2.6	3.9
4,4'-DDD	1	10.23	10.18	10.28	1.3	
	2	10.20	10.15	10.25	2.7	70.0
4,4'-DDT	1	10.71	10.66	10.76	1.4	
	2	10.74	10.70	10.80	1.6	13.3
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

Serial Number 94411

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WWF - WWTP #1		VA
STL (LAB) PROJECT MANAGER	**P.O. NUMBER**	**CONTRACT NO.**
ABBIE PAGE	0057557	
CLIENT (SITE) PM	**CLIENT PHONE**	**CLIENT FAX**
THERESA OFFNER	770-325-7961	
CLIENT NAME	**CLIENT E-MAIL**	
WESTON SOLUTIONS	THERESA.OFFNER@WESTONSOLUTIONS.COM	
CLIENT ADDRESS		
C430 METRIC PL (STE 100) NORCROSS, GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE ____ OF ____

STANDARD REPORT DELIVERY ⊗
DATE DUE ____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE ____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC, PEST, PCB	CYANIDE	METALS/MERCURY	NUMBER OF CONTAINERS SUBMITTED	REMARKS
									PRESERVATIVE				
2/20/07	1510	WFF1-SS4			X			X	X (HCL)	X (NA?)	X (HCL)		MS/MSD
	1525	WFF1-MW3-4-6			X			X	X	X	X		
2/21/07	0910	WFF1-MW1-0-0.5			X			X	X	X	X		
	0920	WFF1-MW1-0.5-2			X			X	X	X	X		
	1100	WFF1-SW1		X				X	X	X	X		
	1130	WFF1-MW1-18-20			X			X	X	X	X		
	1135	WFF1-SD1			X			X	X	X	X		
	1155	WFF1-SD2			X			X	X	X	X		
	1420	WFF1-WW01		X				X	X	X	X		
	1550	WFF1-SS2-A			X			X	X	X	X		
	1605	WFF1-SS3-A			X			X	X	X	X		
	1635	(GLB) RINSATE 2		X				X	X	X	X		HAND AUGER RINSE BLANK

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	2/22/07	1340		2/24/07	1630			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
	2/22/07	1340						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
	022307	0925	YES ○ NO ○		680-24532	

Serial Number 93811

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFF - WWTP #1		VA
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
ABBIE PAGE	0057557	
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
THERESA OFFNER	770-325-7961	
CLIENT NAME	CLIENT E-MAIL	
WESTON SOLUTIONS	THERESA.OFFNER@WESTONSOLUTIONS.COM	
CLIENT ADDRESS		
5430 METRIC PL (STE 100) NORCROSS, GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE ____ OF ____

STANDARD REPORT DELIVERY ☒
DATE DUE ____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE ____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: NUMBER OF CONTAINERS SUBMITTED — TCLP SVOC, PEST, PCB, HERB, METALS, MERC	TCLP VOA	IGNIT, PH, REACTIVE CYANIDE, REACTIVE SULFIDE	VOC	SVOC, PEST/PCB	CYANIDE	METALS / MERC			REMARKS
2/22/07	1035	SOIL CUTTINGS			X			X	X	X							
1	1300	WFF1-SSB			X						X	X	X	X			
	—	TB-3		X							X						
2/20/07	1620	RINSATE 1 ★									X	X	X	X			

1.0/1.1/0.1
TEMP. 3.0/2.8

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
TC [illegible]	2/22/07	1340	Amelia Kennedy	2/22/07	1630			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Amelia Kennedy	2/22/07	1340						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
[illegible]	022307	0925			680-24532	★ analyze per Theresa Offner

2-26-07

STL8240-680 (12/02)

Weston Solutions, Inc.
5430 Metric Place
Suite 100
Norcross, GA 30092
770-325-7900 • FAX 770-325-7950
www.westonsolutions.com

Memorandum
Norcross Office

DATE: April 23, 2007

TO: Teresa Offner, Project Manager

FROM: Paula MacLaren, Environmental Scientist

RE: Inorganic Data Validation and Usability Report
Wallops Island Flight Facility, VA – Old Waste Water Treatment Plant No.1
Site Investigation – Sampling Event
Contract Number (No.) W91236-05-D-0036
Laboratory Sample Delivery Group (SDG) No. 680-24622

OVERVIEW

Severn Trent Laboratories, Inc. analyzed 5 soil samples, 3 sludge samples, 8 water samples, and 4 QC samples collected by Weston Solutions, Inc. (WESTON) at the Old Waste Water Treatment Plant No. 1 located at Wallops Island Flight Facility, Virginia, on February 22-23, 2007. The sample identifications are presented below:

Soil/Sludge Samples		Aqueous Samples	Field QC Samples	
WFFI-SS4-A		WFFI-MW1	WFFI-SS5-D	(soil)
WFFI-SS5		WFFI-MW2	WFFI-MW3-D	(water)
WFFI-SS7		WFFI-MW3	Rinsate 3	(QC)
WFFI-SS9		WFFI-MW4	Rinsate 4	(QC)
WFFI-SS10		WFFI-MW5		
WFFI-SL1	(sludge)	WFFI-MW6		
WFFI-SL02	(sludge)	WFFI-MW7		
WFFI-SL03	(sludge)	WFFI-MW20		

The samples were analyzed for the following parameters:

- Target analyte list (TAL) metals; *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846); Methods 6010B, 7470A, and 7471A
- Total cyanide; SW-846 Method 9012A

SUMMARY

WESTON performed data validation in accordance with the *U.S. Environmental Protection Agency (USEPA) Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses,* April 1993. This report only addresses quality assurance/quality control (QA/QC) problems which affect data usability in meeting site objectives. The following quality assurance/quality control (QA/QC criteria were reviewed:

- Case narrative and deliverables compliance
- Holding Time, sample preservation and storage
- Field sample identity and laboratory sample identity comparison
- QC accuracy and precision acceptance criteria
- Solid sample moisture contents and dry weight
- Instrument calibration
- Instrument linearity
- Initial and continuing calibration blank checks
- Laboratory method blank, field QC blanks
- Continuing calibration verification
- Inductively coupled plasma (ICP) interference check samples
- Laboratory control sample percent recovery
- Matrix spike and matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD)
- ICP serial dilution QC check sample
- Laboratory duplicates and percent RPD
- Method detection limits (MDL) and reporting limits (RL)
- Qualitative and quantitative analyte identification
- Field duplicate samples
- Chain-of-custody (COC)
- Overall assessment of data

The laboratory deliverable report met the requirements and format of a full EPA Contract Laboratory Program (CLP) data deliverable package. The following QA/QC sample analysis observations were noted:

MAJOR PROBLEMS

- No major problems resulting in the rejection of sample data were found.

MINOR PROBLEMS

ICP TAL Metals Analysis:

- The laboratory did not receive a sample allocated for metals analysis for water sample WFFI-

MW4. A sample aliquot was obtained from the unpreserved semivolatile container for that sample location, and therefore, the sample for metals analysis had not been properly preserved with nitric acid to a pH of less than 2. All sample WFFI-MW4 metals results greater than method detection limits (MDL) have been qualified as biased low (L); results below MDL have also been qualified as biased low (UL).

- Due to the elevated level of moisture in sludge sample WFFI-SL-1, analysis of this sample may not be representative of the matrix of interest (solid phase). In some instances, the results for this sample may more accurately reflect the concentration of contaminants in the water fraction of the sample. Detection limits were elevated as a result of the high percent moisture of (92.5 percent).

- The laboratory water ICP method blank showed contamination of aluminum at 90 micrograms per liter (ug/L), and zinc 3.6 ug/L. Sample aluminum and zinc raw data were evaluated against the blank concentrations to determine if their reported values were affected; concentrations less than 5 times the blank concentration. Water samples with reported aluminum and zinc concentrations at less than five times the blank concentration were qualified as having possible laboratory contamination (B) and are considered invalid. These samples are presented below:

WFFI-MWI	(zinc)
WFFI-MW2	(zinc)
WFFI-MW3	(zinc)
WFFI-MW3-D	(zinc)
WFFI-MW4	(zinc)
WFFI-MW5	(zinc)
WFFI-MW6	(zinc)
WFFI-MW7	(zinc)
WFFI-MW20	(zinc)
Rinsate 3	(aluminum, zinc)
Rinsate 4	(aluminum, zinc)

- The water CCB series showed aluminum, barium, beryllium, chromium, manganese, nickel, and vanadium contamination. Sample raw data were evaluated to determine possibility of laboratory contamination in associated samples; sample results less than 5 times the CCB concentration. Associated samples with these metals at concentrations less than 5 times the corresponding CCB were qualified (B) as having possible laboratory contamination and are considered invalid. These samples are presented below:

WFFI-MW1	(beryllium, chromium, nickel)
WFFI-MW3	(nickel)
WFFI-MW3-D	(beryllium, nickel)
WFFI-MW4	(beryllium, chromium, vanadium)
WFFI-MW5	(beryllium, chromium, vanadium)
WFFI-MW6	(beryllium, chromium, nickel, vanadium)
WFF1-MW7	(beryllium, chromium, vanadium)
WFF1-MW20	(beryllium, nickel)

- The soil CCB series showed aluminum, beryllium, and chromium contamination. Sample raw data were evaluated to determine possibility of laboratory contamination in associated samples; sample results less than 5 times the CCB concentration. The associated sample with these metals at concentrations less than 5 times the corresponding CCB was qualified (B) as having possible laboratory contamination and is considered invalid. The sample is listed below:

  WFF1-SL1 (chromium)

- Several water sample aluminum results were greater than 5 times the blank concentration (aluminum at 450 ug/L) but still had been qualified by the laboratory as having been impacted by laboratory contamination (B). Based on Region III guidelines, the data qualifier (B) has been removed from the following reported water sample data:

  WFFI-MW1 (aluminum)
  WFFI-MW2 (aluminum)
  WFFI-MW3 (aluminum)
  WFFI-MW3-D (aluminum)
  WFFI-MW4 (aluminum)
  WFFI-MW5 (aluminum)
  WFFI-MW6 (aluminum)
  WFFI-MW7 (aluminum)
  WFFI-MW20 (aluminum)

- The field rinsate blank sample, Rinsate 3, showed aluminum (89 J ug/L), calcium (100 J ug/L), and zinc (14 J ug/L) contamination.. Field rinsate blank sample, Rinsate 4, showed aluminum (99 J ug/L), calcium (610 ug/L), magnesium (14 J ug/L), potassium (23 J ug/L), and zinc (9.5 J ug/L) contamination. Sample raw data was evaluated against the blank concentrations to determine if their reported values were affected; concentrations less than 5 times the rinsate blank concentration. Samples with reported concentrations at less than five times the rinsate blank concentration were qualified as having possible field contamination (B) and are considered invalid. These samples are presented below:

  WFFI-MW6 (water) (zinc)
  WFFI-MW7 (water) (zinc)
  WFFI-MW3 (water) (zinc)
  WFFI-MW3-D (water) (zinc)
  WFFI-MW20 (water) (zinc)
  WFFI-MW5 (water) (zinc)
  WFFI-MW4 (water) (zinc)
  WFFI-MW2 (water) (zinc)
  WFFI-MW1 (water) (zinc)
  WFFI-SS4-A (soil) (calcium)

- The water contract quantitation detection limit (CRDL) check standard (CRI) percent recoveries

for arsenic (112 percent, 111 percent) and selenium (112 percent) exceeded the recommended QA/QC upper control limit of 110 percent. The following samples with reported concentrations above the method detection limit but less than or equal to 2 times the analyte CRDL were qualified as biased high (K).

WFFI-MW3	(arsenic)
WFFI-MW3-D	(arsenic)
WFFI-MW5	(arsenic)
WFFI-MW20	(arsenic)

Metals of interest not detected or samples with concentrations above 2 times the CRDL did not require data qualifiers. Selenium was not detected in any of the site soil samples.

- The water CRDL-CRI QC sample percent recoveries for aluminum (87 percent), iron (83 percent), lead (84 percent), and thallium (88 percent) exceeded the recommended QA/QC lower control limit of 90 percent. The following samples with reported concentrations above these metals method detection limits but less than or equal to 2 times their CRDLs were qualified as biased low (L). In addition, samples with these metals reported as not detected were qualified as biased low (UL).

WFFI-MW1	(lead, thallium)
WFFI-MW2	(iron, lead, thallium)
WFFI-MW3	(lead, thallium)
WFFI-MW3-D	(lead, thallium)
WFFI-MW4	(lead, thallium)
WFFI-MW5	(lead, thallium)
WFFI-MW6	(lead, thallium)
WFFI-MW7	(lead, thallium)
WFFI-MW20	(lead, thallium)
Rinsate 3	(aluminum, iron, lead, thallium)
Rinsate 4	(aluminum, iron, lead, thallium)

- The soil CRDL-CRI QC sample percent recoveries for potassium (111 percent), selenium (125 percent, 113 percent), and thallium (111 percent, 118 percent) exceeded the recommended QA/QC upper control limit of 110 percent. The following samples with reported concentrations above these metals method detection limits but less than or equal to 2 times their CRQL were qualified as biased high (K):

WFFI-SL02	(potassium)
WFFI-SL03	(potassium)
WFFI-SS4-A	(potassium)
WFFI-SS5	(potassium)
WFFI-SS5-D	(potassium)
WFFI-SS7	(potassium)
WFFI-SS9	(potassium)

WFFI-SS10 (potassium)

Metals of interest not detected or samples with concentrations above 2 times the CRDL did not require data qualifiers. Selenium and thallium were not detected in any of the site soil samples.

- The soil CRDL-CRI QC sample percent recoveries for arsenic (84 percent), iron (77 percent, 75 percent), lead (80 percent), and sodium (80 percent) exceeded the recommended QA/QC lower control limit of 90 percent. The following samples with reported concentrations above these metals method detection limits but less than or equal to 2 times their CRDLs were qualified as biased low (L). In addition, samples with reported arsenic, iron, lead, and sodium concentrations as not detected were also qualified as biased low (UL).

WFFI-SL1	(arsenic, sodium)
WFFI-SL02	(sodium)
WFFI-SL03	(sodium)
WFFI-SS4-A	(sodium)
WFFI-SS5	(sodium)
WFFI-SS5-D	(sodium)
WFFI-SS7	(sodium)
WFFI-SS9	(sodium)
WFFI-SS10	(arsenic, sodium)

Samples with concentrations above 2 times the CRDL did not require data qualifiers. All sample iron and lead concentrations exceeded 2 times the CRDL, and therefore, no data qualifiers were applied.

- ICP metals MS/MSD analysis was performed on site soil sample WFF1-SS4-A. The MS manganese percent recovery exceeded the QA/QC recommendation of 75 to 125 percent. The manganese post-digestion spike percent recovery was within limits. The following samples with reported manganese concentrations greater than IDL have been qualified as biased high (K):

WFFI-SL1
WFFI-SL02
WFFI-SL03
WFFI-SS4-A
WFFI-SS5
WFFI-SS5-D
WFFI-SS7
WFFI-SS9
WFFI-SS10

In addition, the soil ICP MS and MSD percent recoveries for aluminum and iron exceeded the QA/QC recommendation. The sample aluminum and iron concentrations, however, were greater than four times their spike concentrations, and therefore, these matrix spike recovery limits do

not apply. No data qualifiers were applied.

- The water ICP MS and MSD analyses percent recoveries for iron exceeded the QA/QC recommendation of 75 to 125 percent. The sample iron concentration, however, was greater than four times the spike concentration, and therefore, the matrix spike recovery limits do not apply. No data qualifiers were applied to site water sample results.

- Field duplicate water sample set WFFI-MW3/WFFI-MW3-D showed TAL metals within 20 RPD.

- Field duplicate soil sample set WFFI-SS5/WFFI-SS5D showed TAL metals within 25 RPD.

Mercury Analysis:

- The laboratory did not receive a sample allocated for mercury analysis for water sample WFF1-MW4. A sample aliquot was obtained from the unpreserved semivolatile container for that sample location, and therefore, the sample for mercury analysis had not been properly preserved with nitric acid to a pH of less than 2. Sample WFF1-MW4 mercury result was below the MDL and has been qualified as biased low (UL).

- Due to the elevated level of moisture in sludge sample WFFI-SL-1, analysis of this sample may not be representative of the matrix of interest (solid phase). In some instances, the results for this sample may more accurately reflect the concentration of contaminants in the water fraction of the sample. Detection limits were elevated as a result of the high percent moisture of (92.5 percent).

- The laboratory water method blank showed mercury contamination at 0.086 ug/L. Water sample mercury raw data were evaluated against the blank concentration to determine if their reported values were affected; concentrations less than 5 times the blank concentration. Water samples with reported mercury concentrations at less than five times the blank concentration were qualified as having possible laboratory contamination (B) and are considered invalid. This sample is presented below:

  WFFI-MW6 (mercury)

- Laboratory mercury duplicate analysis was performed on site sludge sample WFFI-SL03. The mercury RPD of 65 exceeded the QA/QC limit of 35. Site samples with similar matrices as sample WFF-SL03 were qualified as estimated (J):

  WFFI-SL02
  WFFI-SL03

- Field duplicate soil sample set WFFI-SS5/WFFI-SS5D showed mercury at 6.6 RPD.

Cyanide Analysis:

- The laboratory did not receive a sample allocated for cyanide analysis for water sample WFFI-MW4. A sample aliquot was obtained from the unpreserved semivolatile container for that sample location, and therefore, the sample for cyanide analysis had not been properly preserved to a pH of greater than 12. Sample WFFI-MW4 cyanide result reported below MDL has been qualified as biased low (UL).

- Due to the elevated level of moisture in sludge sample WFFI-SL-1, analysis of this sample may not be representative of the matrix of interest (solid phase). In some instances, the results for this sample may more accurately reflect the concentration of contaminants in the water fraction of the sample. Detection limits were elevated as a result of the high percent moisture of (92.5 percent).

NOTES

- Samples were received by the laboratory slightly below the QA/QC recommended preservative temperature of 4°C±2°C; 0.1, 0.2, 0.3, and 0.4°C. Based on this observation, it has been determined that no impact to sample data has occurred.

- Soil sample WFFI-SS5-D was not identified on the chain of custody.

- The elevated level of moisture in sludge sample WFFI-SL1 may not be representative of the matrix of interest (solid phase). In some instances, the results for this sample may more accurately reflect the concentration of contaminants in the water fraction of the sample. Detection limits were elevated as a result of the high percent moisture (92.5 percent).

- The laboratory analyzed sludge samples WFFI-SL02 and WFFI-SL03 for mercury at 1:20 dilutions due to elevated concentrations of mercury.

- Due to the limited information concerning cyanide holding times for soil samples, the water sample holding time of 14-days as referenced in *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (April 1993), were applied for soil samples.

- Field duplicate sample analysis was performed on soil sample set WFFI-SS5/WFFI-SS5-D. Comparison sample data showed all metals and cyanide analyses within 35 RPD. Field duplicate sample analysis was performed on water sample set WFFI-MW3/WFFI-MW3-D. Comparison data showed all metals and cyanide analyses within 35 RPD, except for zinc at 56 RPD and mercury at 48 RPD. This is for information only; no data qualifiers were applied to sample set results based on these results.

- When there are several QC data qualifiers applied to a value, the hierarchy of qualifiers is followed; R, B, L, K, J.

The laboratory has provided additional information in their case narrative. Based on the evaluation of all information provided in the analytical data package, the results are highly usable with the data validation qualifiers as noted. The sample data is presented in the following attachments.

ATTACHMENTS

Appendix A – Glossary of Data Qualifier Codes
Appendix B – Data Summary Tables
Appendix C – Laboratory Reported Results
Appendix D – Support Documentation

APPENDIX A

Glossary of Data Qualifier Codes
(Inorganic)

DATA QUALIFIER CODES
(Inorganic Analyses)

Codes Related To Identification

(confidence concerning presence or absence of compounds):

U = The analyte was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

R = The data are unusable. (Note: The analyte may or may not be present.)

Codes Related To Quantitation

(can be used for both positive results and sample quantitation limits):

J = The associated value is an estimated quantity

UJ = The analyte was analyzed for, but was not detected. The associated detection limit is an estimate and may be inaccurate or imprecise.

K = The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L = The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL = The analyte was not detected, and the actual quantitation limit is probably higher than reported.

APPENDIX B

Data Summary Tables
(Inorganic)

TABLE 1
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS4-A	WFFI-SS5	WFFI-SS5-D	WFFI-SS7	WFFI-SS9
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4	85.8	76.1
CRQL	Analyte					
20	Aluminum	**4700**	**9700**	**13000**	**10000**	**4600**
6.0	Antimony	2.0 U	2.2 U	2.3 U	**2.2 U**	2.5 U
1.0	Arsenic	**2.1**	**4.4**	**4.7**	**4.2**	**2.3**
20	Barium	**19**	**45**	**52**	**45**	**13**
0.5	Beryllium	**0.18 J**	**0.35 J**	**0.41 J**	**0.34 J**	**0.16 J**
0.5	Cadmium	0.49 U	0.55 U	0.56 U	0.55 U	0.62 U
500	Calcium	**190 B**	**910**	**750**	**900**	**170**
1.0	Chromium	**4.7**	**10**	**13**	**11**	**5.1**
5.0	Cobalt	**1.0**	**2.6**	**3.3**	**2.8**	**0.63 J**
2.5	Copper	**1.4 J**	**3.8**	**4.5**	**4.0**	**1.9 J**
10	Iron	**3100**	**8300**	**10000**	**8400**	**2800**
1.0	Lead	**2.6**	**7.5**	**8.1**	**8.0**	**2.2**
500	Magnesium	**320**	**810**	**1000**	**850**	**330**
1.5	Manganese	**42**	**140**	**180**	**150**	**15**
0.1	Mercury	**0.0096 J**	**0.044**	**0.047**	**0.043**	**0.040**
4.0	Nickel	**2.4 J**	**6.3**	**7.7**	**6.7**	**2.3 J**
500	Potassium	**270 K**	**510 K**	**640 K**	**560 K**	**370 K**
3.5	Selenium	2.5 U	2.8 U	2.8 U	2.7 U	3.1 U
1.0	Silver	0.98 U	1.1 U	1.1 U	1.1 U	1.2 U
500	Sodium	**57 L**	**76 JL**	**91 JL**	**75 L**	**85 L**
2.5	Thallium	2.5 U	2.8 U	2.8 U	2.7 U	3.1 U
5.0	Vanadium	**7.0**	**16**	**20**	**17**	**6.0**
6.0	Zinc	**6.8**	**20**	**23**	**20**	**37**
0.5	Total Cyanide	0.53 U	0.58 U	0.56 U	0.57 U	0.63 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 2
DATA SUMMARY FORM: INORGANICS

SOIL SAMPLES
(mg/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-SS10	WFFI-SL1	WFFI-SL02	WFFI-SL03
	Sample Date	2/22/2007	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Percent Solids	79.3	7.5	62.9	61.3
CRQL	Analyte				
20	Aluminum	**4800**	**680**	**5800**	**6900**
6.0	Antimony	**0.54 J**	**24 U**	**20**	**12**
1.0	Arsenic	**1.3 L**	**12 UL**	**2.6**	**3.2**
20	Barium	**20**	**130**	**270**	**270**
0.5	Beryllium	**0.17 J**	4.8 U	**0.36 J**	**0.46 J**
0.5	Cadmium	**0.30 J**	6.0 U	**2.2**	**3.7**
500	Calcium	**320**	**13000**	**3900**	**4600**
1.0	Chromium	**5.3**	**6.0 B**	**65**	**36**
5.0	Cobalt	**0.57 J**	12 U	**2.0**	**2.6**
2.5	Copper	**6.7**	**11 J**	**180**	**180**
10	Iron	**2700**	**15000**	**14000**	**12000**
1.0	Lead	**4.9**	**130**	**530**	**360**
500	Magnesium	**300**	**730**	**780**	**950**
1.5	Manganese	**15**	**270**	**160 K**	**190 K**
0.1	Mercury	**0.25**	**0.17 J**	**24 J**	**28 J**
4.0	Nickel	**2.8 J**	**4.0 J**	**7.2**	**8.9**
500	Potassium	**300 K**	**1300**	**640 K**	**680 K**
3.5	Selenium	**2.9 U**	30 U	3.6 U	3.7 U
1.0	Silver	**0.64 J**	12 U	**130**	**110**
500	Sodium	**71 L**	**680 L**	**130 L**	**130 L**
2.5	Thallium	**2.9 U**	30 U	3.6 U	3.7 U
5.0	Vanadium	**6.2**	**7.2** J	**16**	**18**
6.0	Zinc	**160**	**680**	**440**	**420**
2.5	Total Cyanide	0.61 U	6.4 U	**1.5**	**1.5**

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
mg/Kg	Milligram per kilogram
Bold	Reported value is above the lab method detection limit

TABLE 3
DATA SUMMARY FORM: INORGANICS

WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW1	WFFI-MW2	WFFI-MW3	WFFI-MW3-D	WFFI-MW4	WFFI-MW5
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0
CRQL	Analyte						
200	Aluminum	**1300**	**620**	**750**	**780**	**2100 L**	**1700**
20	Antimony	20 U	20 U	20 U	20 U	20 UL	20 U
10	Arsenic	10 U	10 U	**13 K**	**11 K**	10 UL	**10 K**
10	Barium	**24**	**23**	**53**	**54**	**46 L**	**38**
4.0	Beryllium	**0.16 B**	4.0 U	4.0 U	**0.14 B**	**0.2 B**	**0.19 B**
5.0	Cadmium	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UL	5.0 U
500	Calcium	**11000**	**12000**	**62000**	**63000**	**22000 L**	**45000**
10	Chromium	**1.6 B**	**17**	10 U	10 U	**1.8 B**	**2.0 B**
10	Cobalt	10 U	10.0 U	**6.0 J**	**6.8 B**	**3.9 B**	10 U
20	Copper	20 U	20 U	20 U	20 U	20 UL	20 U
50	Iron	**310**	**170 L**	**10000**	**10000**	**920 L**	**7900**
5.0	Lead	5.0 UL	5.0 UL	5.0 UL	5.0 UL	5.0 UL	5.0 UL
500	Magnesium	**4100**	**3300**	**3300**	**3300**	**1800 L**	**3600**
10	Manganese	**34**	**41**	**690**	**700**	**120 L**	**530**
0.2	Mercury	0.20 U	0.20 U	0.20 U	**0.13 B**	0.20 UL	0.20 U
40	Nickel	**2.3 B**	40 U	**2.7 B**	**2.1 B**	40 UL	40 U
1000	Potassium	**1400**	**3400**	**2000**	**2100**	**2700 L**	**3400**
10	Selenium	10 U	10 U	10 U	10 U	10 UL	10 U
10	Silver	10 U	10 U	10 U	10 U	10 UL	10 U
1000	Sodium	**5600**	**5400**	**13000**	**13000**	**12000 L**	**7500**
25	Thallium	25 UL	25 UL	25 UL	25 UL	25 UL	25 UL
10	Vanadium	10 U	10 U	10 U	10 U	**2.5 B**	**1.8 B**
20	Zinc	**9 B**	**6.3 B**	**11 B**	**6.2 B**	**5.5 B**	**5.8 B**
10	Total Cyanide	10 U	10 U	10 U	10 U	10 UL	10 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Cor Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above the lab method detection limit

TABLE 4
DATA SUMMARY FORM: INORGANICS

WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFFI-MW6	WFFI-MW7	WFFI-MW20	RINSATE-3	RINSATE-4
	Sample Date	2/22/2007	2/22/2007	2/23/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
CRQL	Analyte					
200	Aluminum	**2200**	**1600**	**730**	**89 B**	**99 B**
20	Antimony	20 U	20 U	20 U	20 U	20 U
10	Arsenic	10 U	10 U	**15 K**	10 U	10 U
10	Barium	**57**	**24**	**55**	10 U	10 U
4.0	Beryllium	**0.19 B**	**0.18 B**	**0.14 B**	4.0 U	4.0 U
5.0	Cadmium	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
500	Calcium	**45000**	**10000**	**64000**	**100 J**	**610**
10	Chromium	**2.2 B**	**4.1 B**	10 U	10 U	10 U
10	Cobalt	**7.1 J**	10 U	**6.6 J**	10 U	10 U
20	Copper	20 U	20 U	20 U	20 U	20 U
50	Iron	**5000**	**570**	**11000**	50 UL	50 UL
5.0	Lead	5.0 UL	5.0 UL	5.0 UL	5.0 UL	5.0 UL
500	Magnesium	**4300**	**4500**	**3400**	500 U	**14 J**
10	Manganese	**1500**	**22**	**720**	10 U	10 U
0.2	Mercury	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
40	Nickel	**3.4 B**	40 U	**2.9 B**	40 U	40 U
1000	Potassium	**3000**	**1900**	2100 U	1000 U	**23 J**
10	Selenium	10 UL	10 U	10 U	10 U	10 U
10	Silver	10 UL	10 U	10 U	10 U	10 U
1000	Sodium	**16000**	**6900**	**14000**	1000 U	1000 U
25	Thallium	25 UL	25 UL	25 UL	25 UL	25 UL
10	Vanadium	**1.9**	**1.6 J**	10 U	10 U	10 U
20	Zinc	**7.8 B**	**8.6 B**	**8.3 B**	**14 B**	**9.5 B**
10	Total Cyanide	10 U	10 U	10 U	10 U	10 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above the lab method detection limit

APPENDIX C

Laboratory Reported Results
(Inorganic)

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-SS4-A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-11

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 92

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4700		B	P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	2.1			P
7440-39-3	Barium	19			P
7440-41-7	Beryllium	0.18	J		P
7440-43-9	Cadmium	0.49	U		P
7440-70-2	Calcium	190		B	P
7440-47-3	Chromium	4.7			P
7440-48-4	Cobalt	1.0			P
7440-50-8	Copper	1.4	J		P
7439-89-6	Iron	3100			P
7439-92-1	Lead	2.6			P
7439-95-4	Magnesium	320			P
7439-96-5	Manganese	42			P
7440-02-0	Nickel	2.4	J		P
7440-09-7	Potassium	270		K	P
7782-49-2	Selenium	2.5	U		P
7440-22-4	Silver	0.98	U		P
7440-23-5	Sodium	57	J	L	P
7440-28-0	Thallium	2.5	U		P
7440-62-2	Vanadium	7.0			P
7440-66-6	Zinc	6.8			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high. CRI percent recovery above 110%.
L- Biased low. CRI percent recovery below 90%.
B- Present in field blank & sample (60 ug/L).
B- Reported due to analyte concentration greater than 5 times blank value.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS4-A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-11

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 92

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.0096	J		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS4-A

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-11

Date Received: 02/27/2007 926 % Solids: 91.7

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.53	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-SS5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-12

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9700 9800		B	P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	4.4			P
7440-39-3	Barium	45			P
7440-41-7	Beryllium	0.35	J		P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	910			P
7440-47-3	Chromium	10			P
7440-48-4	Cobalt	2.6			P
7440-50-8	Copper	3.8			P
7439-89-6	Iron	8300			P
7439-92-1	Lead	7.5			P
7439-95-4	Magnesium	810			P
7439-96-5	Manganese	140			P
7440-02-0	Nickel	6.3			P
7440-09-7	Potassium	510		K	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	76	J	L	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	16			P
7440-66-6	Zinc	20			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high. CRC percent recovery above 110%.
L- Biased low. CRI percent recovery below 90%.
B- Removed due to sample concentration greater than 5 times laboratory blank contaminant.

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-12

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.044			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS5

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-12

Date Received: 02/27/2007 926 % Solids: 84.4

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.58	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS5-D

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-23

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 85

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000		B	P
7440-36-0	Antimony	2.3	U		P
7440-38-2	Arsenic	4.7			P
7440-39-3	Barium	52			P
7440-41-7	Beryllium	0.41	J		P
7440-43-9	Cadmium	0.56	U		P
7440-70-2	Calcium	750			P
7440-47-3	Chromium	13			P
7440-48-4	Cobalt	3.3			P
7440-50-8	Copper	4.5			P
7439-89-6	Iron	10000			P
7439-92-1	Lead	8.1			P
7439-95-4	Magnesium	1000			P
7439-96-5	Manganese	180			P
7440-02-0	Nickel	7.7			P
7440-09-7	Potassium	640		K	P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	91	J	L	P
7440-28-0	Thallium	2.8	U		P
7440-62-2	Vanadium	20			P
7440-66-6	Zinc	23			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K-Biased high. (%R percent recovery above 110%.
L-Biased low. (%R percent recovery) below 90%.
B-Removed due to sample concentration greater than 5 times laboratory contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS5-D

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-23

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 85

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.047			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS5-D

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-23

Date Received: 02/27/2007 926 % Solids: 85.4

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.56	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS7

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-13

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 86

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10000		B	P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	4.2			P
7440-39-3	Barium	45			P
7440-41-7	Beryllium	0.34	J		P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	900 890			P
7440-47-3	Chromium	11			P
7440-48-4	Cobalt	2.8			P
7440-50-8	Copper	4.0			P
7439-89-6	Iron	8400			P
7439-92-1	Lead	8.0			P
7439-95-4	Magnesium	850			P
7439-96-5	Manganese	150			P
7440-02-0	Nickel	6.7			P
7440-09-7	Potassium	560		K	P
7782-49-2	Selenium	2.7	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	75	J	L	P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	17			P
7440-66-6	Zinc	20			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high. CRI percent recovery above 110%.
L- Biased low. CRI percent recovery below 70%.
B- Removed due to sample concentration greater than 5 times laboratory blank contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS7

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-13

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 86

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.043			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS7

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-13

Date Received: 02/27/2007 926 % Solids: 85.8

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.57	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS9

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-4

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 76

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4600		B	P
7440-36-0	Antimony	2.5	U		P
7440-38-2	Arsenic	2.3			P
7440-39-3	Barium	13			P
7440-41-7	Beryllium	0.16	J		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	170			P
7440-47-3	Chromium	5.1			P
7440-48-4	Cobalt	0.63	J		P
7440-50-8	Copper	1.9	J		P
7439-89-6	Iron	2800			P
7439-92-1	Lead	2.2			P
7439-95-4	Magnesium	330			P
7439-96-5	Manganese	15			P
7440-02-0	Nickel	2.3	J		P
7440-09-7	Potassium	370		K	P
7782-49-2	Selenium	3.1	U		P
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	85	J	L	P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	6.0			P
7440-66-6	Zinc	37			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K- Biased high. CCi percent recovery above 110%.
L- Biased low. CCi percent recovery below 90%.
B- Reported due to sample concentration greater than 5 times blank contamination.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS9

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-4

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 76

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.040			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS9

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-4

Date Received: 02/27/2007 926 % Solids: 76.1

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.63	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS10

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-5

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 79

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4800		B	P
7440-36-0	Antimony	0.54	J		P
7440-38-2	Arsenic	1.3		L	P
7440-39-3	Barium	20			P
7440-41-7	Beryllium	0.17	J		P
7440-43-9	Cadmium	0.30 0.29	J		P
7440-70-2	Calcium	320			P
7440-47-3	Chromium	5.3			P
7440-48-4	Cobalt	0.57	J		P
7440-50-8	Copper	6.7			P
7439-89-6	Iron	2700			P
7439-92-1	Lead	4.9			P
7439-95-4	Magnesium	300			P
7439-96-5	Manganese	15			P
7440-02-0	Nickel	2.8	J		P
7440-09-7	Potassium	300		K	P
7782-49-2	Selenium	2.9	U		P
7440-22-4	Silver	0.64	J		P
7440-23-5	Sodium	71	J	L	P
7440-28-0	Thallium	2.9	U		P
7440-62-2	Vanadium	6.2			P
7440-66-6	Zinc	160			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high; CCi percent recovery above 110%

L - Biased low; CCi percent recovery below 90%.

B - Reported due to sample concentration greater than 5 times lab blank contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SS10

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-5

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 79

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.25			CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SS10

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-5

Date Received: 02/27/2007 926 % Solids: 79.3

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.61	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SL1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-14

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	680		B	P
7440-36-0	Antimony	24	U		P
7440-38-2	Arsenic	12	U	L	P
7440-39-3	Barium	130			P
7440-41-7	Beryllium	4.8	U		P
7440-43-9	Cadmium	6.0	U		P
7440-70-2	Calcium	13000			P
7440-47-3	Chromium	6.0	J	B	P
7440-48-4	Cobalt	12	U		P
7440-50-8	Copper	11	J		P
7439-89-6	Iron	15000			P
7439-92-1	Lead	130			P
7439-95-4	Magnesium	730			P
7439-96-5	Manganese	270			P
7440-02-0	Nickel	4.0	J		P
7440-09-7	Potassium	1300			P
7782-49-2	Selenium	30	U		P
7440-22-4	Silver	12	U		P
7440-23-5	Sodium	680	J	L	P
7440-28-0	Thallium	30	U		P
7440-62-2	Vanadium	7.2	J		P
7440-66-6	Zinc	680			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI percent recovery below 90%.
B - Present in laboratory QC blank (Chromium at 7.2 ug/L)
B - Removed due to sample concentration greater than 5 times laboratory contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SL1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-14

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17	J		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SL1

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-14

Date Received: 02/27/2007 926 % Solids: 7.5

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	6.4	mg/Kg	U		9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-SL02

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-2

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 63

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5800		B	P
7440-36-0	Antimony	20			P
7440-38-2	Arsenic	2.6			P
7440-39-3	Barium	270			P
7440-41-7	Beryllium	0.36	J		P
7440-43-9	Cadmium	2.2			P
7440-70-2	Calcium	3900			P
7440-47-3	Chromium	65			P
7440-48-4	Cobalt	2.0			P
7440-50-8	Copper	180			P
7439-89-6	Iron	14000			P
7439-92-1	Lead	530			P
7439-95-4	Magnesium	780			P
7439-96-5	Manganese	160		K	P
7440-02-0	Nickel	7.2			P
7440-09-7	Potassium	640		K	P
7782-49-2	Selenium	3.6	U		P
7440-22-4	Silver	130			P
7440-23-5	Sodium	130	J	L	P
7440-28-0	Thallium	3.6	U		P
7440-62-2	Vanadium	16			P
7440-66-6	Zinc	440			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K - Biased high. Potassium CRI percent recovery above 110%. Manganese MS percent recovery greater than 125%
L - Biased low; CRI percent recovery less than 70%.
B - Removed due to sample concentration greater than 5 times blank contaminant.

STL SAVANNAH

COPY

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SL02

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-2

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 63

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	24		J	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: J - estimated; laboratory duplicate exceeded 35 RPD.
Note: 1 to 20 dilution

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SL02

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-2

Date Received: 02/27/2007 926 % Solids: 62.9

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	1.5	mg/Kg			9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-SL03

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-3

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 61

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6900		B	P
7440-36-0	Antimony	12			P
7440-38-2	Arsenic	3.2			P
7440-39-3	Barium	270			P
7440-41-7	Beryllium	0.46	J		P
7440-43-9	Cadmium	3.7			P
7440-70-2	Calcium	4600			P
7440-47-3	Chromium	36			P
7440-48-4	Cobalt	2.6			P
7440-50-8	Copper	180			P
7439-89-6	Iron	12000			P
7439-92-1	Lead	360			P
7439-95-4	Magnesium	950			P
7439-96-5	Manganese	190		K	P
7440-02-0	Nickel	8.9			P
7440-09-7	Potassium	680		K	P
7782-49-2	Selenium	3.7	U		P
7440-22-4	Silver	110			P
7440-23-5	Sodium	130	J	L	P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	18			P
7440-66-6	Zinc	420			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: K-Biased high; Potassium CRI percent recovery above 110%.
Manganese LCS percent recovery greater than 125%.
L-Biased low; CRI percent recovery less than 90%.
B-Removed due to sample concentration greater than 5 times blank concentration.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-SL03

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Lab Sample ID: 680-24622-3

Level (low/med): LOW Date Received: 2/27/2007

% Solids: 61

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	28		J	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: J- estimated, laboratory duplicate exceeded .35 RPD
Note: (1 to 20 dilution)

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-SL03

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Lab Sample ID: 680-24622-3

Date Received: 02/27/2007 926 % Solids: 61.3

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	1.5	mg/Kg			9012A

Comments: Note - Results and Reporting Limits have been adjusted for dry weight.

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-20

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1300		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	24			P
7440-41-7	Beryllium	0.16	J	B	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	11000			P
7440-47-3	Chromium	1.6	J	B	P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	310			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	4100			P
7439-96-5	Manganese	34			P
7440-02-0	Nickel	2.3	J	B	P
7440-09-7	Potassium	1400			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	5600			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	9.0	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; CR (percent recovery below 90%.

~~B - Present in laboratory blank (Beryllium at 0.52 ug/L; Chromium at 2.0 ug/L; Nickel at 1.5 ug/L; Zinc at 3.4 ug/L).~~

B - Removed due to sample concentration greater than 5 times

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW1

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-20

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW1

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-20

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-19

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	620		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	23			P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	12000			P
7440-47-3	Chromium	17			P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	170		L	P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	3300			P
7439-96-5	Manganese	41			P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	3400			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	5400			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	6.3	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI percent recovery below 90%.
B - Present in laboratory blank (7 ug/L) at 3.6 ug/L.
B - Removed due to sample concentration greater than 5 times laboratory blank contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW2

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-19

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW2

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-19

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW3

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-8

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	750		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	13		K	P
7440-39-3	Barium	53			P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	62000			P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	6.0	J		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	10000			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	3300			P
7439-96-5	Manganese	690			P
7440-02-0	Nickel	2.7	J	B	P
7440-09-7	Potassium	2000			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	13000			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	11	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

L - Biased low. CRI percent recovery below 80%.

K - Biased high. CRI percent recovery above 110%.

B - Present in laboratory blank (Nickel at 1.5 ug/L, zinc at 7.6 ug/L)

B - Removed due to sample concentration greater than 5 times the laboratory blank concentration

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW3

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-8

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW3

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-8

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW3-D

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-9

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	780		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	11		K	P
7440-39-3	Barium	54			P
7440-41-7	Beryllium	0.14	J	B	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	63000			P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	6.8	J		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	10000			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	3300			P
7439-96-5	Manganese	700			P
7440-02-0	Nickel	2.1	J	B	P
7440-09-7	Potassium	2100			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	13000			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	6.2	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

L - Biased low; the percent recovery below 90%.
K - Biased high; the percent recovery above 110%.
B - Present in the laboratory blank (Beryllium at 0.52 ug/L; Nickel at 1.5 ug/L; Zinc at 3.6 ug/L).
B - Removed due to sample concentration greater than 5 times the laboratory blank.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW3-D

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-9

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J	B	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: B-Mercury present in laboratory blank at 0.13 ug/L.

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW3-D

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-9

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-18

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2100		B L	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	46			P
7440-41-7	Beryllium	0.20	J	B	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	22000			P
7440-47-3	Chromium	1.8	J	B	P
7440-48-4	Cobalt	3.9	J		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	920			P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1800			P
7439-96-5	Manganese	120			P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	2700			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	12000			P
7440-28-0	Thallium	25	U		P
7440-62-2	Vanadium	2.5	J	B	P
7440-66-6	Zinc	5.5	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low; sample unpreserved
B - Present in laboratory blank (Beryllium at 0.32 ug/L; Chromium at 2.0 ug/L; Vanadium at 0.4 ug/L; Zinc at 3.6 ug/L).
B - Removed due to sample concentration greater than 5 times blank, per

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-18

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U	L	CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - biased low; sample not preserved in field

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW4

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-18

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U	L	9012A

Comments: L - biased low, sample not preserved

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STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-17

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1700		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10		K	P
7440-39-3	Barium	38			P
7440-41-7	Beryllium	0.19	J	B	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	45000			P
7440-47-3	Chromium	2.0	J	B	P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	7900			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	3600			P
7439-96-5	Manganese	530			P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	3400			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	7500			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	1.8	J	B	P
7440-66-6	Zinc	5.8	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

L - Biased low; QC percent recovery below 90%.
K - Biased high; QC percent recovery above 110%.
B - Present in laboratory blank (Beryllium at 0.32 ug/L; Chromium at 0.9 ug/L; Vanadium at 0.4 ug/L; Zinc at 3.6 ug/L)
5 - Reported conc. is sample concentration greater than 5X blank

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW5

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-17

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW5

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-17

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

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STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW6

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-1

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2200		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	57			P
7440-41-7	Beryllium	0.19	J	B	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	45000			P
7440-47-3	Chromium	2.2	J	B	P
7440-48-4	Cobalt	7.1	J		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	5000			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	4300			P
7439-96-5	Manganese	1500			P
7440-02-0	Nickel	3.4	J	B	P
7440-09-7	Potassium	3000			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	16000			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	1.9	J		P
7440-66-6	Zinc	7.8	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI percent recovery below 90%.
B - Present in laboratory blank. Sample concentration < 5 times blank.
B - Removed due to sample concentration greater than 5 times blank.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW6

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-1

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW6

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-1

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

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STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW7

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-6

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1600		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	24			P
7440-41-7	Beryllium	0.18	J	B	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	10000			P
7440-47-3	Chromium	4.1	J	B	P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	570			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	4500			P
7439-96-5	Manganese	22			P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	1900			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	6900			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	1.6	J		P
7440-66-6	Zinc	8.6	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CCV % recovery below 90%.
B - present in laboratory blank
B - Removed due to sample concentration greater than 5 times laboratory blank contaminant.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW7

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-6

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW7

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-6

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

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STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WFF1-MW20

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-10

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	730		B	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	15		K	P
7440-39-3	Barium	55			P
7440-41-7	Beryllium	0.14	J	B	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	64000			P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	6.6	J		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	11000			P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	3400			P
7439-96-5	Manganese	720			P
7440-02-0	Nickel	2.9	J	B	P
7440-09-7	Potassium	2100			P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	14000			P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	8.3	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

L - Biased low. CRC percent recovery below 90%.

K - Biased high, CRC percent recovery above 110%.

B - Present in laboratory blank (Beryllium at 0.37 ug/L, Nickel at 1.5 ug/L, Zinc at 3.6 ug/L).

B - Removed due to sample concentration greater than 5 times blank value.

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

WFF1-MW20

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-10

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: WFF1-MW20

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-10

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 3

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-7

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	89	J	B L	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	10	U		P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	100	J		P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	50	U	L	P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	500	U		P
7439-96-5	Manganese	10	U		P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	1000	U		P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	14	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CCi percent recovery below 90%.
B - Present in laboratory blank (Aluminum at 90 ug/L; Zinc at 3.6 ug/L).

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 3

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-7

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: Rinsate 3

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-7

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-16

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	99	J	B L	P
7440-36-0	Antimony	20	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	10	U		P
7440-41-7	Beryllium	4.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	610			P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	10	U		P
7440-50-8	Copper	20	U		P
7439-89-6	Iron	50	U	L	P
7439-92-1	Lead	5.0	U	L	P
7439-95-4	Magnesium	14	J		P
7439-96-5	Manganese	10	U		P
7440-02-0	Nickel	40	U		P
7440-09-7	Potassium	23	J		P
7782-49-2	Selenium	10	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	25	U	L	P
7440-62-2	Vanadium	10	U		P
7440-66-6	Zinc	9.5	J	B	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments: L - Biased low. CRI percent recovery below 90%.
B - Present in laboratory blank (Aluminum at 90 ug/L; Zinc at 3.6 ug/L).

STL SAVANNAH

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

RINSATE 4

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Lab Sample ID: 680-24622-16

Level (low/med): LOW Date Received: 2/27/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1B-IN

INORGANIC ANALYSIS DATA SHEET

Client ID: Rinsate 4

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water Lab Sample ID: 680-24622-16

Date Received: 02/27/2007 926 % Solids:

CAS No.	Analyte	Conc.	Units	C	Q	Method
57-12-5	Cyanide, Total	0.010	mg/L	U		9012A

Comments:

FORM IB-IN

APPENDIX D

Support Documentation
(Inorganic)

METALS

-3-

BLANKS

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG NO.: 68024622

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.000	U	200.000	U	200.000	U	88.630	J	90.109	J	P
Antimony	20.000	U	20.000	U	20.000	U	20.000	U	20.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Barium	10.000	U	10.000	U	10.000	U	1.891	J	10.000	U	P
Beryllium	4.000	U	4.000	U	4.000	U	0.274	J	4.000	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Calcium	500.000	U	500.000	U	500.000	U	500.000	U	500.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	1.283	J	10.000	U	P
Cobalt	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Copper	20.000	U	20.000	U	20.000	U	20.000	U	20.000	U	P
Iron	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Lead	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Magnesium	500.000	U	500.000	U	500.000	U	500.000	U	500.000	U	P
Manganese	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	40.000	U	P
Potassium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	1000.000	U	P
Selenium	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Sodium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	1000.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Vanadium	10.000	U	10.000	U	10.000	U	1.725	J	10.000	U	P
Zinc	20.000	U	20.000	U	20.000	U	20.000	U	3.581	J	P

Comments: LIQ

STL SAVANNAH

METALS

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BLANKS

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG NO.: 68024622

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			83.763	J	89.433	J	200.000	U			P
Antimony			20.000	U	20.000	U	20.000	U			P
Arsenic			10.000	U	10.000	U	10.000	U			P
Barium			2.582	J	2.297	J	10.000	U			P
Beryllium			0.317	J	0.304	J	4.000	U			P
Cadmium			5.000	U	5.000	U	5.000	U			P
Calcium			500.000	U	500.000	U	500.000	U			P
Chromium			2.023	J	1.874	J	10.000	U			P
Cobalt			10.000	U	10.000	U	10.000	U			P
Copper			20.000	U	20.000	U	20.000	U			P
Iron			50.000	U	50.000	U	50.000	U			P
Lead			5.000	U	5.000	U	5.000	U			P
Magnesium			500.000	U	500.000	U	500.000	U			P
Manganese			2.238	J	2.068	J	10.000	U			P
Nickel			1.509	J	40.000	U	40.000	U			P
Potassium			1000.000	U	1000.000	U	1000.000	U			P
Selenium			10.000	U	10.000	U	10.000	U			P
Silver			10.000	U	10.000	U	10.000	U			P
Sodium			1000.000	U	1000.000	U	1000.000	U			P
Thallium			25.000	U	25.000	U	25.000	U			P
Vanadium			2.366	J	2.289	J	10.000	U			P
Zinc			20.000	U	20.000	U	20.000	U			P

Comments: LJQ

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			-32.874	J							P
Antimony			20.000	U							P
Arsenic			10.000	U							P
Barium			10.000	U							P
Beryllium			4.000	U							P
Cadmium			5.000	U							P
Calcium			500.000	U							P
Chromium			10.000	U							P
Cobalt			10.000	U							P
Copper			20.000	U							P
Iron			50.000	U							P
Lead			5.000	U							P
Magnesium			500.000	U							P
Manganese			10.000	U							P
Nickel			40.000	U							P
Potassium			1000.000	U							P
Selenium			10.000	U							P
Silver			10.000	U							P
Sodium			1000.000	U							P
Thallium			25.000	U							P
Vanadium			10.000	U							P
Zinc			20.000	U							P

Comments: LJQ

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.000	U	200.000	U	200.000	U	56.169	J	5.164	J	P
Antimony	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Barium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Beryllium	4.000	U	4.000	U	4.000	U	0.191	J	0.400	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Calcium	500.000	U	500.000	U	500.000	U	500.000	U	50.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Cobalt	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Copper	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P
Iron	50.000	U	50.000	U	50.000	U	50.000	U	5.000	U	P
Lead	5.000	U	5.000	U	5.000	U	5.000	U	0.500	U	P
Magnesium	500.000	U	500.000	U	500.000	U	500.000	U	50.000	U	P
Manganese	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	4.000	U	P
Potassium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	100.000	U	P
Selenium	10.000	U	10.000	U	10.000	U	10.000	U	2.500	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Sodium	1000.000	U	1000.000	U	1000.000	U	1000.000	U	100.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	2.500	U	P
Vanadium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Zinc	20.000	U	20.000	U	20.000	U	20.000	U	2.000	U	P

Comments: SOIL

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			59.288	J	82.388	J	200.000	U			P
Antimony			20.000	U	20.000	U	20.000	U			P
Arsenic			10.000	U	10.000	U	10.000	U			P
Barium			10.000	U	10.000	U	10.000	U			P
Beryllium			0.212	J	0.267	J	4.000	U			P
Cadmium			5.000	U	5.000	U	5.000	U			P
Calcium			500.000	U	500.000	U	500.000	U			P
Chromium			10.000	U	1.434	J	10.000	U			P
Cobalt			10.000	U	10.000	U	10.000	U			P
Copper			20.000	U	20.000	U	20.000	U			P
Iron			50.000	U	50.000	U	50.000	U			P
Lead			5.000	U	5.000	U	5.000	U			P
Magnesium			500.000	U	500.000	U	500.000	U			P
Manganese			10.000	U	10.000	U	10.000	U			P
Nickel			40.000	U	40.000	U	40.000	U			P
Potassium			1000.000	U	1000.000	U	1000.000	U			P
Selenium			10.000	U	10.000	U	10.000	U			P
Silver			10.000	U	10.000	U	10.000	U			P
Sodium			1000.000	U	1000.000	U	1000.000	U			P
Thallium			25.000	U	25.000	U	25.000	U			P
Vanadium			10.000	U	10.000	U	10.000	U			P
Zinc			20.000	U	20.000	U	20.000	U			P

Comments: SOIL

METALS

-3-

BLANKS

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG NO.: 68024622

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.000	U							P
Antimony			20.000	U							P
Arsenic			10.000	U							P
Barium			10.000	U							P
Beryllium			4.000	U							P
Cadmium			5.000	U							P
Calcium			500.000	U							P
Chromium			10.000	U							P
Cobalt			10.000	U							P
Copper			20.000	U							P
Iron			50.000	U							P
Lead			5.000	U							P
Magnesium			500.000	U							P
Manganese			10.000	U							P
Nickel			40.000	U							P
Potassium			1000.000	U							P
Selenium			10.000	U							P
Silver			10.000	U							P
Sodium			1000.000	U							P
Thallium			25.000	U							P
Vanadium			10.000	U							P
Zinc			20.000	U							P

Comments: SOIL

METALS
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG No.: 68024622

AA CRDL Standard Source: _____

ICP CRDL Standard Source: SPEX/CPI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum				200.0	188.95	94	173.66	87
Antimony				20.0	20.00	100	21.11	106
Arsenic				10.0	11.19	112	11.12	111
Barium				10.0	10.25	102	10.05	100
Beryllium				4.0	4.15	104	4.07	102
Cadmium				5.0	5.14	103	5.14	103
Calcium				500.0	506.10	101	511.03	102
Chromium				10.0	9.89	99	9.68	97
Cobalt				10.0	9.83	98	10.34	103
Copper				20.0	20.81	104	21.03	105
Iron				50.0	54.06	108	41.47	83
Lead				5.0	5.49	110	4.20	84
Magnesium				500.0	505.85	101	505.07	101
Manganese				10.0	10.39	104	10.33	103
Nickel				40.0	41.82	105	39.83	100
Potassium				1000.0	1081.99	108	1062.22	106
Selenium				10.0	10.55	106	11.19	112
Silver				10.0	10.39	104	9.93	99
Sodium				500.0	517.24	103	473.10	95
Thallium				25.0	22.06	88	24.31	97
Vanadium				10.0	9.74	97	9.58	96
Zinc				20.0	20.75	104	20.86	104

Comments: LIQ

METALS
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: _____

Lab Code: STLSAV Case No.: _____ SAS No.: _____ SDG No.: 68024622

AA CRDL Standard Source: _____

ICP CRDL Standard Source: SPEX/CPI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum				200.0	197.79	99	199.58	100
Antimony				20.0	18.50	92	20.27	101
Arsenic				10.0	10.56	106	8.43	84
Barium				10.0	10.36	104	10.47	105
Beryllium				4.0	4.17	104	4.07	102
Cadmium				5.0	5.18	104	4.90	98
Calcium				500.0	505.02	101	489.80	98
Chromium				10.0	9.87	99	9.66	97
Cobalt				10.0	9.48	95	9.60	96
Copper				20.0	20.73	104	20.89	104
Iron				50.0	38.74	77	37.52	75
Lead				5.0	4.53	91	4.00	80
Magnesium				500.0	499.56	100	494.90	99
Manganese				10.0	10.32	103	10.18	102
Nickel				40.0	41.25	103	40.83	102
Potassium				1000.0	1077.07	108	1106.17	111
Selenium				10.0	12.53	125	11.32	113
Silver				10.0	9.85	98	9.94	99
Sodium				500.0	449.91	90	401.48	80
Thallium				25.0	27.84	111	29.38	118
Vanadium				10.0	9.75	98	9.50	95
Zinc				20.0	20.62	103	19.65	98

Comments: SOIL

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SS4-AS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 91.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Aluminum		6030.2769		4662.9341		196.58	696		P	> 4X
Antimony	75 - 125	44.6001		1.9658	U	49.15	91		P	
Arsenic	75 - 125	184.3852		2.0597		196.58	93		P	
Barium	75 - 125	220.0689		18.9860		196.58	102		P	
Beryllium	75 - 125	5.0755		0.1822	J	4.91	100		P	
Cadmium	75 - 125	4.5878		0.4915	U	4.91	93		P	
Calcium	75 - 125	700.5431		186.4127		491.45	105		P	
Chromium	75 - 125	24.6119		4.7047		19.66	101		P	
Cobalt	75 - 125	48.0622		1.0122		49.15	96		P	
Copper	75 - 125	26.1653		1.4448	J	24.57	101		P	
Iron		3720.7109		3088.9519		98.29	643		P	> 4X
Lead	75 - 125	47.9385		2.6232		49.15	92		P	
Magnesium	75 - 125	850.1979		317.0779		491.45	108		P	
Manganese	75 - 125	123.0992		41.5696		49.15	166	F	P	
Nickel	75 - 125	51.4786		2.4410	J	49.15	100		P	
Potassium	75 - 125	811.4623		272.3209		491.45	110		P	
Selenium	75 - 125	178.8959		2.4573	U	196.58	91		P	
Silver	75 - 125	4.5307		0.9829	U	4.91	92		P	
Sodium	75 - 125	550.0312		56.8788	J	491.45	100		P	
Thallium	75 - 125	194.4492		2.4573	U	196.58	99		P	
Vanadium	75 - 125	54.0776		6.9616		49.15	96		P	
Zinc	75 - 125	53.6045		6.8439		49.15	95		P	

Comments: SOIL

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SS4-ASD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 91.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Aluminum		5620.2461		4662.9341		196.58	487		P	>4X
Antimony	75 - 125	44.7084		1.9658	U	49.15	91		P	
Arsenic	75 - 125	185.0059		2.0597		196.58	93		P	
Barium	75 - 125	219.9195		18.9860		196.58	102		P	
Beryllium	75 - 125	5.1058		0.1822		4.91	100		P	
Cadmium	75 - 125	4.6238		0.4915	U	4.91	94		P	
Calcium	75 - 125	675.3207		186.4127		491.45	99		P	
Chromium	75 - 125	24.5200		4.7047		19.66	101		P	
Cobalt	75 - 125	48.2235		1.0122		49.15	96		P	
Copper	75 - 125	26.1560		1.4448		24.57	101		P	
Iron		3308.6089		3088.9519		98.29	223		P	>4X
Lead	75 - 125	47.9613		2.6232		49.15	92		P	
Magnesium	75 - 125	821.4659		317.0779		491.45	103		P	
Manganese	75 - 125	92.9117		41.5696		49.15	104		P	
Nickel	75 - 125	51.5796		2.4410		49.15	100		P	
Potassium	75 - 125	788.8373		272.3209		491.45	105		P	
Selenium	75 - 125	180.2234		2.4573	U	196.58	92		P	
Silver	75 - 125	4.5801		0.9829	U	4.91	93		P	
Sodium	75 - 125	552.0237		56.8788		491.45	101		P	
Thallium	75 - 125	196.0032		2.4573	U	196.58	100		P	
Vanadium	75 - 125	53.6819		6.9616		49.15	95		P	
Zinc	75 - 125	53.6112		6.8439		49.15	95		P	

Comments: SOIL

STL SAVANNAH

METALS
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-SS4-AA

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Aluminum		48541.60		47440.49		2000.0	55		P	>4X
Antimony		499.59		20.00	U	500.0	100		P	
Arsenic		2011.47		20.96		2000.0	100		P	
Barium		2349.66		193.16		2000.0	108		P	
Beryllium		54.93		1.85	J	50.0	106		P	
Cadmium		50.21		5.00	U	50.0	100		P	
Calcium		7267.13		1896.56		5000.0	107		P	
Chromium		253.61		47.87		200.0	103		P	
Cobalt		522.16		10.30		500.0	102		P	
Copper		279.69		14.70	J	250.0	106		P	
Iron		31624.42		31426.87		1000.0	20		P	>4X
Lead		515.06		26.69		500.0	98		P	
Magnesium		8410.01		3225.94		5000.0	104		P	
Manganese		944.17		422.93		500.0	104		P	
Nickel		552.03		24.83	J	500.0	105		P	
Potassium		8215.77		2770.58		5000.0	109		P	
Selenium		1959.89		10.00	U	2000.0	98		P	
Silver		49.53		10.00	U	50.0	99		P	
Sodium		5949.23		578.68	J	5000.0	107		P	
Thallium		2117.81		25.00	U	2000.0	106		P	
Vanadium		570.10		70.83		500.0	100		P	
Zinc		570.69		69.63		500.0	100		P	

Comments: SOIL

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3S

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2721.2490		745.2239		2000.00	99		P
Antimony	75 - 125	521.5739		20.0000	U	500.00	104		P
Arsenic	75 - 125	2063.8540		13.2598		2000.00	103		P
Barium	75 - 125	2254.7839		52.6155		2000.00	110		P
Beryllium	75 - 125	52.1092		4.0000	U	50.00	104		P
Cadmium	75 - 125	51.2254		5.0000	U	50.00	102		P
Calcium		68060.0938		62023.1016		5000.00	121		P
Chromium	75 - 125	206.1333		10.0000	U	200.00	103		P
Cobalt	75 - 125	516.9014		6.0188	J	500.00	102		P
Copper	75 - 125	265.4885		20.0000	U	250.00	106		P
Iron		11191.5498		10128.5898		1000.00	106		P
Lead	75 - 125	503.5423		5.0000	U	500.00	101		P
Magnesium	75 - 125	8327.6006		3284.1311		5000.00	101		P
Manganese	75 - 125	1217.3350		686.0928		500.00	106		P
Nickel	75 - 125	536.6695		2.6539	J	500.00	107		P
Potassium	75 - 125	7778.0479		2045.0590		5000.00	115		P
Selenium	75 - 125	2054.2329		10.0000	U	2000.00	103		P
Silver	75 - 125	50.7786		10.0000	U	50.00	102		P
Sodium	75 - 125	18622.4805		13090.7900		5000.00	111		P
Thallium	75 - 125	2156.7029		25.0000	U	2000.00	108		P
Vanadium	75 - 125	503.3820		10.0000	U	500.00	101		P
Zinc	75 - 125	507.8456		11.1712	J	500.00	99		P

Comments: UIQ

STL SAVANNAH

METALS

-5A-

SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3SD

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2715.9529		745.2239		2000.00	99		P
Antimony	75 - 125	525.1721		20.0000	U	500.00	105		P
Arsenic	75 - 125	2073.3799		13.2598		2000.00	103		P
Barium	75 - 125	2264.8440		52.6155		2000.00	111		P
Beryllium	75 - 125	52.1835		4.0000	U	50.00	104		P
Cadmium	75 - 125	51.2062		5.0000	U	50.00	102		P
Calcium		67279.2813		62023.1016		5000.00	105		P
Chromium	75 - 125	206.1182		10.0000	U	200.00	103		P
Cobalt	75 - 125	516.8450		6.0188		500.00	102		P
Copper	75 - 125	266.2562		20.0000	U	250.00	107		P
Iron		11488.6797		10128.5898		1000.00	136		P
Lead	75 - 125	504.2400		5.0000	U	500.00	101		P
Magnesium	75 - 125	8330.2949		3284.1311		5000.00	101		P
Manganese	75 - 125	1224.4969		686.0928		500.00	108		P
Nickel	75 - 125	535.9573		2.6539		500.00	107		P
Potassium	75 - 125	7776.1440		2045.0590		5000.00	115		P
Selenium	75 - 125	2062.4661		10.0000	U	2000.00	103		P
Silver	75 - 125	50.9764		10.0000	U	50.00	102		P
Sodium	75 - 125	18758.7305		13090.7900		5000.00	113		P
Thallium	75 - 125	2160.6440		25.0000	U	2000.00	108		P
Vanadium	75 - 125	505.1850		10.0000	U	500.00	101		P
Zinc	75 - 125	507.5210		11.1712		500.00	99		P

Comments: LIQ

STL SAVANNAH

METALS
-5B-
POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

WFF1-MW3A

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		2688.58		745.22		2000.0	97		P
Antimony		524.09		20.00	U	500.0	105		P
Arsenic		2060.38		13.26		2000.0	102		P
Barium		2247.44		52.62		2000.0	110		P
Beryllium		51.97		4.00	U	50.0	104		P
Cadmium		51.01		5.00	U	50.0	102		P
Calcium		66012.17		62023.10		5000.0	80		P
Chromium		205.98		10.00	U	200.0	103		P
Cobalt		515.99		6.02	J	500.0	102		P
Copper		266.12		20.00	U	250.0	106		P
Iron		10823.98		10128.59		1000.0	70		P
Lead		503.45		5.00	U	500.0	101		P
Magnesium		8726.47		3284.13		5000.0	109		P
Manganese		1192.98		686.09		500.0	101		P
Nickel		535.33		2.65	J	500.0	107		P
Potassium		8267.83		2045.06		5000.0	124		P
Selenium		2039.94		10.00	U	2000.0	102		P
Silver		54.30		10.00	U	50.0	109		P
Sodium		18890.35		13090.79		5000.0	116		P
Thallium		2141.62		25.00	U	2000.0	107		P
Vanadium		503.22		10.00	U	500.0	101		P
Zinc		511.05		11.17	J	500.0	100		P

Comments: LJQ

STL SAVANNAH

METALS

-3-

BLANKS

Contract:

Lab Code: STLSAV Case No.: SAS No.: SDG NO.: 68024622

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Mercury	0.2000	U	0.0816	J	0.2000	U	0.2000	U	0.0857	J	CV

Comments: LIQ

Serial Number 93812

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFFI-WWTP #1		
STL (LAB) PROJECT MANAGER: ABBIE PAGE	P.O. NUMBER: 0057557	CONTRACT NO.
CLIENT (SITE) PM: THERESA OFFNER	CLIENT PHONE: 770-325-7961	CLIENT FAX
CLIENT NAME: WESTON SOLUTIONS	CLIENT E-MAIL: THERESA.OFFNER@WESTONSOLUTIONS.COM	
CLIENT ADDRESS: 5430 METRIC PL (STE 100) NORCROSS, GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 3

STANDARD REPORT DELIVERY: X
DATE DUE:
EXPEDITED REPORT DELIVERY (SURCHARGE): O
DATE DUE:
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC, PEST/PCB	CYANIDE	MERCURY/MERCURY	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2/22/07	1515	GCF WFFI-MW6		X				X	X	X	X		
	1520	WFFI-SL02			X			X	X	X	X		
	1530	WFFI-SL03			X			X	X	X	X		
	1610	WFFI-SS9			X			X	X	X	X		
	1645	WFFI-SS10			X			X	X	X	X		
	1700	WFFI-MW7		X				X	X	X	X		
	1730	RINSATE 3		X				X	X	X	X		STAINLESS BOWL RINSE BLANK
2/23/07	0730	WFFI-MW3		X				X	X	X	X		MS/MSD
	0745	WFFI-MW3-D		X				X	X	X	X		
	1010	WFFI-MW20		X				X	X	X	X		
	1020	WFFI-SS4-A			X			X	X	X	X		MS/MSD
	115	WFFI-SS5			X			X	X	X	X		

TEMP.: 0.3/0.1/0.2/0.3/0.2/0.4/0.2/0.3/0.1/0.3/0.3

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/24/07	1000	[signature]	2/26/07	1345			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	2/24/07	1000						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
KL	2/27/07	0926	YES O NO O		60-24622	

Serial Number 33561

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFFI - WWTP #1		VA
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Page	00 59557	
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Teresa Offner	770 325 7561	
CLIENT NAME	CLIENT E-MAIL	
Weston		
CLIENT ADDRESS		
5420 Metric Pl, Ste 100, Norcross, GA		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF 3

STANDARD REPORT DELIVERY ⊗
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: NUMBER OF CONTAINERS SUBMITTED — VOC	SVOC Pest/PCB	CYANIDE	Metals/Merc	SVOC	Pest/PCB	Waste Char				REMARKS
2/23/07	1130	WFFI - SS7			X			X	X	X	X							
	1535	WFFI - SL1			X			X	X	X	X							
	1615	Purge water		X				~~X~~	S/M	X	~~X~~	~~X~~		X				
	1740	Rinsate 4		X				X		X	X	X	X					
~~2/23/07~~	~~1515~~	~~WFFI-MW6~~		X				X		X	X	X	X					S/M
	1700	WFFI-MW7		X				X		X	X	X	X					S/M
2/23/07	0930	WFFI-MW3		X				X		X	X	X	X					
	0945	WFFI-MW3-D		X				X		X	X	X	X					
	1010	WFFI-MW20		X				X		X	X	X	X					
	1150	WFFI-MW5		X				X		X	X	X	X					
	1300	WFFI-MW4		X				X		X	X	X	X					
	1430	WFFI-MW2		X				X		X	X	X	X					

TEMP.: 0.3/0.1/0.2/0.0/0.2
0.4/0.2/0.3/0.1/0.3
0.3

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S/ Madney	2/24/07	1000	Amelia Kennedy	2/26/07	1345			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Amelia Kennedy	2/24/07	1000						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
KL	2/27/07	0926	YES ○ NO ○		680-24622	

Serial Number 94410

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.stl-inc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFF - WWTP #1		
STL (LAB) PROJECT MANAGER: Abbie Page	P.O. NUMBER: 0057557	CONTRACT NO.
CLIENT (SITE) PM: Teresa Offner	CLIENT PHONE	CLIENT FAX
CLIENT NAME: Weston	CLIENT E-MAIL	
CLIENT ADDRESS		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 3 OF 3

STANDARD REPORT DELIVERY ○
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC	Pest/PCB	Metals/Mercury	Cyanide	REMARKS
2/23/07	1525	WFF1-MW1		X				X	X	X	X	X	
		TB-4		X				X					
		TB-5		X				X					

NUMBER OF CONTAINERS SUBMITTED

TEMP.: 0.3/0.1/0.2/0.3/0.2
0.4/0.2/0.3/0.1
0.3/0.3

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S/ Madey	2/24/07	1000	Amanda Kennedy	2/27/07	1345			
RECEIVED BY: (SIGNATURE) Amanda Kennedy	DATE 2/24/07	TIME 1000	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
RC	2/27/07	0926		680 –	24622	

Weston Solutions, Inc.
5430 Metric Place
Suite 100
Norcross, GA 30092
770-325-7900 • FAX 770-325-7950
www.westonsolutions.com

Memorandum
Norcross Office

DATE: April 25, 2007

TO: Teresa Offner, Project Manager

FROM: Paula MacLaren, Environmental Scientist

RE: Organic Data Validation and Usability Report
Wallops Island Flight Facility, VA - Old Waste Water Treatment Plant No.1
Site Investigation – Sampling Event
Contract Number (No.) W91236-05-D-0036
Laboratory Sample Delivery Group (SDG) No. 680-24622

OVERVIEW

Severn Trent Laboratories, Inc. analyzed 5 soil samples, 3 sludge samples, 8 water samples, and 6 field quality control (QC) samples collected by Weston Solutions, Inc., (WESTON) at the Old Waste Water Treatment Plant No. 1 located at Wallops Island Flight Facility, Virginia, on February 22 through 23, 2007. The sample identifications are presented below:

Soil/Sludge Samples		Aqueous Samples	Field QC Samples
WFF1-SS4-A		WFF1-MW1	WFF1-SS5-D (soil-QC)
WFF1-SS5		WFF1-MW2	WFF1-MW3-D (aqueous-QC)
WFF1-SS7		WFF1-MW3	Rinsate-3
WFF1-SS9		WFF1-MW4	Rinsate-4
WFF1-SS10		WFF1-MW5	TB-4
WFF1-SL1	(sludge)	WFF1-MW6	TB-5
WFF1-SL02	(sludge)	WFF1-MW7	
WFFI-SL03	(sludge)	WFF1-MW20	

The samples were analyzed for the following parameters:

- Volatile organic compounds (VOCs) target compound list (TCL); *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846), Method 8260B
- Semivolatile organic compounds (SVOCs) TCL; SW-846 Method 8270C
- Organochlorine pesticide TCL; SW-846 Method 8081A
- Polychlorinated biphenyls (PCBs) TCL; SW-846 Method 8082

SUMMARY

WESTON performed data validation in accordance with the *U.S. Environmental Protection Agency (USEPA) Region III Modifications To National Functional Guidelines for Organic Data Review Multi-Media, Multi*-Concentration, September 1994. This report only addresses quality assurance/quality control (QA/QC) problems which affect data usability in meeting site objectives. The following quality assurance/quality control (QA/QC) criteria were reviewed:

- Holding times, sample preservation and storage
- Sample condition upon laboratory receipt
- Field and laboratory sample identification comparison
- Sample preparation
- Method detection limits (MDL) and reporting limits (RL)
- Instrument performance checks
- 4,4'-DDT and endrin breakdown evaluation
- Instrument calibration
- Initial and continuing calibration verification summaries
- Initial and continuing calibration blank summaries
- Internal standards
- Method blanks
- Ambient, equipment, and trip blanks (as applicable)
- System monitoring compound spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD)
- Laboratory control sample (LCS)
- Qualitative and quantitative compound identification
- Second column confirmation (as applicable)
- Tentatively identified compounds
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The laboratory deliverable reports met the requirements and format of a contract laboratory program (CLP) for organic compounds data deliverable package. The following QA/QC sample analysis observations were noted:

MAJOR PROBLEMS

Semivolatile Organic Analysis:

- Initial calibration on instrument MSG5973 for March 1, 2007 showed 2,4-dinitrophenol exceeding the recommended QA/QC limit of 30.0% RSD; at 44.7%. In addition, the relative response factors (RRF) at the low end of the calibration curve were less than 0.05. Reported

non-detection of 2,4-dinitrophenol for site water samples, therefore, have been qualified as rejected (R) and the samples are listed below:

WFFI-MW1	WFFI-MW4	WFFI-MW20
WFFI-MW2	WFFI-MW5	Rinsate 3
WFFI-MW3	WFFI-MW6	Rinsate 4
WFFI-MW3-D	WFFI-MW7	

MINOR PROBLEMS

Volatile organic analyses:

- Due to the elevated level of moisture in sludge sample WFFI-SL1, analysis of this sample may not be representative of the matrix of interest (solid phase). In some instances, the results for this sample may more accurately reflect the concentration of contaminants in the water fraction of the sample. Detection limits were elevated as a result of the high percent moisture (92.5 percent).

- The continuing calibration verification (CCV) QC check sample on instrument MSM5972 (solid sample analyses) performed on March 6, 2007, showed acetone exceeding the recommended QA/QC limit of 25.0 percent drift (%D); at 28.8 %D. Positive acetone results for the following site soil samples have been qualified as estimated (J):

  WFFI-SL03
  WFFI-SS7

- The CCV QC check sample on instrument MSO5973 (aqueous sample analyses) performed on March 6, 2007, showed acetone (34.7 %D), bromomethane (-37.9 %D), methyl ethyl ketone (41.9 %D), methyl isobutyl ketone (41.5 %D), and 2-hexanone (48.4 %D) exceeding the recommended QA/QC limit of 25.0 %D. Their relative response factors (RRF) were greater than 0.05. Positive sample results for these compounds for the following site water samples have been qualified as estimated (J):

  WFFI-MW3 (acetone)
  WFFI-MW3-D (acetone, methyl ethyl ketone)
  WFFI-MW20 (acetone, methyl ethyl ketone)

- The CCV QC check sample on instrument MSO5973 (aqueous sample analyses) performed on March 7, 2007, showed bromomethane exceeding the recommended QA/QC limit of 25.0 %D; -41.1 %D. The RRF was greater than 0.05. Bromomethane was not detected in any associated site water samples, therefore, no data qualifiers were applied.

- Toluene-d8 system monitoring compound percent recovery for sludge sample WFFI-SL1 was slightly below the recommended QA/QC lower limit of 84 percent recovery; at 83 %. Both

detected and non-detected volatile target compounds reported for sample WFFI-SL1 have been qualified as estimated (J and UJ respectively).

- The site QC trip blank sample, TB-4, showed methylene chloride contamination at 0.57 micrograms per liter (ug/L). The following aqueous site samples with positive concentrations less than 10 times the trip blank contaminant have been qualified as having possible contamination (B) and are considered invalid:

  WFFI-MW3
  WFFI-MW3-D
  WFFI-MW20

- Rinsate 3 field QC sample, collected on February 22, 2007 showed 4.6 µg/L toluene indicating possible field contamination. No associated site aqueous samples collected on February 22, 2007 contained toluene, therefore, no data qualifiers were applied.

- Rinsate 4 field QC sample, collected on February 23, 2007, showed 3.9 ug/L toluene contamination. The following site aqueous samples also collected on February 23, 2007 and with concentrations less than 5 times the rinsate contaminant have been qualified as having possible contamination (B) and are considered invalid:

  WFFI-MW3
  WFFI-MW3-D
  WFFI-MW20

- Field duplicate samples were collected for sample location WFFI-MW3 (aqueous) and WFFI-SS5 (soil). Comparison data for both sample sets were within 20 relative percent difference (RPD).

Semivolatile Organic Analysis:

- Due to the elevated level of moisture in sludge sample WFFI-SL1, analysis of this sample may not be representative of the matrix of interest (solid phase). In some instances, the results for this sample may more accurately reflect the concentration of contaminants in the water fraction of the sample. Detection limits were elevated as a result of the high percent moisture (92.5 percent).

- Instrument MSN5973 CCV QC check sample analyzed on March 13, 2007, showed 2,4-dinitrophenol percent drift exceeding the recommended QA/QC limit of ±25.0%; at -29.1%. The RRF was greater than 0.05. This compound was not detected in any of the associated site solid samples. Therefore, reported non-detected results have been qualified as estimated (UJ) for the following site sludge samples:

  WFFI-SL1 WFFI-SL02 WFFI-SL03

- Instrument MST5973 CCV QC check sample analyzed on March 8, 2007 showed 2,4-dinitrophenol percent drift (%D) exceeding the recommended QA/QC limit of ±25.0%; at -32.7. The RRF was greater than 0.05. This compound was not detected in any of the associated site soil samples. Therefore, reported non-detected results have been qualified as estimated (UJ) for the following site soil samples:

WFFI-SS4-A	WFFI-SS7
WFFI-SS5	WFFI-SS9
WFFI-SS5-D	WFFI-SS10

- Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on soil sample WFFI-SS4-A. The MS analysis showed percent recoveries for n-nitrosodi-n-proplamine (35%) and 1,2,4-trichlorobenzene (31%), below the *Region III Modifications To National Functional Guidelines* recommended QA/QC lower limit of 41 and 38 percent, respectively. The MSD analysis showed all spiked component percent recoveries within their recommended QA/QC limits. The results for these compounds in the following site samples with similar matrices have been qualified as biased low (UL):

WFFI-SS4-A	WFFI-SS7
WFFI-SS5	WFFI-SS9
WFFI-SS5-D	WFFI-SS10
WFFI-SS6	

  In addition, analytical precision, measured as relative percent difference (RPD), showed 1,2,4-trichlorobenzene (25 RPD), acenaphthene (32 RPD), and pyrene (42 RPD) exceeding their QA/QC recommended limit. The reported data for acenaphthene and pyrene in the following site samples with similar matrices have been qualified as estimated (UJ):

WFFI-SS4-A	WFFI-SS7
WFFI-SS5	WFFI-SS9
WFFI-SS5-D	WFFI-SS10
WFFI-SS6	

- Field duplicate samples were collected for sample location WFFI-MW3 (aqueous) and WFFI-SS5 (soil). Comparison data for the water sample set was within 50 RPD for 3&4 methylphenol; the other compounds within 20 RPD. Comparison data for the soil sample set was within 20 RPD.

Pesticide/PCB Analysis:

- Due to the elevated level of moisture in sludge sample WFFI-SL1, analysis of this sample may not be representative of the matrix of interest (solid phase). In some instances, the results for this

sample may more accurately reflect the concentration of contaminants in the water fraction of the sample. Detection limits were elevated as a result of the high percent moisture (92.5 percent).

- Sludge samples WFFI-SL02 and WFFI-SL03 required 1:50 and 1:40 dilutions, respectively, due to elevated levels of DDx constituents. Sludge sample WFFI-SL1 required a 1:10 dilution to reduce matrix interference in quantifying DDx compounds.

- The continuing calibration sequence was not followed as recommended with bracketing at every 12-hour intervals. The next sequential continuing standard mixture analyzed after sample analyses was used to evaluate instrument performance.

- The end continuing calibration standard mixture (March 9, 2007 at 1151) which bracketed samples analyzed on March 8, 2007 showed 4,4-DDD and 4,4'-DDT compound %D (28.7 %D and -35.1 %D, respectively) exceeding the recommended QA/QC limit of ±25.0 %D. The following samples with reported positive 4,4-DDD and 4,4'-DDT concentrations have been qualified as estimated (J):

  WFFI-SS-10
  WFFI-SL02 (diluted)
  WFFI-SL03 (diluted)

- The continuing calibration standard mixture (March 11, 2007 at 1052) which bracketed diluted sample WFFI-SL1 analyzed on March 11, 2007 showed 4,4'-DDT (instrument SGJECD1 at -39.9%D; SGJECD2 at -31.0%D) and methoxychlor (SGJECD2 at -25.6%D) compounds exceeding the recommended QA/QC limit of ±25.0 %D. The reported positive value for 4,4'-DDT, and the non-detected value for methoxychlor compounds have been qualified as estimated (J, UJ) for sample WFFI-SL1.

- Several soil samples which had two (from different columns) out of four spiked percent recoveries below the QA/QC lower limit of 30 percent but were greater than 10 percent. Reported positive results have been qualified as estimated (J) and all non-detected compounds have been qualified as estimated (UJ) in the following site samples:

  WFFI-SS9
  WFFI-SS10

- Several water samples which had two (from different columns) out of four spiked component percent recoveries below the QA/QC lower limit of 30 percent but were greater than 10 percent. Reported positive results have been qualified as estimated (J) and all non-detected compounds have been qualified as estimated (UJ) in the following site samples:

WFFI-MW3	WFFI-MW20
WFFI-MW3-D	Rinsate 4
WFFI-MW6	

- Several sample analyses showed the agreement between the two columns exceeding the recommended QA/QC range of no greater than 40 RPD. In reviewing the raw data chromatograms, no anomalies were noted for the following samples. The more conservative, higher concentrations, as recommended in method SW-846 have been reported for the following samples as estimated values (J):

  WFFI-SL02 (dieldrin)
  WFFI-SL1 diluted (DDE, DDT)

- Field duplicate samples were collected for sample locations WFFI-MW3 (aqueous) and WFFI-SS5 (soil). Comparison data for the water sample set was within 45 RPD for 4,4'-DDE; the other compounds within 20 RPD. Comparison data for the soil sample set was within 20 RPD.

NOTES

- Soil sample WFFI-SS5-D was not listed on the chain-of-custody.

- Samples were received by the laboratory slightly below the QA/QC recommended preservative temperature of 4°C±2°C; 0.1, 0.2, 0.3, and 0.4°C. Based on this observation, it has been determined that no impact to sample data had occurred.

- The soil sample technical holding time for sample organic extraction/analysis was evaluated using the USEPA *National Functional Guideline* technical holding time of 14-days for preserved VOC analyses; 14-days to extraction and 40-days to analysis for SVOC and pesticides/PCB analyses.

- For volatile organic analyses, the laboratory used system monitoring compound dibromofluoromethane, as allowed in SW-846 method 8260, in place of 1,2-dichloroethane-d4.

- For pesticide/PCB analyses, instrument performance was monitored using the internal standard bromonitrobenzene (BNB) as described in SW-846 method 8081A.

- Tentatively identified compounds (TICs) are not included in this data package.

- When there are several QC data qualifiers applied to a value, the hierarchy of qualifiers is followed; R, B, L, K, J.

The laboratory has provided additional information in their case narrative. Based on the evaluation of all information provided in the analytical data package, the results are highly usable with the data validation qualifiers as noted. The sample data is presented in the following attachments.

ATTACHMENTS

Appendix A – Glossary of Data Qualifier Codes
Appendix B – Data Summary Tables
Appendix C – Laboratory Reported Results
Appendix D – Support Documentation

APPENDIX A

Glossary of Data Qualifier Codes
(Organic)

DATA QUALIFIER CODES
(Organic Analyses)

Codes Related To Identification

(Confidence concerning presence or absence of compounds):

U = the compound was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

R = the data are unusable. (Note: The compound may or may not be present.)

Codes Related To Quantitation

(Can be used for both positive results and sample quantitation limits):

J = the associated value is an estimated quantity

UJ = the compound was analyzed for, but was not detected. The associated detection limit is an estimate and may be inaccurate or imprecise.

K = the compound is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L = the compound is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL = the compound was not detected, and the actual quantitation limit is probably higher than reported.

APPENDIX B

Data Summary Tables
(Organic)

TABLE 1A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Volatile Organic Compounds**			
10	Acetone	58 U	50 U	47 U
5.0	Benzene	5.8 U	5.0 U	4.7 U
5.0	Bromoform	5.8 U	5.0 U	4.7 U
5.0	Bromomethane	5.8 U	5.0 U	4.7 U
5.0	Carbon disulfide	5.8 U	5.0 U	4.7 U
5.0	Carbon tetrachloride	5.8 U	5.0 U	4.7 U
5.0	Chlorobenzene	5.8 U	5.0 U	4.7 U
5.0	Chlorodibromomethane	5.8 U	5.0 U	4.7 U
5.0	Chloroethane	5.8 U	5.0 U	4.7 U
5.0	Chloroform	5.8 U	5.0 U	4.7 U
5.0	Chloromethane	5.8 U	5.0 U	4.7 U
5.0	cis-1,2-Dichloroethene	5.8 U	5.0 U	4.7 U
5.0	cis-1,3-Dichloropropene	5.8 U	5.0 U	4.7 U
5.0	Dichlorobromomethane	5.8 U	5.0 U	4.7 U
5.0	1,1-Dichloroethane	5.8 U	5.0 U	4.7 U
5.0	1,2-Dichloroethane	5.8 U	5.0 U	4.7 U
5.0	1,1-Dichloroethene	5.8 U	5.0 U	4.7 U
5.0	1,2-Dichloropropane	5.8 U	5.0 U	4.7 U
5.0	Ethylbenzene	5.8 U	5.0 U	4.7 U
10	2-Hexanone	29 U	25 U	24 U
5.0	Methylene Chloride	5.8 U	5.0 U	4.7 U
10	Methyl Ethyl Ketone	29 U	25 U	24 U
10	Methyl isobutyl ketone	29 U	25 U	24 U
5.0	Styrene	5.8 U	5.0 U	4.7 U
5.0	1,1,2,2-Tetrachloroethane	5.8 U	5.0 U	4.7 U
5.0	Tetrachloroethene	5.8 U	5.0 U	4.7 U
5.0	Toluene	5.8 U	5.0 U	4.7 U
5.0	trans-1,2-Dichloroethene	5.8 U	5.0 U	4.7 U
5.0	trans-1,3-Dichloropropene	5.8 U	5.0 U	4.7 U
5.0	1,1,1-Trichloroethane	5.8 U	5.0 U	4.7 U
5.0	1,1,2-Trichloroethane	5.8 U	5.0 U	4.7 U
5.0	Trichloroethene	5.8 U	5.0 U	4.7 U
5.0	Vinyl chloride	5.8 U	5.0 U	4.7 U
5.0	Xylenes, Total	12 U	10 U	9.4 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 1B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Volatile Organic Compounds**			
10	Acetone	**84 J**	49 U	52 U
5.0	Benzene	4.2 U	4.9 U	5.2 U
5.0	Bromoform	4.2 U	4.9 U	5.2 U
5.0	Bromomethane	4.2 U	4.9 U	5.2 U
5.0	Carbon disulfide	4.2 U	4.9 U	5.2 U
5.0	Carbon tetrachloride	4.2 U	4.9 U	5.2 U
5.0	Chlorobenzene	4.2 U	4.9 U	5.2 U
5.0	Chlorodibromomethane	4.2 U	4.9 U	5.2 U
5.0	Chloroethane	4.2 U	4.9 U	5.2 U
5.0	Chloroform	4.2 U	4.9 U	5.2 U
5.0	Chloromethane	4.2 U	4.9 U	5.2 U
5.0	cis-1,2-Dichloroethene	4.2 U	4.9 U	5.2 U
5.0	cis-1,3-Dichloropropene	4.2 U	4.9 U	5.2 U
5.0	Dichlorobromomethane	4.2 U	4.9 U	5.2 U
5.0	1,1-Dichloroethane	4.2 U	4.9 U	5.2 U
5.0	1,2-Dichloroethane	4.2 U	4.9 U	5.2 U
5.0	1,1-Dichloroethene	4.2 U	4.9 U	5.2 U
5.0	1,2-Dichloropropane	4.2 U	4.9 U	5.2 U
5.0	Ethylbenzene	4.2 U	4.9 U	5.2 U
10	2-Hexanone	21 U	25 U	26 U
5.0	Methylene Chloride	4.2 U	4.9 U	5.2 U
10	Methyl Ethyl Ketone	**8.3 J**	25 U	26 U
10	Methyl isobutyl ketone	21 U	25 U	26 U
5.0	Styrene	4.2 U	4.9 U	5.2 U
5.0	1,1,2,2-Tetrachloroethane	4.2 U	4.9 U	5.2 U
5.0	Tetrachloroethene	4.2 U	**6.7**	5.2 U
5.0	Toluene	4.2 U	4.9 U	5.2 U
5.0	trans-1,2-Dichloroethene	4.2 U	4.9 U	5.2 U
5.0	trans-1,3-Dichloropropene	4.2 U	4.9 U	5.2 U
5.0	1,1,1-Trichloroethane	4.2 U	4.9 U	5.2 U
5.0	1,1,2-Trichloroethane	4.2 U	4.9 U	5.2 U
5.0	Trichloroethene	4.2 U	4.9 U	5.2 U
5.0	Vinyl chloride	4.2 U	4.9 U	5.2 U
5.0	Xylenes, Total	8.3 U	9.8 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 1C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	7.5	62.9	61.3
CRQL	**Volatile Organic Compounds**			
10	Acetone	**630 J**	**740**	**55 J**
5.0	Benzene	71 UJ	9.5 U	11 U
5.0	Bromoform	71 UJ	9.5 U	11 U
5.0	Bromomethane	71 UJ	9.5 U	11 U
5.0	Carbon disulfide	71 UJ	9.5 U	11 U
5.0	Carbon tetrachloride	71 UJ	9.5 U	11 U
5.0	Chlorobenzene	71 UJ	9.5 U	11 U
5.0	Chlorodibromomethane	71 UJ	9.5 U	11 U
5.0	Chloroethane	71 UJ	9.5 U	11 U
5.0	Chloroform	71 UJ	9.5 U	11 U
5.0	Chloromethane	71 UJ	9.5 U	11 U
5.0	cis-1,2-Dichloroethene	71 UJ	9.5 U	11 U
5.0	cis-1,3-Dichloropropene	71 UJ	9.5 U	11 U
5.0	Dichlorobromomethane	71 UJ	9.5 U	11 U
5.0	1,1-Dichloroethane	71 UJ	9.5 U	11 U
5.0	1,2-Dichloroethane	71 UJ	9.5 U	11 U
5.0	1,1-Dichloroethene	71 UJ	9.5 U	11 U
5.0	1,2-Dichloropropane	71 UJ	9.5 U	11 U
5.0	Ethylbenzene	71 UJ	9.5 U	11 U
10	2-Hexanone	**130 J**	47 U	55 U
5.0	Methylene Chloride	71 UJ	9.5 U	11 U
10	Methyl Ethyl Ketone	**210 J**	**77**	55 U
10	Methyl isobutyl ketone	**91 J**	47 U	55 U
5.0	Styrene	71 UJ	9.5 U	11 U
5.0	1,1,2,2-Tetrachloroethane	**29 J**	9.5 U	11 U
5.0	Tetrachloroethene	71 UJ	**5.1 J**	11 U
5.0	Toluene	**1200 J**	**6.2 J**	11 U
5.0	trans-1,2-Dichloroethene	71 UJ	9.5 U	11 U
5.0	trans-1,3-Dichloropropene	71 UJ	9.5 U	11 U
5.0	1,1,1-Trichloroethane	71 UJ	9.5 U	11 U
5.0	1,1,2-Trichloroethane	71 UJ	9.5 U	11 U
5.0	Trichloroethene	71 UJ	9.5 U	11 U
5.0	Vinyl chloride	71 UJ	9.5 U	11 U
5.0	Xylenes, Total	140 UJ	19 U	22 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported concentrations above laboratory detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 1D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
CRQL	**Volatile Organic Compounds**				
25	Acetone	25 U	25 U	**52 J**	**50 J**
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	**0.65 B**	**0.57 B**
10	Methyl Ethyl Ketone	10 U	10 U	**17**	**16 J**
10	Methyl isobutyl ketone	10 U	10 U	10 U	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	**4.4**	1.0 U	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U	**0.77 B**	**0.66 B**
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
NA	Not analyzed
Bold	Reported concentrations above laboratory detection limit

TABLE 1E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
CRQL	**Volatile Organic Compounds**					
25	Acetone	25 U	25 U	25 U	25 U	**47 J**
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	5.0 U	5.0 U	**0.58 B**
10	Methyl Ethyl Ketone	10 U	10 U	10 U	10 U	**15 J**
10	Methyl isobutyl ketone	10 U	10 U	10 U	10 U	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Toluene	1.0 U	1.0 U	1.0 U	1.0 U	**0.64 B**
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
Bold	Reported value is above laboratory method detection limit

TABLE 1F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4	TB-4	TB-5
	Sample Date	2/22/2007	2/23/2007	2/24/2007	2/24/2007
	Location	Field QC	Field QC	Field QC	Field QC
	Dilution Factor	1.0	1.0	1.0	1.0
CRQL	**Volatile Organic Compounds**				
25	Acetone	25 U	25 U	25 U	25 U
1.0	Benzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromoform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Carbon disulfide	2.0 U	2.0 U	2.0 U	2.0 U
1.0	Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chlorodibromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloroform	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Dichlorobromomethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U
10	2-Hexanone	10 U	10 U	10 U	10 U
5.0	Methylene Chloride	5.0 U	5.0 U	**0.57 J**	5.0 U
10	Methyl Ethyl Ketone	10 U	10 U	10 U	10 U
10	Methyl isobutyl ketone	10 U	10 U	10 U	10 U
1.0	Styrene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Toluene	**4.6**	**3.9**	1.0 U	1.0 U
1.0	trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U
1.0	Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U
2.0	Xylenes, Total	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Semivolatile Organic Compounds**			
330	Acenaphthene	360 UJ	390 UJ	390 UJ
330	Acenaphthylene	360 U	390 U	390 U
330	Anthracene	360 U	390 U	390 U
330	Benzo[a]anthracene	360 U	390 U	390 U
330	Benzo[a]pyrene	360 U	390 U	390 U
330	Benzo[b]fluoranthene	360 U	390 U	390 U
330	Benzo[g,h,i]perylene	360 U	390 U	390 U
330	Benzo[k]fluoranthene	360 U	390 U	390 U
330	Bis(2-chloroethoxy)methane	360 U	390 U	390 U
330	Bis(2-chloroethyl)ether	360 U	390 U	390 U
330	bis(chloroisopropyl) ether	360 U	390 U	390 U
330	Bis(2-ethylhexyl) phthalate	360 U	390 U	390 U
330	4-Bromophenyl phenyl ether	360 U	390 U	390 U
330	Butyl benzyl phthalate	360 U	390 U	390 U
330	Carbazole	360 U	390 U	390 U
660	4-Chloroaniline	720 U	780 U	770 U
330	4-Chloro-3-methylphenol	360 U	390 U	390 U
330	2-Chloronaphthalene	360 U	390 U	390 U
330	2-Chlorophenol	360 U	390 U	390 U
330	4-Chlorophenyl phenyl ether	360 U	390 U	390 U
330	Chrysene	360 U	390 U	390 U
330	Dibenz(a,h)anthracene	360 U	390 U	390 U
330	Dibenzofuran	360 U	390 U	390 U
330	1,3-Dichlorobenzene	360 U	390 U	390 U
330	1,4-Dichlorobenzene	360 U	390 U	390 U
330	1,2-Dichlorobenzene	360 U	390 U	390 U
660	3,3'-Dichlorobenzidine	720 U	780 U	770 U
330	2,4-Dichlorophenol	360 U	390 U	390 U
330	Diethyl phthalate	360 U	390 U	390 U
330	2,4-Dimethylphenol	360 U	390 U	390 U
330	Dimethyl phthalate	360 U	390 U	390 U
330	Di-n-butyl phthalate	360 U	390 U	390 U
1700	4,6-Dinitro-2-methylphenol	1900 U	2000 U	2000 U
1700	2,4-Dinitrophenol	1900 UJ	2000 UJ	2000 UJ
330	2,4-Dinitrotoluene	360 U	390 U	390 U
330	2,6-Dinitrotoluene	360 U	390 U	390 U
330	Di-n-octyl phthalate	360 U	390 U	390 U
330	Fluoranthene	360 U	390 U	390 U

TABLE 2A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Semivolatile Organic Compounds**			
330	Fluorene	360 U	390 U	390 U
330	Hexachlorobenzene	360 U	390 U	390 U
330	Hexachlorobutadiene	360 U	390 U	390 U
330	Hexachlorocyclopentadiene	360 U	390 U	390 U
330	Hexachloroethane	360 U	390 U	390 U
330	Indeno[1,2,3-cd]pyrene	360 U	390 U	390 U
330	Isophorone	360 U	390 U	390 U
330	2-Methylnaphthalene	360 U	390 U	390 U
330	2-Methylphenol	360 U	390 U	390 U
330	3 & 4 Methylphenol	360 U	390 U	390 U
330	Naphthalene	360 U	390 U	390 U
1700	2-Nitroaniline	1900 U	2000 U	2000 U
1700	3-Nitroaniline	1900 U	2000 U	2000 U
1700	4-Nitroaniline	1900 U	2000 U	2000 U
330	Nitrobenzene	360 U	390 U	390 U
330	2-Nitrophenol	360 U	390 U	390 U
1700	4-Nitrophenol	1900 U	2000 U	2000 U
330	N-Nitrosodi-n-propylamine	360 UL	390 UL	390 UL
330	N-Nitrosodiphenylamine	360 U	390 U	390 U
1700	Pentachlorophenol	1900 U	2000 U	2000 U
330	Phenanthrene	360 U	390 U	390 U
330	Phenol	360 U	390 U	390 U
330	Pyrene	360 UJ	390 UJ	390 UJ
330	1,2,4-Trichlorobenzene	360 UL	390 UL	390 UL
330	2,4,6-Trichlorophenol	360 U	390 U	390 U
330	2,4,5-Trichlorophenol	360 U	390 U	390 U

Notes:

B	Present in laboratory blank and/or field QC samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Semivolatile Organic Compounds**			
330	Acenaphthene	380 UJ	430 UJ	420 UJ
330	Acenaphthylene	380 U	430 U	420 U
330	Anthracene	380 U	430 U	420 U
330	Benzo[a]anthracene	380 U	430 U	420 U
330	Benzo[a]pyrene	380 U	430 U	420 U
330	Benzo[b]fluoranthene	380 U	430 U	420 U
330	Benzo[g,h,i]perylene	380 U	430 U	420 U
330	Benzo[k]fluoranthene	380 U	430 U	420 U
330	Bis(2-chloroethoxy)methane	380 U	430 U	420 U
330	Bis(2-chloroethyl)ether	380 U	430 U	420 U
330	bis(chloroisopropyl) ether	380 U	430 U	420 U
330	Bis(2-ethylhexyl) phthalate	380 U	430 U	420 U
330	4-Bromophenyl phenyl ether	380 U	430 U	420 U
330	Butyl benzyl phthalate	380 U	430 U	420 U
330	Carbazole	380 U	430 U	420 U
660	4-Chloroaniline	770 U	860 U	820 U
330	4-Chloro-3-methylphenol	380 U	430 U	420 U
330	2-Chloronaphthalene	380 U	430 U	420 U
330	2-Chlorophenol	380 U	430 U	420 U
330	4-Chlorophenyl phenyl ether	380 U	430 U	420 U
330	Chrysene	380 U	430 U	420 U
330	Dibenz(a,h)anthracene	380 U	430 U	420 U
330	Dibenzofuran	380 U	430 U	420 U
330	1,3-Dichlorobenzene	380 U	430 U	420 U
330	1,4-Dichlorobenzene	380 U	430 U	420 U
330	1,2-Dichlorobenzene	380 U	430 U	420 U
660	3,3'-Dichlorobenzidine	770 U	860 U	820 U
330	2,4-Dichlorophenol	380 U	430 U	420 U
330	Diethyl phthalate	380 U	430 U	420 U
330	2,4-Dimethylphenol	380 U	430 U	420 U
330	Dimethyl phthalate	380 U	430 U	420 U
330	Di-n-butyl phthalate	**36 J**	430 U	420 U
1700	4,6-Dinitro-2-methylphenol	2000 U	2200 U	2100 U
1700	2,4-Dinitrophenol	2000 UJ	2200 UJ	2100 UJ
330	2,4-Dinitrotoluene	380 U	430 U	420 U
330	2,6-Dinitrotoluene	380 U	430 U	420 U
330	Di-n-octyl phthalate	380 U	430 U	420 U
330	Fluoranthene	380 U	430 U	420 U

TABLE 2B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Semivolatile Organic Compounds**			
330	Fluorene	380 U	430 U	420 U
330	Hexachlorobenzene	380 U	430 U	420 U
330	Hexachlorobutadiene	380 U	430 U	420 U
330	Hexachlorocyclopentadiene	380 U	430 U	420 U
330	Hexachloroethane	380 U	430 U	420 U
330	Indeno[1,2,3-cd]pyrene	380 U	430 U	420 U
330	Isophorone	380 U	430 U	420 U
330	2-Methylnaphthalene	380 U	430 U	420 U
330	2-Methylphenol	380 U	430 U	420 U
330	3 & 4 Methylphenol	380 U	430 U	420 U
330	Naphthalene	380 U	430 U	420 U
1700	2-Nitroaniline	2000 U	2200 U	2100 U
1700	3-Nitroaniline	2000 U	2200 U	2100 U
1700	4-Nitroaniline	2000 U	2200 U	2100 U
330	Nitrobenzene	380 U	430 U	420 U
330	2-Nitrophenol	380 U	430 U	420 U
1700	4-Nitrophenol	2000 U	2200 U	2100 U
330	N-Nitrosodi-n-propylamine	380 UL	430 UL	420 UL
330	N-Nitrosodiphenylamine	380 U	430 U	420 U
1700	Pentachlorophenol	2000 U	2200 U	2100 U
330	Phenanthrene	380 U	430 U	420 U
330	Phenol	380 U	430 U	420 U
330	Pyrene	380 UJ	430 UJ	420 UJ
330	1,2,4-Trichlorobenzene	380 UL	430 UL	420 UL
330	2,4,6-Trichlorophenol	380 U	430 U	420 U
330	2,4,5-Trichlorophenol	380 U	430 U	420 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	7.5	62.9	61.3
CRQL	Semivolatile Organic Compounds			
330	Acenaphthene	4400 UJ	520 U	540 U
330	Acenaphthylene	4400 UJ	520 U	540 U
330	Anthracene	**630 J**	**74 J**	**64 J**
330	Benzo[a]anthracene	**2100 J**	**400 J**	**290 J**
330	Benzo[a]pyrene	**910 J**	**490 J**	**290 J**
330	Benzo[b]fluoranthene	**4800 J**	**870**	**550**
330	Benzo[g,h,i]perylene	**1200 J**	**390 J**	**270 J**
330	Benzo[k]fluoranthene	**2400 J**	**590**	**290 J**
330	Bis(2-chloroethoxy)methane	4400 UJ	520 U	540 U
330	Bis(2-chloroethyl)ether	4400 UJ	520 U	540 U
330	bis(chloroisopropyl) ether	4400 UJ	520 U	540 U
330	Bis(2-ethylhexyl) phthalate	4400 UJ	**79 J**	540 U
330	4-Bromophenyl phenyl ether	4400 UJ	520 U	540 U
330	Butyl benzyl phthalate	4400 UJ	520 U	540 U
330	Carbazole	4400 UJ	**53 J**	540 U
660	4-Chloroaniline	8800 UJ	1000 U	1100 U
330	4-Chloro-3-methylphenol	4400 UJ	520 U	540 U
330	2-Chloronaphthalene	4400 UJ	520 U	540 U
330	2-Chlorophenol	4400 UJ	520 U	540 U
330	4-Chlorophenyl phenyl ether	4400 UJ	520 U	540 U
330	Chrysene	**4700 J**	**570**	**480 J**
330	Dibenz(a,h)anthracene	4400 UJ	520 U	**76 J**
330	Dibenzofuran	4400 UJ	520 U	540 U
330	1,3-Dichlorobenzene	4400 UJ	520 U	540 U
330	1,4-Dichlorobenzene	4400 UJ	**84 J**	**84 J**
330	1,2-Dichlorobenzene	4400 UJ	520 U	540 U
660	3,3'-Dichlorobenzidine	8800 UJ	1000 U	1100 U
330	2,4-Dichlorophenol	4400 UJ	520 UJ	540 UJ
330	Diethyl phthalate	4400 UJ	520 U	540 U
330	2,4-Dimethylphenol	4400 UJ	520 U	540 U
330	Dimethyl phthalate	4400 UJ	520 U	540 U
330	Di-n-butyl phthalate	4400 UJ	**110 J**	**89 J**
1700	4,6-Dinitro-2-methylphenol	23000 UJ	2700 U	2800 U
1700	2,4-Dinitrophenol	23000 UJ	2700 UJ	2800 UJ
330	2,4-Dinitrotoluene	4400 UJ	520 U	540 U
330	2,6-Dinitrotoluene	4400 UJ	520 U	540 U
330	Di-n-octyl phthalate	4400 UJ	520 U	540 U
330	Fluoranthene	**9000 J**	**500 J**	**410 J**

TABLE 2C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	7.5	62.9	61.3
CRQL	**Semivolatile Organic Compounds**			
330	Fluorene	**360 J**	520 U	540 U
330	Hexachlorobenzene	4400 UJ	520 U	540 U
330	Hexachlorobutadiene	4400 UJ	520 U	540 U
330	Hexachlorocyclopentadiene	4400 UJ	520 U	540 U
330	Hexachloroethane	4400 UJ	520 U	540 U
330	Indeno[1,2,3-cd]pyrene	**1400 J**	**330 J**	**230 J**
330	Isophorone	4400 UJ	520 U	540 U
330	2-Methylnaphthalene	4400 UJ	520 U	540 U
330	2-Methylphenol	4400 UJ	520 U	540 U
330	3 & 4 Methylphenol	4400 UJ	520 U	540 U
330	Naphthalene	4400 UJ	520 U	540 U
1700	2-Nitroaniline	23000 UJ	2700 U	2800 U
1700	3-Nitroaniline	23000 UJ	2700 U	2800 U
1700	4-Nitroaniline	23000 UJ	2700 U	2800 U
330	Nitrobenzene	4400 UJ	520 U	540 U
330	2-Nitrophenol	4400 UJ	520 U	540 U
1700	4-Nitrophenol	23000 UJ	2700 U	2800 U
330	N-Nitrosodi-n-propylamine	4400 UJ	520 U	540 U
330	N-Nitrosodiphenylamine	4400 UJ	520 U	540 U
1700	Pentachlorophenol	23000 UJ	2700 U	2800 U
330	Phenanthrene	**3000 J**	**200 J**	**170 J**
330	Phenol	4400 UJ	520 U	540 U
330	Pyrene	**6300 J**	**420 J**	**360 J**
330	1,2,4-Trichlorobenzene	4400 UJ	520 U	540 U
330	2,4,6-Trichlorophenol	4400 UJ	520 U	540 U
330	2,4,5-Trichlorophenol	4400 UJ	520 U	540 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume	1030	1020	1040	1000
CRQL	Semivolatile Organic Compounds				
10	Acenaphthene	9.7 U	9.8 U	9.6 U	10 U
10	Acenaphthylene	9.7 U	9.8 U	9.6 U	10 U
10	Anthracene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[a]anthracene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[a]pyrene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[b]fluoranthene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[g,h,i]perylene	9.7 U	9.8 U	9.6 U	10 U
10	Benzo[k]fluoranthene	9.7 U	9.8 U	9.6 U	10 U
10	Bis(2-chloroethoxy)methar	9.7 U	9.8 U	9.6 U	10 U
10	Bis(2-chloroethyl)ether	9.7 U	9.8 U	9.6 U	10 U
10	bis(chloroisopropyl) ether	9.7 U	9.8 U	9.6 U	10 U
10	Bis(2-ethylhexyl) phthalate	**1.5 J**	9.8 U	9.6 U	10 U
10	4-Bromophenyl phenyl eth	9.7 U	9.8 U	9.6 U	10 U
10	Butyl benzyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	Carbazole	9.7 U	9.8 U	9.6 U	10 U
20	4-Chloroaniline	19 U	20 U	19 U	20 U
10	4-Chloro-3-methylphenol	9.7 U	9.8 U	9.6 U	10 U
10	2-Chloronaphthalene	9.7 U	9.8 U	9.6 U	10 U
10	2-Chlorophenol	9.7 U	9.8 U	9.6 U	10 U
10	4-Chlorophenyl phenyl eth	9.7 U	9.8 U	9.6 U	10 U
10	Chrysene	9.7 U	9.8 U	9.6 U	10 U
10	Dibenz(a,h)anthracene	9.7 U	9.8 U	9.6 U	10 U
10	Dibenzofuran	9.7 U	9.8 U	9.6 U	10 U
10	1,3-Dichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	1,4-Dichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	1,2-Dichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
20	3,3'-Dichlorobenzidine	19 U	20 U	19 U	20 U
10	2,4-Dichlorophenol	9.7 U	9.8 U	9.6 U	10 U
10	Diethyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	2,4-Dimethylphenol	9.7 U	9.8 U	9.6 U	10 U
10	Dimethyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	Di-n-butyl phthalate	9.7 U	9.8 U	9.6 U	10 U
50	4,6-Dinitro-2-methylpheno	49 U	49 U	48 U	50 U
50	2,4-Dinitrophenol	49 UR	49 UR	48 UR	50 UR
10	2,4-Dinitrotoluene	9.7 U	9.8 U	9.6 U	10 U
10	2,6-Dinitrotoluene	9.7 U	9.8 U	9.6 U	10 U
10	Di-n-octyl phthalate	9.7 U	9.8 U	9.6 U	10 U
10	Fluoranthene	9.7 U	9.8 U	9.6 U	10 U
10	Fluorene	9.7 U	9.8 U	9.6 U	10 U

TABLE 2D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume	1030	1020	1040	1000
CRQL	**Semivolatile Organic Compounds**				
10	Hexachlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	Hexachlorobutadiene	9.7 U	9.8 U	9.6 U	10 U
10	Hexachlorocyclopentadien	9.7 U	9.8 U	9.6 U	10 U
10	Hexachloroethane	9.7 U	9.8 U	9.6 U	10 U
10	Indeno[1,2,3-cd]pyrene	9.7 U	9.8 U	9.6 U	10 U
10	Isophorone	9.7 U	9.8 U	9.6 U	10 U
10	2-Methylnaphthalene	9.7 U	9.8 U	9.6 U	10 U
10	2-Methylphenol	9.7 U	9.8 U	9.6 U	10 U
10	3 & 4 Methylphenol	9.7 U	9.8 U	**7.8 J**	**4.7 J**
10	Naphthalene	9.7 U	9.8 U	9.6 U	10 U
50	2-Nitroaniline	49 U	49 U	48 U	50 U
50	3-Nitroaniline	49 U	49 U	48 U	50 U
50	4-Nitroaniline	49 U	49 U	48 U	50 U
10	Nitrobenzene	9.7 U	9.8 U	9.6 U	10 U
50	2-Nitrophenol	9.7 U	9.8 U	9.6 U	10 U
50	4-Nitrophenol	49 U	49 U	48 U	50 U
10	N-Nitrosodi-n-propylamine	9.7 U	9.8 U	9.6 U	10 U
10	N-Nitrosodiphenylamine	9.7 U	9.8 U	9.6 U	10 U
50	Pentachlorophenol	49 U	49 U	48 U	50 U
10	Phenanthrene	9.7 U	9.8 U	9.6 U	10 U
10	Phenol	9.7 U	9.8 U	**8.6 J**	**7.8 J**
10	Pyrene	9.7 U	9.8 U	9.6 U	10 U
10	1,2,4-Trichlorobenzene	9.7 U	9.8 U	9.6 U	10 U
10	2,4,6-Trichlorophenol	9.7 U	9.8 U	9.6 U	10 U
10	2,4,5-Trichlorophenol	9.7 U	9.8 U	9.6 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
R	Rejected value based on QC data
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Volume)

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Sample Volume	1000	1000	1000	1060	1000
CRQL	Semivolatile Organic Compounds					
10	Acenaphthene	10 U	10 U	10 U	9.4 U	10 U
10	Acenaphthylene	10 U	10 U	10 U	9.4 U	10 U
10	Anthracene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[a]anthracene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[a]pyrene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[b]fluoranthene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[g,h,i]perylene	10 U	10 U	10 U	9.4 U	10 U
10	Benzo[k]fluoranthene	10 U	10 U	10 U	9.4 U	10 U
10	Bis(2-chloroethoxy)methane	10 U	10 U	10 U	9.4 U	10 U
10	Bis(2-chloroethyl)ether	10 U	10 U	10 U	9.4 U	10 U
10	bis(chloroisopropyl) ether	10 U	10 U	10 U	9.4 U	10 U
10	Bis(2-ethylhexyl) phthalate	10 U	10 U	**1.1 J**	9.4 U	10 U
10	4-Bromophenyl phenyl ether	10 U	10 U	10 U	9.4 U	10 U
10	Butyl benzyl phthalate	10 U	10 U	10 U	9.4 U	10 U
10	Carbazole	10 U	10 U	10 U	9.4 U	10 U
20	4-Chloroaniline	20 U	20 U	20 U	19 U	20 U
10	4-Chloro-3-methylphenol	10 U	10 U	10 U	9.4 U	10 U
10	2-Chloronaphthalene	10 U	10 U	10 U	9.4 U	10 U
10	2-Chlorophenol	10 U	10 U	10 U	9.4 U	10 U
10	4-Chlorophenyl phenyl ether	10 U	10 U	10 U	9.4 U	10 U
10	Chrysene	10 U	10 U	10 U	9.4 U	10 U
10	Dibenz(a,h)anthracene	10 U	10 U	10 U	9.4 U	10 U
10	Dibenzofuran	10 U	10 U	10 U	9.4 U	10 U
10	1,3-Dichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	1,4-Dichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	1,2-Dichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
20	3,3'-Dichlorobenzidine	20 U	20 U	20 U	19 U	20 U
10	2,4-Dichlorophenol	10 U	10 U	10 U	9.4 U	10 U
10	Diethyl phthalate	10 U	10 U	10 U	**0.73 J**	10 U
10	2,4-Dimethylphenol	10 U	10 U	10 U	9.4 U	**100**
10	Dimethyl phthalate	10 U	10 U	10 U	9.4 U	10 U
10	Di-n-butyl phthalate	10 U	10 U	10 U	9.4 U	10 U
50	4,6-Dinitro-2-methylphenol	50 U	50 U	50 U	47 U	50 U
50	2,4-Dinitrophenol	50 UR	50 UR	50 UR	47 UR	50 UR
10	2,4-Dinitrotoluene	10 U	10 U	10 U	9.4 U	10 U
10	2,6-Dinitrotoluene	10 U	10 U	10 U	9.4 U	10 U
10	Di-n-octyl phthalate	10 U	10 U	10 U	9.4 U	10 U
10	Fluoranthene	10 U	10 U	10 U	9.4 U	10 U

TABLE 2E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Sample Volume	1000	1000	1000	1060	1000
CRQL	Semivolatile Organic Compounds					
10	Fluorene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachlorobutadiene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachlorocyclopentadiene	10 U	10 U	10 U	9.4 U	10 U
10	Hexachloroethane	10 U	10 U	10 U	9.4 U	10 U
10	Indeno[1,2,3-cd]pyrene	10 U	10 U	10 U	9.4 U	10 U
10	Isophorone	10 U	10 U	10 U	9.4 U	10 U
10	2-Methylnaphthalene	10 U	10 U	10 U	9.4 U	10 U
10	2-Methylphenol	10 U	10 U	10 U	9.4 U	10 U
10	3 & 4 Methylphenol	10 U	10 U	10 U	9.4 U	**11**
10	Naphthalene	10 U	10 U	10 U	9.4 U	10 U
50	2-Nitroaniline	50 U	50 U	50 U	47 U	50 U
50	3-Nitroaniline	50 U	50 U	50 U	47 U	50 U
50	4-Nitroaniline	50 U	50 U	50 U	47 U	50 U
10	Nitrobenzene	10 U	10 U	10 U	9.4 U	10 U
50	2-Nitrophenol	10 U	10 U	10 U	9.4 U	10 U
50	4-Nitrophenol	50 U	50 U	50 U	47 U	50 U
10	N-Nitrosodi-n-propylamine	10 U	10 U	10 U	9.4 U	10 U
10	N-Nitrosodiphenylamine	10 U	10 U	10 U	9.4 U	10 U
50	Pentachlorophenol	50 U	50 U	50 U	47 U	50 U
10	Phenanthrene	10 U	10 U	10 U	9.4 U	10 U
10	Phenol	10 U	10 U	10 U	9.4 U	**12**
10	Pyrene	10 U	10 U	10 U	9.4 U	10 U
10	1,2,4-Trichlorobenzene	10 U	10 U	10 U	9.4 U	10 U
10	2,4,6-Trichlorophenol	10 U	10 U	10 U	9.4 U	10 U
10	2,4,5-Trichlorophenol	10 U	10 U	10 U	9.4 U	10 U

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
NA	Not analyzed
R	Rejected value based on QC data
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Volume)

TABLE 2F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4
	Sample Date	2/22/2007	2/23/2007
	Location	Field QC	Field QC
	Dilution Factor	1.0	1.0
	Sample Volume (ml)	1040	1000
CRQL	Semivolatile Organic Compounds		
10	Acenaphthene	9.6 U	10 U
10	Acenaphthylene	9.6 U	10 U
10	Anthracene	9.6 U	10 U
10	Benzo[a]anthracene	9.6 U	10 U
10	Benzo[a]pyrene	9.6 U	10 U
10	Benzo[b]fluoranthene	9.6 U	10 U
10	Benzo[g,h,i]perylene	9.6 U	10 U
10	Benzo[k]fluoranthene	9.6 U	10 U
10	Bis(2-chloroethoxy)methar	9.6 U	10 U
10	Bis(2-chloroethyl)ether	9.6 U	10 U
10	bis(chloroisopropyl) ether	9.6 U	10 U
10	Bis(2-ethylhexyl) phthalate	9.6 U	10 U
10	4-Bromophenyl phenyl eth	9.6 U	10 U
10	Butyl benzyl phthalate	9.6 U	10 U
10	Carbazole	9.6 U	10 U
20	4-Chloroaniline	19 U	20 U
10	4-Chloro-3-methylphenol	9.6 U	10 U
10	2-Chloronaphthalene	9.6 U	10 U
10	2-Chlorophenol	9.6 U	10 U
10	4-Chlorophenyl phenyl eth	9.6 U	10 U
10	Chrysene	9.6 U	10 U
10	Dibenz(a,h)anthracene	9.6 U	10 U
10	Dibenzofuran	9.6 U	10 U
10	1,3-Dichlorobenzene	9.6 U	10 U
10	1,4-Dichlorobenzene	9.6 U	10 U
10	1,2-Dichlorobenzene	9.6 U	10 U
20	3,3'-Dichlorobenzidine	19 U	20 U
10	2,4-Dichlorophenol	9.6 U	10 U
10	Diethyl phthalate	9.6 U	10 U
10	2,4-Dimethylphenol	9.6 U	10 U
10	Dimethyl phthalate	9.6 U	10 U
10	Di-n-butyl phthalate	9.6 U	10 U
50	4,6-Dinitro-2-methylpheno	48 U	50 U
50	2,4-Dinitrophenol	48 UR	50 UR
10	2,4-Dinitrotoluene	9.6 U	10 U
10	2,6-Dinitrotoluene	9.6 U	10 U
10	Di-n-octyl phthalate	9.6 U	10 U
10	Fluoranthene	9.6 U	10 U

TABLE 2F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4
	Sample Date	2/22/2007	2/23/2007
	Location	Field QC	Field QC
	Dilution Factor	1.0	1.0
	Sample Volume (ml)	1040	1000
CRQL	**Semivolatile Organic Compounds**		
10	Fluorene	9.6 U	10 U
10	Hexachlorobenzene	9.6 U	10 U
10	Hexachlorobutadiene	9.6 U	10 U
10	Hexachlorocyclopentadien	9.6 U	10 U
10	Hexachloroethane	9.6 U	10 U
10	Indeno[1,2,3-cd]pyrene	9.6 U	10 U
10	Isophorone	9.6 U	10 U
10	2-Methylnaphthalene	9.6 U	10 U
10	2-Methylphenol	9.6 U	10 U
10	3 & 4 Methylphenol	9.6 U	10 U
10	Naphthalene	9.6 U	10 U
50	2-Nitroaniline	48 U	50 U
50	3-Nitroaniline	48 U	50 U
50	4-Nitroaniline	48 U	50 U
10	Nitrobenzene	9.6 U	10 U
50	2-Nitrophenol	9.6 U	10 U
50	4-Nitrophenol	48 U	50 U
10	N-Nitrosodi-n-propylamine	9.6 U	10 U
10	N-Nitrosodiphenylamine	9.6 U	10 U
50	Pentachlorophenol	48 U	50 U
10	Phenanthrene	9.6 U	10 U
10	Phenol	9.6 U	10 U
10	Pyrene	9.6 U	10 U
10	1,2,4-Trichlorobenzene	9.6 U	10 U
10	2,4,6-Trichlorophenol	9.6 U	10 U
10	2,4,5-Trichlorophenol	9.6 U	10 U

Notes: B - Present in laboratory blank and/or field QC samples
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/L - Microgram per liter
ml - Milliliter
NA - Not analyzed
R - Rejected value based on QC data
Bold - Reported value is above lab method detection limit
* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

TABLE 3A
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS4-A	WFF1-SS5	WFF1-SS5-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	91.7	84.4	85.4
CRQL	**Pesticide Compounds**			
1.7	Aldrin	1.8 U	2.0 U	2.0 U
1.7	alpha-BHC	1.8 U	2.0 U	2.0 U
1.7	beta-BHC	1.8 U	2.0 U	2.0 U
1.7	Chlordane (technical)	18 U	20 U	20 U
3.3	4,4'-DDD	3.5 U	3.9 U	3.8 U
3.3	4,4'-DDE	**0.42 J**	**0.41 J**	**0.65 J**
3.3	4,4'-DDT	3.5 U	3.9 U	3.8 U
1.7	delta-BHC	1.8 U	2.0 U	2.0 U
3.3	Dieldrin	3.5 U	3.9 U	3.8 U
1.7	Endosulfan I	1.8 U	2.0 U	2.0 U
3.3	Endosulfan II	3.5 U	3.9 U	3.8 U
3.3	Endosulfan sulfate	3.5 U	3.9 U	3.8 U
3.3	Endrin	3.5 U	3.9 U	3.8 U
3.3	Endrin aldehyde	3.5 U	3.9 U	3.8 U
3.3	Endrin ketone	3.5 U	3.9 U	3.8 U
1.7	gamma-BHC (Lindane)	1.8 U	2.0 U	2.0 U
1.7	Heptachlor	1.8 U	2.0 U	2.0 U
1.7	Heptachlor epoxide	1.8 U	2.0 U	2.0 U
17	Methoxychlor	18 U	20 U	20 U
33	PCB-1016	35 U	39 U	38 U
67	PCB-1221	72 U	79 U	77 U
33	PCB-1232	35 U	39 U	38 U
33	PCB-1242	35 U	39 U	38 U
33	PCB-1248	35 U	39 U	38 U
33	PCB-1254	35 U	39 U	38 U
33	PCB-1260	35 U	39 U	38 U
170	Toxaphene	180 U	200 U	200 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3B
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SOIL SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SS7	WFF1-SS9	WFF1-SS10
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0
	Percent Solids	85.8	76.1	79.3
CRQL	**Pesticide Compounds**			
1.7	Aldrin	2.0 U	2.2 UJ	2.1 UJ
1.7	alpha-BHC	2.0 U	2.2 UJ	2.1 UJ
1.7	beta-BHC	2.0 U	2.2 UJ	2.1 UJ
1.7	Chlordane (technical)	20 U	22 UJ	21 UJ
3.3	4,4'-DDD	3.8 U	4.3 UJ	**3.8 J**
3.3	4,4'-DDE	**0.76 J**	**0.77 J**	**3.2 J**
3.3	4,4'-DDT	3.8 U	4.3 UJ	**3.8 J**
1.7	delta-BHC	2.0 U	2.2 UJ	2.1 UJ
3.3	Dieldrin	3.8 U	4.3 UJ	4.1 UJ
1.7	Endosulfan I	2.0 U	2.2 UJ	2.1 UJ
3.3	Endosulfan II	3.8 U	4.3 UJ	4.1 UJ
3.3	Endosulfan sulfate	3.8 U	4.3 UJ	4.1 UJ
3.3	Endrin	3.8 U	4.3 UJ	4.1 UJ
3.3	Endrin aldehyde	3.8 U	4.3 UJ	4.1 UJ
3.3	Endrin ketone	3.8 U	4.3 UJ	4.1 UJ
1.7	gamma-BHC (Lindane)	2.0 U	2.2 UJ	2.1 UJ
1.7	Heptachlor	2.0 U	2.2 UJ	2.1 UJ
1.7	Heptachlor epoxide	2.0 U	2.2 UJ	2.1 UJ
17	Methoxychlor	20 U	22 UJ	21 UJ
33	PCB-1016	38 U	43 UJ	41 UJ
67	PCB-1221	77 U	88 UJ	83 UJ
33	PCB-1232	38 U	43 UJ	41 UJ
33	PCB-1242	38 U	43 UJ	41 UJ
33	PCB-1248	38 U	43 UJ	41 UJ
33	PCB-1254	38 U	43 UJ	41 UJ
33	PCB-1260	38 U	43 UJ	41 UJ
170	Toxaphene	200 U	220 UJ	210 UJ

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3C
DATA SUMMARY FORM: ORGANIC COMPOUNDS
SLUDGE SAMPLES
(ug/Kg)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-SL1	WFF1-SL02	WFF1-SL03
	Sample Date	2/23/2007	2/22/2007	2/22/2007
	Location	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0/10[a]	5.0/50[a]	4.0/40[a]
	Percent Solids	10	62.9	61.3
CRQL	**Pesticide Compounds**			
1.7	Aldrin	220 UJ	13 U	11 U
1.7	alpha-BHC	220 UJ	13 U	11 U
1.7	beta-BHC	220 UJ	13 U	11 U
1.7	Chlordane (technical)	2200 UJ	130 U	110 U
3.3	4,4'-DDD	**110 J**	**1100 J**	**1200 J**
3.3	4,4'-DDE	**67 J**	**1400**	**1300**
3.3	4,4'-DDT	**110 J**	**890 J**	**1100 J**
1.7	delta-BHC	220 UJ	13 U	11 U
3.3	Dieldrin	440 UJ	**9.9 J**	**5.6 J**
1.7	Endosulfan I	220 UJ	13 U	11 U
3.3	Endosulfan II	440 UJ	26 U	21 U
3.3	Endosulfan sulfate	440 UJ	26 U	21 U
3.3	Endrin	440 UJ	26 U	21 U
3.3	Endrin aldehyde	440 UJ	26 U	21 U
3.3	Endrin ketone	440 UJ	26 U	21 U
1.7	gamma-BHC (Lindane)	220 UJ	13 U	11 U
1.7	Heptachlor	220 UJ	13 U	11 U
1.7	Heptachlor epoxide	220 UJ	13 U	11 U
17	Methoxychlor	2200 UJ	130 U	110 U
33	PCB-1016	4400 UJ	260 U	210 U
67	PCB-1221	8900 UJ	530 U	440 U
33	PCB-1232	4400 UJ	260 U	210 U
33	PCB-1242	4400 UJ	260 U	210 U
33	PCB-1248	4400 UJ	260 U	210 U
33	PCB-1254	4400 UJ	260 U	210 U
33	PCB-1260	4400 UJ	260 U	210 U
170	Toxaphene	22000 UJ	1300 U	1100 U

Notes:

B	Present in laboratory blank and/or field QC blanks
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/Kg	Microgram per kilogram
Bold	Reported value is above lab method detection limit
a	Second dilution performed for DDx compounds

* Dry Weight CRQL = Non-adjusted CRQL ÷ (% solids ÷ 100)

TABLE 3D
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW1	WFF1-MW2	WFF1-MW3	WFF1-MW3-D
	Sample Date	2/23/2007	2/23/2007	2/23/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1040	1040	1060	1000
CRQL	**Pesticides Compounds**				
0.050	Aldrin	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	alpha-BHC	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	beta-BHC	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.50	Chlordane (technical)	0.48 U	0.48 U	0.47 UJ	0.50 UJ
0.10	4,4'-DDD	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	4,4'-DDE	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	4,4'-DDT	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.50	delta-BHC	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.10	Dieldrin	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.050	Endosulfan I	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.10	Endosulfan II	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endosulfan sulfate	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endrin	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endrin aldehyde	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.10	Endrin ketone	0.096 U	0.096 U	0.094 UJ	0.10 UJ
0.050	gamma-BHC (Lindane)	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	Heptachlor	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.050	Heptachlor epoxide	0.048 U	0.048 U	0.047 UJ	0.050 UJ
0.50	Methoxychlor	0.48 U	0.48 U	0.47 UJ	0.50 UJ
1.0	PCB-1016	0.96 U	0.96 U	0.94 UJ	1.0 UJ
2.0	PCB-1221	1.9 U	1.9 U	1.9 UJ	2.0 UJ
1.0	PCB-1232	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1242	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1248	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1254	0.96 U	0.96 U	0.94 UJ	1.0 UJ
1.0	PCB-1260	0.96 U	0.96 U	0.94 UJ	1.0 UJ
5.0	Toxaphene	4.8 U	4.8 U	4.7 UJ	5.0 UJ

Notes:

B	Present in laboratory blank and/or field QC blank samples
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

TABLE 3E
DATA SUMMARY FORM: ORGANIC COMPOUNDS
GROUND WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant, Wallops Island Flight Facillity, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	WFF1-MW4	WFF1-MW5	WFF1-MW6	WFF1-MW7	WFF1-MW20
	Sample Date	2/23/2007	2/23/2007	2/22/2007	2/22/2007	2/23/2007
	Location	WWTP#1	WWTP#1	WWTP#1	WWTP#1	WWTP#1
	Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Sample Volume (ml)	1000	1040	1000	1000	980
CRQL	**Pesticides Compounds**					
0.050	Aldrin	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	alpha-BHC	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	beta-BHC	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.50	Chlordane (technical)	0.50 U	0.48 U	0.50 UJ	0.50 U	0.51 UJ
0.10	4,4'-DDD	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	4,4'-DDE	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	4,4'-DDT	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.50	delta-BHC	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.10	Dieldrin	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.050	Endosulfan I	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.10	Endosulfan II	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endosulfan sulfate	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endrin	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endrin aldehyde	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.10	Endrin ketone	0.10 U	0.096 U	0.10 UJ	0.10 U	0.10 UJ
0.050	gamma-BHC (Lindane)	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	Heptachlor	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.050	Heptachlor epoxide	0.050 U	0.048 U	0.050 UJ	0.050 U	0.051 UJ
0.50	Methoxychlor	0.50 U	0.48 U	0.50 UJ	0.50 U	0.51 UJ
1.0	PCB-1016	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
2.0	PCB-1221	2.0 U	1.9 U	2.0 UJ	2.0 U	2.0 UJ
1.0	PCB-1232	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1242	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1248	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1254	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
1.0	PCB-1260	1.0 U	0.96 U	1.0 UJ	1.0 U	1.0 UJ
5.0	Toxaphene	5.0 U	4.8 U	5.0 UJ	5.0 U	5.1 UJ

Notes:

B	Present in laboratory blank and/or field QC blank sample
CRQL	Contract Required Quantitation Limit
J	Estimated value
K	Value is biased high based on QC data
L	Value is biased low based on QC data
U	Analyzed for but not detected at the reported value
µg/L	Microgram per liter
ml	Milliliter
NA	Not analyzed
Bold	Reported value is above laboratory method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

TABLE 3F
DATA SUMMARY FORM: ORGANIC COMPOUNDS
FIELD QC WATER SAMPLES
(ug/L)

Site Name: Old Waste Water Treatment Plant
Wallops Island Flight Facility, VA
Contract No: W91236-05-D-0036
Sampling Dates: February 19-23, 2007

	Sample No.	Rinsate 3	Rinsate-4
	Sample Date	2/22/2007	2/23/2007
	Location	Field QC	Field QC
	Dilution Factor	1.0	1.0
	Sample Volume	1000	850
CRQL	**Pesticides Compounds**		
0.050	Aldrin	0.050 U	0.059 UJ
0.050	alpha-BHC	0.050 U	0.059 UJ
0.050	beta-BHC	0.050 U	0.059 UJ
0.50	Chlordane (technical)	0.50 U	0.59 UJ
0.10	4,4'-DDD	0.10 U	0.12 UJ
0.10	4,4'-DDE	0.10 U	0.12 UJ
0.10	4,4'-DDT	0.10 U	0.12 UJ
0.50	delta-BHC	0.050 U	0.059 UJ
0.10	Dieldrin	0.10 U	0.12 UJ
0.050	Endosulfan I	0.050 U	0.059 UJ
0.10	Endosulfan II	0.10 U	0.12 UJ
0.10	Endosulfan sulfate	0.10 U	0.12 UJ
0.10	Endrin	0.10 U	0.12 UJ
0.10	Endrin aldehyde	0.10 U	0.12 UJ
0.10	Endrin ketone	0.10 U	0.12 UJ
0.050	gamma-BHC (Lindane)	0.050 U	0.059 UJ
0.050	Heptachlor	0.050 U	0.059 UJ
0.050	Heptachlor epoxide	0.050 U	0.059 UJ
0.50	Methoxychlor	0.50 U	0.59 UJ
1.0	PCB-1016	1.0 U	1.2 UJ
2.0	PCB-1221	2.0 U	2.4 UJ
1.0	PCB-1232	1.0 U	1.2 UJ
1.0	PCB-1242	1.0 U	1.2 UJ
1.0	PCB-1248	1.0 U	1.2 UJ
1.0	PCB-1254	1.0 U	1.2 UJ
1.0	PCB-1260	1.0 U	1.2 UJ
5.0	Toxaphene	5.0 U	5.9 UJ

Notes: B - Present in the laboratory blank and/or field QC blanks
CRQL - Contract Required Quantitation Limit
J - Estimated value
K - Value is biased high based on QC data
L - Value is biased low based on QC data
U - Analyzed for but not detected at the reported value
µg/L - Microgram per liter
ml - Milliliter
NA - Not analyzed
Bold - Reported value is above lab method detection limit

* Sample CRQL = Non-adjusted CRQL (1000ml ÷ Sample Vol)

APPENDIX C

Laboratory Reported Results
(Organic)

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS4-A

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-11

Sample wt/vol: 4.7 (g) | Lab File ID: m0431.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 8.3 | Date Analyzed: 03/08/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	58	U
71-43-2	Benzene	5.8	U
75-25-2	Bromoform	5.8	U
74-83-9	Bromomethane	5.8	U
75-15-0	Carbon disulfide	5.8	U
56-23-5	Carbon tetrachloride	5.8	U
108-90-7	Chlorobenzene	5.8	U
124-48-1	Chlorodibromomethane	5.8	U
75-00-3	Chloroethane	5.8	U
67-66-3	Chloroform	5.8	U
74-87-3	Chloromethane	5.8	U
156-59-2	cis-1,2-Dichloroethene	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
75-27-4	Dichlorobromomethane	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U
75-35-4	1,1-Dichloroethene	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U
100-41-4	Ethylbenzene	5.8	U
591-78-6	2-Hexanone	29	U
75-09-2	Methylene Chloride	5.8	U
78-93-3	Methyl Ethyl Ketone	29	U
108-10-1	methyl isobutyl ketone	29	U
100-42-5	Styrene	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
127-18-4	Tetrachloroethene	5.8	U
108-88-3	Toluene	5.8	U
156-60-5	trans-1,2-Dichloroethene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
79-01-6	Trichloroethene	5.8	U
75-01-4	Vinyl chloride	5.8	U
1330-20-7	Xylenes, Total	12	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS5

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-12

Sample wt/vol: 5.9 (g) | Lab File ID: m0394.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 15.6 | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	50	U
71-43-2	Benzene	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Chlorodibromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-27-4	Dichlorobromomethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	25	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	25	U
108-10-1	methyl isobutyl ketone	25	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	5.0	U
1330-20-7	Xylenes, Total	10	U

FORM I 8260B

1

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS5-D

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-23

Sample wt/vol: 6.2 (g) | Lab File ID: m0396.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 14.6 | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	47	U
71-43-2	Benzene	4.7	U
75-25-2	Bromoform	4.7	U
74-83-9	Bromomethane	4.7	U
75-15-0	Carbon disulfide	4.7	U
56-23-5	Carbon tetrachloride	4.7	U
108-90-7	Chlorobenzene	4.7	U
124-48-1	Chlorodibromomethane	4.7	U
75-00-3	Chloroethane	4.7	U
67-66-3	Chloroform	4.7	U
74-87-3	Chloromethane	4.7	U
156-59-2	cis-1,2-Dichloroethene	4.7	U
10061-01-5	cis-1,3-Dichloropropene	4.7	U
75-27-4	Dichlorobromomethane	4.7	U
107-06-2	1,2-Dichloroethane	4.7	U
75-34-3	1,1-Dichloroethane	4.7	U
75-35-4	1,1-Dichloroethene	4.7	U
78-87-5	1,2-Dichloropropane	4.7	U
100-41-4	Ethylbenzene	4.7	U
591-78-6	2-Hexanone	24	U
75-09-2	Methylene Chloride	4.7	U
78-93-3	Methyl Ethyl Ketone	24	U
108-10-1	methyl isobutyl ketone	24	U
100-42-5	Styrene	4.7	U
79-34-5	1,1,2,2-Tetrachloroethane	4.7	U
127-18-4	Tetrachloroethene	4.7	U
108-88-3	Toluene	4.7	U
156-60-5	trans-1,2-Dichloroethene	4.7	U
10061-02-6	trans-1,3-Dichloropropene	4.7	U
71-55-6	1,1,1-Trichloroethane	4.7	U
79-00-5	1,1,2-Trichloroethane	4.7	U
79-01-6	Trichloroethene	4.7	U
75-01-4	Vinyl chloride	4.7	U
1330-20-7	Xylenes, Total	9.4	U

FORM I 8260B

1

ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS7

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-13

Sample wt/vol: 7.0 (g) | Lab File ID: m0395.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 14.2 | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	84	
71-43-2	Benzene	4.2	U
75-25-2	Bromoform	4.2	U
74-83-9	Bromomethane	4.2	U
75-15-0	Carbon disulfide	4.2	U
56-23-5	Carbon tetrachloride	4.2	U
108-90-7	Chlorobenzene	4.2	U
124-48-1	Chlorodibromomethane	4.2	U
75-00-3	Chloroethane	4.2	U
67-66-3	Chloroform	4.2	U
74-87-3	Chloromethane	4.2	U
156-59-2	cis-1,2-Dichloroethene	4.2	U
10061-01-5	cis-1,3-Dichloropropene	4.2	U
75-27-4	Dichlorobromomethane	4.2	U
107-06-2	1,2-Dichloroethane	4.2	U
75-34-3	1,1-Dichloroethane	4.2	U
75-35-4	1,1-Dichloroethene	4.2	U
78-87-5	1,2-Dichloropropane	4.2	U
100-41-4	Ethylbenzene	4.2	U
591-78-6	2-Hexanone	21	U
75-09-2	Methylene Chloride	4.2	U
78-93-3	Methyl Ethyl Ketone	8.3	J
108-10-1	methyl isobutyl ketone	21	U
100-42-5	Styrene	4.2	U
79-34-5	1,1,2,2-Tetrachloroethane	4.2	U
127-18-4	Tetrachloroethene	4.2	U
108-88-3	Toluene	4.2	U
156-60-5	trans-1,2-Dichloroethene	4.2	U
10061-02-6	trans-1,3-Dichloropropene	4.2	U
71-55-6	1,1,1-Trichloroethane	4.2	U
79-00-5	1,1,2-Trichloroethane	4.2	U
79-01-6	Trichloroethene	4.2	U
75-01-4	Vinyl chloride	4.2	U
1330-20-7	Xylenes, Total	8.3	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS9

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-4

Sample wt/vol: 6.7 (g) | Lab File ID: m0392.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 23.9 | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	49	U
71-43-2	Benzene	4.9	U
75-25-2	Bromoform	4.9	U
74-83-9	Bromomethane	4.9	U
75-15-0	Carbon disulfide	4.9	U
56-23-5	Carbon tetrachloride	4.9	U
108-90-7	Chlorobenzene	4.9	U
124-48-1	Chlorodibromomethane	4.9	U
75-00-3	Chloroethane	4.9	U
67-66-3	Chloroform	4.9	U
74-87-3	Chloromethane	4.9	U
156-59-2	cis-1,2-Dichloroethene	4.9	U
10061-01-5	cis-1,3-Dichloropropene	4.9	U
75-27-4	Dichlorobromomethane	4.9	U
107-06-2	1,2-Dichloroethane	4.9	U
75-34-3	1,1-Dichloroethane	4.9	U
75-35-4	1,1-Dichloroethene	4.9	U
78-87-5	1,2-Dichloropropane	4.9	U
100-41-4	Ethylbenzene	4.9	U
591-78-6	2-Hexanone	25	U
75-09-2	Methylene Chloride	4.9	U
78-93-3	Methyl Ethyl Ketone	25	U
108-10-1	methyl isobutyl ketone	25	U
100-42-5	Styrene	4.9	U
79-34-5	1,1,2,2-Tetrachloroethane	4.9	U
127-18-4	Tetrachloroethene	6.7	
108-88-3	Toluene	4.9	U
156-60-5	trans-1,2-Dichloroethene	4.9	U
10061-02-6	trans-1,3-Dichloropropene	4.9	U
71-55-6	1,1,1-Trichloroethane	4.9	U
79-00-5	1,1,2-Trichloroethane	4.9	U
79-01-6	Trichloroethene	4.9	U
75-01-4	Vinyl chloride	4.9	U
1330-20-7	Xylenes, Total	9.8	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SS10

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-5

Sample wt/vol: 6.1 (g) | Lab File ID: m0393.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 20.7 | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	52	U
71-43-2	Benzene	5.2	U
75-25-2	Bromoform	5.2	U
74-83-9	Bromomethane	5.2	U
75-15-0	Carbon disulfide	5.2	U
56-23-5	Carbon tetrachloride	5.2	U
108-90-7	Chlorobenzene	5.2	U
124-48-1	Chlorodibromomethane	5.2	U
75-00-3	Chloroethane	5.2	U
67-66-3	Chloroform	5.2	U
74-87-3	Chloromethane	5.2	U
156-59-2	cis-1,2-Dichloroethene	5.2	U
10061-01-5	cis-1,3-Dichloropropene	5.2	U
75-27-4	Dichlorobromomethane	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U
75-35-4	1,1-Dichloroethene	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U
100-41-4	Ethylbenzene	5.2	U
591-78-6	2-Hexanone	26	U
75-09-2	Methylene Chloride	5.2	U
78-93-3	Methyl Ethyl Ketone	26	U
108-10-1	methyl isobutyl ketone	26	U
100-42-5	Styrene	5.2	U
79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
127-18-4	Tetrachloroethene	5.2	U
108-88-3	Toluene	5.2	U
156-60-5	trans-1,2-Dichloroethene	5.2	U
10061-02-6	trans-1,3-Dichloropropene	5.2	U
71-55-6	1,1,1-Trichloroethane	5.2	U
79-00-5	1,1,2-Trichloroethane	5.2	U
79-01-6	Trichloroethene	5.2	U
75-01-4	Vinyl chloride	5.2	U
1330-20-7	Xylenes, Total	10	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SL1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-14

Sample wt/vol: 4.7 (g) | Lab File ID: m0434.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 92.5 | Date Analyzed: 03/08/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	630	J
71-43-2	Benzene	71	U
75-25-2	Bromoform	71	U
74-83-9	Bromomethane	71	U
75-15-0	Carbon disulfide	71	U
56-23-5	Carbon tetrachloride	71	U
108-90-7	Chlorobenzene	71	U
124-48-1	Chlorodibromomethane	71	U
75-00-3	Chloroethane	71	U
67-66-3	Chloroform	71	U
74-87-3	Chloromethane	71	U
156-59-2	cis-1,2-Dichloroethene	71	U
10061-01-5	cis-1,3-Dichloropropene	71	U
75-27-4	Dichlorobromomethane	71	U
75-34-3	1,1-Dichloroethane	71	U
107-06-2	1,2-Dichloroethane	71	U
75-35-4	1,1-Dichloroethene	71	U
78-87-5	1,2-Dichloropropane	71	U
100-41-4	Ethylbenzene	71	U
591-78-6	2-Hexanone	130	J
75-09-2	Methylene Chloride	71	U
78-93-3	Methyl Ethyl Ketone	210	J
108-10-1	methyl isobutyl ketone	91	J
100-42-5	Styrene	71	U
79-34-5	1,1,2,2-Tetrachloroethane	29	J
127-18-4	Tetrachloroethene	71	U
108-88-3	Toluene	1200	
156-60-5	trans-1,2-Dichloroethene	71	U
10061-02-6	trans-1,3-Dichloropropene	71	U
71-55-6	1,1,1-Trichloroethane	71	U
79-00-5	1,1,2-Trichloroethane	71	U
79-01-6	Trichloroethene	71	U
75-01-4	Vinyl chloride	71	U
1330-20-7	Xylenes, Total	140	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SL02

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-2

Sample wt/vol: 4.2 (g) | Lab File ID: m0407.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 37.1 | Date Analyzed: 03/07/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	740	
71-43-2	Benzene	9.5	U
75-25-2	Bromoform	9.5	U
74-83-9	Bromomethane	9.5	U
75-15-0	Carbon disulfide	9.5	U
56-23-5	Carbon tetrachloride	9.5	U
108-90-7	Chlorobenzene	9.5	U
124-48-1	Chlorodibromomethane	9.5	U
75-00-3	Chloroethane	9.5	U
67-66-3	Chloroform	9.5	U
74-87-3	Chloromethane	9.5	U
156-59-2	cis-1,2-Dichloroethene	9.5	U
10061-01-5	cis-1,3-Dichloropropene	9.5	U
75-27-4	Dichlorobromomethane	9.5	U
107-06-2	1,2-Dichloroethane	9.5	U
75-34-3	1,1-Dichloroethane	9.5	U
75-35-4	1,1-Dichloroethene	9.5	U
78-87-5	1,2-Dichloropropane	9.5	U
100-41-4	Ethylbenzene	9.5	U
591-78-6	2-Hexanone	47	U
75-09-2	Methylene Chloride	9.5	U
78-93-3	Methyl Ethyl Ketone	77	
108-10-1	methyl isobutyl ketone	47	U
100-42-5	Styrene	9.5	U
79-34-5	1,1,2,2-Tetrachloroethane	9.5	U
127-18-4	Tetrachloroethene	5.1	J
108-88-3	Toluene	6.2	J
156-60-5	trans-1,2-Dichloroethene	9.5	U
10061-02-6	trans-1,3-Dichloropropene	9.5	U
71-55-6	1,1,1-Trichloroethane	9.5	U
79-00-5	1,1,2-Trichloroethane	9.5	U
79-01-6	Trichloroethene	9.5	U
75-01-4	Vinyl chloride	9.5	U
1330-20-7	Xylenes, Total	19	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-SL03

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-3

Sample wt/vol: 3.7 (g) | Lab File ID: m0391.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 38.7 | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
67-64-1	Acetone	55	J
71-43-2	Benzene	11	U
75-25-2	Bromoform	11	U
74-83-9	Bromomethane	11	U
75-15-0	Carbon disulfide	11	U
56-23-5	Carbon tetrachloride	11	U
108-90-7	Chlorobenzene	11	U
124-48-1	Chlorodibromomethane	11	U
75-00-3	Chloroethane	11	U
67-66-3	Chloroform	11	U
74-87-3	Chloromethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
75-27-4	Dichlorobromomethane	11	U
107-06-2	1,2-Dichloroethane	11	U
75-34-3	1,1-Dichloroethane	11	U
75-35-4	1,1-Dichloroethene	11	U
78-87-5	1,2-Dichloropropane	11	U
100-41-4	Ethylbenzene	11	U
591-78-6	2-Hexanone	55	U
75-09-2	Methylene Chloride	11	U
78-93-3	Methyl Ethyl Ketone	55	U
108-10-1	methyl isobutyl ketone	55	U
100-42-5	Styrene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
127-18-4	Tetrachloroethene	11	U
108-88-3	Toluene	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
71-55-6	1,1,1-Trichloroethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
79-01-6	Trichloroethene	11	U
75-01-4	Vinyl chloride	11	U
1330-20-7	Xylenes, Total	22	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-20

Sample wt/vol: 5 (mL) | Lab File ID: o2693.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U ✗
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U ✗
108-10-1	methyl isobutyl ketone	10	U ✗
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	4.4	
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW2

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-19

Sample wt/vol: 5 (mL) | Lab File ID: o2692.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW3

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-8

Sample wt/vol: 5 (mL) | Lab File ID: o2687.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	52	
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	0.65	J
78-93-3	Methyl Ethyl Ketone	17	
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	0.77	J
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW3-D

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-9

Sample wt/vol: 5 (mL) | Lab File ID: o2688.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	50	
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	0.57	J
78-93-3	Methyl Ethyl Ketone	16	
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	0.66	J
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW4

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-18

Sample wt/vol: 5 (mL) | Lab File ID: o2691.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-17

Sample wt/vol: 5 (mL) | Lab File ID: o2690.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW6

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-1

Sample wt/vol: 5 (mL) | Lab File ID: o2685.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW7

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-6

Sample wt/vol: 5 (mL) | Lab File ID: o2686.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: WFF1-MW20

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-10

Sample wt/vol: 5 (mL) | Lab File ID: o2689.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	47	
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	0.58	J
78-93-3	Methyl Ethyl Ketone	15	
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	0.64	J
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: Rinsate 3

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-7

Sample wt/vol: 5 (mL) | Lab File ID: o2683.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	4.6	
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: Rinsate 4

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-16

Sample wt/vol: 5 (mL) | Lab File ID: o2684.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/06/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	3.9	
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

FORM I 8260B

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: TB-4

Lab Name: STL Savannah | Job No.:680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-21

Sample wt/vol: 5 (mL) | Lab File ID: o2760.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/07/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	0.57	J
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

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ORGANIC ANALYSIS DATA SHEET
Volatile Organic Compounds by GC/MS

Client Sample ID: TB-5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-22

Sample wt/vol: 5 (mL) | Lab File ID: o2761.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Analyzed: 03/07/2007

GC Column: DB-624 ID: 0.18 (mm) | Dilution Factor: 1

Soil Extract Volume: | Soil Aliquot Volume:

CAS NO.	COMPOUND	UNITS: ug/L	Q
67-64-1	Acetone	25	U
71-43-2	Benzene	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
75-15-0	Carbon disulfide	2.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
75-27-4	Dichlorobromomethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
100-41-4	Ethylbenzene	1.0	U
591-78-6	2-Hexanone	10	U
75-09-2	Methylene Chloride	5.0	U
78-93-3	Methyl Ethyl Ketone	10	U
108-10-1	methyl isobutyl ketone	10	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes, Total	2.0	U

FORM I 8260B

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS4-A

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-11

Sample wt/vol: 30.04 (g) | Lab File ID: t1529.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 8.3 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	720	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	360	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS4-A

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-11

Sample wt/vol: 30.04 (g) | Lab File ID: t1529.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 8.3 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
15831-10-4	3 & 4 Methylphenol	360	U
84-66-2	Diethyl phthalate	360	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butyl benzyl phthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	720	U
56-55-3	Benzo[a]anthracene	360	U
117-81-7	Bis(2-ethylhexyl) phthalate	360	U
218-01-9	Chrysene	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo[b]fluoranthene	360	U
207-08-9	Benzo[k]fluoranthene	360	U
50-32-8	Benzo[a]pyrene	360	U
193-39-5	Indeno[1,2,3-cd]pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo[g,h,i]perylene	360	U
86-74-8	Carbazole	360	U
108-60-1	bis(chloroisopropyl) ether	360	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-12

Sample wt/vol: 30.21 (g) | Lab File ID: t1530.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 15.6 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
108-95-2	Phenol	390	U	
111-44-4	Bis(2-chloroethyl)ether	390	U	
95-57-8	2-Chlorophenol	390	U	
541-73-1	1,3-Dichlorobenzene	390	U	
106-46-7	1,4-Dichlorobenzene	390	U	
95-50-1	1,2-Dichlorobenzene	390	U	
95-48-7	2-Methylphenol	390	U	
621-64-7	N-Nitrosodi-n-propylamine	390	U	L
67-72-1	Hexachloroethane	390	U	
98-95-3	Nitrobenzene	390	U	
78-59-1	Isophorone	390	U	
88-75-5	2-Nitrophenol	390	U	
105-67-9	2,4-Dimethylphenol	390	U	
111-91-1	Bis(2-chloroethoxy)methane	390	U	
120-83-2	2,4-Dichlorophenol	390	U	
120-82-1	1,2,4-Trichlorobenzene	390	U	L
91-20-3	Naphthalene	390	U	
106-47-8	4-Chloroaniline	780	U	
87-68-3	Hexachlorobutadiene	390	U	
59-50-7	4-Chloro-3-methylphenol	390	U	
91-57-6	2-Methylnaphthalene	390	U	
77-47-4	Hexachlorocyclopentadiene	390	U	
88-06-2	2,4,6-Trichlorophenol	390	U	
95-95-4	2,4,5-Trichlorophenol	390	U	
91-58-7	2-Chloronaphthalene	390	U	
88-74-4	2-Nitroaniline	2000	U	
131-11-3	Dimethyl phthalate	390	U	
208-96-8	Acenaphthylene	390	U	
99-09-2	3-Nitroaniline	2000	U	
83-32-9	Acenaphthene	390	U	J
51-28-5	2,4-Dinitrophenol	2000	U	J
100-02-7	4-Nitrophenol	2000	U	
132-64-9	Dibenzofuran	390	U	

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-12

Sample wt/vol: 30.21 (g) | Lab File ID: t1530.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 15.6 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
15831-10-4	3 & 4 Methylphenol	390	U
84-66-2	Diethyl phthalate	390	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	780	U
56-55-3	Benzo[a]anthracene	390	U
117-81-7	Bis(2-ethylhexyl) phthalate	390	U
218-01-9	Chrysene	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo[b]fluoranthene	390	U
207-08-9	Benzo[k]fluoranthene	390	U
50-32-8	Benzo[a]pyrene	390	U
193-39-5	Indeno[1,2,3-cd]pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo[g,h,i]perylene	390	U
86-74-8	Carbazole	390	U
108-60-1	bis(chloroisopropyl) ether	390	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS5-D

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-23

Sample wt/vol: 30.29 (g) | Lab File ID: t1533.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 14.6 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
108-95-2	Phenol	390 ~~380~~	U	
111-44-4	Bis(2-chloroethyl)ether	380	U	
95-57-8	2-Chlorophenol	380	U	
541-73-1	1,3-Dichlorobenzene	380	U	
106-46-7	1,4-Dichlorobenzene	380	U	
95-50-1	1,2-Dichlorobenzene	380	U	
95-48-7	2-Methylphenol	380	U	
621-64-7	N-Nitrosodi-n-propylamine	380	U	L
67-72-1	Hexachloroethane	380	U	
98-95-3	Nitrobenzene	380	U	
78-59-1	Isophorone	380	U	
88-75-5	2-Nitrophenol	380	U	
105-67-9	2,4-Dimethylphenol	380	U	
111-91-1	Bis(2-chloroethoxy)methane	380	U	
120-83-2	2,4-Dichlorophenol	380	U	
120-82-1	1,2,4-Trichlorobenzene	380	U	L
91-20-3	Naphthalene	~~380~~	U	
106-47-8	4-Chloroaniline	770	U	
87-68-3	Hexachlorobutadiene	390 ~~380~~	U	
59-50-7	4-Chloro-3-methylphenol	380	U	
91-57-6	2-Methylnaphthalene	380	U	
77-47-4	Hexachlorocyclopentadiene	380	U	
88-06-2	2,4,6-Trichlorophenol	380	U	
95-95-4	2,4,5-Trichlorophenol	380	U	
91-58-7	2-Chloronaphthalene	~~380~~	U	
88-74-4	2-Nitroaniline	2000	U	
131-11-3	Dimethyl phthalate	390 ~~380~~	U	
208-96-8	Acenaphthylene	390 ~~380~~	U	
99-09-2	3-Nitroaniline	2000	U	
83-32-9	Acenaphthene	390 ~~380~~	U	J
51-28-5	2,4-Dinitrophenol	2000	U	J
100-02-7	4-Nitrophenol	2000	U	
132-64-9	Dibenzofuran	390 ~~380~~	U	

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS5-D

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-23

Sample wt/vol: 30.29 (g) | Lab File ID: t1533.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 14.6 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	390 ~~380~~	U
606-20-2	2,6-Dinitrotoluene	380	U
15831-10-4	3 & 4 Methylphenol	380	U
84-66-2	Diethyl phthalate	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
86-73-7	Fluorene	~~380~~	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390 ~~380~~	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	~~380~~	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	390 ~~380~~	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U J
85-68-7	Butyl benzyl phthalate	~~380~~	U
91-94-1	3,3'-Dichlorobenzidine	770	U
56-55-3	Benzo[a]anthracene	390 ~~380~~	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
218-01-9	Chrysene	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
86-74-8	Carbazole	380	U
108-60-1	bis(chloroisopropyl) ether	~~380~~	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS7

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-13

Sample wt/vol: 30.03 (g) | Lab File ID: t1531.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 14.2 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
108-95-2	Phenol	380	U	
111-44-4	Bis(2-chloroethyl)ether	380	U	
95-57-8	2-Chlorophenol	380	U	
541-73-1	1,3-Dichlorobenzene	380	U	
106-46-7	1,4-Dichlorobenzene	380	U	
95-50-1	1,2-Dichlorobenzene	380	U	
95-48-7	2-Methylphenol	380	U	
621-64-7	N-Nitrosodi-n-propylamine	380	U	L
67-72-1	Hexachloroethane	380	U	
98-95-3	Nitrobenzene	380	U	
78-59-1	Isophorone	380	U	
88-75-5	2-Nitrophenol	380	U	
105-67-9	2,4-Dimethylphenol	380	U	
111-91-1	Bis(2-chloroethoxy)methane	380	U	
120-83-2	2,4-Dichlorophenol	380	U	
120-82-1	1,2,4-Trichlorobenzene	380	U	L
91-20-3	Naphthalene	380	U	
106-47-8	4-Chloroaniline	770	U	
87-68-3	Hexachlorobutadiene	380	U	
59-50-7	4-Chloro-3-methylphenol	380	U	
91-57-6	2-Methylnaphthalene	380	U	
77-47-4	Hexachlorocyclopentadiene	380	U	
88-06-2	2,4,6-Trichlorophenol	380	U	
95-95-4	2,4,5-Trichlorophenol	380	U	
91-58-7	2-Chloronaphthalene	380	U	
88-74-4	2-Nitroaniline	2000	U	
131-11-3	Dimethyl phthalate	380	U	
208-96-8	Acenaphthylene	380	U	
99-09-2	3-Nitroaniline	2000	U	
83-32-9	Acenaphthene	380	U	J
51-28-5	2,4-Dinitrophenol	2000	U	J
100-02-7	4-Nitrophenol	2000	U	
132-64-9	Dibenzofuran	380	U	

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS7

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-13

Sample wt/vol: 30.03 (g) | Lab File ID: t1531.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 14.2 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
15831-10-4	3 & 4 Methylphenol	380	U
84-66-2	Diethyl phthalate	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butyl phthalate	36	J
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	770	U
56-55-3	Benzo[a]anthracene	380	U
117-81-7	Bis(2-ethylhexyl) phthalate	380	U
218-01-9	Chrysene	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
86-74-8	Carbazole	380	U
108-60-1	bis(chloroisopropyl) ether	380	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS9

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-4

Sample wt/vol: 30.26 (g) | Lab File ID: t1527.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 23.9 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
108-95-2	Phenol	430	U	
111-44-4	Bis(2-chloroethyl)ether	430	U	
95-57-8	2-Chlorophenol	430	U	
541-73-1	1,3-Dichlorobenzene	430	U	
106-46-7	1,4-Dichlorobenzene	430	U	
95-50-1	1,2-Dichlorobenzene	430	U	
95-48-7	2-Methylphenol	430	U	
621-64-7	N-Nitrosodi-n-propylamine	430	U	L
67-72-1	Hexachloroethane	430	U	
98-95-3	Nitrobenzene	430	U	
78-59-1	Isophorone	430	U	
88-75-5	2-Nitrophenol	430	U	
105-67-9	2,4-Dimethylphenol	430	U	
111-91-1	Bis(2-chloroethoxy)methane	430	U	
120-83-2	2,4-Dichlorophenol	430	U	
120-82-1	1,2,4-Trichlorobenzene	430	U	L
91-20-3	Naphthalene	430	U	
106-47-8	4-Chloroaniline	860	U	
87-68-3	Hexachlorobutadiene	430	U	
59-50-7	4-Chloro-3-methylphenol	430	U	
91-57-6	2-Methylnaphthalene	430	U	
77-47-4	Hexachlorocyclopentadiene	430	U	
88-06-2	2,4,6-Trichlorophenol	430	U	
95-95-4	2,4,5-Trichlorophenol	430	U	
91-58-7	2-Chloronaphthalene	430	U	
88-74-4	2-Nitroaniline	2200	U	
131-11-3	Dimethyl phthalate	430	U	
208-96-8	Acenaphthylene	430	U	
99-09-2	3-Nitroaniline	2200	U	
83-32-9	Acenaphthene	430	U	JJ
51-28-5	2,4-Dinitrophenol	2200	U	
100-02-7	4-Nitrophenol	2200	U	
132-64-9	Dibenzofuran	430	U	

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS9

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-4

Sample wt/vol: 30.26 (g) | Lab File ID: t1527.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 23.9 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
15831-10-4	3 & 4 Methylphenol	430	U
84-66-2	Diethyl phthalate	430	U
7005-72-3	4-Chlorophenyl phenyl ether	430	U
86-73-7	Fluorene	430	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine	430	U
101-55-3	4-Bromophenyl phenyl ether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	430	U
120-12-7	Anthracene	430	U
84-74-2	Di-n-butyl phthalate	430	U
206-44-0	Fluoranthene	430	U
129-00-0	Pyrene	430	U
85-68-7	Butyl benzyl phthalate	430	U
91-94-1	3,3'-Dichlorobenzidine	860	U
56-55-3	Benzo[a]anthracene	430	U
117-81-7	Bis(2-ethylhexyl) phthalate	430	U
218-01-9	Chrysene	430	U
117-84-0	Di-n-octyl phthalate	430	U
205-99-2	Benzo[b]fluoranthene	430	U
207-08-9	Benzo[k]fluoranthene	430	U
50-32-8	Benzo[a]pyrene	430	U
193-39-5	Indeno[1,2,3-cd]pyrene	430	U
53-70-3	Dibenz(a,h)anthracene	430	U
191-24-2	Benzo[g,h,i]perylene	430	U
86-74-8	Carbazole	430	U
108-60-1	bis(chloroisopropyl) ether	430	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS10

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-5

Sample wt/vol: 30.26 (g) | Lab File ID: t1528.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 20.7 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
108-95-2	Phenol	420 ~~410~~	U	
111-44-4	Bis(2-chloroethyl)ether	410	U	
95-57-8	2-Chlorophenol	410	U	
541-73-1	1,3-Dichlorobenzene	410	U	
106-46-7	1,4-Dichlorobenzene	410	U	
95-50-1	1,2-Dichlorobenzene	410	U	
95-48-7	2-Methylphenol	410	U	
621-64-7	N-Nitrosodi-n-propylamine	410	U	L
67-72-1	Hexachloroethane	410	U	
98-95-3	Nitrobenzene	410	U	
78-59-1	Isophorone	410	U	
88-75-5	2-Nitrophenol	410	U	
105-67-9	2,4-Dimethylphenol	410	U	
111-91-1	Bis(2-chloroethoxy)methane	410	U	
120-83-2	2,4-Dichlorophenol	410	U	
120-82-1	1,2,4-Trichlorobenzene	410	U	L
91-20-3	Naphthalene	~~410~~	U	
106-47-8	4-Chloroaniline	820	U	
87-68-3	Hexachlorobutadiene	420 ~~410~~	U	
59-50-7	4-Chloro-3-methylphenol	410	U	
91-57-6	2-Methylnaphthalene	410	U	
77-47-4	Hexachlorocyclopentadiene	410	U	
88-06-2	2,4,6-Trichlorophenol	410	U	
95-95-4	2,4,5-Trichlorophenol	410	U	
91-58-7	2-Chloronaphthalene	~~410~~	U	
88-74-4	2-Nitroaniline	2100	U	
131-11-3	Dimethyl phthalate	420 ~~410~~	U	
208-96-8	Acenaphthylene	420 ~~410~~	U	
99-09-2	3-Nitroaniline	2100	U	
83-32-9	Acenaphthene	420 ~~410~~	U	J
51-28-5	2,4-Dinitrophenol	2100	U	J
100-02-7	4-Nitrophenol	2100	U	
132-64-9	Dibenzofuran	420 ~~410~~	U	

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SS10

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-5

Sample wt/vol: 30.26 (g) | Lab File ID: t1528.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 20.7 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	~~410~~ 420	U
606-20-2	2,6-Dinitrotoluene	410	U
15831-10-4	3 & 4 Methylphenol	410	U
84-66-2	Diethyl phthalate	410	U
7005-72-3	4-Chlorophenyl phenyl ether	410	U
86-73-7	Fluorene	~~410~~ *	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	~~410~~ 420	U
101-55-3	4-Bromophenyl phenyl ether	410	U
118-74-1	Hexachlorobenzene	~~410~~	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	~~410~~ 420	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butyl phthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U J
85-68-7	Butyl benzyl phthalate	~~410~~	U
91-94-1	3,3'-Dichlorobenzidine	820	U
56-55-3	Benzo[a]anthracene	~~410~~ 420	U
117-81-7	Bis(2-ethylhexyl) phthalate	410	U
218-01-9	Chrysene	410	U
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U
86-74-8	Carbazole	410	U
108-60-1	bis(chloroisopropyl) ether	~~410~~	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SL1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-14

Sample wt/vol: 30.08 (g) | Lab File ID: n6087.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 92.5 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/13/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	4400	U
111-44-4	Bis(2-chloroethyl)ether	4400	U
95-57-8	2-Chlorophenol	4400	U
541-73-1	1,3-Dichlorobenzene	4400	U
106-46-7	1,4-Dichlorobenzene	4400	U
95-50-1	1,2-Dichlorobenzene	4400	U
95-48-7	2-Methylphenol	4400	U
621-64-7	N-Nitrosodi-n-propylamine	4400	U
67-72-1	Hexachloroethane	4400	U
98-95-3	Nitrobenzene	4400	U
78-59-1	Isophorone	4400	U
88-75-5	2-Nitrophenol	4400	U
105-67-9	2,4-Dimethylphenol	4400	U
111-91-1	Bis(2-chloroethoxy)methane	4400	U
120-83-2	2,4-Dichlorophenol	4400	U
120-82-1	1,2,4-Trichlorobenzene	4400	U
91-20-3	Naphthalene	4400	U
106-47-8	4-Chloroaniline	8800	U
87-68-3	Hexachlorobutadiene	4400	U
59-50-7	4-Chloro-3-methylphenol	4400	U
91-57-6	2-Methylnaphthalene	4400	U
77-47-4	Hexachlorocyclopentadiene	4400	U
88-06-2	2,4,6-Trichlorophenol	4400	U
95-95-4	2,4,5-Trichlorophenol	4400	U
91-58-7	2-Chloronaphthalene	4400	U
88-74-4	2-Nitroaniline	23000	U
131-11-3	Dimethyl phthalate	4400	U
208-96-8	Acenaphthylene	4400	U
99-09-2	3-Nitroaniline	23000	U
83-32-9	Acenaphthene	4400	U
51-28-5	2,4-Dinitrophenol	23000	U
100-02-7	4-Nitrophenol	23000	U
132-64-9	Dibenzofuran	4400	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SL1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-14

Sample wt/vol: 30.08 (g) | Lab File ID: n6087.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 92.5 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/13/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	4400	U
606-20-2	2,6-Dinitrotoluene	4400	U
15831-10-4	3 & 4 Methylphenol	4400	U
84-66-2	Diethyl phthalate	4400	U
7005-72-3	4-Chlorophenyl phenyl ether	4400	U
86-73-7	Fluorene	360	J
100-01-6	4-Nitroaniline	23000	U
534-52-1	4,6-Dinitro-2-methylphenol	23000	U
86-30-6	N-Nitrosodiphenylamine	4400	U
101-55-3	4-Bromophenyl phenyl ether	4400	U
118-74-1	Hexachlorobenzene	4400	U
87-86-5	Pentachlorophenol	23000	U
85-01-8	Phenanthrene	3000	J
120-12-7	Anthracene	630	J
84-74-2	Di-n-butyl phthalate	4400	U
206-44-0	Fluoranthene	9000	
129-00-0	Pyrene	6300	
85-68-7	Butyl benzyl phthalate	4400	U
91-94-1	3,3'-Dichlorobenzidine	8800	U
56-55-3	Benzo[a]anthracene	2100	J
117-81-7	Bis(2-ethylhexyl) phthalate	4400	U
218-01-9	Chrysene	4700	
117-84-0	Di-n-octyl phthalate	4400	U
205-99-2	Benzo[b]fluoranthene	4800	M
207-08-9	Benzo[k]fluoranthene	2400	J M
50-32-8	Benzo[a]pyrene	910	J
193-39-5	Indeno[1,2,3-cd]pyrene	1400	J
53-70-3	Dibenz(a,h)anthracene	4400	U
191-24-2	Benzo[g,h,i]perylene	1200	J
86-74-8	Carbazole	4400	U
108-60-1	bis(chloroisopropyl) ether	4400	U

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ORGANIC ANALYSIS DATA SHEET

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SL02

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-2

Sample wt/vol: 30.24 (g) | Lab File ID: n6088.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 37.1 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/13/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	520	U
111-44-4	Bis(2-chloroethyl)ether	520	U
95-57-8	2-Chlorophenol	520	U
541-73-1	1,3-Dichlorobenzene	520	U
106-46-7	1,4-Dichlorobenzene	84	J
95-50-1	1,2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
621-64-7	N-Nitrosodi-n-propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	Bis(2-chloroethoxy)methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
120-82-1	1,2,4-Trichlorobenzene	520	U
91-20-3	Naphthalene	520	U
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	520	U
59-50-7	4-Chloro-3-methylphenol	520	U
91-57-6	2-Methylnaphthalene	520	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	520	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	2700	U
131-11-3	Dimethyl phthalate	520	U
208-96-8	Acenaphthylene	520	U
99-09-2	3-Nitroaniline	2700	U
83-32-9	Acenaphthene	520	U
51-28-5	2,4-Dinitrophenol	2700	U J
100-02-7	4-Nitrophenol	2700	U
132-64-9	Dibenzofuran	520	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SL02

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-2

Sample wt/vol: 30.24 (g) | Lab File ID: n6088.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 37.1 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/13/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	520	U
606-20-2	2,6-Dinitrotoluene	520	U
15831-10-4	3 & 4 Methylphenol	520	U
84-66-2	Diethyl phthalate	520	U
7005-72-3	4-Chlorophenyl phenyl ether	520	U
86-73-7	Fluorene	520	U
100-01-6	4-Nitroaniline	2700	U
534-52-1	4,6-Dinitro-2-methylphenol	2700	U
86-30-6	N-Nitrosodiphenylamine	520	U
101-55-3	4-Bromophenyl phenyl ether	520	U
118-74-1	Hexachlorobenzene	520	U
87-86-5	Pentachlorophenol	2700	U
85-01-8	Phenanthrene	200	J
120-12-7	Anthracene	74	J
84-74-2	Di-n-butyl phthalate	110	J
206-44-0	Fluoranthene	500	J
129-00-0	Pyrene	420	J
85-68-7	Butyl benzyl phthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	1000	U
56-55-3	Benzo[a]anthracene	400	J
117-81-7	Bis(2-ethylhexyl) phthalate	79	J
218-01-9	Chrysene	570	
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo[b]fluoranthene	870	M
207-08-9	Benzo[k]fluoranthene	590	M
50-32-8	Benzo[a]pyrene	490	J
193-39-5	Indeno[1,2,3-cd]pyrene	330	J
53-70-3	Dibenz(a,h)anthracene	520	U
191-24-2	Benzo[g,h,i]perylene	390	J
86-74-8	Carbazole	53	J
108-60-1	bis(chloroisopropyl) ether	520	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SL03

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-3

Sample wt/vol: 30.01 (g) | Lab File ID: n6086.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 38.7 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/13/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
108-95-2	Phenol	540	U
111-44-4	Bis(2-chloroethyl)ether	540	U
95-57-8	2-Chlorophenol	540	U
541-73-1	1,3-Dichlorobenzene	540	U
106-46-7	1,4-Dichlorobenzene	84	J
95-50-1	1,2-Dichlorobenzene	540	U
95-48-7	2-Methylphenol	540	U
621-64-7	N-Nitrosodi-n-propylamine	540	U
67-72-1	Hexachloroethane	540	U
98-95-3	Nitrobenzene	540	U
78-59-1	Isophorone	540	U
88-75-5	2-Nitrophenol	540	U
105-67-9	2,4-Dimethylphenol	540	U
111-91-1	Bis(2-chloroethoxy)methane	540	U
120-83-2	2,4-Dichlorophenol	540	U
120-82-1	1,2,4-Trichlorobenzene	540	U
91-20-3	Naphthalene	540	U
106-47-8	4-Chloroaniline	1100	U
87-68-3	Hexachlorobutadiene	540	U
59-50-7	4-Chloro-3-methylphenol	540	U
91-57-6	2-Methylnaphthalene	540	U
77-47-4	Hexachlorocyclopentadiene	540	U
88-06-2	2,4,6-Trichlorophenol	540	U
95-95-4	2,4,5-Trichlorophenol	540	U
91-58-7	2-Chloronaphthalene	540	U
88-74-4	2-Nitroaniline	2800	U
131-11-3	Dimethyl phthalate	540	U
208-96-8	Acenaphthylene	540	U
99-09-2	3-Nitroaniline	2800	U
83-32-9	Acenaphthene	540	U
51-28-5	2,4-Dinitrophenol	2800	U J
100-02-7	4-Nitrophenol	2800	U
132-64-9	Dibenzofuran	540	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-SL03

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-3

Sample wt/vol: 30.01 (g) | Lab File ID: n6086.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: 38.7 | Date Extracted: 03/06/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/13/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3550B

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	540	U
606-20-2	2,6-Dinitrotoluene	540	U
15831-10-4	3 & 4 Methylphenol	540	U
84-66-2	Diethyl phthalate	540	U
7005-72-3	4-Chlorophenyl phenyl ether	540	U
86-73-7	Fluorene	540	U
100-01-6	4-Nitroaniline	2800	U
534-52-1	4,6-Dinitro-2-methylphenol	2800	U
86-30-6	N-Nitrosodiphenylamine	540	U
101-55-3	4-Bromophenyl phenyl ether	540	U
118-74-1	Hexachlorobenzene	540	U
87-86-5	Pentachlorophenol	2800	U
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	64	J
84-74-2	Di-n-butyl phthalate	89	J
206-44-0	Fluoranthene	410	J
129-00-0	Pyrene	360	J
85-68-7	Butyl benzyl phthalate	540	U
91-94-1	3,3'-Dichlorobenzidine	1100	U
56-55-3	Benzo[a]anthracene	290	J
117-81-7	Bis(2-ethylhexyl) phthalate	540	U
218-01-9	Chrysene	480	J
117-84-0	Di-n-octyl phthalate	540	U
205-99-2	Benzo[b]fluoranthene	550	M
207-08-9	Benzo[k]fluoranthene	290	J M
50-32-8	Benzo[a]pyrene	290	J
193-39-5	Indeno[1,2,3-cd]pyrene	230	J
53-70-3	Dibenz(a,h)anthracene	76	J
191-24-2	Benzo[g,h,i]perylene	270	J
86-74-8	Carbazole	540	U
108-60-1	bis(chloroisopropyl) ether	540	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-20

Sample wt/vol: 1030 (mL) | Lab File ID: g8134.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.7	U
111-44-4	Bis(2-chloroethyl)ether	9.7	U
95-57-8	2-Chlorophenol	9.7	U
541-73-1	1,3-Dichlorobenzene	9.7	U
106-46-7	1,4-Dichlorobenzene	9.7	U
95-50-1	1,2-Dichlorobenzene	9.7	U
95-48-7	2-Methylphenol	9.7	U
621-64-7	N-Nitrosodi-n-propylamine	9.7	U
67-72-1	Hexachloroethane	9.7	U
98-95-3	Nitrobenzene	9.7	U
78-59-1	Isophorone	9.7	U
88-75-5	2-Nitrophenol	9.7	U
105-67-9	2,4-Dimethylphenol	9.7	U
111-91-1	Bis(2-chloroethoxy)methane	9.7	U
120-83-2	2,4-Dichlorophenol	9.7	U
120-82-1	1,2,4-Trichlorobenzene	9.7	U
91-20-3	Naphthalene	9.7	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.7	U
59-50-7	4-Chloro-3-methylphenol	9.7	U
91-57-6	2-Methylnaphthalene	9.7	U
77-47-4	Hexachlorocyclopentadiene	9.7	U
88-06-2	2,4,6-Trichlorophenol	9.7	U
95-95-4	2,4,5-Trichlorophenol	9.7	U
91-58-7	2-Chloronaphthalene	9.7	U
88-74-4	2-Nitroaniline	49	U
131-11-3	Dimethyl phthalate	9.7	U
208-96-8	Acenaphthylene	9.7	U
99-09-2	3-Nitroaniline	49	U
83-32-9	Acenaphthene	9.7	U
51-28-5	2,4-Dinitrophenol	49	U
100-02-7	4-Nitrophenol	49	U
132-64-9	Dibenzofuran	9.7	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-20

Sample wt/vol: 1030 (mL) | Lab File ID: g8134.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.7	U
606-20-2	2,6-Dinitrotoluene	9.7	U
15831-10-4	3 & 4 Methylphenol	9.7	U
84-66-2	Diethyl phthalate	9.7	U
7005-72-3	4-Chlorophenyl phenyl ether	9.7	U
86-73-7	Fluorene	9.7	U
100-01-6	4-Nitroaniline	49	U
534-52-1	4,6-Dinitro-2-methylphenol	49	U
86-30-6	N-Nitrosodiphenylamine	9.7	U
101-55-3	4-Bromophenyl phenyl ether	9.7	U
118-74-1	Hexachlorobenzene	9.7	U
87-86-5	Pentachlorophenol	49	U
85-01-8	Phenanthrene	9.7	U
120-12-7	Anthracene	9.7	U
84-74-2	Di-n-butyl phthalate	9.7	U
206-44-0	Fluoranthene	9.7	U
129-00-0	Pyrene	9.7	U
85-68-7	Butyl benzyl phthalate	9.7	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.7	U
117-81-7	Bis(2-ethylhexyl) phthalate	1.5	J
218-01-9	Chrysene	9.7	U
117-84-0	Di-n-octyl phthalate	9.7	U
205-99-2	Benzo[b]fluoranthene	9.7	U
207-08-9	Benzo[k]fluoranthene	9.7	U
50-32-8	Benzo[a]pyrene	9.7	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.7	U
53-70-3	Dibenz(a,h)anthracene	9.7	U
191-24-2	Benzo[g,h,i]perylene	9.7	U
86-74-8	Carbazole	9.7	U
108-60-1	bis(chloroisopropyl) ether	9.7	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-19

Sample wt/vol: 1020 (mL) | Lab File ID: g8133.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.8	U
111-44-4	Bis(2-chloroethyl)ether	9.8	U
95-57-8	2-Chlorophenol	9.8	U
541-73-1	1,3-Dichlorobenzene	9.8	U
106-46-7	1,4-Dichlorobenzene	9.8	U
95-50-1	1,2-Dichlorobenzene	9.8	U
95-48-7	2-Methylphenol	9.8	U
621-64-7	N-Nitrosodi-n-propylamine	9.8	U
67-72-1	Hexachloroethane	9.8	U
98-95-3	Nitrobenzene	9.8	U
78-59-1	Isophorone	9.8	U
88-75-5	2-Nitrophenol	9.8	U
105-67-9	2,4-Dimethylphenol	9.8	U
111-91-1	Bis(2-chloroethoxy)methane	9.8	U
120-83-2	2,4-Dichlorophenol	9.8	U
120-82-1	1,2,4-Trichlorobenzene	9.8	U
91-20-3	Naphthalene	9.8	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	9.8	U
59-50-7	4-Chloro-3-methylphenol	9.8	U
91-57-6	2-Methylnaphthalene	9.8	U
77-47-4	Hexachlorocyclopentadiene	9.8	U
88-06-2	2,4,6-Trichlorophenol	9.8	U
95-95-4	2,4,5-Trichlorophenol	9.8	U
91-58-7	2-Chloronaphthalene	9.8	U
88-74-4	2-Nitroaniline	49	U
131-11-3	Dimethyl phthalate	9.8	U
208-96-8	Acenaphthylene	9.8	U
99-09-2	3-Nitroaniline	49	U
83-32-9	Acenaphthene	9.8	U
51-28-5	2,4-Dinitrophenol	49	U R
100-02-7	4-Nitrophenol	49	U
132-64-9	Dibenzofuran	9.8	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW2

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-19

Sample wt/vol: 1020 (mL) | Lab File ID: g8133.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.8	U
606-20-2	2,6-Dinitrotoluene	9.8	U
15831-10-4	3 & 4 Methylphenol	9.8	U
84-66-2	Diethyl phthalate	9.8	U
7005-72-3	4-Chlorophenyl phenyl ether	9.8	U
86-73-7	Fluorene	9.8	U
100-01-6	4-Nitroaniline	49	U
534-52-1	4,6-Dinitro-2-methylphenol	49	U
86-30-6	N-Nitrosodiphenylamine	9.8	U
101-55-3	4-Bromophenyl phenyl ether	9.8	U
118-74-1	Hexachlorobenzene	9.8	U
87-86-5	Pentachlorophenol	49	U
85-01-8	Phenanthrene	9.8	U
120-12-7	Anthracene	9.8	U
84-74-2	Di-n-butyl phthalate	9.8	U
206-44-0	Fluoranthene	9.8	U
129-00-0	Pyrene	9.8	U
85-68-7	Butyl benzyl phthalate	9.8	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	9.8	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.8	U
218-01-9	Chrysene	9.8	U
117-84-0	Di-n-octyl phthalate	9.8	U
205-99-2	Benzo[b]fluoranthene	9.8	U
207-08-9	Benzo[k]fluoranthene	9.8	U
50-32-8	Benzo[a]pyrene	9.8	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.8	U
53-70-3	Dibenz(a,h)anthracene	9.8	U
191-24-2	Benzo[g,h,i]perylene	9.8	U
86-74-8	Carbazole	9.8	U
108-60-1	bis(chloroisopropyl) ether	9.8	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW3

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-8

Sample wt/vol: 1040 (mL) | Lab File ID: g8138.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	8.6	J
111-44-4	Bis(2-chloroethyl)ether	9.6	U
95-57-8	2-Chlorophenol	9.6	U
541-73-1	1,3-Dichlorobenzene	9.6	U
106-46-7	1,4-Dichlorobenzene	9.6	U
95-50-1	1,2-Dichlorobenzene	9.6	U
95-48-7	2-Methylphenol	9.6	U
621-64-7	N-Nitrosodi-n-propylamine	9.6	U
67-72-1	Hexachloroethane	9.6	U
98-95-3	Nitrobenzene	9.6	U
78-59-1	Isophorone	9.6	U
88-75-5	2-Nitrophenol	9.6	U
105-67-9	2,4-Dimethylphenol	9.6	U
111-91-1	Bis(2-chloroethoxy)methane	9.6	U
120-83-2	2,4-Dichlorophenol	9.6	U
120-82-1	1,2,4-Trichlorobenzene	9.6	U
91-20-3	Naphthalene	9.6	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.6	U
59-50-7	4-Chloro-3-methylphenol	9.6	U
91-57-6	2-Methylnaphthalene	9.6	U
77-47-4	Hexachlorocyclopentadiene	9.6	U
88-06-2	2,4,6-Trichlorophenol	9.6	U
95-95-4	2,4,5-Trichlorophenol	9.6	U
91-58-7	2-Chloronaphthalene	9.6	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.6	U
208-96-8	Acenaphthylene	9.6	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.6	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.6	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW3

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-8

Sample wt/vol: 1040 (mL) | Lab File ID: g8138.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.6	U
606-20-2	2,6-Dinitrotoluene	9.6	U
15831-10-4	3 & 4 Methylphenol	7.8	J
84-66-2	Diethyl phthalate	9.6	U
7005-72-3	4-Chlorophenyl phenyl ether	9.6	U
86-73-7	Fluorene	9.6	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.6	U
101-55-3	4-Bromophenyl phenyl ether	9.6	U
118-74-1	Hexachlorobenzene	9.6	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	9.6	U
120-12-7	Anthracene	9.6	U
84-74-2	Di-n-butyl phthalate	9.6	U
206-44-0	Fluoranthene	9.6	U
129-00-0	Pyrene	9.6	U
85-68-7	Butyl benzyl phthalate	9.6	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.6	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.6	U
218-01-9	Chrysene	9.6	U
117-84-0	Di-n-octyl phthalate	9.6	U
205-99-2	Benzo[b]fluoranthene	9.6	U
207-08-9	Benzo[k]fluoranthene	9.6	U
50-32-8	Benzo[a]pyrene	9.6	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.6	U
53-70-3	Dibenz(a,h)anthracene	9.6	U
191-24-2	Benzo[g,h,i]perylene	9.6	U
86-74-8	Carbazole	9.6	U
108-60-1	bis(chloroisopropyl) ether	9.6	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW3-D

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-9

Sample wt/vol: 1000 (mL) | Lab File ID: g8128.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	7.8	J
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW3-D

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-9

Sample wt/vol: 1000 (mL) | Lab File ID: g8128.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
15831-10-4	3 & 4 Methylphenol	4.7	J
84-66-2	Diethyl phthalate	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	10	U
117-81-7	Bis(2-ethylhexyl) phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U
86-74-8	Carbazole	10	U
108-60-1	bis(chloroisopropyl) ether	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-18

Sample wt/vol: 1000 (mL) | Lab File ID: g8132.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW4

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-18

Sample wt/vol: 1000 (mL) | Lab File ID: g8132.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
15831-10-4	3 & 4 Methylphenol	10	U
84-66-2	Diethyl phthalate	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	10	U
117-81-7	Bis(2-ethylhexyl) phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U
86-74-8	Carbazole	10	U
108-60-1	bis(chloroisopropyl) ether	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-17

Sample wt/vol: 1000 (mL) | Lab File ID: g8131.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-17

Sample wt/vol: 1000 (mL) | Lab File ID: g8131.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
15831-10-4	3 & 4 Methylphenol	10	U
84-66-2	Diethyl phthalate	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	10	U
117-81-7	Bis(2-ethylhexyl) phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U
86-74-8	Carbazole	10	U
108-60-1	bis(chloroisopropyl) ether	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-1

Sample wt/vol: 1000 (mL) | Lab File ID: g8135.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U R
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW6

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-1

Sample wt/vol: 1000 (mL) | Lab File ID: g8135.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
15831-10-4	3 & 4 Methylphenol	10	U
84-66-2	Diethyl phthalate	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	10	U
117-81-7	Bis(2-ethylhexyl) phthalate	1.1	J
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U
86-74-8	Carbazole	10	U
108-60-1	bis(chloroisopropyl) ether	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW7

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-6

Sample wt/vol: 1060 (mL) | Lab File ID: g8136.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.4	U
111-44-4	Bis(2-chloroethyl)ether	9.4	U
95-57-8	2-Chlorophenol	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
95-48-7	2-Methylphenol	9.4	U
621-64-7	N-Nitrosodi-n-propylamine	9.4	U
67-72-1	Hexachloroethane	9.4	U
98-95-3	Nitrobenzene	9.4	U
78-59-1	Isophorone	9.4	U
88-75-5	2-Nitrophenol	9.4	U
105-67-9	2,4-Dimethylphenol	9.4	U
111-91-1	Bis(2-chloroethoxy)methane	9.4	U
120-83-2	2,4-Dichlorophenol	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
91-20-3	Naphthalene	9.4	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.4	U
59-50-7	4-Chloro-3-methylphenol	9.4	U
91-57-6	2-Methylnaphthalene	9.4	U
77-47-4	Hexachlorocyclopentadiene	9.4	U
88-06-2	2,4,6-Trichlorophenol	9.4	U
95-95-4	2,4,5-Trichlorophenol	9.4	U
91-58-7	2-Chloronaphthalene	9.4	U
88-74-4	2-Nitroaniline	47	U
131-11-3	Dimethyl phthalate	9.4	U
208-96-8	Acenaphthylene	9.4	U
99-09-2	3-Nitroaniline	47	U
83-32-9	Acenaphthene	9.4	U
51-28-5	2,4-Dinitrophenol	47	U
100-02-7	4-Nitrophenol	47	U
132-64-9	Dibenzofuran	9.4	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW7

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-6

Sample wt/vol: 1060 (mL) | Lab File ID: g8136.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.4	U
606-20-2	2,6-Dinitrotoluene	9.4	U
15831-10-4	3 & 4 Methylphenol	9.4	U
84-66-2	Diethyl phthalate	0.73	J
7005-72-3	4-Chlorophenyl phenyl ether	9.4	U
86-73-7	Fluorene	9.4	U
100-01-6	4-Nitroaniline	47	U
534-52-1	4,6-Dinitro-2-methylphenol	47	U
86-30-6	N-Nitrosodiphenylamine	9.4	U
101-55-3	4-Bromophenyl phenyl ether	9.4	U
118-74-1	Hexachlorobenzene	9.4	U
87-86-5	Pentachlorophenol	47	U
85-01-8	Phenanthrene	9.4	U
120-12-7	Anthracene	9.4	U
84-74-2	Di-n-butyl phthalate	9.4	U
206-44-0	Fluoranthene	9.4	U
129-00-0	Pyrene	9.4	U
85-68-7	Butyl benzyl phthalate	9.4	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.4	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.4	U
218-01-9	Chrysene	9.4	U
117-84-0	Di-n-octyl phthalate	9.4	U
205-99-2	Benzo[b]fluoranthene	9.4	U
207-08-9	Benzo[k]fluoranthene	9.4	U
50-32-8	Benzo[a]pyrene	9.4	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.4	U
53-70-3	Dibenz(a,h)anthracene	9.4	U
191-24-2	Benzo[g,h,i]perylene	9.4	U
86-74-8	Carbazole	9.4	U
108-60-1	bis(chloroisopropyl) ether	9.4	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW20

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-10

Sample wt/vol: 1000 (mL) | Lab File ID: g8129.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	12	
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	100	
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

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ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: WFF1-MW20

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-10

Sample wt/vol: 1000 (mL) | Lab File ID: g8129.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
15831-10-4	3 & 4 Methylphenol	11	
84-66-2	Diethyl phthalate	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	10	U
117-81-7	Bis(2-ethylhexyl) phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U
86-74-8	Carbazole	10	U
108-60-1	bis(chloroisopropyl) ether	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: Rinsate 3

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-7

Sample wt/vol: 1040 (mL) | Lab File ID: g8142.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	9.6	U
111-44-4	Bis(2-chloroethyl)ether	9.6	U
95-57-8	2-Chlorophenol	9.6	U
541-73-1	1,3-Dichlorobenzene	9.6	U
106-46-7	1,4-Dichlorobenzene	9.6	U
95-50-1	1,2-Dichlorobenzene	9.6	U
95-48-7	2-Methylphenol	9.6	U
621-64-7	N-Nitrosodi-n-propylamine	9.6	U
67-72-1	Hexachloroethane	9.6	U
98-95-3	Nitrobenzene	9.6	U
78-59-1	Isophorone	9.6	U
88-75-5	2-Nitrophenol	9.6	U
105-67-9	2,4-Dimethylphenol	9.6	U
111-91-1	Bis(2-chloroethoxy)methane	9.6	U
120-83-2	2,4-Dichlorophenol	9.6	U
120-82-1	1,2,4-Trichlorobenzene	9.6	U
91-20-3	Naphthalene	9.6	U
106-47-8	4-Chloroaniline	19	U
87-68-3	Hexachlorobutadiene	9.6	U
59-50-7	4-Chloro-3-methylphenol	9.6	U
91-57-6	2-Methylnaphthalene	9.6	U
77-47-4	Hexachlorocyclopentadiene	9.6	U
88-06-2	2,4,6-Trichlorophenol	9.6	U
95-95-4	2,4,5-Trichlorophenol	9.6	U
91-58-7	2-Chloronaphthalene	9.6	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethyl phthalate	9.6	U
208-96-8	Acenaphthylene	9.6	U
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	9.6	U
51-28-5	2,4-Dinitrophenol	48	U R
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	9.6	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: Rinsate 3

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-7

Sample wt/vol: 1040 (mL) | Lab File ID: g8142.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/05/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	9.6	U
606-20-2	2,6-Dinitrotoluene	9.6	U
15831-10-4	3 & 4 Methylphenol	9.6	U
84-66-2	Diethyl phthalate	9.6	U
7005-72-3	4-Chlorophenyl phenyl ether	9.6	U
86-73-7	Fluorene	9.6	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-Nitrosodiphenylamine	9.6	U
101-55-3	4-Bromophenyl phenyl ether	9.6	U
118-74-1	Hexachlorobenzene	9.6	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	9.6	U
120-12-7	Anthracene	9.6	U
84-74-2	Di-n-butyl phthalate	9.6	U
206-44-0	Fluoranthene	9.6	U
129-00-0	Pyrene	9.6	U
85-68-7	Butyl benzyl phthalate	9.6	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo[a]anthracene	9.6	U
117-81-7	Bis(2-ethylhexyl) phthalate	9.6	U
218-01-9	Chrysene	9.6	U
117-84-0	Di-n-octyl phthalate	9.6	U
205-99-2	Benzo[b]fluoranthene	9.6	U
207-08-9	Benzo[k]fluoranthene	9.6	U
50-32-8	Benzo[a]pyrene	9.6	U
193-39-5	Indeno[1,2,3-cd]pyrene	9.6	U
53-70-3	Dibenz(a,h)anthracene	9.6	U
191-24-2	Benzo[g,h,i]perylene	9.6	U
86-74-8	Carbazole	9.6	U
108-60-1	bis(chloroisopropyl) ether	9.6	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: Rinsate 4

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-16

Sample wt/vol: 1000 (mL) | Lab File ID: g8130.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U R
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

ORGANIC ANALYSIS DATA SHEET
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Client Sample ID: Rinsate 4

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-16

Sample wt/vol: 1000 (mL) | Lab File ID: g8130.d

Level: (low/med) Low | Date Received: 02/27/2007

% Moisture: | Date Extracted: 02/28/2007

Concentrated Extract Volume: 1 (mL) | Date Analyzed: 03/02/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | Extraction Method: 3520C

CAS NO.	COMPOUND	UNITS: ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
15831-10-4	3 & 4 Methylphenol	10	U
84-66-2	Diethyl phthalate	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo[a]anthracene	10	U
117-81-7	Bis(2-ethylhexyl) phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U
86-74-8	Carbazole	10	U
108-60-1	bis(chloroisopropyl) ether	10	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS4-A

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-11

Sample wt/vol: 30.44 (g) | Lab File ID: jc08016.d

% Moisture: 8.3 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.5	U
72-55-9	4,4'-DDE	0.42	J
50-29-3	4,4'-DDT	3.5	U
309-00-2	Aldrin	1.8	U
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
57-74-9	Chlordane (technical)	18	U
319-86-8	delta-BHC	1.8	U
60-57-1	Dieldrin	3.5	U
959-98-8	Endosulfan I	1.8	U
33213-65-9	Endosulfan II	3.5	U
1031-07-8	Endosulfan sulfate	3.5	U
72-20-8	Endrin	3.5	U
7421-93-4	Endrin aldehyde	3.5	U
53494-70-5	Endrin ketone	3.5	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
72-43-5	Methoxychlor	18	U
12674-11-2	PCB-1016	35	U
11104-28-2	PCB-1221	72	U
11141-16-5	PCB-1232	35	U
53469-21-9	PCB-1242	35	U
12672-29-6	PCB-1248	35	U
11097-69-1	PCB-1254	35	U
11096-82-5	PCB-1260	35	U
8001-35-2	Toxaphene	180	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-12

Sample wt/vol: 30.11 (g) | Lab File ID: jc08017.d

% Moisture: 15.6 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.9	U
72-55-9	4,4'-DDE	0.41	J
50-29-3	4,4'-DDT	3.9	U
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
53494-70-5	Endrin ketone	3.9	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	39	U
11104-28-2	PCB-1221	79	U
11141-16-5	PCB-1232	39	U
53469-21-9	PCB-1242	39	U
12672-29-6	PCB-1248	39	U
11097-69-1	PCB-1254	39	U
11096-82-5	PCB-1260	39	U
8001-35-2	Toxaphene	200	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS5-D

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-23

Sample wt/vol: 30.41 (g) | Lab File ID: jc08019.d

% Moisture: 14.6 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	0.65	J
50-29-3	4,4'-DDT	3.8	U
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
53494-70-5	Endrin ketone	3.8	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	77	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
8001-35-2	Toxaphene	200	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS7

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-13

Sample wt/vol: 30.46 (g) | Lab File ID: jc08018.d

% Moisture: 14.2 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	0.76	J
50-29-3	4,4'-DDT	3.8	U
309-00-2	Aldrin	2.0	U
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
57-74-9	Chlordane (technical)	20	U
319-86-8	delta-BHC	2.0	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
53494-70-5	Endrin ketone	3.8	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
72-43-5	Methoxychlor	20	U
12674-11-2	PCB-1016	38	U
11104-28-2	PCB-1221	77	U
11141-16-5	PCB-1232	38	U
53469-21-9	PCB-1242	38	U
12672-29-6	PCB-1248	38	U
11097-69-1	PCB-1254	38	U
11096-82-5	PCB-1260	38	U
8001-35-2	Toxaphene	200	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS9

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-4

Sample wt/vol: 30.19 (g) | Lab File ID: jc08014.d

% Moisture: 23.9 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	4.3	U
72-55-9	4,4'-DDE	0.77	J
50-29-3	4,4'-DDT	4.3	U
309-00-2	Aldrin	2.2	U
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
57-74-9	Chlordane (technical)	22	U
319-86-8	delta-BHC	2.2	U
60-57-1	Dieldrin	4.3	U
959-98-8	Endosulfan I	2.2	U
33213-65-9	Endosulfan II	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
72-20-8	Endrin	4.3	U
7421-93-4	Endrin aldehyde	4.3	U
53494-70-5	Endrin ketone	4.3	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
72-43-5	Methoxychlor	22	U
12674-11-2	PCB-1016	43	U
11104-28-2	PCB-1221	88	U
11141-16-5	PCB-1232	43	U
53469-21-9	PCB-1242	43	U
12672-29-6	PCB-1248	43	U
11097-69-1	PCB-1254	43	U
11096-82-5	PCB-1260	43	U
8001-35-2	Toxaphene	220	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SS10

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-5

Sample wt/vol: 30.49 (g) | Lab File ID: jc08015.d

% Moisture: 20.7 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	3.8	J
72-55-9	4,4'-DDE	3.2	J
50-29-3	4,4'-DDT	3.8	J
309-00-2	Aldrin	2.1	U
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
57-74-9	Chlordane (technical)	21	U
319-86-8	delta-BHC	2.1	U
60-57-1	Dieldrin	4.1	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
72-20-8	Endrin	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
53494-70-5	Endrin ketone	4.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
72-43-5	Methoxychlor	21	U
12674-11-2	PCB-1016	41	U
11104-28-2	PCB-1221	83	U
11141-16-5	PCB-1232	41	U
53469-21-9	PCB-1242	41	U
12672-29-6	PCB-1248	41	U
11097-69-1	PCB-1254	41	U
11096-82-5	PCB-1260	41	U
8001-35-2	Toxaphene	210	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SL1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-14

Sample wt/vol: 30.37 (g) | Lab File ID: jc08030.d

% Moisture: 92.5 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/09/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	61	P
72-55-9	4,4'-DDE	30	JP
50-29-3	4,4'-DDT	11	JP
309-00-2	Aldrin	22	U
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
57-74-9	Chlordane (technical)	220	U
319-86-8	delta-BHC	22	U
60-57-1	Dieldrin	44	U
959-98-8	Endosulfan I	22	U
33213-65-9	Endosulfan II	44	U
1031-07-8	Endosulfan sulfate	44	U
72-20-8	Endrin	44	U
7421-93-4	Endrin aldehyde	44	U
53494-70-5	Endrin ketone	44	U
58-89-9	gamma-BHC (Lindane)	22	U
76-44-8	Heptachlor	22	U
1024-57-3	Heptachlor epoxide	22	U
72-43-5	Methoxychlor	220	U
12674-11-2	PCB-1016	440	U
11104-28-2	PCB-1221	890	U
11141-16-5	PCB-1232	440	U
53469-21-9	PCB-1242	440	U
12672-29-6	PCB-1248	440	U
11097-69-1	PCB-1254	440	U
11096-82-5	PCB-1260	440	U
8001-35-2	Toxaphene	2200	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SL1DL

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-14-DL

Sample wt/vol: 30.37 (g) | Lab File ID: jcl1007.d

% Moisture: 92.5 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/11/2007

Injection Volume: | Dilution Factor: 10

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	110	JD
72-55-9	4,4'-DDE	67 ~~44~~	JDP
50-29-3	4,4'-DDT	110 ~~48~~	JMDP
309-00-2	Aldrin	220	U
319-84-6	alpha-BHC	220	U
319-85-7	beta-BHC	220	U
57-74-9	Chlordane (technical)	2200	U
319-86-8	delta-BHC	220	U
60-57-1	Dieldrin	440	U
959-98-8	Endosulfan I	220	U
33213-65-9	Endosulfan II	440	U
1031-07-8	Endosulfan sulfate	440	U
72-20-8	Endrin	440	U
7421-93-4	Endrin aldehyde	440	U
53494-70-5	Endrin ketone	440	U
58-89-9	gamma-BHC (Lindane)	220	U
76-44-8	Heptachlor	220	U
1024-57-3	Heptachlor epoxide	220	U
72-43-5	Methoxychlor	2200	U
12674-11-2	PCB-1016	4400	U
11104-28-2	PCB-1221	8900	U
11141-16-5	PCB-1232	4400	U
53469-21-9	PCB-1242	4400	U
12672-29-6	PCB-1248	4400	U
11097-69-1	PCB-1254	4400	U
11096-82-5	PCB-1260	4400	U
8001-35-2	Toxaphene	22000	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SL02

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-2

Sample wt/vol: 30.08 (g) | Lab File ID: jc08011.d

% Moisture: 37.1 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 5

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	1100	E
72-55-9	4,4'-DDE	1500	E
50-29-3	4,4'-DDT	1000	E
309-00-2	Aldrin	13	U
319-84-6	alpha-BHC	13	U
319-85-7	beta-BHC	13	U
57-74-9	Chlordane (technical)	130	U
319-86-8	delta-BHC	13	U
60-57-1	Dieldrin	6.0	JP
959-98-8	Endosulfan I	13	U
33213-65-9	Endosulfan II	26	U
1031-07-8	Endosulfan sulfate	26	U
72-20-8	Endrin	26	U
7421-93-4	Endrin aldehyde	26	U
53494-70-5	Endrin ketone	26	U
58-89-9	gamma-BHC (Lindane)	13	U
76-44-8	Heptachlor	13	U
1024-57-3	Heptachlor epoxide	13	U
72-43-5	Methoxychlor	130	U
12674-11-2	PCB-1016	260	U
11104-28-2	PCB-1221	530	U
11141-16-5	PCB-1232	260	U
53469-21-9	PCB-1242	260	U
12672-29-6	PCB-1248	260	U
11097-69-1	PCB-1254	260	U
11096-82-5	PCB-1260	260	U
8001-35-2	Toxaphene	1300	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SL02DL

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-2-DL

Sample wt/vol: 30.08 (g) | Lab File ID: jc08010.d

% Moisture: 37.1 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 50

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
72-54-8	4,4'-DDD	1100	D	J
72-55-9	4,4'-DDE	1400	D	
50-29-3	4,4'-DDT	890	D	J
309-00-2	Aldrin	~~130~~	~~U~~	
319-84-6	alpha-BHC	130	U	
319-85-7	beta-BHC	130	U	
57-74-9	Chlordane (technical)	1300	U	
319-86-8	delta-BHC	130	U	
60-57-1	Dieldrin	260	U	
959-98-8	Endosulfan I	130	U	
33213-65-9	Endosulfan II	260	U	
1031-07-8	Endosulfan sulfate	260	U	
72-20-8	Endrin	260	U	
7421-93-4	Endrin aldehyde	260	U	
53494-70-5	Endrin ketone	260	U	
58-89-9	gamma-BHC (Lindane)	130	U	
76-44-8	Heptachlor	130	U	
1024-57-3	Heptachlor epoxide	130	U	
72-43-5	Methoxychlor	1300	U	
12674-11-2	PCB-1016	2600	U	
11104-28-2	PCB-1221	5300	U	
11141-16-5	PCB-1232	2600	U	
53469-21-9	PCB-1242	2600	U	
12672-29-6	PCB-1248	2600	U	
11097-69-1	PCB-1254	2600	U	
11096-82-5	PCB-1260	2600	U	
8001-35-2	Toxaphene	~~13000~~	~~U~~	

ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SL03

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-3

Sample wt/vol: 30.07 (g) | Lab File ID: jc08013.d

% Moisture: 38.7 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 4

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q
72-54-8	4,4'-DDD	1300	E
72-55-9	4,4'-DDE	1400	E
50-29-3	4,4'-DDT	910	E
309-00-2	Aldrin	11	U
319-84-6	alpha-BHC	11	U
319-85-7	beta-BHC	11	U
57-74-9	Chlordane (technical)	110	U
319-86-8	delta-BHC	11	U
60-57-1	Dieldrin	5.6	MJP
959-98-8	Endosulfan I	11	U
33213-65-9	Endosulfan II	21	U
1031-07-8	Endosulfan sulfate	21	U
72-20-8	Endrin	21	U
7421-93-4	Endrin aldehyde	21	U
53494-70-5	Endrin ketone	21	U
58-89-9	gamma-BHC (Lindane)	11	U
76-44-8	Heptachlor	11	U
1024-57-3	Heptachlor epoxide	11	U
72-43-5	Methoxychlor	110	U
12674-11-2	PCB-1016	210	U
11104-28-2	PCB-1221	440	U
11141-16-5	PCB-1232	210	U
53469-21-9	PCB-1242	210	U
12672-29-6	PCB-1248	210	U
11097-69-1	PCB-1254	210	U
11096-82-5	PCB-1260	210	U
8001-35-2	Toxaphene	1100	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-SL03DL

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid | Lab Sample ID: 680-24622-3-DL

Sample wt/vol: 30.07 (g) | Lab File ID: jc08012.d

% Moisture: 38.7 | Date Received: 02/27/2007

Extraction Method: 3550B | Date Extracted: 03/06/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/08/2007

Injection Volume: | Dilution Factor: 40

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/Kg	Q	
72-54-8	4,4'-DDD	1200	D	J
72-55-9	4,4'-DDE	1300	D	
50-29-3	4,4'-DDT	1100	D	J
309-00-2	Aldrin	~~110~~	~~U~~	
319-84-6	alpha-BHC	110	U	
319-85-7	beta-BHC	110	U	
57-74-9	Chlordane (technical)	1100	U	
319-86-8	delta-BHC	110	U	
60-57-1	Dieldrin	210	U	
959-98-8	Endosulfan I	110	U	
33213-65-9	Endosulfan II	210	U	
1031-07-8	Endosulfan sulfate	210	U	
72-20-8	Endrin	210	U	
7421-93-4	Endrin aldehyde	210	U	
53494-70-5	Endrin ketone	210	U	
58-89-9	gamma-BHC (Lindane)	110	U	
76-44-8	Heptachlor	110	U	
1024-57-3	Heptachlor epoxide	110	U	
72-43-5	Methoxychlor	1100	U	
12674-11-2	PCB-1016	2100	U	
11104-28-2	PCB-1221	4400	U	
11141-16-5	PCB-1232	2100	U	
53469-21-9	PCB-1242	2100	U	
12672-29-6	PCB-1248	2100	U	
11097-69-1	PCB-1254	2100	U	
11096-82-5	PCB-1260	2100	U	
8001-35-2	Toxaphene	~~11000~~	~~U~~	

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW1

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-20

Sample wt/vol: 1040 (mL) | Lab File ID: jc05056.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.096	U
72-55-9	4,4'-DDE	0.096	U
50-29-3	4,4'-DDT	0.096	U
309-00-2	Aldrin	0.048	U
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
57-74-9	Chlordane (technical)	0.48	U
319-86-8	delta-BHC	0.048	U
60-57-1	Dieldrin	0.096	U
959-98-8	Endosulfan I	0.048	U
33213-65-9	Endosulfan II	0.096	U
1031-07-8	Endosulfan sulfate	0.096	U
72-20-8	Endrin	0.096	U
7421-93-4	Endrin aldehyde	0.096	U
53494-70-5	Endrin ketone	0.096	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
72-43-5	Methoxychlor	0.48	U
12674-11-2	PCB-1016	0.96	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.96	U
53469-21-9	PCB-1242	0.96	U
12672-29-6	PCB-1248	0.96	U
11097-69-1	PCB-1254	0.96	U
11096-82-5	PCB-1260	0.96	U
8001-35-2	Toxaphene	4.8	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW2

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-19

Sample wt/vol: 1040 (mL) | Lab File ID: jc05055.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.096	U
72-55-9	4,4'-DDE	0.096	U
50-29-3	4,4'-DDT	0.096	U
309-00-2	Aldrin	0.048	U
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
57-74-9	Chlordane (technical)	0.48	U
319-86-8	delta-BHC	0.048	U
60-57-1	Dieldrin	0.096	U
959-98-8	Endosulfan I	0.048	U
33213-65-9	Endosulfan II	0.096	U
1031-07-8	Endosulfan sulfate	0.096	U
72-20-8	Endrin	0.096	U
7421-93-4	Endrin aldehyde	0.096	U
53494-70-5	Endrin ketone	0.096	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
72-43-5	Methoxychlor	0.48	U
12674-11-2	PCB-1016	0.96	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.96	U
53469-21-9	PCB-1242	0.96	U
12672-29-6	PCB-1248	0.96	U
11097-69-1	PCB-1254	0.96	U
11096-82-5	PCB-1260	0.96	U
8001-35-2	Toxaphene	4.8	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW3

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-8

Sample wt/vol: 1060 (mL) | Lab File ID: jc05049.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.094	U
72-55-9	4,4'-DDE	0.094	U
50-29-3	4,4'-DDT	0.094	U
309-00-2	Aldrin	0.047	U
319-84-6	alpha-BHC	0.047	U
319-85-7	beta-BHC	0.047	U
57-74-9	Chlordane (technical)	0.47	U
319-86-8	delta-BHC	0.047	U
60-57-1	Dieldrin	0.094	U
959-98-8	Endosulfan I	0.047	U
33213-65-9	Endosulfan II	0.094	U
1031-07-8	Endosulfan sulfate	0.094	U
72-20-8	Endrin	0.094	U
7421-93-4	Endrin aldehyde	0.094	U
53494-70-5	Endrin ketone	0.094	U
58-89-9	gamma-BHC (Lindane)	0.047	U
76-44-8	Heptachlor	0.047	U
1024-57-3	Heptachlor epoxide	0.047	U
72-43-5	Methoxychlor	0.47	U
12674-11-2	PCB-1016	0.94	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.94	U
53469-21-9	PCB-1242	0.94	U
12672-29-6	PCB-1248	0.94	U
11097-69-1	PCB-1254	0.94	U
11096-82-5	PCB-1260	0.94	U
8001-35-2	Toxaphene	4.7	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW3-D

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-9

Sample wt/vol: 1000 (mL) | Lab File ID: jc05050.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
57-74-9	Chlordane (technical)	0.50	U
319-86-8	delta-BHC	0.050	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
12674-11-2	PCB-1016	1.0	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	1.0	U
53469-21-9	PCB-1242	1.0	U
12672-29-6	PCB-1248	1.0	U
11097-69-1	PCB-1254	1.0	U
11096-82-5	PCB-1260	1.0	U
8001-35-2	Toxaphene	5.0	U

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ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW4

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-18

Sample wt/vol: 1000 (mL) | Lab File ID: jc05054.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
57-74-9	Chlordane (technical)	0.50	U
319-86-8	delta-BHC	0.050	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
12674-11-2	PCB-1016	1.0	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	1.0	U
53469-21-9	PCB-1242	1.0	U
12672-29-6	PCB-1248	1.0	U
11097-69-1	PCB-1254	1.0	U
11096-82-5	PCB-1260	1.0	U
8001-35-2	Toxaphene	5.0	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW5

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-17

Sample wt/vol: 1040 (mL) | Lab File ID: jc05053.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.096	U
72-55-9	4,4'-DDE	0.096	U
50-29-3	4,4'-DDT	0.096	U
309-00-2	Aldrin	0.048	U
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
57-74-9	Chlordane (technical)	0.48	U
319-86-8	delta-BHC	0.048	U
60-57-1	Dieldrin	0.096	U
959-98-8	Endosulfan I	0.048	U
33213-65-9	Endosulfan II	0.096	U
1031-07-8	Endosulfan sulfate	0.096	U
72-20-8	Endrin	0.096	U
7421-93-4	Endrin aldehyde	0.096	U
53494-70-5	Endrin ketone	0.096	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
72-43-5	Methoxychlor	0.48	U
12674-11-2	PCB-1016	0.96	U
11104-28-2	PCB-1221	1.9	U
11141-16-5	PCB-1232	0.96	U
53469-21-9	PCB-1242	0.96	U
12672-29-6	PCB-1248	0.96	U
11097-69-1	PCB-1254	0.96	U
11096-82-5	PCB-1260	0.96	U
8001-35-2	Toxaphene	4.8	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW6

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-1

Sample wt/vol: 1000 (mL) | Lab File ID: jc05046.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
57-74-9	Chlordane (technical)	0.50	U
319-86-8	delta-BHC	0.050	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
12674-11-2	PCB-1016	1.0	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	1.0	U
53469-21-9	PCB-1242	1.0	U
12672-29-6	PCB-1248	1.0	U
11097-69-1	PCB-1254	1.0	U
11096-82-5	PCB-1260	1.0	U
8001-35-2	Toxaphene	5.0	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW7

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-6

Sample wt/vol: 1000 (mL) | Lab File ID: jc05047.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
57-74-9	Chlordane (technical)	0.50	U
319-86-8	delta-BHC	0.050	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
12674-11-2	PCB-1016	1.0	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	1.0	U
53469-21-9	PCB-1242	1.0	U
12672-29-6	PCB-1248	1.0	U
11097-69-1	PCB-1254	1.0	U
11096-82-5	PCB-1260	1.0	U
8001-35-2	Toxaphene	5.0	U

ORGANIC ANALYSIS DATA SHEET
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: WFF1-MW20

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-10

Sample wt/vol: 980 (mL) | Lab File ID: jc05051.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
309-00-2	Aldrin	0.051	U
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
57-74-9	Chlordane (technical)	0.51	U
319-86-8	delta-BHC	0.051	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.051	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
58-89-9	gamma-BHC (Lindane)	0.051	U
76-44-8	Heptachlor	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
72-43-5	Methoxychlor	0.51	U
12674-11-2	PCB-1016	1.0	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	1.0	U
53469-21-9	PCB-1242	1.0	U
12672-29-6	PCB-1248	1.0	U
11097-69-1	PCB-1254	1.0	U
11096-82-5	PCB-1260	1.0	U
8001-35-2	Toxaphene	5.1	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: Rinsate 3

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-7

Sample wt/vol: 1000 (mL) | Lab File ID: jc05048.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: CLP II ID: 0.32 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
57-74-9	Chlordane (technical)	0.50	U
319-86-8	delta-BHC	0.050	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
12674-11-2	PCB-1016	1.0	U
11104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	1.0	U
53469-21-9	PCB-1242	1.0	U
12672-29-6	PCB-1248	1.0	U
11097-69-1	PCB-1254	1.0	U
11096-82-5	PCB-1260	1.0	U
8001-35-2	Toxaphene	5.0	U

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ORGANIC ANALYSIS DATA SHEET

Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Client Sample ID: Rinsate 4

Lab Name: STL Savannah | Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water | Lab Sample ID: 680-24622-16

Sample wt/vol: 850 (mL) | Lab File ID: jc05052.d

% Moisture: | Date Received: 02/27/2007

Extraction Method: 3520C | Date Extracted: 02/28/2007

Concentrated Extract Volume: 10 (mL) | Date Analyzed: 03/06/2007

Injection Volume: | Dilution Factor: 1

GPC Cleanup: (Y/N) N | GC Column: Equity ID: 0.25 (mm)

CAS NO.	COMPOUND	UNITS: ug/L	Q
72-54-8	4,4'-DDD	0.12	U
72-55-9	4,4'-DDE	0.12	U
50-29-3	4,4'-DDT	0.12	U
309-00-2	Aldrin	0.059	U
319-84-6	alpha-BHC	0.059	U
319-85-7	beta-BHC	0.059	U
57-74-9	Chlordane (technical)	0.59	U
319-86-8	delta-BHC	0.059	U
60-57-1	Dieldrin	0.12	U
959-98-8	Endosulfan I	0.059	U
33213-65-9	Endosulfan II	0.12	U
1031-07-8	Endosulfan sulfate	0.12	U
72-20-8	Endrin	0.12	U
7421-93-4	Endrin aldehyde	0.12	U
53494-70-5	Endrin ketone	0.12	U
58-89-9	gamma-BHC (Lindane)	0.059	U
76-44-8	Heptachlor	0.059	U
1024-57-3	Heptachlor epoxide	0.059	U
72-43-5	Methoxychlor	0.59	U
12674-11-2	PCB-1016	1.2	U
11104-28-2	PCB-1221	2.4	U
11141-16-5	PCB-1232	1.2	U
53469-21-9	PCB-1242	1.2	U
12672-29-6	PCB-1248	1.2	U
11097-69-1	PCB-1254	1.2	U
11096-82-5	PCB-1260	1.2	U
8001-35-2	Toxaphene	5.9	U

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APPENDIX D

Support Documentation
(Organic)

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSM5972 Calibration Date: 03/06/07 Time: 1132

Lab File ID: MQ208 Init. Calib. Date(s): 03/01/07 03/01/07

Init. Calib. Times: 1219 1412

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
DICHLORODIFLUOROMETHANE	1.12393		1.13758	0.01	1.2		AVRG	
CHLOROMETHANE	1.06809		1.05832	0.1	-0.9		AVRG	
VINYL CHLORIDE	0.87542		0.84421	0.01	-3.6	20.0	AVRG	
BROMOMETHANE	0.40790		0.47254	0.01	15.8		AVRG	
CHLOROETHANE	0.48284		0.43400	0.01	-10.1		AVRG	
TRICHLOROFLUOROMETHANE	1.44917		1.43839	0.01	-0.7		AVRG	
TRICHLOROTRIFLUOROETHANE(113	0.68520		0.71480	0.01	4.3		AVRG	
1 1-DICHLOROETHENE	0.54463		0.44376	0.01	-18.5	20.0	AVRG	
ACETONE	100.0000	128.8207	0.07748	0.01	28.8		LINR	
CARBON DISULFIDE	1.73408		1.70632	0.01	-1.6		AVRG	
METHYLENE CHLORIDE	0.52605		0.53292	0.01	1.3		AVRG	
trans-1 2-DICHLOROETHENE	0.57526		0.54355	0.01	-5.5		AVRG	
METHYL T-BUTYL ETHER	1.88463		1.98520	0.01	5.3		AVRG	
1 1-DICHLOROETHANE	1.34829		1.30058	0.1	-3.5		AVRG	
VINYL ACETATE	1.51594		1.77891	0.01	17.3		AVRG	
cis-1 2-DICHLOROETHENE	0.65858		0.60625	0.01	-7.9		AVRG	
2 2-DICHLOROPROPANE	1.19298		1.28127	0.01	7.4		AVRG	
2-BUTANONE	100.0000	121.3373	0.50416	0.01	21.3		LINR	
BROMOCHLOROMETHANE	0.85165		0.72129	0.01	-15.3		AVRG	
CHLOROFORM	1.32820		1.28468	0.01	-3.3	20.0	AVRG	
1 1 1-TRICHLOROETHANE	0.70730		0.70462	0.01	-0.4		AVRG	
1 1-DICHLOROPROPENE	0.61336		0.57895	0.01	-5.6		AVRG	
CARBON TETRACHLORIDE	0.56616		0.54481	0.01	-3.8		AVRG	
BENZENE	1.41568		1.26416	0.01	-10.7		AVRG	
1 2-DICHLOROETHANE	0.69814		0.69048	0.01	-1.1		AVRG	
TRICHLOROETHENE	0.32783		0.33465	0.01	2.1		AVRG	
1 2-DICHLOROPROPANE	0.40370		0.39053	0.01	-3.3	20.0	AVRG	
DIBROMOMETHANE	0.24263		0.23839	0.01	-1.7		AVRG	
BROMODICHLOROMETHANE	0.53849		0.53197	0.01	-1.2		AVRG	
2-CHLOROETHYL VINYL ETHER			0.19501	0.01	0.0		AVRG	<-
cis-1,3-DICHLOROPROPENE	0.58160		0.61929	0.01	6.5		AVRG	
4-METHYL-2-PENTANONE (MIBK)	0.50208		0.55793	0.01	11.1		AVRG	
TOLUENE	0.84558		0.84204	0.01	-0.4	20.0	AVRG	
trans-1,3-DICHLOROPROPENE	0.57621		0.60533	0.01	5.1		AVRG	
1 1 2-TRICHLOROETHANE	0.24811		0.25351	0.01	2.2		AVRG	
TETRACHLOROETHENE	0.39402		0.43081	0.01	9.3		AVRG	
1 3-DICHLOROPROPANE	0.56583		0.57929	0.01	2.4		AVRG	
2-HEXANONE	0.63352		0.77448	0.01	22.3		AVRG	

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSM5972 Calibration Date: 03/06/07 Time: 1132

Lab File ID: MQ208 Init. Calib. Date(s): 03/01/07 03/01/07

Init. Calib. Times: 1219 1412

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOCHLOROMETHANE	0.60582		0.64889	0.01	7.1		AVRG
1 2-DIBROMOETHANE	0.32576		0.33552	0.01	3.0		AVRG
CHLOROBENZENE	1.52514		1.57707	0.3	3.4		AVRG
1 1 1 2-TETRACHLOROETHANE	0.54734		0.60038	0.01	9.7		AVRG
ETHYL BENZENE	2.91692		3.10292	0.01	6.4	20.0	AVRG
m,p-XYLENE	1.01098		1.03852	0.01	2.7		AVRG
o-XYLENE	0.97953		1.01661	0.01	3.8		AVRG
STYRENE	1.67605		1.72353	0.01	2.8		AVRG
BROMOFORM	50.0000	47.2798	0.37914	0.1	-5.4		LINR
ISOPROPYLBENZENE	2.90392		2.97283	0.01	2.4		AVRG
BROMOBENZENE	0.49162		0.51507	0.01	4.8		AVRG
1 1 2 2-TETRACHLOROETHANE	0.64427		0.69671	0.3	8.1		AVRG
1 2 3-TRICHLOROPROPANE	0.21943		0.25034	0.01	14.1		AVRG
n-PROPYLBENZENE	0.66149		0.70310	0.01	6.3		AVRG
2-CHLOROTOLUENE	0.55136		0.58579	0.01	6.2		AVRG
1 3 5-TRIMETHYLBENZENE	2.13438		2.48482	0.01	16.4		AVRG
4-CHLOROTOLUENE	0.55749		0.58313	0.01	4.6		AVRG
tert-BUTYLBENZENE	1.95326		2.03877	0.01	4.4		AVRG
1 2 4-TRIMETHYLBENZENE	2.11638		2.48846	0.01	17.6		AVRG
sec-BUTYLBENZENE	3.12660		3.25103	0.01	4.0		AVRG
1 3-DICHLOROBENZENE	0.96924		1.03803	0.01	7.1		AVRG
p-ISOPROPYLTOLUENE	2.18699		2.61280	0.01	19.5		AVRG
1 4-DICHLOROBENZENE	0.98035		1.03245	0.01	5.3		AVRG
1 2-DICHLOROBENZENE	0.88950		0.93263	0.01	4.8		AVRG
n-BUTYLBENZENE	2.20699		2.60621	0.01	18.1		AVRG
1 2-DIBROMO-3-CHLOROPROPANE	0.09913		0.11616	0.01	17.2		AVRG
1 2 4-TRICHLOROBENZENE	0.62509		0.70106	0.01	12.2		AVRG
HEXACHLOROBUTADIENE	0.50715		0.56056	0.01	10.5		AVRG
NAPHTHALENE	1.24658		1.55965	0.01	25.1		AVRG
1 2 3-TRICHLOROBENZENE	0.56041		0.65125	0.01	16.2		AVRG
1,3-DICHLOROPROPENE (total)	0.57890		0.61231	0.01	5.8		AVRG
XYLENE (total)	1.00050		1.03122	0.01	3.1		AVRG
METHYL ACETATE	0.86699		0.72399	0.01	-16.5		AVRG
CYCLOHEXANE	0.80737		0.62947	0.01	-22.0		AVRG
METHYL CYCLOHEXANE	0.62990		0.57825	0.01	-8.2		AVRG
BUTADIENE	0.84696		0.81211	0.01	-4.1		AVRG
DIBROMOFLUOROMETHANE	0.71658		0.70782	0.01	-1.2		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSM5972 Calibration Date: 03/06/07 Time: 1132

Lab File ID: MQ208 Init. Calib. Date(s): 03/01/07 03/01/07

Init. Calib. Times: 1219 1412

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
TOLUENE-d8	1.17771		1.21550	0.01	3.2		AVRG
4-BROMOFLUOROBENZENE	0.92977		0.97005	0.01	4.3		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSO5973 Calibration Date: 03/06/07 Time: 1021

Lab File ID: OQ490 Init. Calib. Date(s): 02/26/07 02/26/07

Init. Calib. Times: 1224 1449

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DICHLORODIFLUOROMETHANE	1.11668		1.11308	0.01	-0.3		AVRG
CHLOROMETHANE	50.0000	50.0378	1.08780	0.1	0.1		2ORD
VINYL CHLORIDE	0.80236		0.80931	0.01	0.9	20.0	AVRG
BROMOMETHANE	50.0000	31.0549	0.19799	0.01	-37.9		LINR
CHLOROETHANE	0.22482		0.22193	0.01	-1.3		AVRG
TRICHLOROFLUOROMETHANE	50.0000	56.7597	0.90903	0.01	13.5		2ORD
TRICHLOROTRIFLUOROETHANE(113	0.79850		0.88597	0.01	11.0		AVRG
1 1-DICHLOROETHENE	0.72877		0.76166	0.01	4.5	20.0	AVRG
ACETONE	0.08542		0.11508	0.01	34.7		AVRG
CARBON DISULFIDE	2.02524		2.20920	0.01	9.1		AVRG
METHYLENE CHLORIDE	0.78535		0.81089	0.01	3.3		AVRG
trans-1 2-DICHLOROETHENE	0.89783		0.97355	0.01	8.4		AVRG
METHYL T-BUTYL ETHER	2.30698		2.63160	0.01	14.1		AVRG
1 1-DICHLOROETHANE	1.53921		1.50238	0.1	-2.4		AVRG
VINYL ACETATE	2.16277		2.51886	0.01	16.5		AVRG
cis-1 2-DICHLOROETHENE	1.13203		1.14208	0.01	0.9		AVRG
2 2-DICHLOROPROPANE	1.12333		1.21804	0.01	8.4		AVRG
2-BUTANONE	0.54252		0.76981	0.01	41.9		AVRG
BROMOCHLOROMETHANE	0.98185		0.97509	0.01	-0.7		AVRG
CHLOROFORM	1.59121		1.62840	0.01	2.3	20.0	AVRG
1 1 1-TRICHLOROETHANE	0.37657		0.38470	0.01	2.2		AVRG
1 1-DICHLOROPROPENE	0.31525		0.31865	0.01	1.1		AVRG
CARBON TETRACHLORIDE	0.31096		0.33023	0.01	6.2		AVRG
BENZENE	0.92099		0.89897	0.01	-2.4		AVRG
1 2-DICHLOROETHANE	0.32441		0.33094	0.01	2.0		AVRG
TRICHLOROETHENE	0.35492		0.36280	0.01	2.2		AVRG
1 2-DICHLOROPROPANE	0.28093		0.27405	0.01	-2.4	20.0	AVRG
DIBROMOMETHANE	0.16937		0.17867	0.01	5.5		AVRG
BROMODICHLOROMETHANE	0.31315		0.33784	0.01	7.9		AVRG
2-CHLOROETHYL VINYL ETHER	0.18815		0.22695	0.01	20.6		AVRG
cis-1,3-DICHLOROPROPENE	0.34852		0.37760	0.01	8.3		AVRG
4-METHYL-2-PENTANONE (MIBK)	0.28666		0.40567	0.01	41.5		AVRG
TOLUENE	0.65624		0.66718	0.01	1.7	20.0	AVRG
trans-1,3-DICHLOROPROPENE	0.31992		0.34475	0.01	7.8		AVRG
1 1 2-TRICHLOROETHANE	0.21150		0.22752	0.01	7.6		AVRG
TETRACHLOROETHENE	0.70491		0.71968	0.01	2.1		AVRG
1 3-DICHLOROPROPANE	0.38807		0.40969	0.01	5.6		AVRG
2-HEXANONE	0.47419		0.70378	0.01	48.4		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSO5973 Calibration Date: 03/06/07 Time: 1021

Lab File ID: OQ490 Init. Calib. Date(s): 02/26/07 02/26/07

Init. Calib. Times: 1224 1449

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOCHLOROMETHANE	0.76007		0.84097	0.01	10.6		AVRG
1 2-DIBROMOETHANE	0.30850		0.34627	0.01	12.2		AVRG
CHLOROBENZENE	2.14665		2.12564	0.3	-1.0		AVRG
1 1 1 2-TETRACHLOROETHANE	0.74085		0.80691	0.01	8.9		AVRG
ETHYL BENZENE	3.07370		3.06824	0.01	-0.2	20.0	AVRG
STYRENE	2.17767		2.26186	0.01	3.9		AVRG
BROMOFORM	50.0000	51.0443	0.56621	0.1	2.1		LINR
ISOPROPYLBENZENE	3.49526		3.42941	0.01	-1.9		AVRG
m,p-XYLENE	1.28705		1.30189	0.01	1.2		AVRG
o-XYLENE	1.29069		1.30441	0.01	1.1		AVRG
BROMOBENZENE	0.97280		1.01512	0.01	4.4		AVRG
1 1 2 2-TETRACHLOROETHANE	0.75635		0.92136	0.3	21.8		AVRG
1 2 3-TRICHLOROPROPANE	0.26119		0.32587	0.01	24.8		AVRG
n-PROPYLBENZENE	1.13554		1.16324	0.01	2.4		AVRG
2-CHLOROTOLUENE	0.96493		1.00324	0.01	4.0		AVRG
1 3 5-TRIMETHYLBENZENE	2.59107		3.02055	0.01	16.6		AVRG
4-CHLOROTOLUENE	0.97170		0.97898	0.01	0.7		AVRG
tert-BUTYLBENZENE	3.05125		3.04732	0.01	-0.1		AVRG
1 2 4-TRIMETHYLBENZENE	2.59742		3.04308	0.01	17.2		AVRG
sec-BUTYLBENZENE	4.14510		4.35055	0.01	5.0		AVRG
1 3-DICHLOROBENZENE	2.07359		2.10753	0.01	1.6		AVRG
p-ISOPROPYLTOLUENE	3.48921		4.21340	0.01	20.8		AVRG
1 4-DICHLOROBENZENE	2.04409		2.01141	0.01	-1.6		AVRG
1 2-DICHLOROBENZENE	1.94376		1.92183	0.01	-1.1		AVRG
n-BUTYLBENZENE	2.75556		3.23898	0.01	17.5		AVRG
1 2-DIBROMO-3-CHLOROPROPANE	0.18233		0.26438	0.01	45.0		AVRG
1 2 4-TRICHLOROBENZENE	50.0000	53.8905	1.51930	0.01	7.8		LINR
HEXACHLOROBUTADIENE	50.0000	53.3778	0.62246	0.01	6.8		LINR
NAPHTHALENE	50.0000	69.3876	3.69580	0.01	38.8		LINR
1 2 3-TRICHLOROBENZENE	50.0000	55.2904	1.32018	0.01	10.6		LINR
1,3-DICHLOROPROPENE (total)	0.33422		0.36118	0.01	8.1		AVRG
XYLENE (total)	1.28826		1.30273	0.01	1.1		AVRG
1,2-DICHLOROETHENE (total)	1.01493		1.05781	0.01	4.2		AVRG
METHYL ACETATE	50.0000	63.3553	1.21912	0.01	26.7		LINR
CYCLOHEXANE	0.53890		0.46572	0.01	-13.6		AVRG
METHYL CYCLOHEXANE	0.56499		0.54304	0.01	-3.9		AVRG
BUTADIENE	0.87127		0.70754	0.01	-18.8		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSO5973 Calibration Date: 03/06/07 Time: 1021

Lab File ID: OQ490 Init. Calib. Date(s): 02/26/07 02/26/07

Init. Calib. Times: 1224 1449

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOFLUOROMETHANE	1.07308		1.16013	0.01	8.1		AVRG
TOLUENE-d8	1.01149		1.06258	0.01	5.1		AVRG
4-BROMOFLUOROBENZENE	1.00425		1.03877	0.01	3.4		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSO5973 Calibration Date: 03/07/07 Time: 1357

Lab File ID: OQ503 Init. Calib. Date(s): 02/26/07 02/26/07

Init. Calib. Times: 1224 1449

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DICHLORODIFLUOROMETHANE	1.11668		0.99698	0.01	-10.7		AVRG
CHLOROMETHANE	50.0000	54.5167	1.19154	0.1	9.0		2ORD
VINYL CHLORIDE	0.80236		0.88068	0.01	9.8	20.0	AVRG
BROMOMETHANE	50.0000	29.4578	0.18781	0.01	-41.1		LINR
CHLOROETHANE	0.22482		0.25128	0.01	11.8		AVRG
TRICHLOROFLUOROMETHANE	50.0000	60.7852	0.97858	0.01	21.6		2ORD
TRICHLOROTRIFLUOROETHANE(113	0.79850		0.88901	0.01	11.3		AVRG
1 1-DICHLOROETHENE	0.72877		0.77617	0.01	6.5	20.0	AVRG
ACETONE	0.08542		0.10032	0.01	17.4		AVRG
CARBON DISULFIDE	2.02524		2.12928	0.01	5.1		AVRG
METHYLENE CHLORIDE	0.78535		0.81514	0.01	3.8		AVRG
trans-1 2-DICHLOROETHENE	0.89783		0.92904	0.01	3.5		AVRG
METHYL T-BUTYL ETHER	2.30698		2.45599	0.01	6.5		AVRG
1 1-DICHLOROETHANE	1.53921		1.49897	0.1	-2.6		AVRG
VINYL ACETATE	2.16277		2.16499	0.01	0.1		AVRG
cis-1 2-DICHLOROETHENE	1.13203		1.11280	0.01	-1.7		AVRG
2 2-DICHLOROPROPANE	1.12333		1.09827	0.01	-2.2		AVRG
2-BUTANONE	0.54252		0.64015	0.01	18.0		AVRG
BROMOCHLOROMETHANE	0.98185		0.96089	0.01	-2.1		AVRG
CHLOROFORM	1.59121		1.61704	0.01	1.6	20.0	AVRG
1 1 1-TRICHLOROETHANE	0.37657		0.38468	0.01	2.2		AVRG
1 1-DICHLOROPROPENE	0.31525		0.30222	0.01	-4.1		AVRG
CARBON TETRACHLORIDE	0.31096		0.32663	0.01	5.0		AVRG
BENZENE	0.92099		0.86455	0.01	-6.1		AVRG
1 2-DICHLOROETHANE	0.32441		0.32457	0.01	0.0		AVRG
TRICHLOROETHENE	0.35492		0.35588	0.01	0.3		AVRG
1 2-DICHLOROPROPANE	0.28093		0.27236	0.01	-3.1	20.0	AVRG
DIBROMOMETHANE	0.16937		0.16866	0.01	-0.4		AVRG
BROMODICHLOROMETHANE	0.31315		0.33175	0.01	5.9		AVRG
2-CHLOROETHYL VINYL ETHER	0.18815		0.20901	0.01	11.1		AVRG
cis-1,3-DICHLOROPROPENE	0.34852		0.36199	0.01	3.9		AVRG
4-METHYL-2-PENTANONE (MIBK)	0.28666		0.34129	0.01	19.1		AVRG
TOLUENE	0.65624		0.65739	0.01	0.2	20.0	AVRG
trans-1,3-DICHLOROPROPENE	0.31992		0.33275	0.01	4.0		AVRG
1 1 2-TRICHLOROETHANE	0.21150		0.21833	0.01	3.2		AVRG
TETRACHLOROETHENE	0.70491		0.68857	0.01	-2.3		AVRG
1 3-DICHLOROPROPANE	0.38807		0.39493	0.01	1.8		AVRG
2-HEXANONE	0.47419		0.55714	0.01	17.5		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSO5973 Calibration Date: 03/07/07 Time: 1357

Lab File ID: OQ503 Init. Calib. Date(s): 02/26/07 02/26/07

Init. Calib. Times: 1224 1449

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOCHLOROMETHANE	0.76007		0.82123	0.01	8.0		AVRG
1 2-DIBROMOETHANE	0.30850		0.33056	0.01	7.1		AVRG
CHLOROBENZENE	2.14665		2.09698	0.3	-2.3		AVRG
1 1 1 2-TETRACHLOROETHANE	0.74085		0.79347	0.01	7.1		AVRG
ETHYL BENZENE	3.07370		2.94873	0.01	-4.1	20.0	AVRG
STYRENE	2.17767		2.19652	0.01	0.9		AVRG
BROMOFORM	50.0000	46.2746	0.51330	0.1	-7.5		LINR
ISOPROPYLBENZENE	3.49526		3.47287	0.01	-0.6		AVRG
m,p-XYLENE	1.28705		1.26352	0.01	-1.8		AVRG
o-XYLENE	1.29069		1.25969	0.01	-2.4		AVRG
BROMOBENZENE	0.97280		0.97682	0.01	0.4		AVRG
1 1 2 2-TETRACHLOROETHANE	0.75635		0.81753	0.3	8.1		AVRG
1 2 3-TRICHLOROPROPANE	0.26119		0.28591	0.01	9.5		AVRG
n-PROPYLBENZENE	1.13554		1.14514	0.01	0.8		AVRG
2-CHLOROTOLUENE	0.96493		0.98083	0.01	1.6		AVRG
1 3 5-TRIMETHYLBENZENE	2.59107		3.00219	0.01	15.9		AVRG
4-CHLOROTOLUENE	0.97170		0.97005	0.01	-0.2		AVRG
tert-BUTYLBENZENE	3.05125		3.03422	0.01	-0.6		AVRG
1 2 4-TRIMETHYLBENZENE	2.59742		2.91984	0.01	12.4		AVRG
sec-BUTYLBENZENE	4.14510		4.25596	0.01	2.7		AVRG
1 3-DICHLOROBENZENE	2.07359		2.04761	0.01	-1.3		AVRG
p-ISOPROPYLTOLUENE	3.48921		4.17237	0.01	19.6		AVRG
1 4-DICHLOROBENZENE	2.04409		1.97978	0.01	-3.1		AVRG
1 2-DICHLOROBENZENE	1.94376		1.84935	0.01	-4.9		AVRG
n-BUTYLBENZENE	2.75556		3.18015	0.01	15.4		AVRG
1 2-DIBROMO-3-CHLOROPROPANE	0.18233		0.21793	0.01	19.5		AVRG
1 2 4-TRICHLOROBENZENE	50.0000	50.0321	1.41052	0.01	0.1		LINR
HEXACHLOROBUTADIENE	50.0000	50.5860	0.58990	0.01	1.2		LINR
NAPHTHALENE	50.0000	59.2519	3.15594	0.01	18.5		LINR
1 2 3-TRICHLOROBENZENE	50.0000	51.1353	1.22097	0.01	2.3		LINR
1,3-DICHLOROPROPENE (total)	0.33422		0.34737	0.01	3.9		AVRG
XYLENE (total)	1.28826		1.26224	0.01	-2.0		AVRG
1,2-DICHLOROETHENE (total)	1.01493		1.02092	0.01	0.6		AVRG
METHYL ACETATE	50.0000	54.3724	1.04626	0.01	8.7		LINR
CYCLOHEXANE	0.53890		0.46527	0.01	-13.7		AVRG
METHYL CYCLOHEXANE	0.56499		0.54163	0.01	-4.1		AVRG
BUTADIENE	0.87127		0.77093	0.01	-11.5		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL Case No.: SAS No.: SDG No.: 680-24622

Instrument ID: MSO5973 Calibration Date: 03/07/07 Time: 1357

Lab File ID: OQ503 Init. Calib. Date(s): 02/26/07 02/26/07

Init. Calib. Times: 1224 1449

GC Column: DB-624 ID: 0.18 (mm)

COMPOUND	ICAL5.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
DIBROMOFLUOROMETHANE	1.07308		1.16385	0.01	8.5		AVRG
TOLUENE-d8	1.01149		1.03722	0.01	2.5		AVRG
4-BROMOFLUOROBENZENE	1.00425		1.01663	0.01	1.2		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

SURROGATE COMPOUND RECOVERY
Volatile Organic Compounds by GC/MS

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid

SAMPLE ID	(BFB)#	(DFM)#	(TOL)#
LCS 680-69049/4	107	102	104
LCS 680-69129/2	118	97	114
LCS 680-69248/4	101	98	100
MB 680-69049/5	98	90	94
MB 680-69129/25	99	86	95
MB 680-69248/12	97	94	95
WFF1-SL02	77	85	86
WFF1-SL03	75	93	89
WFF1-SS9	96	84	97
WFF1-SS10	95	84	97
WFF1-SS4-A	95	91	98
WFF1-SS4-AMS	110	101	111
WFF1-SS4-AMSD	111	103	108
WFF1-SS5	88	80	96
WFF1-SS7	91	81	98
WFF1-SL1	84	93	83
WFF1-SS5-D	84	83	93

SUR (BFB) =4-Bromofluorobenzene
SUR (DFM) =Dibromofluoromethane
SUR (TOL) =Toluene-d8 (Surr)

Column to be used to flag recovery values

QC LIMITS
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FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MSG5973 Calibration Date(s): 03/01/07 03/01/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1409 1629

LAB FILE ID: RRF10: GQ451 RRF20: GQ450 RRF50: GQ449
RRF80: GQ446A RRF100: GQ448 RRF200: GQ447

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF100	RRF200
1,4-Dioxane	0.6114	0.5025	0.5751	0.5642	0.5229	0.5333
Pyridine	1.4318	1.3636	1.4603	1.5092	1.4783	1.5527
N-Nitrosodimethylamine	0.7158	0.6548	0.6917	0.7002	0.6791	0.7040
Aniline	1.9247	1.9028	2.0218	1.9397	1.9438	2.0119
Phenol	1.6951	1.6894	1.8301	1.8210	1.8355	1.9404
Bis(2-chloroethyl)ether	1.0191	1.0332	1.0296	1.0357	1.0181	1.0294
2-Chlorophenol	1.6120	1.5739	1.6731	1.6345	1.6508	1.7316
1,3-Dichlorobenzene	1.8278	1.7897	1.8302	1.8189	1.7815	1.8474
1,4-Dichlorobenzene	1.8408	1.8040	1.8595	1.8465	1.7730	1.8546
Benzyl Alcohol	0.9024	0.8896	1.0192	1.0152	1.0967	1.1049
1,2-Dichlorobenzene	1.8114	1.7472	1.7430	1.7182	1.6756	1.7342
2-Methylphenol	1.2263	1.1934	1.2681	1.2373	1.2416	1.2942
N-Nitroso-di-n-propylamine	0.9302	0.9512	0.9881	0.9992	0.9989	1.0113
3&4-Methylphenol	1.6990	1.6888	1.8537	1.8569	1.8691	1.9385
Hexachloroethane	0.6537	0.5998	0.6256	0.6251	0.6215	0.6400
Nitrobenzene	0.2995	0.2926	0.3199	0.3210	0.3128	0.3266
Isophorone	0.5726	0.5690	0.6228	0.6413	0.6249	0.6290
2-Nitrophenol	0.1421	0.1383	0.1706	0.1755	0.1915	0.1922
2,4-Dimethylphenol	0.2868	0.2862	0.3127	0.3087	0.3144	0.3227
Bis(2-chloroethoxy)methane	0.3852	0.3762	0.3965	0.4072	0.3947	0.4034
Benzoic acid	32149	39088	144074	272499	783367	692567
2,4-Dichlorophenol	0.2784	0.2781	0.3065	0.3142	0.3126	0.3214
1,2,4-Trichlorobenzene	0.3279	0.3172	0.3268	0.3286	0.3178	0.3286
Naphthalene	1.1223	1.1020	1.1488	1.1337	1.0900	1.1312
4-Chloroaniline	0.4186	0.4084	0.4559	0.4586	0.4393	0.4482
Hexachlorobutadiene	0.1574	0.1527	0.1592	0.1615	0.1578	0.1627
4-Chloro-3-methylphenol	0.2603	0.2607	0.2949	0.3073	0.3092	0.3078
2-Methylnaphthalene	0.7560	0.7451	0.7852	0.8021	0.7705	0.7783
1-Methylnaphthalene	0.7631	0.7502	0.7998	0.7985	0.7612	0.7764
Hexachlorocyclopentadiene	0.2616	0.2663	0.2900	0.3010	0.3165	0.3351
2,4,6-Trichlorophenol	0.2999	0.3018	0.3398	0.3475	0.3525	0.3764
2,4,5-Trichlorophenol	0.3093	0.3178	0.3687	0.3781	0.3737	0.3983
2-Chloronaphthalene	1.1868	1.1567	1.1816	1.1600	1.1323	1.2044
2-Nitroaniline	0.2081	0.2172	0.2649	0.2850	0.2866	0.2986
Dimethylphthalate	1.3445	1.3448	1.4050	1.4434	1.3960	1.4277
2,6-Dinitrotoluene	29277	37612	106449	207388	484985	432832
Acenaphthylene	1.8965	1.8814	1.9644	1.9791	1.9015	2.0000
3-Nitroaniline	0.2698	0.2699	0.3332	0.3530	0.3536	0.3617
Acenaphthene	1.1042	1.1104	1.1244	1.1282	1.0903	1.1563
2,4-Dinitrophenol	0.0414	0.0457	0.0698	0.0958	0.1282	0.1220
4-Nitrophenol	19088	33395	76363	158582	360813	322042

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MSG5973 Calibration Date(s): 03/01/07 03/01/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1409 1629

LAB FILE ID: RRF10: GQ451 RRF20: GQ450 RRF50: GQ449
RRF80: GQ446A RRF100: GQ448 RRF200: GQ447

COMPOUND	RRF10	RRF20	RRF50	RRF80	RRF100	RRF200
Dibenzofuran	1.7166	1.7346	1.7411	1.7411	1.6638	1.7376
2,4-Dinitrotoluene	38204	50481	147312	292572	664524	596536
Diethylphthalate	1.3282	1.3321	1.3997	1.4481	1.3903	1.3985
Fluorene	1.3545	1.3469	1.4037	1.4454	1.3804	1.4160
4-Chlorophenyl-phenylether	0.5997	0.6173	0.6180	0.6388	0.6228	0.6344
4-Nitroaniline	0.2732	0.2864	0.3403	0.3674	0.3557	0.3572
4,6-Dinitro-2-methylphenol	10686	15859	52608	115266	302166	264255
N-Nitrosodiphenylamine	0.5460	0.5415	0.5705	0.5484	0.5400	0.5738
1,2-Diphenylhydrazine	0.6653	0.6646	0.6854	0.6702	0.6532	0.6927
4-Bromophenyl-phenylether	0.2045	0.1996	0.2062	0.2086	0.2068	0.2205
Hexachlorobenzene	0.2330	0.2268	0.2332	0.2353	0.2295	0.2398
Pentachlorophenol	21877	29180	89808	189324	421586	386413
Phenanthrene	1.1506	1.1399	1.1745	1.1481	1.0929	1.1434
Anthracene	1.1330	1.1302	1.1827	1.1606	1.0945	1.1491
Carbazole	1.0808	1.0912	1.1613	1.1651	1.0952	1.1359
Di-n-Butylphthalate	1.2129	1.2690	1.4062	1.4568	1.4365	1.4604
Fluoranthene	1.1382	1.1637	1.2409	1.2896	1.2091	1.2404
Benzidine	169342	135279	343259	650073	1389685	1046352
Pyrene	1.3209	1.3213	1.4170	1.3594	1.3154	1.3953
Butylbenzylphthalate	0.5707	0.5873	0.6799	0.6940	0.7078	0.7305
3,3'-Dichlorobenzidine	0.4589	0.3667	0.4380	0.4847	0.4855	0.4996
Benzo(a)Anthracene	1.2231	1.2120	1.2976	1.3057	1.2977	1.3500
Bis(2-ethylhexyl)phthalate	0.8287	0.8417	0.9677	0.9715	0.9893	1.0257
Chrysene	1.1659	1.1726	1.2121	1.1795	1.1374	1.1975
Di-n-octylphthalate	271978	358508	968081	2071568	4405236	3808013
Benzo(b)fluoranthene	1.3288	1.4552	1.4796	1.5267	1.6324	1.5701
Benzo(k)fluoranthene	1.4527	1.4444	1.5755	1.5146	1.4853	1.6964
Benzo(a)pyrene	1.2527	1.2912	1.4151	1.4319	1.4272	1.5301
Indeno(1,2,3-cd)pyrene	1.2806	1.3071	1.4508	1.5155	1.4935	1.5582
Dibenzo(a,h)anthracene	1.2787	1.3133	1.4348	1.4608	1.4721	1.5647
Benzo(g,h,i)perylene	1.2997	1.2954	1.4202	1.4487	1.4377	1.5387
2-Fluorophenol	1.4204	1.3439	1.4949	1.5268	1.5787	1.6721
Phenol-d5	1.7106	1.6723	1.8806	1.8715	1.9236	2.0488
Nitrobenzene-d5	0.2919	0.2981	0.3269	0.3332	0.3248	0.3361
2-Fluorobiphenyl	1.4207	1.4078	1.4391	1.4050	1.3703	1.4615
2,4,6-Tribromophenol	0.1711	0.1757	0.1999	0.2194	0.2143	0.2186
Terphenyl-d14	0.9556	0.9670	1.0557	1.0271	1.0312	1.0848

Note: Compound responses are reported in place of RRFs for linear and quadratic curves.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MSG5973 Calibration Date(s): 03/01/07 03/01/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1409 1629

COMPOUND	CURVE	COEFFICIENTS A0	A1	A2	%RSD OR R^2
1,4-Dioxane	AVRG		0.5516		7.186
Pyridine	AVRG		1.4660		4.444
N-Nitrosodimethylamine	AVRG		0.6910		3.120
Aniline	AVRG		1.9575		2.466
Phenol	AVRG		1.8019		5.297
Bis(2-chloroethyl)ether	AVRG		1.0275		0.710
2-Chlorophenol	AVRG		1.6460		3.279
1,3-Dichlorobenzene	AVRG		1.8159		1.397
1,4-Dichlorobenzene	AVRG		1.8297		1.859
Benzyl Alcohol	AVRG		1.0047		9.181
1,2-Dichlorobenzene	AVRG		1.7383		2.547
2-Methylphenol	AVRG		1.2435		2.792
N-Nitroso-di-n-propylamine	AVRG		0.9798		3.253
3&4-Methylphenol	AVRG		1.8177		5.543
Hexachloroethane	AVRG		0.6276		2.898
Nitrobenzene	AVRG		0.3121		4.269
Isophorone	AVRG		0.6099		5.083
2-Nitrophenol	AVRG		0.1684		13.932
2,4-Dimethylphenol	AVRG		0.3052		4.989
Bis(2-chloroethoxy)methane	AVRG		0.3939		2.925
Benzoic acid	2ORDR	0.00000000	4.16255295	-0.3740868	0.9897284
2,4-Dichlorophenol	AVRG		0.3018		6.263
1,2,4-Trichlorobenzene	AVRG		0.3245		1.682
Naphthalene	AVRG		1.1213		1.938
4-Chloroaniline	AVRG		0.4381		4.680
Hexachlorobutadiene	AVRG		0.1585		2.234
4-Chloro-3-methylphenol	AVRG		0.2900		8.086
2-Methylnaphthalene	AVRG		0.7729		2.653
1-Methylnaphthalene	AVRG		0.7749		2.656
Hexachlorocyclopentadiene	AVRG		0.2951		9.665
2,4,6-Trichlorophenol	AVRG		0.3363		8.941
2,4,5-Trichlorophenol	AVRG		0.3576		9.982
2-Chloronaphthalene	AVRG		1.1703		2.196
2-Nitroaniline	AVRG		0.2601		14.768
Dimethylphthalate	AVRG		1.3936		2.971
2,6-Dinitrotoluene	LINR	0.00000000	3.45300060		0.9965904
Acenaphthylene	AVRG		1.9371		2.580
3-Nitroaniline	AVRG		0.3235		13.167
Acenaphthene	AVRG		1.1190		2.046
2,4-Dinitrophenol	AVRG		0.0838		44.696
4-Nitrophenol	LINR	0.00000000	4.63063321		0.9968228

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MSG5973 Calibration Date(s): 03/01/07 03/01/07

Column: SLB-5MS ID: 0.25 (mm) Calibration Time(s): 1409 1629

COMPOUND	CURVE	COEFFICIENTS A0	A1	A2	%RSD OR R^2
Dibenzofuran	AVRG		1.7225		1.750
2,4-Dinitrotoluene	LINR	0.00000000	2.50193667		0.9967017
Diethylphthalate	AVRG		1.3828		3.298
Fluorene	AVRG		1.3911		2.714
4-Chlorophenyl-phenylether	AVRG		0.6218		2.241
4-Nitroaniline	AVRG		0.3300		12.146
4,6-Dinitro-2-methylphenol	2ORDR	0.00000000	11.6982777	-4.5014171	0.9927445
N-Nitrosodiphenylamine	AVRG		0.5534		2.693
1,2-Diphenylhydrazine	AVRG		0.6719		2.168
4-Bromophenyl-phenylether	AVRG		0.2077		3.360
Hexachlorobenzene	AVRG		0.2329		1.943
Pentachlorophenol	LINR	0.00000000	6.59749672		0.9915916
Phenanthrene	AVRG		1.1416		2.344
Anthracene	AVRG		1.1417		2.637
Carbazole	AVRG		1.1216		3.326
Di-n-Butylphthalate	AVRG		1.3736		7.719
Fluoranthene	AVRG		1.2136		4.578
Benzidine	LINR	0.00000000	2.01597754		0.9932967
Pyrene	AVRG		1.3549		3.192
Butylbenzylphthalate	AVRG		0.6617		10.033
3,3'-Dichlorobenzidine	AVRG		0.4556		10.707
Benzo(a)Anthracene	AVRG		1.2810		4.137
Bis(2-ethylhexyl)phthalate	AVRG		0.9374		8.738
Chrysene	AVRG		1.1775		2.205
Di-n-octylphthalate	LINR	0.00000000	0.58428387		0.9960813
Benzo(b)fluoranthene	AVRG		1.4988		6.990
Benzo(k)fluoranthene	AVRG		1.5282		6.226
Benzo(a)pyrene	AVRG		1.3914		7.330
Indeno(1,2,3-cd)pyrene	AVRG		1.4343		7.982
Dibenzo(a,h)anthracene	AVRG		1.4207		7.507
Benzo(g,h,i)perylene	AVRG		1.4067		6.681
2-Fluorophenol	AVRG		1.5061		7.688
Phenol-d5	AVRG		1.8512		7.536
Nitrobenzene-d5	AVRG		0.3185		5.885
2-Fluorobiphenyl	AVRG		1.4174		2.205
2,4,6-Tribromophenol	AVRG		0.1998		10.853
Terphenyl-d14	AVRG		1.0202		4.924

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MSN5973 Calibration Date: 03/13/07 Time: 1335

Lab File ID: NQ372 Init. Calib. Date(s): 02/19/07 02/19/07

Init. Calib. Times: 1243 1523

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
1,4-Dioxane	0.70580		0.79168		12.2		AVRG
Pyridine	2.16802		2.29943		6.1		AVRG
N-Nitrosodimethylamine	0.80521		0.87504		8.7		AVRG
Aniline	2.50459		2.28916		-8.6		AVRG
Phenol	2.29708		2.21312		-3.7	20.0	AVRG
Bis(2-chloroethyl)ether	1.31866		1.46739		11.3		AVRG
2-Chlorophenol	1.58534		1.55210		-2.1		AVRG
1,3-Dichlorobenzene	1.77971		1.75012		-1.7		AVRG
1,4-Dichlorobenzene	1.81342		1.80691		-0.4	20.0	AVRG
Benzyl Alcohol	1.15247		1.18960		3.2		AVRG
1,2-Dichlorobenzene	1.71767		1.68997		-1.6		AVRG
2-Methylphenol	1.39397		1.38226		-0.8		AVRG
N-Nitroso-di-n-propylamine	1.49368		1.52570	0.05	2.1		AVRG
3&4-Methylphenol	2.09022		2.05512		-1.7		AVRG
Hexachloroethane	0.75768		0.75468		-0.4		AVRG
Nitrobenzene	0.50639		0.52090		2.9		AVRG
Isophorone	0.95479		0.95317		-0.2		AVRG
2-Nitrophenol	0.18926		0.20806		9.9	20.0	AVRG
2,4-Dimethylphenol	0.33949		0.33256		-2.0		AVRG
Bis(2-chloroethoxy)methane	0.51169		0.51816		1.3		AVRG
Benzoic acid	80.0000	77.0412	0.30419		-3.7		2ORD
2,4-Dichlorophenol	0.32378		0.31393		-3.0	20.0	AVRG
1,2,4-Trichlorobenzene	0.35863		0.34740		-3.1		AVRG
Naphthalene	1.10182		1.09315		-0.8		AVRG
4-Chloroaniline	0.46646		0.44445		-4.7		AVRG
Hexachlorobutadiene	0.22829		0.21490		-5.9	20.0	AVRG
4-Chloro-3-methylphenol	0.38786		0.38992		0.5	20.0	AVRG
2-Methylnaphthalene	0.77330		0.76009		-1.7		AVRG
1-Methylnaphthalene	0.78477		0.75989		-3.2		AVRG
Hexachlorocyclopentadiene	0.37919		0.38212	0.05	0.8		AVRG
2,4,6-Trichlorophenol	0.37909		0.37181		-1.9	20.0	AVRG
2,4,5-Trichlorophenol	0.41847		0.40661		-2.8		AVRG
2-Chloronaphthalene	1.18297		1.18550		0.2		AVRG
2-Nitroaniline	0.42333		0.45667		7.9		AVRG
Dimethylphthalate	1.45389		1.44319		-0.7		AVRG
2,6-Dinitrotoluene	0.30062		0.32235		7.2		AVRG
Acenaphthylene	1.83263		1.83178		0.0		AVRG
3-Nitroaniline	0.33823		0.33358		-1.4		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MSN5973 Calibration Date: 03/13/07 Time: 1335

Lab File ID: NQ372 Init. Calib. Date(s): 02/19/07 02/19/07

Init. Calib. Times: 1243 1523

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
Acenaphthene	1.09315		1.08248		-1.0	20.0	AVRG
2,4-Dinitrophenol	80.0000	56.6985	0.09328	0.05	-29.1		2ORD
4-Nitrophenol	0.31353		0.35446	0.05	13.1		AVRG
Dibenzofuran	1.71554		1.67163		-2.6		AVRG
2,4-Dinitrotoluene	0.42114		0.44923		6.7		AVRG
Diethylphthalate	1.47858		1.46449		-1.0		AVRG
Fluorene	1.42455		1.39017		-2.4		AVRG
4-Chlorophenyl-phenylether	0.70948		0.66965		-5.6		AVRG
4-Nitroaniline	0.35764		0.34503		-3.5		AVRG
4,6-Dinitro-2-methylphenol	80.0000	74.6119	0.10603		-6.7		2ORD
N-Nitrosodiphenylamine	0.54341		0.55853		2.8	20.0	AVRG
1,2-Diphenylhydrazine	0.94280		1.02095		8.3		AVRG
4-Bromophenyl-phenylether	0.22495		0.22426		-0.3		AVRG
Hexachlorobenzene	0.24636		0.23684		-3.9		AVRG
Pentachlorophenol	80.0000	67.6646	0.14502		-15.4	20.0	LINR
Phenanthrene	1.11708		1.11982		0.2		AVRG
Anthracene	1.15044		1.14711		-0.3		AVRG
Carbazole	1.10307		1.10036		-0.2		AVRG
Di-n-Butylphthalate	1.36239		1.41663		4.0		AVRG
Fluoranthene	1.32466		1.27808		-3.5	20.0	AVRG
Benzidine	80.0000	80.3777	0.52302		0.5		2ORD
Pyrene	1.30376		1.27507		-2.2		AVRG
Butylbenzylphthalate	0.60694		0.64268		5.9		AVRG
3,3'-Dichlorobenzidine	0.47371		0.42767		-9.7		AVRG
Benzo(a)Anthracene	1.29384		1.27129		-1.7		AVRG
Bis(2-ethylhexyl)phthalate	0.86219		0.91596		6.2		AVRG
Chrysene	1.25841		1.22562		-2.6		AVRG
Di-n-octylphthalate	1.46788		1.58165		7.8	20.0	AVRG
Benzo(b)fluoranthene	1.56448		1.55288		-0.7		AVRG
Benzo(k)fluoranthene	1.55495		1.54917		-0.4		AVRG
Benzo(a)pyrene	1.44129		1.41946		-1.5	20.0	AVRG
Indeno(1,2,3-cd)pyrene	1.43022		1.42694		-0.2		AVRG
Dibenzo(a,h)anthracene	1.38515		1.42507		2.9		AVRG
Benzo(g,h,i)perylene	1.37217		1.38711		1.1		AVRG
2-Fluorophenol	1.61896		1.61513		-0.2		AVRG
Phenol-d5	2.30910		2.26007		-2.1		AVRG
Nitrobenzene-d5	0.52408		0.53019		1.2		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MST5973 Calibration Date: 03/08/07 Time: 0856

Lab File ID: TQ486 Init. Calib. Date(s): 02/28/07 02/28/07

Init. Calib. Times: 1243 1459

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
1,4-Dioxane	0.65485		0.74405		13.6		AVRG
Pyridine	1.91356		1.94319		1.5		AVRG
N-Nitrosodimethylamine	0.85753		0.83540		-2.6		AVRG
Aniline	2.59839		2.19062		-15.7		AVRG
Phenol	2.25422		2.14518		-4.8	20.0	AVRG
Bis(2-chloroethyl)ether	1.46178		1.42764		-2.3		AVRG
2-Chlorophenol	1.67810		1.65669		-1.3		AVRG
1,3-Dichlorobenzene	1.79320		1.82915		2.0		AVRG
1,4-Dichlorobenzene	1.80935		1.84297		1.9	20.0	AVRG
Benzyl Alcohol	1.11785		1.09419		-2.1		AVRG
1,2-Dichlorobenzene	1.72131		1.77237		3.0		AVRG
2-Methylphenol	1.36071		1.31572		-3.3		AVRG
N-Nitroso-di-n-propylamine	1.31510		1.29833	0.05	-1.3		AVRG
3&4-Methylphenol	1.99331		1.91072		-4.1		AVRG
Hexachloroethane	0.71498		0.72615		1.6		AVRG
Nitrobenzene	0.44251		0.42498		-4.0		AVRG
Isophorone	0.81071		0.80210		-1.1		AVRG
2-Nitrophenol	0.21245		0.18202		-14.3	20.0	AVRG
2,4-Dimethylphenol	0.33420		0.31623		-5.4		AVRG
Bis(2-chloroethoxy)methane	0.49126		0.46628		-5.1		AVRG
Benzoic acid	0.30914		0.24128		-22.0		AVRG
2,4-Dichlorophenol	0.32708		0.31803		-2.8	20.0	AVRG
1,2,4-Trichlorobenzene	0.35673		0.36080		1.1		AVRG
Naphthalene	1.14559		1.16042		1.3		AVRG
4-Chloroaniline	0.48417		0.46132		-4.7		AVRG
Hexachlorobutadiene	0.20395		0.20909		2.5	20.0	AVRG
4-Chloro-3-methylphenol	0.35111		0.33227		-5.4	20.0	AVRG
2-Methylnaphthalene	0.76957		0.76368		-0.8		AVRG
1-Methylnaphthalene	0.77197		0.78643		1.9		AVRG
Hexachlorocyclopentadiene	0.37716		0.34202	0.05	-9.3		AVRG
2,4,6-Trichlorophenol	0.37478		0.36685		-2.1	20.0	AVRG
2,4,5-Trichlorophenol	0.40784		0.40373		-1.0		AVRG
2-Chloronaphthalene	1.17399		1.16868		-0.5		AVRG
2-Nitroaniline	0.40953		0.36992		-9.7		AVRG
Dimethylphthalate	1.39967		1.38115		-1.3		AVRG
2,6-Dinitrotoluene	0.30858		0.29724		-3.7		AVRG
Acenaphthylene	1.85091		1.84630		-0.2		AVRG
3-Nitroaniline	0.36458		0.33072		-9.3		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MST5973 Calibration Date: 03/08/07 Time: 0856

Lab File ID: TQ486 Init. Calib. Date(s): 02/28/07 02/28/07

Init. Calib. Times: 1243 1459

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
Acenaphthene	1.13005		1.13458		0.4	20.0	AVRG
2,4-Dinitrophenol	0.17606		0.11845	0.05	-32.7		AVRG
4-Nitrophenol	0.30299		0.27766	0.05	-8.4		AVRG
Dibenzofuran	1.70266		1.67875		-1.4		AVRG
2,4-Dinitrotoluene	0.42466		0.41454		-2.4		AVRG
Diethylphthalate	1.36920		1.35776		-0.8		AVRG
Fluorene	1.35557		1.36674		0.8		AVRG
4-Chlorophenyl-phenylether	0.67376		0.68365		1.5		AVRG
4-Nitroaniline	0.37368		0.34279		-8.3		AVRG
4,6-Dinitro-2-methylphenol	0.13285		0.11662		-12.2		AVRG
N-Nitrosodiphenylamine	0.53137		0.52427		-1.3	20.0	AVRG
1,2-Diphenylhydrazine	0.85632		0.82142		-4.1		AVRG
4-Bromophenyl-phenylether	0.22966		0.23134		0.7		AVRG
Hexachlorobenzene	0.24179		0.25066		3.7		AVRG
Pentachlorophenol	0.15714		0.15500		-1.4	20.0	AVRG
Phenanthrene	1.13240		1.14543		1.2		AVRG
Anthracene	1.15547		1.16963		1.2		AVRG
Carbazole	1.10414		1.11338		0.8		AVRG
Di-n-Butylphthalate	1.29585		1.32749		2.4		AVRG
Fluoranthene	1.30498		1.34389		3.0	20.0	AVRG
Benzidine	80.0000	39.7061	0.21311		-50.4		LINR
Pyrene	1.30339		1.26766		-2.7		AVRG
Butylbenzylphthalate	0.56131		0.54835		-2.3		AVRG
3,3'-Dichlorobenzidine	0.44789		0.44696		-0.2		AVRG
Benzo(a)Anthracene	1.27101		1.26083		-0.8		AVRG
Bis(2-ethylhexyl)phthalate	0.78172		0.77169		-1.3		AVRG
Chrysene	1.21111		1.24258		2.6		AVRG
Di-n-octylphthalate	80.0000	81.8821	1.33647		2.4	20.0	LINR
Benzo(b)fluoranthene	1.50710		1.37489		-8.8		AVRG
Benzo(k)fluoranthene	1.49888		1.61291		7.6		AVRG
Benzo(a)pyrene	1.38387		1.41652		2.4	20.0	AVRG
Indeno(1,2,3-cd)pyrene	1.42050		1.51418		6.6		AVRG
Dibenzo(a,h)anthracene	1.33912		1.41024		5.3		AVRG
Benzo(g,h,i)perylene	1.36921		1.47601		7.8		AVRG
2-Fluorophenol	1.62104		1.60415		-1.0		AVRG
Phenol-d5	2.22920		2.16259		-3.0		AVRG
Nitrobenzene-d5	0.44212		0.42655		-3.5		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: MST5973 Calibration Date: 03/08/07 Time: 0856

Lab File ID: TQ486 Init. Calib. Date(s): 02/28/07 02/28/07

Init. Calib. Times: 1243 1459

GC Column: SLB-5MS ID: 0.25 (mm)

COMPOUND	ICAL80.0 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE
2-Fluorobiphenyl	1.37203		1.39648		1.8		AVRG
2,4,6-Tribromophenol	0.22772		0.23580		3.5		AVRG
Terphenyl-d14	0.98075		0.95832		-2.3		AVRG

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

3

Matrix Spike

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.:680-24622-1

SDG No.:68024622

Matrix:Solid Level: Low

Matrix Spike-Client Sample ID:WFF1-SS4-A

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)		MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
Phenol	3590	360	U	1350	38	34-98
Bis(2-chloroethyl)ether	3590	360	U	1070	30	30-98
2-Chlorophenol	3590	360	U	1250	35 F	36-99
1,3-Dichlorobenzene	3590	360	U	949	26 F	34-90
1,4-Dichlorobenzene	3590	360	U	991	28 F	32-90
1,2-Dichlorobenzene	3590	360	U	1050	29 F	35-93
2-Methylphenol	3590	360	U	1370	38	38-107
N-Nitrosodi-n-propylamine	3590	360	U	1270	35	24-108
Hexachloroethane	3590	360	U	904	25 F	31-88
Nitrobenzene	3590	360	U	1120	31 F	33-106
Isophorone	3590	360	U	1300	36 F	37-106
2-Nitrophenol	3590	360	U	1150	32 F	38-104
2,4-Dimethylphenol	3590	360	U	1340	37 F	40-112
Bis(2-chloroethoxy)methane	3590	360	U	1350	37 F	38-106
2,4-Dichlorophenol	3590	360	U	1380	38 F	43-108
1,2,4-Trichlorobenzene	3590	360	U	1120	31 F	36-98
Naphthalene	3590	360	U	1210	34	34-97
4-Chloroaniline	3590	720	U	936	26	7-103
Hexachlorobutadiene	3590	360	U	1210	34 F	42-105
4-Chloro-3-methylphenol	3590	360	U	1470	41	39-113
2-Methylnaphthalene	3590	360	U	1320	37 F	39-104
Hexachlorocyclopentadiene	3590	360	U	909	25	20-109
2,4,6-Trichlorophenol	3590	360	U	1440	40 F	44-113
2,4,5-Trichlorophenol	3590	360	U	1550	43 F	46-116
2-Chloronaphthalene	3590	360	U	1330	37 F	41-110
2-Nitroaniline	3590	1900	U	1490	41 J	38-124
Dimethyl phthalate	3590	360	U	1570	44	43-114
Acenaphthylene	3590	360	U	1420	40 F	41-112
3-Nitroaniline	3590	1900	U	1210	34 J	19-118
Acenaphthene	3590	360	U	1400	39	36-108
2,4-Dinitrophenol	3590	1900	U	596	17 J	1-131
4-Nitrophenol	3590	1900	U	1050	29 J	21-132
Dibenzofuran	3590	360	U	1440	40 F	44-108
2,4-Dinitrotoluene	3590	360	U	1570	44	32-128
2,6-Dinitrotoluene	3590	360	U	1470	41	38-128
3 & 4 Methylphenol	3590	360	U	1370	38	37-106
Diethyl phthalate	3590	360	U	1590	44	41-118
4-Chlorophenyl phenyl ether	3590	360	U	1460	41 F	42-111
Fluorene	3590	360	U	1510	42	37-113
4-Nitroaniline	3590	1900	U	1390	39 J	32-130

Reg 3 QAQC limits
26-90
25-102
28-104
41-126
38-107
26-103
31-137
11-114
28-89

3

Matrix Spike

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.:680-24622-1

SDG No.:68024622

Matrix:Solid Level: Low

Matrix Spike-Client Sample ID:WFF1-SS4-A

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)		MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
4,6-Dinitro-2-methylphenol	3590	1900	U	1240	35 J	11-142
N-Nitrosodiphenylamine	3590	360	U	1700	47	16-113
4-Bromophenyl phenyl ether	3590	360	U	1380	39	38-106
Hexachlorobenzene	3590	360	U	1640	46	46-115
Pentachlorophenol	3590	1900	U	1510	42 J	27-116
Phenanthrene	3590	360	U	1660	46 F	47-114
Anthracene	3590	360	U	1680	47	46-115
Di-n-butyl phthalate	3590	360	U	1680	47	35-93
Fluoranthene	3590	360	U	1730	48	41-124
Pyrene	3590	360	U	1680	47	36-128
Butyl benzyl phthalate	3590	360	U	1690	47	43-127
3,3'-Dichlorobenzidine	3590	720	U	1070	30	1-118
Benzo[a]anthracene	3590	360	U	1730	48	46-116
Bis(2-ethylhexyl) phthalate	3590	360	U	1680	47	25-134
Chrysene	3590	360	U	1810	50	46-118
Di-n-octyl phthalate	3590	360	U	1750	49	43-129
Benzo[b]fluoranthene	3590	360	U	1860	52	35-122
Benzo[k]fluoranthene	3590	360	U	1780	49	36-124
Benzo[a]pyrene	3590	360	U	1780	49	37-120
Indeno[1,2,3-cd]pyrene	3590	360	U	1810	50	36-133
Dibenz(a,h)anthracene	3590	360	U	1770	49	41-124
Benzo[g,h,i]perylene	3590	360	U	1760	49	41-122
Carbazole	3590	360	U	1700	47	47-118
bis(chloroisopropyl) ether	3590	360	U	1140	32	16-116

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

3

Matrix Spike Duplicate

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Level: Low

Matrix Spike Duplicate-Client Sample ID: WFF1-SS4-A

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC
Phenol	3600	1580	44	16	35 50	34-98
Bis(2-chloroethyl)ether	3600	1220	34	13	50 50	30-98
2-Chlorophenol	3600	1460	41	15	50	36-99
1,3-Dichlorobenzene	3600	1060	30 F	11	50	34-90
1,4-Dichlorobenzene	3600	1130	32	13	27 50	32-90
1,2-Dichlorobenzene	3600	1220	34 F	15	50	35-93
2-Methylphenol	3600	1610	45	16	50	38-107
N-Nitrosodi-n-propylamine	3600	1470	41	15	38 50	24-108
Hexachloroethane	3600	1050	29 F	15	50	31-88
Nitrobenzene	3600	1450	40	26	50	33-106
Isophorone	3600	1740	48	29	50	37-106
2-Nitrophenol	3600	1320	37 F	14	50	38-104
2,4-Dimethylphenol	3600	1810	50	30	50	40-112
Bis(2-chloroethoxy)methane	3600	1730	48	25	50	38-106
2,4-Dichlorophenol	3600	1800	50	27	50	43-108
1,2,4-Trichlorobenzene	3600	1440	40	(25)	25 50	36-98
Naphthalene	3600	1530	43	24	50	34-97
4-Chloroaniline	3600	1260	35	29	50	7-103
Hexachlorobutadiene	3600	1570	44	26	50	42-105
4-Chloro-3-methylphenol	3600	2000	56	31	33 50	39-113
2-Methylnaphthalene	3600	1680	47	24	50	39-104
Hexachlorocyclopentadiene	3600	1200	33	27	50	20-109
2,4,6-Trichlorophenol	3600	2000	56	33	50	44-113
2,4,5-Trichlorophenol	3600	2110	59	31	50	46-116
2-Chloronaphthalene	3600	1780	49	29	50	41-110
2-Nitroaniline	3600	2130	59	35	50	38-124
Dimethyl phthalate	3600	2290	64	37	50	43-114
Acenaphthylene	3600	1960	54	32	50	41-112
3-Nitroaniline	3600	1750	49 J	37	50	19-118
Acenaphthene	3600	1930	54	(32)	19 50	36-108
2,4-Dinitrophenol	3600	203	6 J F	98	50	1-131
4-Nitrophenol	3600	1300	36 J	21	50 50	21-132
Dibenzofuran	3600	2030	56	34	50	44-108
2,4-Dinitrotoluene	3600	2310	64	38	47 50	32-128
2,6-Dinitrotoluene	3600	2190	61	40	50	38-128
3 & 4 Methylphenol	3600	1620	45	17	50	37-106
Diethyl phthalate	3600	2310	64	37	50	41-118
4-Chlorophenyl phenyl ether	3600	2080	58	35	50	42-111
Fluorene	3600	2160	60	35	50	37-113
4-Nitroaniline	3600	1970	55	34	50	32-130

Reg 3 QA/QC Limits

46-80

25-102

28-104

41-126

38-107

26-103

31-137

1-114

28-89

3

Matrix Spike Duplicate

Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid Level: Low

Matrix Spike Duplicate-Client Sample ID: WFF1-SS4-A

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC
4,6-Dinitro-2-methylphenol	3600	1150	32 J	8	50	11-142
N-Nitrosodiphenylamine	3600	2470	69	37	50	16-113
4-Bromophenyl phenyl ether	3600	1990	55	36	50	38-106
Hexachlorobenzene	3600	2380	66	37	50	46-115
Pentachlorophenol	3600	1930	54	24 47	50	27-116 17-109
Phenanthrene	3600	2440	68	38	50	47-114
Anthracene	3600	2450	68	37	50	46-115
Di-n-butyl phthalate	3600	2510	70	40	50	35-93
Fluoranthene	3600	2550	71	38	50	41-124
Pyrene	3600	2560	71	42 36	50	36-128 35-142
Butyl benzyl phthalate	3600	2540	70	40	50	43-127
3,3'-Dichlorobenzidine	3600	1490	41	33	50	1-118
Benzo[a]anthracene	3600	2580	72	39	50	46-116
Bis(2-ethylhexyl) phthalate	3600	2550	71	41	50	25-134
Chrysene	3600	2670	74	38	50	46-118
Di-n-octyl phthalate	3600	2630	73	40	50	43-129
Benzo[b]fluoranthene	3600	2440	68	27	50	35-122
Benzo[k]fluoranthene	3600	3100	86 F	54	50	36-124
Benzo[a]pyrene	3600	2660	74	40	50	37-120
Indeno[1,2,3-cd]pyrene	3600	2490	69	32	50	36-133
Dibenz(a,h)anthracene	3600	2640	73	40	50	41-124
Benzo[g,h,i]perylene	3600	2570	71	37	50	41-122
Carbazole	3600	2490	69	38	50	47-118
bis(chloroisopropyl) ether	3600	1310	36	14	50	16-116

Reg 3 QA/QC

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: SGJECD1 Calibration Date: 03/11/07 Time: 1052

Lab File ID: JC11005 Init. Calib. Date(s): 02/12/07 02/13/07

Init. Calib. Times: 1913 0619

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.53554		1.53247		-0.2	15.0	AVRG	
gamma-BHC (Lindane)	1.45887		1.37978		-5.4	15.0	AVRG	
beta-BHC	0.44276		0.44425		0.3	15.0	AVRG	
Heptachlor	1.22711		1.04765		-14.6	15.0	AVRG	
delta-BHC	1.31877		1.27351		-3.4	15.0	AVRG	
Aldrin	1.59610		1.44731		-9.3	15.0	AVRG	
Heptachlor epoxide	1.46529		1.32026		-9.9	15.0	AVRG	
gamma-Chlordane	1.45306		1.29943		-10.6	15.0	AVRG	
alpha-Chlordane	1.46290		1.31284		-10.3	15.0	AVRG	
Endosulfan I	1.68854		1.69642		0.5	15.0	AVRG	
4,4'-DDE	0.98192		0.95121		-3.1	15.0	AVRG	
Dieldrin	1.37525		1.29045		-6.2	15.0	AVRG	
Endrin	0.83462		0.87007		4.2	15.0	AVRG	
4,4'-DDD	0.77139		0.87479		13.4	15.0	AVRG	
Endosulfan II	1.23457		1.04459		-15.4	15.0	AVRG	<-
4,4'-DDT	0.0400	0.0241	0.46812		-39.9	15.0	2ORD	<-
Endrin aldehyde	0.95769		0.93360		-2.5	15.0	AVRG	
Endosulfan sulfate	1.11596		1.03918		-6.9	15.0	AVRG	
Methoxychlor	0.32072		0.21633		-32.5	15.0	AVRG	<-
Endrin ketone	1.35215		1.13548		-16.0	15.0	AVRG	<-
Tetrachloro-m-xylene	0.93723		0.95831		2.2	15.0	AVRG	
DCB Decachlorobiphenyl	0.90480		0.85244		-5.8	15.0	AVRG	

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 9.67
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: SGJECD1 Calibration Date: 03/11/07 Time: 1052

Init. Calib. Date(s): 02/12/07 02/12/07

Init. Calib. Times: 1913 2108

GC Column: RTX CLP I ID: 0.32 (mm)

COMPOUND	METHOD RT	RT WINDOW FROM	RT WINDOW TO
alpha-BHC	6.296	6.246	6.346
gamma-BHC (Lindane)	6.940	6.890	6.990
beta-BHC	7.138	7.088	7.188
Heptachlor	7.873	7.823	7.923
delta-BHC	7.488	7.438	7.538
Aldrin	8.478	8.428	8.528
Heptachlor epoxide	9.885	9.835	9.935
gamma-Chlordane	10.173	10.123	10.223
alpha-Chlordane	10.485	10.435	10.535
Endosulfan I	10.800	10.750	10.850
4,4'-DDE	10.711	10.661	10.761
Dieldrin	11.366	11.316	11.416
Endrin	11.910	11.860	11.960
4,4'-DDD	12.131	12.081	12.181
Endosulfan II	12.448	12.398	12.498
4,4'-DDT	12.780	12.730	12.830
Endrin aldehyde	13.455	13.405	13.505
Endosulfan sulfate	14.490	14.440	14.540
Methoxychlor	13.965	13.915	14.015
Endrin ketone	15.135	15.085	15.185
Tetrachloro-m-xylene	5.158	5.108	5.208
DCB Decachlorobiphenyl	17.460	17.410	17.510

FORM 7
PEST-PCB CONTINUING CALIBRATION CHECK

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Instrument ID: SGJECD2 Calibration Date: 03/11/07 Time: 1052

Lab File ID: JC11005 Init. Calib. Date(s): 02/12/07 02/13/07

Init. Calib. Times: 1913 0619

GC Column: RTX CLP II ID: 0.32 (mm)

COMPOUND	ICAL4.00 AMOUNT or AVG RRF	CCAL AMOUNT	CCAL RRF	MIN RRF	%D or %DRIFT*	MAX %D or %DRIFT*	CURV TYPE	
alpha-BHC	1.68280		1.75350		4.2	15.0	AVRG	
gamma-BHC (Lindane)	1.57356		1.55364		-1.3	15.0	AVRG	
beta-BHC	0.42953		0.42226		-1.7	15.0	AVRG	
Heptachlor	1.58194		1.59256		0.7	15.0	AVRG	
delta-BHC	1.25530		1.27440		1.5	15.0	AVRG	
Aldrin	1.65469		1.62813		-1.6	15.0	AVRG	
Heptachlor epoxide	1.53494		1.50374		-2.0	15.0	AVRG	
gamma-Chlordane	1.53694		1.49932		-2.4	15.0	AVRG	
alpha-Chlordane	1.51254		1.45523		-3.8	15.0	AVRG	
Endosulfan I	1.44488		1.43191		-0.9	15.0	AVRG	
4,4'-DDE	1.30280		1.34605		3.3	15.0	AVRG	
Dieldrin	1.47293		1.49665		1.6	15.0	AVRG	
Endrin	0.99444		1.09504		10.1	15.0	AVRG	
4,4'-DDD	0.90354		1.08243		19.8	15.0	AVRG	<-
Endosulfan II	1.31280		1.41298		7.6	15.0	AVRG	
4,4'-DDT	0.87487		0.60374		-31.0	15.0	AVRG	<-
Endrin aldehyde	0.96955		0.97957		1.0	15.0	AVRG	
Endosulfan sulfate	1.16843		1.18502		1.4	15.0	AVRG	
Methoxychlor	0.45028		0.33495		-25.6	15.0	AVRG	<-
Endrin ketone	1.32864		1.19392		-10.1	15.0	AVRG	
Tetrachloro-m-xylene	0.95444		1.02962		7.9	15.0	AVRG	
DCB Decachlorobiphenyl	0.85309		0.70466		-17.4	15.0	AVRG	<-

*%Drift is reported for linear and 2nd order curves and
%D (%Difference) is reported for average curves.

Average %D/%Drift test result:

Calculated Average %D/%Drift: 7.14
Maximum Average %D/%Drift: 15.00

Passes Average %D/%Drift Test

SURROGATE COMPOUND RECOVERY
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Solid

GC Column (1): Equity ID: 0.25 (mm) GC Column (2): _____ ID: ____

SAMPLE ID	(DCB1)	(DCB2)	(TCX1)	(TCX2)
LCS 680-68934/17-AA	90		53	
MB 680-68934/11-AA	104		88	
WFF1-SL02	108		62	
WFF1-SL02DL		0 D		0 D
WFF1-SL03	112		54	
WFF1-SL03DL		0 D		0 D
WFF1-SS9	62		16 X	
WFF1-SS10	56		20 X	
WFF1-SS4-A	57		50	
WFF1-SS4-AMS	63		69	
WFF1-SS4-AMSD	66		72	
WFF1-SS5	57		32	
WFF1-SS7	49		36	
WFF1-SL1	45		59	
WFF1-SL1DL		0 D		0 D
WFF1-SS5-D	67		60	

QC LIMITS

SUR (DCB1) =DCB Decachlorobiphenyl (30-150)
SUR (TCX1) =Tetrachloro-m-xylene (30-150)

Column to be used to flag recovery values

SURROGATE COMPOUND RECOVERY
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography

Lab Name: STL Savannah Job No.: 680-24622-1

SDG No.: 68024622

Matrix: Water

GC Column (1): Equity ID: 0.25 (mm) GC Column (2): _____ ID: ____

SAMPLE ID	(DCB1)	(TCX1)
LCS 680-68539/17-AA	67	80
WFF1-MW6	29 X	59
WFF1-MW7	59	66
Rinsate 3	34	65
WFF1-MW3	26 X	60
WFF1-MW3MS	21 X	71
WFF1-MW3MSD	25 X	80
WFF1-MW3-D	31	59
WFF1-MW20	29 X	61
Rinsate 4	27 X	68
WFF1-MW5	31	68
WFF1-MW4	35	72
WFF1-MW2	56	63
WFF1-MW1	52	62

	QC LIMITS
SUR (DCB1) =DCB Decachlorobiphenyl	(30-150)
SUR (TCX1) =Tetrachloro-m-xylene	(30-150)

Column to be used to flag recovery values

FORM II 8081A_8082

FORM 10
PEST-PCB IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 680-24622-A-2-A

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Lab Sample ID: WFF1-SL02 Date(s) Analyzed: 03/08/07 03/08/07

Instrument ID (1): SGJECD1 Instrument ID (2): SGJECD2

GC Column(1): RTX CLP I ID: 0.32(mm) GC Column(2): RTX CLP II ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
gamma-Chlordane	1	10.17	10.12	10.22	7.7	
	2	10.55	10.52	10.62	20	88.8
4,4'-DDE	1	10.71	10.66	10.76	1500	
	2	11.37	11.32	11.42	1200	22.2
Dieldrin	1	11.38	11.32	11.42	6.0	
	2	11.67	11.63	11.73	9.9	49.0
4,4'-DDD	1	12.13	12.08	12.18	1100	
	2	12.74	12.69	12.79	930	16.7
4,4'-DDT	1	12.78	12.73	12.83	840	
	2	13.47	13.42	13.52	1000	17.4
	1					
	2					
	1					
	2					
	1					
	2					

<RL

FORM 10
PEST-PCB IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 680-24622-A-14-

Lab Name: STL SAVANNAH Contract:

Lab Code: SL-SAV Case No.: SAS No.: SDG No.: 68024622

Lab Sample ID: WFF1-SL1 DILUTED Date(s) Analyzed: 03/11/07 03/11/07

Instrument ID (1): SGJECD1 Instrument ID (2): SGJECD2

GC Column(1): RTX CLP I ID: 0.32(mm) GC Column(2): RTX CLP II ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDE	1	10.71	10.66	10.76	44	
	2	11.37	11.32	11.42	67	41.4
4,4'-DDD	1	12.13	12.08	12.18	110	
	2	12.74	12.69	12.79	100	9.5
4,4'-DDT	1	12.77	12.73	12.83	48	
	2	13.47	13.42	13.52	110	78.5
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

PEST-PCB

Serial Number 93812

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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Fax: (912) 352-0165

○ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFFI-WWTP #1		
STL (LAB) PROJECT MANAGER: ABBIE PAGE	P.O. NUMBER: 0057557	CONTRACT NO.
CLIENT (SITE) PM: THERESA OFFNER	CLIENT PHONE: 770-325-7961	CLIENT FAX
CLIENT NAME: WESTON SOLUTIONS	CLIENT E-MAIL: THERESA.OFFNER@WESTONSOLUTIONS.COM	
CLIENT ADDRESS: 5430 METRIC PL (STE 100) NORCROSS, GA 30092		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 3

STANDARD REPORT DELIVERY ☒
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC, PEST/PCB	CYANIDE	METALS/MERCURY	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2/22/07	1515	~~DUP~~ GW WFFI-MW6		X				X	X	X	X		
	1520	WFFI-SL02			X			X	X	X	X		
	1530	WFFI-SL03			X			X	X	X	X		
	1610	WFFI-SS9			X			X	X	X	X		
	1645	WFFI-SS10			X			X	X	X	X		
	1700	WFFI-MW7		X				X	X	X	X		
↓	1730	RINSATE 3		X				X	X	X	X		STAINLESS BOWL RINSE BLANK
2/23/07	0930	WFFI-MW5		X				X	X	X	X		MS/MSD
	0945	WFFI-MW5-D		X				X	X	X	X		
	1010	WFFI-MW20		X				X	X	X	X		
	1040	WFFI-SL4-A			X			X	X	X	X		MS/MSD
	115	WFFI-SS5			X			X	X	X	X		

TEMP: 0.3/0.1/0.2/0.3/0.2
0.9/0.2/0.3/0.1/0.3/0.3

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/24/07	1000	[signature]	2/26/07	1345			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	2/24/07	1000						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
KL	2/27/07	0926	YES ○ NO ○		60-24622	

Serial Number 93561

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

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Savannah, GA 31404
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Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFF1 - WWTP #1		VA
STL (LAB) PROJECT MANAGER: Abbie Page	P.O. NUMBER: 00 93557	CONTRACT NO.
CLIENT (SITE) PM: Teresa Offner	CLIENT PHONE: 770 325 7561	CLIENT FAX
CLIENT NAME: Weston	CLIENT E-MAIL	
CLIENT ADDRESS: 5420 Metric Pl, Ste 100, Norcross, GA		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF 3

STANDARD REPORT DELIVERY ☒
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	NUMBER OF CONTAINERS SUBMITTED: VOC	SVOC Pest/PCB	CYANIDE	Metals/Merc	SVOC	Pest/PCB	Waste Char	REMARKS
2/23/07	1130	WFF1 - SS7			X			X	X	X	X				
	1335	WFF1 - SL1			X			X	X	X	X				
	1615	Purge water		X				X	~~X~~ S/M	X	X	X		X	
	1740	Rinsate 4		X				X		X	X	X	X		
~~2/22/07~~	~~1515~~	~~WFF1 - MW6~~		~~X~~				~~X~~		~~X~~	~~X~~	~~X~~	~~X~~		S/M
↓	1700	~~WFF1 - MW7~~		X				X		X	X	X	X		S/M
2/23/07	0930	WFF1 - MW3		X				X		X	X	X	X		
	0945	WFF1 - MW3-D		X				X		X	X	X	X		
	1010	WFF1 - MW20		X				X		X	X	X	X		
	1150	WFF1 - MW5		X				X		X	X	X	X		
	1300	WFF1 - MW4		X				X		X	X	X	X		
	1430	WFF1 - MW2		X				X		X	X	X	X		

TEMP.: 0.3/0.1/0.2/0.2/0.2 0.4/0.2/0.3/0.1/0.3 0.3

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S/ Mackey	2/24/07	1000	Amelia Kennedy	2/26/07	1345			
RECEIVED BY: (SIGNATURE) Amelia Kennedy	DATE 2/24/07	TIME 1000	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
KL	2/27/07	0926	YES ○ NO ○		680-24622	

Serial Number 94410

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
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Savannah, GA 31404

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○ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
WFF - WWTP #1		
STL (LAB) PROJECT MANAGER: Abbie Page	P.O. NUMBER: 0057557	CONTRACT NO.
CLIENT (SITE) PM: Teresa Offner	CLIENT PHONE	CLIENT FAX
CLIENT NAME: Weston	CLIENT E-MAIL	
CLIENT ADDRESS		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 3 OF 3

STANDARD REPORT DELIVERY ○
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT,...)	REQUIRED ANALYSIS: VOC	SVOC	Pest/PCB	Metals/Mercury	Cyanide	REMARKS
2/23/07	1525	WFF1-MW1		X				X	X	X	X	X	
		TB-4		X				X					
		TB-5		X				X					

TEMP.: 0.3/0.1/0.2/0.3/0.2
0.4/0.2/0.3/0.1
0.2/0.3

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
SJ Madey	2/24/07	1000	Amila Kennedy	2/27/07	1345			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Amila Kennedy	2/24/07	1000						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
RC	2/27/07	0926	YES ○ NO ○	680 –	24622	

APPENDIX D1
HUMAN HEALTH RISK ASSESSMENT TABLES

TABLE D-1
RAGS PART D Table 1
SELECTION OF EXPOSURE PATHWAYS
Site WWTP - Wallops Island Flight Facility

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future	Surface Soil	Surface Soil (0-2 ft)	Surface Soil	Trespasser	Adolescent Child	Ingestion	On-Site	Quantitative	Trespasser incidentally ingests soil
						Dermal Contact	On-Site	Quantitative	Trespasser contacts soils
		Air	Airborne dust and VOCs from soil			Inhalation	On-Site	Quantitative	Trespasser inhales outdoor dust and VOCs from soil
	Sludge	Sludge	Sludge			Ingestion	On-Site	Quantitative	Trespasser incidentally ingests sludge
						Dermal Contact	On-Site	Quantitative	Trespaser contacts sludge
	Sediment	Sediment	Intermittent Stream Sediment			Ingestion	Off-site	Quantitative	Trespasser ingests sediment while wading
						Dermal Contact	Off-site	Quantitative	Trespasser contacts sediment while wading
	Surface water	Surface water	Intermittent Stream Surface Water			Ingestion	Off-site	Quantitative	Child ingests surface water while wading
						Dermal Contact	Off-site	Quantitative	Child contacts surface water while wading
	Waste water	Waste water	Waste water in settling tank			Dermal Contact	On-Site	Quantitative	Child contacts waste water from settling tank while trespassing
Future	Surface Soil	Surface Soil (0-2 ft)	Surface Soil	Industrial Worker	Adult	Ingestion	On-Site	Quantitative	Worker incidentally ingests soils
						Dermal Contact	On-Site	Quantitative	Worker contacts soils
		Air	Airborne dust and VOCs from soil			Inhalation	On-Site	Quantitative	Worker inhales dust and VOCs from soil
		Air	Vapor Intrusion			Inhalation	On-Site	Quantitative	Worker inhales VOCs from vapor intrusion into basement of building.
	Subsurface Soil	Subsurface Soil (2-10 ft)	Subsurface Soil			Ingestion	On-Site	Quantitative	Worker incidentally ingests soils
						Dermal Contact	On-Site	Quantitative	Worker contacts soils
		Air	Airborne dust and VOCs from soil			Inhalation	On-Site	Quantitative	Worker inhales dust and VOCs from soil
		Air	Vapor Intrusion			Inhalation	On-Site	Quantitative	Worker inhales VOCs from vapor intrusion into basement of building.
	Sludge	Sludge	Sludge			Ingestion	On-Site	Quantitative	Worker incidentally ingests sludge
						Dermal Contact	On-Site	Quantitative	Worker contacts sludge
	Waste water	Waste water	Waste water in settling tank			Dermal Contact	On-Site	Quantitative	Worker contacts waste water from settling tank
	Surface Soil	Surface Soil (0-2 ft)	Surface Soil	Construction Worker	Adult	Ingestion	On-Site	Quantitative	Worker incidentally ingests soils
						Dermal Contact	On-Site	Quantitative	Worker contacts soils
		Air	Airborne dust and VOCs from soil			Inhalation	On-Site	Quantitative	Worker inhales outdoor dust and VOCs from soil
	Subsurface Soil	Subsurface Soil (2-10 ft)	Subsurface Soil			Ingestion	On-Site	Quantitative	Worker incidentally ingests soils
						Dermal Contact	On-Site	Quantitative	Worker contacts soils
		Air	Airborne dust and VOCs from soil			Inhalation	On-Site	Quantitative	Worker inhales outdoor dust and VOCs from soil

TABLE D-1
RAGS PART D Table 1
SELECTION OF EXPOSURE PATHWAYS
Site WWTP - Wallops Island Flight Facility

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future (continued)	Sludge	Sludge	Sludge	Construction Worker	Adult	Ingestion	On-Site	Quantitative	Worker incidentally ingests sludge
						Dermal Contact	On-Site	Quantitative	Worker contacts sludge
	Groundwater	Groundwater	Groundwater in construction trenches			Dermal Contact	On-Site	Quantitative	Worker contacts groundwater that infiltrates construction trenches
	Waste water	Waste water	Waste water in settling tank			Dermal Contact	On-Site	Quantitative	Worker contacts waste water from settling tank during construction activities
	Surface Soil	Surface Soil (0-2 ft)	Surface Soil	Resident	Child/Adult	Ingestion	On-Site	Quantitative	Resident incidentally ingests soils
						Dermal Contact	On-Site	Quantitative	Resident contacts soils
		Air	Airborne dust and VOCs from soil		Child/Adult	Inhalation	On-Site	Quantitative	Resident inhales outdoor dust and VOCs from soil
		Air	Vapor Intrusion		Child/Adult	Inhalation	On-Site	Quantitative	Resident inhales VOCs from vapor intrusion into basement of building.
	Subsurface Soil	Subsurface Soil (2-10 ft)	Subsurface Soil		Child/Adult	Ingestion	On-Site	Quantitative	Resident incidentally ingests soils
						Dermal Contact	On-Site	Quantitative	Resident contacts soils
		Air	Airborne dust and VOCs from soil		Child/Adult	Inhalation	On-Site	Quantitative	Resident inhales outdoor dust and VOCs from soil
		Air	Vapor Intrusion		Child/Adult	Inhalation	On-Site	Quantitative	Resident inhales VOCs from vapor intrusion into basement of building.
	Sediment	Sediment	Intermittent Stream Sediment		Child/Adult	Ingestion	Off-site	Quantitative	Resident ingests sediment while wading
						Dermal Contact	Off-site	Quantitative	Resident contacts sediment while wading
	Surface water	Surface water	Intermittent Stream Surface Water		Child/Adult	Ingestion	Off-site	Quantitative	Resident ingests surface water while wading
						Dermal Contact	Off-site	Quantitative	Resident contacts surface water while wading
	Groundwater	Groundwater	Tap water		Child/Adult	Ingestion	On-Site	Quantitative	Resident drinks water
						Dermal Contact	On-Site	Quantitative	Resident dermally absorbs contaminants while bathing/showering
					Child/Adult	Inhalation	On-Site	Quantitative	Resident inhales VOCs while bathing/showering

Table D-2

RAGS Part D TABLE 2.1

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Subsurface soil (0.5 - 10 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
Subsurface Soil at WWTP	67641	Acetone	9.50E-03	1.90E-01	mg/kg	WFF1-MW1-0.5-2	10/10	-	1.90E-01	N/A	6.10E+03 n	N/A	N/A	No	BSL
	191242	Benzo[g,h,i]perylene	3.10E-02	6.30E-02	mg/kg	WFF1-MW4-0.5-2	2/10	3.7E-01-4.1E-01	6.30E-02	N/A	1.70E+02 n	N/A	N/A	No	BSL
	117817	Bis(2-ethylhexyl) phthalate	5.90E-02	5.90E-02	mg/kg	WFF1-MW4-0.5-2	1/10	3.6E-01-4.1E-01	5.90E-02	N/A	3.50E+01 c	N/A	N/A	No	BSL
	72559	4,4'-DDE	4.80E-04	1.50E-03	mg/kg	WFF1-MW6-2-4	2/10	3.6E-03-4.1E-03	1.50E-03	N/A	1.40E+00 c	N/A	N/A	No	BSL
	50293	4,4'-DDT	7.90E-04	7.90E-04	mg/kg	WFF1-MW6-2-4	1/10	3.6E-03-4.1E-03	7.90E-04	N/A	1.70E+00 c	N/A	N/A	No	BSL
	84742	Di-n-butyl phthalate	5.80E-02	5.80E-02	mg/kg	WFF1-MW4-0.5-2	1/10	3.6E-01-4.1E-01	5.80E-02	N/A	6.10E+02 n	N/A	N/A	No	BSL
	53703	Dibenz(a,h)anthracene	4.60E-02	4.60E-02	mg/kg	WFF1-MW4-0.5-2	1/10	3.6E-01-4.1E-01	4.60E-02	N/A	1.50E-02 c	N/A	N/A	Yes	ASL
	193395	Indeno[1,2,3-cd]pyrene	4.30E-02	4.30E-02	mg/kg	WFF1-MW4-0.5-2	1/10	3.6E-01-4.1E-01	4.30E-02	N/A	1.50E-01 c	N/A	N/A	No	BSL
	78933	Methyl Ethyl Ketone	4.60E-03	4.60E-02	mg/kg	WFF1-MW3-4-6	5/10	1.9E-02-2.6E-02	4.60E-02	N/A	2.80E+03 n	N/A	N/A	No	BSL
	108101	Methyl isobutyl ketone	1.20E-02	2.80E-01	mg/kg	WFF1-MW6-2-4	3/10	1.9E-02-2.6E-02	2.80E-01	N/A	5.30E+02 n	N/A	N/A	No	BSL
	108883	Toluene	2.90E-03	2.90E-03	mg/kg	WFF1-MW3-4-6	1/10	3.8E-03-5.2E-03	2.90E-03	N/A	5.00E+02 n	N/A	N/A	No	BSL
	1330207	Xylenes, Total	1.20E-02	1.20E-02	mg/kg	WFF1-MW3-4-6	1/10	7.5E-03-1.0E-02	1.20E-02	N/A	6.00E+01 n	N/A	N/A	No	BSL
	7429905	Aluminum	1.30E+03	9.70E+03	mg/kg	WFF1-MW4-0.5-2	10/10	-	9.70E+03	N/A	7.70E+03 n	N/A	N/A	Yes	ASL
	7440382	Arsenic	7.60E-01	3.50E+00	mg/kg	WFF1-MW5-0.5-2	7/10	1.1E+00-1.1E+00	3.50E+00	N/A	3.90E-01 c	N/A	N/A	Yes	ASL
	7440393	Barium	5.90E+00	3.80E+01	mg/kg	WFF1-MW4-0.5-2	10/10	-	3.80E+01	N/A	1.50E+03 n	N/A	N/A	No	BSL
	7440417	Beryllium	1.60E-01	2.90E-01	mg/kg	WFF1-MW4-0.5-2	7/10	4.4E-02-1.3E-01	2.90E-01	N/A	1.60E+01 n	N/A	N/A	No	BSL
	7440702	Calcium	1.70E+02	3.00E+03	mg/kg	WFF1-MW3-4-6	8/10	7.9E+01-9.6E+01	3.00E+03	N/A	NUT	N/A	N/A	NUT	NUT
	18540299	Chromium	2.00E+00	9.30E+00	mg/kg	WFF1-MW4-0.5-2	9/10	1.6E+00-1.6E+00	9.30E+00	N/A	2.80E+02 c	N/A	N/A	No	BSL
	7440484	Cobalt	2.30E-01	2.00E+00	mg/kg	WFF1-MW4-0.5-2	10/10	-	2.00E+00	N/A	2.30E+00 n	N/A	N/A	No	BSL
	7440508	Copper	1.30E+00	2.60E+00	mg/kg	WFF1-MW2-0.5-2	7/10	3.1E-01-1.2E+00	2.60E+00	N/A	3.13E+02 n	N/A	N/A	No	BSL
	7439896	Iron	2.30E+03	6.50E+03	mg/kg	WFF1-MW4-0.5-2	8/10	6.2E+02-9.4E+02	6.50E+03	N/A	5.50E+03 n	N/A	N/A	Yes	ASL
	7439921	Lead	1.90E+00	5.00E+00	mg/kg	WFF1-MW7-0.5-2	8/10	8.5E-01-1.7E+00	5.00E+00	N/A	4.00E+02 nL	N/A	N/A	No	BSL
	7439954	Magnesium	8.50E+01	7.20E+02	mg/kg	WFF1-MW4-0.5-2	10/10	-	7.20E+02	N/A	NUT	N/A	N/A	NUT	NUT
	7439965	Manganese	5.50E+00	9.00E+01	mg/kg	WFF1-MW4-0.5-2	10/10	-	9.00E+01	N/A	1.80E+02 n	N/A	N/A	No	BSL
	7487947	Mercury	4.60E-03	2.70E-02	mg/kg	WFF1-MW7-0.5-2	10/10	-	2.70E-02	N/A	2.30E+00 n	N/A	N/A	No	BSL
	7440020	Nickel	2.50E+00	4.70E+00	mg/kg	WFF1-MW4-0.5-2	3/10	6.5E-01-3.0E+00	4.70E+00	N/A	1.50E+02 n	N/A	N/A	No	BSL
	7440097	Potassium	1.20E+02	4.60E+02	mg/kg	WFF1-MW4-0.5-2	10/10	-	4.60E+02	N/A	NUT	N/A	N/A	NUT	NUT
	7440235	Sodium	6.20E+01	9.30E+01	mg/kg	WFF1-MW3-4-6	10/10	-	9.30E+01	N/A	NUT	N/A	N/A	NUT	NUT
	7440622	Vanadium	1.80E+00	1.40E+01	mg/kg	WFF1-MW4-0.5-2	10/10	-	1.40E+01	N/A	5.50E+01 n	N/A	N/A	No	BSL
	7440666	Zinc	5.80E+00	2.70E+01	mg/kg	WFF1-MW7-0.5-2	8/10	1.8E+00-2.5E+00	2.70E+01	N/A	2.30E+03 n	N/A	N/A	No	BSL

Table D-2

RAGS Part D TABLE 2.1

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Subsurface soil (0.5 - 10 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)

(1) Maximum concentration used for screening.

(2) Maximum detected shale background value shown with arithmetic mean in parenthesis.

(3) All compounds were screened against the residential soil regional screening level (RSL).
Lead was screened against the CERCLA/RCRA corrective action level of 400 mg/kg.
Pyrene was used as a surrogate for benzo(ghi)perylene.
Nickel soluble salts value was used for nickel.

(4) Rationale Codes:

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	Below Screening Level (BSL)
	Essential Nutrient (NUT)

Definitions: ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
c = Cancer effects at a target risk of 1.0E-06.
COPC = Chemical of Potential Concern
n = Noncancer effects, at a target hazard quotient of 0.1.
NA = Not available.
N/A = Not Applicable

Table D-3

RAGS Part D TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface soil (0 - 2 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
Surface Soil at WWTP	67641	Acetone	5.00E-02	3.70E-01	mg/kg	WFF1-MW1-0-0.5	12/15	4.7E-02-5.8E-02	3.70E-01	N/A	6.10E+03 n	N/A	N/A	No	BSL
	50328	Benzo[a]pyrene	3.40E-02	3.40E-02	mg/kg	WFF1-MW2-0-0.5	1/14	3.6E-01-4.4E-01	3.40E-02	N/A	1.50E-02 c	N/A	N/A	Yes	ASL
	191242	Benzo[g,h,i]perylene	3.50E-02	5.20E-02	mg/kg	WFF1-MW2-0-0.5	2/14	3.6E-01-4.4E-01	5.20E-02	N/A	1.70E+02 n	N/A	N/A	No	BSL
	72548	4,4'-DDD	5.70E-04	1.20E-02	mg/kg	WFF1-SS1	5/14	3.5E-03-4.3E-03	1.20E-02	N/A	2.00E+00 c	N/A	N/A	No	BSL
	72559	4,4'-DDE	4.10E-04	1.40E-02	mg/kg	WFF1-MW6-0-0.5	11/14	3.6E-03-3.7E-03	1.40E-02	N/A	1.40E+00 c	N/A	N/A	No	BSL
	50293	4,4'-DDT	7.90E-04	4.30E-02	mg/kg	WFF1-SS6	6/14	3.5E-03-4.3E-03	4.30E-02	N/A	1.70E+00 c	N/A	N/A	No	BSL
	84742	Di-n-butyl phthalate	3.60E-02	3.60E-02	mg/kg	WFF1-SS7	1/14	3.6E-01-4.4E-01	3.60E-02	N/A	6.10E+02 n	N/A	N/A	No	BSL
	53703	Dibenz(a,h)anthracene	3.30E-02	5.00E-02	mg/kg	WFF1-MW2-0-0.5	2/14	3.6E-01-4.4E-01	5.00E-02	N/A	1.50E-02 c	N/A	N/A	Yes	ASL
	60571	Dieldrin	3.90E-03	5.70E-03	mg/kg	WFF1-SS1	1/14	3.5E-03-8.1E-03	5.70E-03	N/A	3.00E-02 c	N/A	N/A	No	BSL
	193395	Indeno[1,2,3-cd]pyrene	3.00E-02	5.20E-02	mg/kg	WFF1-MW2-0-0.5	2/14	3.6E-01-4.4E-01	5.20E-02	N/A	1.50E-01 c	N/A	N/A	No	BSL
	78933	Methyl Ethyl Ketone	7.10E-03	3.30E-02	mg/kg	WFF1-MW2-0-0.5	11/15	2.4E-02-2.9E-02	3.30E-02	N/A	2.80E+03 n	N/A	N/A	No	BSL
	108101	Methyl isobutyl ketone	6.10E-03	3.40E-01	mg/kg	WFF1-MW2-0-0.5	5/15	2.1E-02-2.9E-02	3.40E-01	N/A	5.30E+02 n	N/A	N/A	No	BSL
	11096825	PCB-1260	1.90E-01	2.90E-01	mg/kg	WFF1-SS1	1/14	3.5E-02-4.4E-02	2.90E-01	N/A	2.20E-01 c	N/A	N/A	Yes	ASL
	127184	Tetrachloroethene	6.70E-03	6.70E-03	mg/kg	WFF1-SS9	1/15	4.2E-03-7.3E-03	6.70E-03	N/A	5.70E-01 c	N/A	N/A	No	BSL
	108883	Toluene	2.70E-03	2.70E-03	mg/kg	WFF1-MW1-0-0.5	1/15	4.2E-03-7.3E-03	2.70E-03	N/A	5.00E+02 n	N/A	N/A	No	BSL
	7429905	Aluminum	3.00E+03	1.30E+04	mg/kg	WFF1-MW2-0-0.5	14/14	-	1.30E+04	N/A	7.70E+03 n	N/A	N/A	Yes	ASL
	7440360	Antimony	5.40E-01	3.20E+00	mg/kg	WFF1-SS6	4/14	2.0E+00-2.5E+00	3.20E+00	N/A	3.10E+00 n	N/A	N/A	Yes	ASL
	7440382	Arsenic	1.20E+00	5.40E+00	mg/kg	WFF1-MW7-0-0.5	14/14	-	5.40E+00	N/A	3.90E-01 c	N/A	N/A	Yes	ASL
	7440393	Barium	1.30E+01	1.00E+02	mg/kg	WFF1-SS1	14/14	-	1.00E+02	N/A	1.50E+03 n	N/A	N/A	No	BSL
	7440417	Beryllium	8.70E-02	4.40E-01	mg/kg	WFF1-MW1-0-0.5	13/14	1.3E-01-1.3E-01	4.40E-01	N/A	1.60E+01 n	N/A	N/A	No	BSL
	7440439	Cadmium	2.90E-01	3.70E-01	mg/kg	WFF1-SS6	3/14	4.9E-01-6.2E-01	3.70E-01	N/A	7.00E+00 n	N/A	N/A	No	BSL
	7440702	Calcium	1.60E+02	4.20E+04	mg/kg	WFF1-MW1-0-0.5	13/14	1.9E+02-1.9E+02	4.20E+04	N/A	NUT	N/A	N/A	NUT	NUT
	18540299	Chromium	4.60E+00	1.30E+01	mg/kg	WFF1-MW2-0-0.5	14/14	-	1.30E+01	N/A	2.30E+01 n	N/A	N/A	No	BSL
	7440484	Cobalt	5.70E-01	3.30E+00	mg/kg	WFF1-MW7-0-0.5	14/14	-	3.30E+00	N/A	2.30E+00 n	N/A	N/A	Yes	ASL
	7440508	Copper	1.40E+00	1.50E+01	mg/kg	WFF1-SS1-D	14/14	-	1.50E+01	N/A	3.13E+02 n	N/A	N/A	No	BSL
	7439896	Iron	2.60E+03	1.00E+04	mg/kg	WFF1-SS5-D	14/14	-	1.00E+04	N/A	5.50E+03 n	N/A	N/A	Yes	ASL
	7439921	Lead	2.20E+00	4.60E+02	mg/kg	WFF1-SS1-D	14/14	-	4.60E+02	N/A	4.00E+02 nL	N/A	N/A	Yes	ASL
	7439954	Magnesium	2.80E+02	1.10E+03	mg/kg	WFF1-MW7-0-0.5	14/14	-	1.10E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7439965	Manganese	1.50E+01	3.20E+02	mg/kg	WFF1-MW1-0-0.5	14/14	-	3.20E+02	N/A	1.80E+02 n	N/A	N/A	Yes	ASL
	7487947	Mercury	9.60E-03	2.50E-01	mg/kg	WFF1-SS10	14/14	-	2.50E-01	N/A	2.30E+00 n	N/A	N/A	No	BSL
	7440020	Nickel	2.30E+00	7.70E+00	mg/kg	WFF1-MW7-0-0.5	12/14	2.1E+00-2.9E+00	7.70E+00	N/A	1.50E+02 n	N/A	N/A	No	BSL
	7440097	Potassium	2.50E+02	6.40E+02	mg/kg	WFF1-SS5-D	14/14	-	6.40E+02	N/A	NUT	N/A	N/A	NUT	NUT
	7440224	Silver	1.20E-01	6.40E-01	mg/kg	WFF1-SS10	3/14	9.8E-01-1.2E+00	6.40E-01	N/A	3.90E+01 n	N/A	N/A	No	BSL

Table D-3

RAGS Part D TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface soil (0 - 2 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
	7440235	Sodium	5.70E+01	4.80E+02	mg/kg	WFF1-MW1-0-0.5	14/14	-	4.80E+02	N/A	NUT	N/A	N/A	NUT	NUT
	57125	Total Cyanide	3.40E-01	3.40E-01	mg/kg	WFF1-MW6-0-0.5	1/16	5.3E-01-6.5E-01	3.40E-01	N/A	1.60E+02 n	N/A	N/A	No	BSL
	7440622	Vanadium	6.00E+00	2.40E+01	mg/kg	WFF1-MW7-0-0.5	14/14	-	2.40E+01	N/A	5.50E+01 n	N/A	N/A	No	BSL
	7440666	Zinc	6.80E+00	2.50E+02	mg/kg	WFF1-SS1-D	14/14	-	2.50E+02	N/A	2.30E+03 n	N/A	N/A	No	BSL

(1) Maximum concentration used for screening.

(2) Maximum detected shale background value shown with arithmetic mean in parenthesis.

(3) All compounds were screened against the residential soil regional screening level (RSL).
Lead was screened against the CERCLA/RCRA corrective action level of 400 mg/kg.
Pyrene was used as a surrogate for benzo(ghi)perylene.
Nickel soluble salts value was used for nickel.

(4) Rationale Codes:

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	Below Screening Level (BSL)
	Essential Nutrient (NUT)

Definitions: ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
c = Cancer effects at a target risk of 1.0E-06.
COPC = Chemical of Potential Concern
n = Noncancer effects, at a target hazard quotient of 0.1.
NA = Not available.
N/A = Not Applicable

Table D-4

RAGS Part D TABLE 2.3

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Sludge
Exposure Medium: Sludge

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
Sludge at WWTP	67641	Acetone	5.50E-02	7.40E-01	mg/kg	WFF1-SL02	3/3	-	7.40E-01	N/A	6.10E+03 n	N/A	N/A	No	BSL
	120127	Anthracene	6.40E-02	6.30E-01	mg/kg	WFF1-SL1	3/3	-	6.30E-01	N/A	1.70E+03 n	N/A	N/A	No	BSL
	56553	Benzo[a]anthracene	2.90E-01	2.10E+00	mg/kg	WFF1-SL1	3/3	-	2.10E+00	N/A	1.50E-01 c	N/A	N/A	Yes	ASL
	50328	Benzo[a]pyrene	2.90E-01	9.10E-01	mg/kg	WFF1-SL1	3/3	-	9.10E-01	N/A	1.50E-02 c	N/A	N/A	Yes	ASL
	205992	Benzo[b]fluoranthene	5.50E-01	4.80E+00	mg/kg	WFF1-SL1	3/3	-	4.80E+00	N/A	1.50E-01 c	N/A	N/A	Yes	ASL
	207089	Benzo[k]fluoranthene	2.90E-01	2.40E+00	mg/kg	WFF1-SL1	3/3	-	2.40E+00	N/A	1.50E+00 c	N/A	N/A	Yes	ASL
	191242	Benzo[g,h,i]perylene	2.70E-01	1.20E+00	mg/kg	WFF1-SL1	3/3	-	1.20E+00	N/A	1.70E+02 n	N/A	N/A	No	BSL
	117817	Bis(2-ethylhexyl) phthalate	7.90E-02	7.90E-02	mg/kg	WFF1-SL02	1/3	5.4E-01-4.4E+00	7.90E-02	N/A	3.50E+01 c	N/A	N/A	No	BSL
	86748	Carbazole	5.30E-02	5.30E-02	mg/kg	WFF1-SL02	1/3	5.4E-01-4.4E+00	5.30E-02	N/A	NBA	N/A	N/A	Yes	NBA
	218019	Chrysene	4.80E-01	4.70E+00	mg/kg	WFF1-SL1	3/3	-	4.70E+00	N/A	1.50E+01 c	N/A	N/A	No	BSL
	72548	4,4'-DDD	1.10E-01	1.20E+00	mg/kg	WFF1-SL03	3/3	-	1.20E+00	N/A	2.00E+00 c	N/A	N/A	No	BSL
	72559	4,4'-DDE	6.70E-02	1.40E+00	mg/kg	WFF1-SL02	3/3	-	1.40E+00	N/A	1.40E+00 c	N/A	N/A	No	BSL
	50293	4,4'-DDT	1.10E-01	1.10E+00	mg/kg	WFF1-SL03	3/3	-	1.10E+00	N/A	1.70E+00 c	N/A	N/A	No	BSL
	84742	Di-n-butyl phthalate	8.90E-02	1.10E-01	mg/kg	WFF1-SL02	2/3	4.4E+00-4.4E+00	1.10E-01	N/A	6.10E+02 n	N/A	N/A	No	BSL
	53703	Dibenz(a,h)anthracene	7.60E-02	7.60E-02	mg/kg	WFF1-SL03	1/3	5.2E-01-4.4E+00	7.60E-02	N/A	1.50E-02 c	N/A	N/A	Yes	ASL
	106467	1,4-Dichlorobenzene	8.40E-02	8.40E-02	mg/kg	WFF1-SL02	2/3	4.4E+00-4.4E+00	8.40E-02	N/A	2.60E+00 c	N/A	N/A	No	BSL
	60571	Dieldrin	5.60E-03	9.90E-03	mg/kg	WFF1-SL02	2/3	4.4E-01-4.4E-01	9.90E-03	N/A	3.00E-02 c	N/A	N/A	No	BSL
	206440	Fluoranthene	4.10E-01	9.00E+00	mg/kg	WFF1-SL1	3/3	-	9.00E+00	N/A	2.30E+02 n	N/A	N/A	No	BSL
	86737	Fluorene	3.60E-01	3.60E-01	mg/kg	WFF1-SL1	1/3	5.2E-01-5.4E-01	3.60E-01	N/A	2.30E+02 n	N/A	N/A	No	BSL
	591786	2-Hexanone	1.30E-01	1.30E-01	mg/kg	WFF1-SL1	1/3	4.7E-02-5.5E-02	1.30E-01	N/A	NBA	N/A	N/A	Yes	NBA
	193395	Indeno[1,2,3-cd]pyrene	2.30E-01	1.40E+00	mg/kg	WFF1-SL1	3/3	-	1.40E+00	N/A	1.50E-01 c	N/A	N/A	Yes	ASL
	78933	Methyl Ethyl Ketone	7.70E-02	2.10E-01	mg/kg	WFF1-SL1	2/3	5.5E-02-5.5E-02	2.10E-01	N/A	2.80E+03 n	N/A	N/A	No	BSL
	108101	Methyl isobutyl ketone	9.10E-02	9.10E-02	mg/kg	WFF1-SL1	1/3	4.7E-02-5.5E-02	9.10E-02	N/A	5.30E+02 n	N/A	N/A	No	BSL
	85018	Phenanthrene	1.70E-01	3.00E+00	mg/kg	WFF1-SL1	3/3	-	3.00E+00	N/A	1.70E+02 n	N/A	N/A	No	BSL
	129000	Pyrene	3.60E-01	6.30E+00	mg/kg	WFF1-SL1	3/3	-	6.30E+00	N/A	1.70E+02 n	N/A	N/A	No	BSL
	79345	1,1,2,2-Tetrachloroethane	2.90E-02	2.90E-02	mg/kg	WFF1-SL1	1/3	9.5E-03-1.1E-02	2.90E-02	N/A	5.90E-01 c	N/A	N/A	No	BSL
	127184	Tetrachloroethene	5.10E-03	5.10E-03	mg/kg	WFF1-SL02	1/3	1.1E-02-7.1E-02	5.10E-03	N/A	5.70E-01 c	N/A	N/A	No	BSL
	108883	Toluene	6.20E-03	1.20E+00	mg/kg	WFF1-SL1	2/3	1.1E-02-1.1E-02	1.20E+00	N/A	5.00E+02 n	N/A	N/A	No	BSL
	7429905	Aluminum	6.80E+02	6.90E+03	mg/kg	WFF1-SL03	3/3	-	6.90E+03	N/A	7.70E+03 n	N/A	N/A	No	BSL
	7440360	Antimony	1.20E+01	2.00E+01	mg/kg	WFF1-SL02	2/3	2.4E+01-2.4E+01	2.00E+01	N/A	3.10E+00 n	N/A	N/A	Yes	ASL
	7440382	Arsenic	2.60E+00	3.20E+00	mg/kg	WFF1-SL03	2/3	1.2E+01-1.2E+01	3.20E+00	N/A	3.90E-01 c	N/A	N/A	Yes	ASL
	7440393	Barium	1.30E+02	2.70E+02	mg/kg	WFF1-SL02	3/3	-	2.70E+02	N/A	1.50E+03 n	N/A	N/A	No	BSL
	7440417	Beryllium	3.60E-01	4.60E-01	mg/kg	WFF1-SL03	2/3	4.8E+00-4.8E+00	4.60E-01	N/A	1.60E+01 n	N/A	N/A	No	BSL
	7440439	Cadmium	2.20E+00	3.70E+00	mg/kg	WFF1-SL03	2/3	6.0E+00-6.0E+00	3.70E+00	N/A	7.00E+00 n	N/A	N/A	No	BSL
	7440702	Calcium	3.90E+03	1.30E+04	mg/kg	WFF1-SL1	3/3	-	1.30E+04	N/A	NUT	N/A	N/A	NUT	NUT

Table D-4

RAGS Part D TABLE 2.3

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Sludge
Exposure Medium: Sludge

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
	18540299	Chromium	3.60E+01	6.50E+01	mg/kg	WFF1-SL02	2/3	6.0E+00-6.0E+00	6.50E+01	N/A	2.30E+01 n	N/A	N/A	Yes	ASL
	7440484	Cobalt	2.00E+00	2.60E+00	mg/kg	WFF1-SL03	2/3	1.2E+01-1.2E+01	2.60E+00	N/A	2.30E+00 n	N/A	N/A	Yes	ASL
	7440508	Copper	1.10E+01	1.80E+02	mg/kg	WFF1-SL02	3/3	-	1.80E+02	N/A	3.13E+02 n	N/A	N/A	No	BSL
	57125	Total Cyanide	1.50E+00	1.50E+00	mg/kg	WFF1-SL02	2/3	6.4E+00-6.4E+00	1.50E+00	N/A	1.60E+02 n	N/A	N/A	No	BSL
	7439896	Iron	1.20E+04	1.50E+04	mg/kg	WFF1-SL1	3/3	-	1.50E+04	N/A	5.50E+03 n	N/A	N/A	Yes	ASL
	7439921	Lead	1.30E+02	5.30E+02	mg/kg	WFF1-SL02	3/3	-	5.30E+02	N/A	4.00E+02 nL	N/A	N/A	Yes	ASL
	7439954	Magnesium	7.30E+02	9.50E+02	mg/kg	WFF1-SL03	3/3	-	9.50E+02	N/A	NUT	N/A	N/A	NUT	NUT
	7439965	Manganese	1.60E+02	2.70E+02	mg/kg	WFF1-SL1	3/3	-	2.70E+02	N/A	1.80E+02 n	N/A	N/A	Yes	ASL
	7487947	Mercury	1.70E-01	2.80E+01	mg/kg	WFF1-SL03	3/3	-	2.80E+01	N/A	2.30E+00 n	N/A	N/A	Yes	ASL
	7440020	Nickel	4.00E+00	8.90E+00	mg/kg	WFF1-SL03	3/3	-	8.90E+00	N/A	1.50E+02 n	N/A	N/A	No	BSL
	7440097	Potassium	6.40E+02	1.30E+03	mg/kg	WFF1-SL1	3/3	-	1.30E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7440224	Silver	1.10E+02	1.30E+02	mg/kg	WFF1-SL02	2/3	1.2E+01-1.2E+01	1.30E+02	N/A	3.90E+01 n	N/A	N/A	Yes	ASL
	7440235	Sodium	1.30E+02	6.80E+02	mg/kg	WFF1-SL1	3/3	-	6.80E+02	N/A	NUT	N/A	N/A	NUT	NUT
	7440622	Vanadium	7.20E+00	1.80E+01	mg/kg	WFF1-SL03	3/3	-	1.80E+01	N/A	5.50E+01 n	N/A	N/A	No	BSL
	7440666	Zinc	4.20E+02	6.80E+02	mg/kg	WFF1-SL1	3/3	-	6.80E+02	N/A	2.30E+03 n	N/A	N/A	No	BSL

(1) Maximum concentration used for screening.

(2) Maximum detected shale background value shown with arithmetic mean in parenthesis.

(3) All compounds were screened against the residential soil regional screening level (RSL).
Lead was screened against the CERCLA/RCRA corrective action level of 400 mg/kg.
Pyrene was used as a surrogate for benzo(ghi)perylene, carbazole, and phenanthrene.
Nickel soluble salts value was used for nickel.

(4) Rationale Codes:

Selection Reason:	Above Screening Levels (ASL)
	No Benchmark Available (NBA)
Deletion Reason:	Below Screening Level (BSL)
	Essential Nutrient (NUT)

Definitions: ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered.
c = Cancer effects at a target risk of 1.0E-06.
COPC = Chemical of Potential Concern.
n = Noncancer effects, at a target hazard quotient of 0.1.
NA = Not available.
N/A = Not Applicable.
NBA = No benchmark available.

Table D-5

RAGS Part D TABLE 2.4

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
Sediment at WWTP	67641	Acetone	4.50E-02	2.70E-01	mg/kg	WFF1-SD2	2/2	-	2.70E-01	N/A	6.10E+04 n	N/A	N/A	No	BSL
	72548	4,4'-DDD	2.70E-03	2.70E-03	mg/kg	WFF1-SD2	1/2	4.3E-03-4.3E-03	2.70E-03	N/A	2.00E+01 c	N/A	N/A	No	BSL
	72559	4,4'-DDE	1.80E-03	2.60E-03	mg/kg	WFF1-SD2	2/2	-	2.60E-03	N/A	1.40E+01 c	N/A	N/A	No	BSL
	50293	4,4'-DDT	7.70E-04	1.60E-03	mg/kg	WFF1-SD2	2/2	-	1.60E-03	N/A	1.70E+01 c	N/A	N/A	No	BSL
	78933	Methyl Ethyl Ketone	1.80E-02	1.80E-02	mg/kg	WFF1-SD2	1/2	2.6E-02-2.6E-02	1.80E-02	N/A	2.80E+04 ns	N/A	N/A	No	BSL
	7429905	Aluminum	3.40E+03	5.50E+03	mg/kg	WFF1-SD2	2/2	-	5.50E+03	N/A	7.70E+04 n	N/A	N/A	No	BSL
	7440382	Arsenic	1.40E+00	2.70E+00	mg/kg	WFF1-SD2	2/2	-	2.70E+00	N/A	3.90E+00 c	N/A	N/A	No	BSL
	7440393	Barium	1.60E+01	2.30E+01	mg/kg	WFF1-SD2	2/2	-	2.30E+01	N/A	1.50E+04 n	N/A	N/A	No	BSL
	7440417	Beryllium	1.10E-01	1.80E-01	mg/kg	WFF1-SD2	2/2	-	1.80E-01	N/A	1.60E+02 n	N/A	N/A	No	BSL
	7440702	Calcium	2.00E+02	6.50E+02	mg/kg	WFF1-SD2	2/2	-	6.50E+02	N/A	NUT	N/A	N/A	NUT	NUT
	18540299	Chromium	4.20E+00	6.80E+00	mg/kg	WFF1-SD2	2/2	-	6.80E+00	N/A	2.30E+02 n	N/A	N/A	No	BSL
	7440484	Cobalt	7.40E-01	1.90E+00	mg/kg	WFF1-SD2	2/2	-	1.90E+00	N/A	2.30E+01 n	N/A	N/A	No	BSL
	7440508	Copper	1.30E+00	2.90E+00	mg/kg	WFF1-SD2	2/2	-	2.90E+00	N/A	3.10E+03 n	N/A	N/A	No	BSL
	7439896	Iron	2.60E+03	4.10E+03	mg/kg	WFF1-SD2	2/2	-	4.10E+03	N/A	5.50E+04 n	N/A	N/A	No	BSL
	7439921	Lead	4.00E+00	7.90E+00	mg/kg	WFF1-SD2	2/2	-	7.90E+00	N/A	4.00E+02 nL	N/A	N/A	No	BSL
	7439954	Magnesium	2.60E+02	4.40E+02	mg/kg	WFF1-SD2	2/2	-	4.40E+02	N/A	NUT	N/A	N/A	NUT	NUT
	7439965	Manganese	4.40E+01	9.50E+01	mg/kg	WFF1-SD2	2/2	-	9.50E+01	N/A	1.80E+03 n	N/A	N/A	No	BSL
	7487947	Mercury	9.30E-03	4.40E-02	mg/kg	WFF1-SD2	2/2	-	4.40E-02	N/A	7.80E+00 n	N/A	N/A	No	BSL
	7440020	Nickel	1.80E+00	3.10E+00	mg/kg	WFF1-SD2	2/2	-	3.10E+00	N/A	1.50E+03 n	N/A	N/A	No	BSL
	7440097	Potassium	2.20E+02	3.20E+02	mg/kg	WFF1-SD2	2/2	-	3.20E+02	N/A	NUT	N/A	N/A	NUT	NUT
	7440235	Sodium	6.00E+01	7.10E+01	mg/kg	WFF1-SD1	2/2	-	7.10E+01	N/A	NUT	N/A	N/A	NUT	NUT
	7440622	Vanadium	5.90E+00	8.80E+00	mg/kg	WFF1-SD2	2/2	-	8.80E+00	N/A	5.50E+02 n	N/A	N/A	No	BSL
	7440666	Zinc	9.60E+00	2.00E+01	mg/kg	WFF1-SD2	2/2	-	2.00E+01	N/A	2.30E+04 n	N/A	N/A	No	BSL

(1) Maximum concentration used for screening.

(2) Maximum detected shale background value shown with arithmetic mean in parenthesis.

(3) All compounds were screened against the residential soil regional screening level (RSL), adjusted for sediment.
Lead was screened against the CERCLA/RCRA corrective action level of 400 mg/kg.
Methyl mercury value was used for mercury.
Nickel soluble salts value was used for nickel.

(4) Rationale Codes:

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: Below Screening Level (BSL)
Essential Nutrient (NUT)

Definitions: ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
c = Cancer effects at a target risk of 1.0E-05.
COPC = Chemical of Potential Concern
n = Noncancer effects, at a target hazard quotient of 1.0.
NA = Not available.
N/A = Not Applicable

Table D-6

RAGS Part D TABLE 2.5

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
Groundwater at WWTP	105679	2,4-Dimethylphenol	1.00E+02	1.00E+02	µg/L	WFF1-MW20	1/7	9.4E+00-1.0E+01	1.00E+02	N/A	7.30E+01 n	N/A	N/A	Yes	ASL
	1064453&4	3 & 4 Methylphenol	4.70E+00	1.10E+01	µg/L	WFF1-MW20	1/7	9.4E+00-1.0E+01	1.10E+01	N/A	1.80E+01 n	N/A	N/A	No	BSL
	67641	Acetone	4.70E+01	5.20E+01	µg/L	WFF1-MW3	1/7	2.5E+01-2.5E+01	5.20E+01	N/A	2.20E+03 n	N/A	N/A	No	BSL
	117817	Bis(2-ethylhexyl) phthalate	1.10E+00	1.50E+00	µg/L	WFF1-MW1	2/7	9.4E+00-1.0E+01	1.50E+00	N/A	4.80E+00 c	N/A	N/A	No	BSL
	84662	Diethyl phthalate	7.30E-01	7.30E-01	µg/L	WFF1-MW7	1/7	9.6E+00-1.0E+01	7.30E-01	N/A	2.90E+03 n	N/A	N/A	No	BSL
	78933	Methyl Ethyl Ketone	1.50E+01	1.70E+01	µg/L	WFF1-MW3	1/7	1.0E+01-1.0E+01	1.70E+01	N/A	7.10E+02 n	N/A	N/A	No	BSL
	108952	Phenol	7.80E+00	1.20E+01	µg/L	WFF1-MW20	1/7	9.4E+00-1.0E+01	1.20E+01	N/A	1.10E+03 n	N/A	N/A	No	BSL
	127184	Tetrachloroethene	4.40E+00	4.40E+00	µg/L	WFF1-MW1	1/7	1.0E+00-1.0E+00	4.40E+00	N/A	1.10E-01 c	N/A	N/A	Yes	ASL
	7429905	Aluminum	6.20E+02	2.20E+03	µg/L	WFF1-MW6	7/7	-	2.20E+03	N/A	3.70E+03 n	N/A	N/A	No	BSL
	7440382	Arsenic	1.00E+01	1.50E+01	µg/L	WFF1-MW20	2/7	1.0E+01-1.0E+01	1.50E+01	N/A	4.50E-02 c	N/A	N/A	Yes	ASL
	7440393	Barium	2.30E+01	5.70E+01	µg/L	WFF1-MW6	7/7	-	5.70E+01	N/A	7.30E+02 n	N/A	N/A	No	BSL
	7440702	Calcium	1.00E+04	6.40E+04	µg/L	WFF1-MW20	7/7	-	6.40E+04	N/A	NUT	N/A	N/A	NUT	NUT
	18540299	Chromium	1.70E+01	1.70E+01	µg/L	WFF1-MW2	1/7	1.6E+00-1.0E+01	1.70E+01	N/A	1.10E+01 n	N/A	N/A	Yes	ASL
	7440484	Cobalt	6.00E+00	7.10E+00	µg/L	WFF1-MW6	2/7	3.9E+00-1.0E+01	7.10E+00	N/A	1.10E+00 n	N/A	N/A	Yes	ASL
	7439896	Iron	1.70E+02	1.10E+04	µg/L	WFF1-MW20	7/7	-	1.10E+04	N/A	2.60E+03 n	N/A	N/A	Yes	ASL
	7439954	Magnesium	1.80E+03	4.50E+03	µg/L	WFF1-MW7	7/7	-	4.50E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7439965	Manganese	2.20E+01	1.50E+03	µg/L	WFF1-MW6	7/7	-	1.50E+03	N/A	8.80E+01 n	N/A	N/A	Yes	ASL
	7440097	Potassium	1.40E+03	3.40E+03	µg/L	WFF1-MW2	7/7	-	3.40E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7440235	Sodium	5.40E+03	1.60E+04	µg/L	WFF1-MW6	7/7	-	1.60E+04	N/A	NUT	N/A	N/A	NUT	NUT
	7440622	Vanadium	1.60E+00	1.90E+00	µg/L	WFF1-MW6	2/7	1.8E+00-1.0E+01	1.90E+00	N/A	2.60E+01 n	N/A	N/A	No	BSL

(1) Maximum concentration used for screening.

(2) To date, no background study has been completed.

(3) Region 3 tap water regional screening level (RSL).

(4) Rationale Codes:

Selection Reason: Above Screening Levels (ASL)

Deletion Reason: Below Screening Level (BSL)

Essential Nutrient (NUT)

Definitions: ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

c = Cancer effects at a target risk of 1.0E-06.

COPC = Chemical of Potential Concern

n = Noncancer effects, at a target hazard quotient of 0.1.

N/A = Not Applicable

Table D-7

RAGS Part D TABLE 2.6

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
Surface Water	74873	Chloromethane	5.30E-01	5.30E-01	µg/L	WFF1-SW1	1/1	-	5.30E-01	N/A	1.90E+02 n	N/A	N/A	No	BSL
at WWTP	7429905	Aluminum	2.50E+03	2.50E+03	µg/L	WFF1-SW1	1/1	-	2.50E+03	N/A	3.70E+04 n	N/A	N/A	No	BSL
	7440393	Barium	3.10E+01	3.10E+01	µg/L	WFF1-SW1	1/1	-	3.10E+01	N/A	2.00E+03	N/A	N/A	No	BSL
	7440702	Calcium	8.80E+03	8.80E+03	µg/L	WFF1-SW1	1/1	-	8.80E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7440484	Cobalt	3.50E+00	3.50E+00	µg/L	WFF1-SW1	1/1	-	3.50E+00	N/A	1.10E+01 n	N/A	N/A	No	BSL
	7439896	Iron	7.20E+03	7.20E+03	µg/L	WFF1-SW1	1/1	-	7.20E+03	N/A	3.00E+02	N/A	N/A	Yes	ASL
	7439954	Magnesium	1.20E+03	1.20E+03	µg/L	WFF1-SW1	1/1	-	1.20E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7439965	Manganese	4.60E+02	4.60E+02	µg/L	WFF1-SW1	1/1	-	4.60E+02	N/A	5.00E+01	N/A	N/A	Yes	ASL
	7440097	Potassium	1.60E+03	1.60E+03	µg/L	WFF1-SW1	1/1	-	1.60E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7440235	Sodium	6.30E+03	6.30E+03	µg/L	WFF1-SW1	1/1	-	6.30E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7440622	Vanadium	3.50E+00	3.50E+00	µg/L	WFF1-SW1	1/1	-	3.50E+00	N/A	2.60E+02 n	N/A	N/A	No	BSL

(1) Maximum concentration used for screening.

(2) To date, no background study has been completed.

(3) Minimum value from the EPA Region 3 tap water regional screening level (RSL) with a TR of 1E-05 and THQ of 1.0 or VA Surface Water Quality Standard (Human Health, Public Water Supply).

(4) Rationale Codes:

Selection Reason: Above Screening Levels (ASL)

Deletion Reason: Below Screening Level (BSL)
Essential Nutrient (NUT)

Definitions: ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
c = Cancer effects at a target risk of 1.0E-05.
COPC = Chemical of Potential Concern
n = Noncancer effects, at a target hazard quotient of 1.0.
N/A = Not Applicable

Table D-8

RAGS Part D TABLE 2.7

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Waste Water
Exposure Medium: Waste Water

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (3) (N/C)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
Waste Water at WWTP	67641	Acetone	8.90E+00	8.90E+00	µg/L	WFF1-WW01	1/1	-	8.90E+00	N/A	2.20E+04 n	N/A	N/A	No	BSL
	206440	Fluoranthene	1.50E+00	1.50E+00	µg/L	WFF1-WW01	1/1	-	1.50E+00	N/A	3.00E+02	N/A	N/A	No	BSL
	78933	Methyl Ethyl Ketone	3.80E+00	3.80E+00	µg/L	WFF1-WW01	1/1	-	3.80E+00	N/A	7.10E+03 n	N/A	N/A	No	BSL
	85018	Phenanthrene	9.10E-01	9.10E-01	µg/L	WFF1-WW01	1/1	-	9.10E-01	N/A	1.40E-01 c	N/A	N/A	No	BSL
	129000	Pyrene	1.20E+00	1.20E+00	µg/L	WFF1-WW01	1/1	-	1.20E+00	N/A	9.60E+02	N/A	N/A	No	BSL
	7429905	Aluminum	2.40E+02	2.40E+02	µg/L	WFF1-WW01	1/1	-	2.40E+02	N/A	3.70E+04 n	N/A	N/A	No	BSL
	7440393	Barium	1.00E+02	1.00E+02	µg/L	WFF1-WW01	1/1	-	1.00E+02	N/A	2.00E+03	N/A	N/A	No	BSL
	7440702	Calcium	2.70E+04	2.70E+04	µg/L	WFF1-WW01	1/1	-	2.70E+04	N/A	NUT	N/A	N/A	NUT	NUT
	7440508	Copper	4.40E+00	4.40E+00	µg/L	WFF1-WW01	1/1	-	4.40E+00	N/A	1.30E+03	N/A	N/A	No	BSL
	7439896	Iron	1.50E+04	1.50E+04	µg/L	WFF1-WW01	1/1	-	1.50E+04	N/A	3.00E+02	N/A	N/A	Yes	ASL
	7439921	Lead	2.90E+01	2.90E+01	µg/L	WFF1-WW01	1/1	-	2.90E+01	N/A	1.50E+01	N/A	N/A	Yes	ASL
	7439954	Magnesium	2.80E+03	2.80E+03	µg/L	WFF1-WW01	1/1	-	2.80E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7439965	Manganese	1.70E+02	1.70E+02	µg/L	WFF1-WW01	1/1	-	1.70E+02	N/A	5.00E+01	N/A	N/A	Yes	ASL
	7440097	Potassium	1.00E+04	1.00E+04	µg/L	WFF1-WW01	1/1	-	1.00E+04	N/A	NUT	N/A	N/A	NUT	NUT
	7440235	Sodium	8.80E+03	8.80E+03	µg/L	WFF1-WW01	1/1	-	8.80E+03	N/A	NUT	N/A	N/A	NUT	NUT
	7440622	Vanadium	1.80E+00	1.80E+00	µg/L	WFF1-WW01	1/1	-	1.80E+00	N/A	2.60E+02 n	N/A	N/A	No	BSL
	7440666	Zinc	9.80E+01	9.80E+01	µg/L	WFF1-WW01	1/1	-	9.80E+01	N/A	9.10E+03	N/A	N/A	No	BSL

(1) Maximum concentration used for screening.

(2) To date, no background study has been completed.

(3) Minimum value from the EPA Region 3 tap water regional screening level (RSL) with a TR of 1E-05 and THQ of 1.0 or VA Surface Water Quality Standard (Human Health, Public Water Supply).

(4) Rationale Codes:

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: Below Screening Level (BSL)
Essential Nutrient (NUT)

Definitions: ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
c = Cancer effects at a target risk of 1.0E-05.
COPC = Chemical of Potential Concern
n = Noncancer effects, at a target hazard quotient of 1.0.
N/A = Not Applicable

TABLE D-9

RAGS Part D TABLE 3.1 RME

EXPOSURE POINT CONCENTRATION SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Subsurface Soil (0.5 - 10 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Subsurface Soil at WWTP	Dibenz(a,h)anthracene	mg/kg	4.60E-02	NC	4.60E-02	4.60E-02	mg/kg	Maximum	(1)
	Aluminum	mg/kg	5.35E+03	6.97E+03 (N)	9.70E+03	6.97E+03	mg/kg	95% Student's-t UCL	(2)
	Arsenic	mg/kg	2.08E+00	2.32E+00 (NP)	3.50E+00	2.32E+00	mg/kg	95% KM (t) UCL	(3)
	Iron	mg/kg	3.59E+03	4.15E+03 (NP)	6.50E+03	4.15E+03	mg/kg	95% KM (t) UCL	(3)

The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

(1) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(2) Based on ProUCL recommendation, data is normally distributed.
(3) Based on ProUCL recommendation, data is non-parametric.

Definitions: N = Normal
NC = Not calculated due to insufficient number of detects and/or sample size.
NP = Non-parametric

TABLE D-10

RAGS Part D TABLE 3.2 RME

EXPOSURE POINT CONCENTRATION SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Surface Soil at WWTP	Benzo[a]pyrene	mg/kg	3.40E-02	NC	3.40E-02	3.40E-02	mg/kg	Maximum	(1)
	Dibenz(a,h)anthracene	mg/kg	4.15E-02	NC	5.00E-02	5.00E-02	mg/kg	Maximum	(1)
	PCB-1260	mg/kg	2.57E-01	NC	2.90E-01	2.90E-01	mg/kg	Maximum	(1)
	Aluminum	mg/kg	7.14E+03	8.68E+03 (N)	1.30E+04	1.30E+04	mg/kg	Maximum	(1)
	Antimony	mg/kg	1.21E+00	NC	3.20E+00	3.20E+00	mg/kg	Maximum	(1)
	Arsenic	mg/kg	2.80E+00	3.43E+00 (N)	5.40E+00	5.40E+00	mg/kg	Maximum	(1)
	Cobalt	mg/kg	1.65E+00	2.11E+00 (N)	3.30E+00	3.30E+00	mg/kg	Maximum	(1)
	Iron	mg/kg	5.06E+03	6.43E+03 (G)	1.00E+04	1.00E+04	mg/kg	Maximum	(1)
	Lead	mg/kg	3.63E+01	3.30E+02 (ND)	4.60E+02	4.60E+02	mg/kg	Maximum	(1)
	Manganese	mg/kg	9.44E+01	1.42E+02 (G)	3.20E+02	3.20E+02	mg/kg	Maximum	(1)

The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

(1) Due to the inclusion of several composite samples, the EPC defaulted to the maximum detected concentration.

Definitions: G = Gamma
N = Normal
NC = Not calculated due to insufficient number of detects and/or sample s
ND = Not Discernable. Data do not follow a discernable distribution.

TABLE D-11

EXPOSURE POINT CONCENTRATION SUMMARY FOR SOILS

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Max EPC

Exposure Point	Chemical of Potential Concern	Units	Subsurface Soil EPC (1)	Surface Soil EPC (2)	Maximum Exposure Point Concentration		
					Value	Units	Statistic
Max EPC at WWTP	Benzo[a]pyrene	mg/kg	Not a Subsurface COPC	3.40E-02	3.40E-02	mg/kg	Surface EPC
	Dibenz(a,h)anthracene	mg/kg	4.60E-02	5.00E-02	5.00E-02	mg/kg	Surface EPC
	PCB-1260	mg/kg	Not a Subsurface COPC	2.90E-01	2.90E-01	mg/kg	Surface EPC
	Aluminum	mg/kg	6.97E+03	1.30E+04	1.30E+04	mg/kg	Surface EPC
	Antimony	mg/kg	Not a Subsurface COPC	3.20E+00	3.20E+00	mg/kg	Surface EPC
	Arsenic	mg/kg	2.32E+00	5.40E+00	5.40E+00	mg/kg	Surface EPC
	Cobalt	mg/kg	Not a Subsurface COPC	3.30E+00	3.30E+00	mg/kg	Surface EPC
	Iron	mg/kg	4.15E+03	1.00E+04	1.00E+04	mg/kg	Surface EPC
	Lead	mg/kg	Not a Subsurface COPC	4.60E+02	4.60E+02	mg/kg	Surface EPC
	Manganese	mg/kg	Not a Subsurface COPC	3.20E+02	3.20E+02	mg/kg	Surface EPC

Within each soil depth evaluated, the EPC is based on the lower of the 95% UCL and the maximum detected concentration.
The EPC shown represents the higher of the EPC of subsurface soils or the surface soils.

(1) See Table D-9.
(2) See Table D-10.

TABLE D-12

RAGS Part D TABLE 3.3 RME

EXPOSURE POINT CONCENTRATION SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Sludge
Exposure Medium: Sludge

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Sludge at WWTP	Benzo[a]anthracene	mg/kg	9.30E-01	NC	2.10E+00	2.10E+00	mg/kg	Maximum	(1)
	Benzo[a]pyrene	mg/kg	5.63E-01	NC	9.10E-01	9.10E-01	mg/kg	Maximum	(1)
	Benzo[b]fluoranthene	mg/kg	2.07E+00	NC	4.80E+00	4.80E+00	mg/kg	Maximum	(1)
	Benzo[k]fluoranthene	mg/kg	1.09E+00	NC	2.40E+00	2.40E+00	mg/kg	Maximum	(1)
	Carbazole	mg/kg	8.41E-01	NC	5.30E-02	5.30E-02	mg/kg	Maximum	(1)
	Dibenz(a,h)anthracene	mg/kg	7.60E-02	NC	7.60E-02	7.60E-02	mg/kg	Maximum	(1)
	2-Hexanone	mg/kg	1.30E-01	NC	1.30E-01	1.30E-01	mg/kg	Maximum	(1)
	Indeno[1,2,3-cd]pyrene	mg/kg	6.53E-01	NC	1.40E+00	1.40E+00	mg/kg	Maximum	(1)
	Antimony	mg/kg	1.60E+01	NC	2.00E+01	2.00E+01	mg/kg	Maximum	(1)
	Arsenic	mg/kg	2.90E+00	NC	3.20E+00	3.20E+00	mg/kg	Maximum	(1)
	Chromium	mg/kg	5.05E+01	NC	6.50E+01	6.50E+01	mg/kg	Maximum	(1)
	Cobalt	mg/kg	2.30E+00	NC	2.60E+00	2.60E+00	mg/kg	Maximum	(1)
	Iron	mg/kg	1.37E+04	NC	1.50E+04	1.50E+04	mg/kg	Maximum	(1)
	Lead	mg/kg	3.40E+02	NC	5.30E+02	5.30E+02	mg/kg	Maximum	(1)
	Manganese	mg/kg	2.07E+02	NC	2.70E+02	2.70E+02	mg/kg	Maximum	(1)
	Mercury	mg/kg	1.74E+01	NC	2.80E+01	2.80E+01	mg/kg	Maximum	(1)
	Silver	mg/kg	1.20E+02	NC	1.30E+02	1.30E+02	mg/kg	Maximum	(1)

The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: NC = Not calculated due to insufficient sample size (n = 3).

(1) 95% UCL was not calculated because of small sample size. Therefore, the maximum concentration was used for the EPC.

TABLE D-13

RAGS Part D TABLE 3.4 RME

EXPOSURE POINT CONCENTRATION SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Groundwater at WWTP	2,4-Dimethylphenol	µg/L	1.00E+02	NC	1.00E+02	1.00E+02	µg/L	Maximum	(1)
	Tetrachloroethene	µg/L	4.40E+00	NC	4.40E+00	4.40E+00	µg/L	Maximum	(1)
	Arsenic	µg/L	1.25E+01	NC	1.50E+01	1.50E+01	µg/L	Maximum	(1)
	Chromium	µg/L	1.70E+01	NC	1.70E+01	1.70E+01	µg/L	Maximum	(1)
	Cobalt	µg/L	6.70E+00	NC	7.10E+00	7.10E+00	µg/L	Maximum	(1)
	Iron	µg/L	3.60E+03	6.67E+03 (N)	1.10E+04	6.67E+03	µg/L	95% Student's-t UCL	(2)
	Manganese	µg/L	4.22E+02	1.49E+03 (G)	1.50E+03	1.49E+03	µg/L	95% Approximate Gamma UCL	(3)

The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: G = Gamma
N = Normal
NC = Not calculated due to insufficient number of detects and/or sample size.

(1) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.

(2) Based on ProUCL recommendation, data is normally distributed.

(3) Based on ProUCL recommendation, data has gamma distribution.

TABLE D-14

RAGS Part D TABLE 3.5 RME

EXPOSURE POINT CONCENTRATION SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Surface Water at WWTP	Iron	µg/L	7.20E+03	NC	7.20E+03	7.20E+03	µg/L	Maximum	(1)
	Manganese	µg/L	4.60E+02	NC	4.60E+02	4.60E+02	µg/L	Maximum	(1)

The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: NC = Not calculated due to insufficient sample size (n = 1).

(1) 95% UCL was not calculated because of small sample size. Therefore, the maximum concentration was used for the EPC.

TABLE D-15

RAGS Part D TABLE 3.6 RME

EXPOSURE POINT CONCENTRATION SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Medium: Waste Water
Exposure Medium: Waste Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Waste Water at WWTP	Iron	µg/L	7.20E+03	NC	1.50E+04	1.50E+04	µg/L	Maximum	(1)
	Lead	µg/L	2.50E+00	NC	2.90E+01	2.90E+01	µg/L	Maximum	(1)
	Manganese	µg/L	4.60E+02	NC	1.70E+02	1.70E+02	µg/L	Maximum	(1)

The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: NC = Not calculated due to insufficient sample size (n = 1).

(1) 95% UCL was not calculated because of small sample size. Therefore, the maximum concentration was used for the EPC.

TABLE D-16

RAGS Part D Table 4.1

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Soils
Exposure Medium: Soils & Sludge

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Trespasser	Adolescent Child	Surface Soils/ Sludge	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil; D-12 for sludge	Chronic daily intake (CDI)(mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 2002c	EPC x IR-SD x CF x FI x EF x ED x ET x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ET	Exposure Time	2	hour/day	Professional Judgement	
				ED	Exposure Duration	10	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	42	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	87,600	hours	EPA, 1989	
	Industrial Worker	Adult	Surface/ Subsurface Soils/ Sludge	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil; D-12 for sludge	Chronic daily intake (CDI)(mg/kg-day) =
				IR-S	Ingestion Rate of Soil	50	mg/day	EPA, 2002c	EPC x IR-S x CF x FI x EF x ED x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	250	days/year	EPA, 2002c	
				ED	Exposure Duration	25	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	
	Construction Worker	Adult	Surface/ Subsurface Soils/ Sludge	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil; D-12 for sludge	Chronic daily intake (CDI)(mg/kg-day) =
				IR-S	Ingestion Rate of Soil	330	mg/day	EPA, 2002c	EPC x IR-S x CF x FI x EF x ED x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	120	days/year	Professional Judgement	
				ED	Exposure Duration	1	years	Professional Judgement	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	365	days	Professional Judgement	
	Resident	Child/Adult (Cancer Only)	Surface/ Subsurface Soils	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil	Chronic daily intake (CDI)(mg/kg-day) =
				IFS_{adj}	Age-adjusted soil ingestion factor	114	mg-year/kg-day	Calculated	EPC x IFS_{adj} x CF x FI x EF x 1/AT
				FI	Fraction Ingested	1	unitless	EPA, 1989	Where
				EF	Exposure Frequency	350	days/year	Site-specific	IFS_{adj} = (IRS_c x ED_c x 1/BW_c) + (IRS_a x ED_a x 1/BW_a)
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	
				IRS_c	Ingestion Rate of Soil - child	200	mg/day	EPA, 1997	
				IRS_a	Ingestion Rate of Soil - adult	100	mg/day	EPA, 1997	
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

TABLE D-16

RAGS Part D Table 4.1

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Soils
Exposure Medium: Soils & Sludge

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion (Continued)	Resident (Continued)	Child (Non-cancer Only)	Surface/ Subsurface Soils	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil	Chronic daily intake (CDI)(mg/kg-day) =
				IR-S	Ingestion Rate of Soil	200	mg/day	EPA, 2002c	EPC x IR-S x CF x FI x EF x ED x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	6	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Adult	Surface/ Subsurface Soils	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil	Chronic daily intake (CDI)(mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 2002c	EPC x IR-S x CF x FI x EF x ED x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	24	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
Dermal	Trespasser	Adolescent Child	Surface/ Subsurface Soils/ Sludge	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil; D-12 for sludge	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,500	cm^2/day	EPA, 2004b	EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	10	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b; Table: TBD	
				BW	Body Weight	42	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	
	Industrial Worker	Adult	Surface/ Subsurface Soils/ Sludge	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil; D-12 for sludge	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				SA	Exposed Skin Surface Area	3,300	cm^2/day	EPA, 2004b	EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SSAF	Soil to Skin Adherence Factor	0.11	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	250	days/year	EPA, 2002c	
				ED	Exposure Duration	25	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

TABLE D-16

RAGS Part D Table 4.1

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Soils
Exposure Medium: Soils & Sludge

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (Continued)	Construction Worker	Adult	Surface/ Subsurface Soils/ Sludge	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil; D-12 for sludge	Dermally Absorbed Dose (DAD)(mg/kg-day) = EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SA	Exposed Skin Surface Area	3,300	cm^2/day	EPA, 2004b	
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	120	days/year	Professional Judgement	
				ED	Exposure Duration	1	years	Professional Judgement	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	365	days	Professional Judgement	
	Resident	Child/Adult (Cancer Only)	Surface/ Subsurface Soils	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil	Chronic daily intake (CDI)(mg/kg-day) = EPC x SFS_{adj} x DABS x CF x EF x 1/AT
				SFS_{adj}	Age-adjusted dermal factor	361	mg-year/kg-day	Calculated	
				EF	Exposure Frequency	350	days/year	Site-specific	Where
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	$SFS_{adj} = (SA_c \times AF_c \times ED_c \times 1/BW_c) +$
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	$(SA_a \times AF_a \times ED_a \times 1/BW_a)$
				SA_c	Exposed Skin Surface Area - child	2,800	cm^2/day	EPA, 2004b	
				SA_a	Exposed Skin Surface Area - adult	5,700	cm^2/day	EPA, 2004b	
				$SSAF_c$	Soil to Skin Adherence Factor - child	0.2	mg/cm^2	EPA, 2004b	
				$SSAF_a$	Soil to Skin Adherence Factor - adult	0.07	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
		Child (Non-cancer Only)	Surface/ Subsurface Soils	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil	Dermally Absorbed Dose (DAD)(mg/kg-day) = EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SA	Exposed Skin Surface Area	2,800	cm^2/day	EPA, 2004b	
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	6	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	

TABLE D-16

RAGS Part D Table 4.1

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Soils
Exposure Medium: Soils & Sludge

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Resident	Adult	Surface/ Subsurface Soils	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11 for soil	Dermally Absorbed Dose (DAD)(mg/kg-day) = EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SA	Exposed Skin Surface Area	5,700	cm^2/day	EPA, 2004b	
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	24	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

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TABLE D-17

RAGS Part D Table 4.2

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Trespasser	Adolescent Child	Air	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11	Exposure Concentration (EC)(mg/m^3) =
				ET	Exposure time	2	hours/day	Professional Judgement	EPC x ET x EF x ED x 1/PEF (or 1/VF) x 1/AT
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	10	years	Professional Judgement	
				PEF	Particulate Emissions Factor	1.77E+09	m^3/kg	EPA, 2002c	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989, 2009b	
				AT-NC	Averaging Time (Non-Cancer)	87,600	hours	EPA, 1989, 2009b	
	Industrial Worker	Adult	Air	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11	Exposure Concentration (EC)(mg/m^3) =
				ET	Exposure time	8	hours/day	EPA, 2009b	EPC x ET x EF x ED x 1/PEF (or 1/VF) x 1/AT
				EF	Exposure Frequency	250	days/year	EPA, 2002c	
				ED	Exposure Duration	25	years	EPA, 2002c	
				PEF	Particulate Emissions Factor	1.77E+09	m^3/kg	EPA, 2002c	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989, 2009b	
				AT-NC	Averaging Time (Non-Cancer)	219,000	hours	EPA, 1989, 2009b	
	Construction Worker	Adult	Air	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11	Exposure Concentration (EC)(mg/m^3) =
				ET	Exposure time	8	hours/day	EPA, 2009b	EPC x ET x EF x ED x 1/PEF (or 1/VF) x 1/AT
				EF	Exposure Frequency	120	days/year	Professional Judgement	
				ED	Exposure Duration	1	years	Professional Judgement	
				PEF	Particulate Emissions Factor	1.77E+09	m^3/kg	EPA, 2002c	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989, 2009b	
				AT-NC	Averaging Time (Non-Cancer)	8,760	hours	Professional Judgement	
	Resident	Child/Adult (Cancer Only)	Air	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11	Exposure Concentration (EC)(mg/m^3) =
				ED_{adj}	Exposure Duration - Child + Adult	30	years	Calculated	$EPC \times ED_{adj} \times EF \times 1/PEF$ (or 1/VF) x 1/AT
				EF	Exposure Frequency	350	days/year	Site-specific	Where
				PEF	Particulate Emissions Factor	1.77E+09	m^3/kg	EPA, 2002c	$ED_{adj} = (ED_c) + (ED_a)$
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
		Child (Non-cancer Only)	Air	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11	Exposure Concentration (EC)(mg/m^3) =
				EF	Exposure Frequency	350	days/year	EPA, 2002c	EPC x EF x ED x 1/PEF (or 1/VF) x 1/AT
				ED	Exposure Duration	6	years	EPA, 2002c	
				PEF	Particulate Emissions Factor	1.77E+09	m^3/kg	EPA, 2002c	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Adult	Air	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-11	Exposure Concentration (EC)(mg/m^3) =
				EF	Exposure Frequency	350	days/year	EPA, 2002c	EPC x EF x ED x 1/PEF (or 1/VF) x 1/AT
				ED	Exposure Duration	24	years	EPA, 2002c	
				PEF	Particulate Emissions Factor	1.77E+09	m^3/kg	EPA, 2002c	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	

TABLE D-17

RAGS Part D Table 4.2

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

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TABLE D-18

RAGS Part D Table 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Groundwater/Wastewater
Exposure Medium: Groundwater/Wastewater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child/Adult (Cancer Only)	Tap Water	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] See Table D-13	Chronic daily intake (CDI)(mg/kg-day) =
				IFW_{adj}	Age-adjusted tap water ingestion factor	1.09	L-year/kg-day	Calculated	EPC x IFW_{adj} x CF x EF x 1/AT
				EF	Exposure Frequency	350	days/year	Site-specific	Where
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	$IFW_{adj} = (IRW_c \times ED_c \times 1/BW_c) + (IRW_a \times ED_a \times 1/BW_a)$
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	
				IRW_c	Ingestion Rate of Groundwater - child	1	L/day	EPA, 2002c	
				IRW_a	Ingestion Rate of Groundwater - adult	2	L/day	EPA, 2002c	
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	
				CF	Conversion Factor	1.00E-03	mg/µg	-----	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
		Child (Non-cancer Only)	Tap Water	EPC	Exposure Point Concentration	Chemical-specific	µg/L	[1] See Table D-13	Chronic daily intake (CDI)(mg/kg-day) =
				IR-G	Ingestion Rate of Groundwater	1	L/day	EPA, 2002c	EPC x IR-G x CF x EF x ED x 1/BW x 1/AT
				CF	Conversion Factor	1.00E-03	mg/µg	-----	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	6	years	EPA, 2002c	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Adult	Tap Water	EPC	Exposure Point Concentration	Chemical-specific	µg/L	[1] See Table D-13	Chronic daily intake (CDI)(mg/kg-day) =
				IR-G	Ingestion Rate of Groundwater	2	L/day	EPA, 2002c	EPC x IR-G x CF x EF x ED x 1/BW x 1/AT
				CF	Conversion Factor	1.00E-03	mg/µg	-----	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	24	years	EPA, 2002c	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
Dermal	Trespasser	Adolescent Child	Wastewater from Settling Tank	SA	Skin Surface Area Available for Contact	3,500	cm^2	EPA, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-19	DA_{EVENT} x EV x SA x EF x ED x 1/BW x 1/AT
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	10	years	EPA, 2002c	
				BW	Body Weight	42	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	

TABLE D-18

RAGS Part D Table 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Groundwater/Wastewater
Exposure Medium: Groundwater/Wastewater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Trespasser	Adolescent Child	Wastewater from Settling Tank	FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-19	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-19	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-19	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-19	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-19	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-19	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	2.60	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$
	Industrial Worker	Adult	Wastewater from Settling Tank	SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-19	$DA_{EVENT} \times EV \times SA \times EF \times ED \times 1/BW \times 1/AT$
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	250	days/year	Professional Judgement	
				ED	Exposure Duration	25	years	EPA, 2002c	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-19	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-19	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-19	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-19	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-19	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-19	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	0.50	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$
	Construction Worker	Adult	Groundwater/ Wastewater from Trench/ Settling Tank	SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2003, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-19	$DA_{EVENT} \times EV \times SA \times EF \times ED \times 1/BW \times 1/AT$
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	120	days/year	Professional Judgement	
				ED	Exposure Duration	1	years	Professional Judgement	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	365	days	Professional Judgement	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-19	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-19	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-19	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$

TABLE D-18

RAGS Part D Table 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Groundwater/Wastewater
Exposure Medium: Groundwater/Wastewater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Construction Worker	Adult	Groundwater/ Wastewater from Trench/ Settling Tank	B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-19	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-19	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-19	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	2	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$
	Resident	Child/Adult (Cancer Only)	Tap Water While Bathing/ Showering	SFW_{adj}	Age-adjusted dermal tap water factor	8,811	cm^2	Calculated	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				SA_c	Skin Surface Area Available for Contact - child	6,600	cm^2	EPA, 2004b	$SFW_{adj} \times DA_{EVENT} \times EV \times EF \times 1/AT$
				SA_a	Skin Surface Area Available for Contact - adult	18,000	cm^2	EPA, 2004b	Where
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	$SFW_{adj} = (SA_c \times ED_c \times 1/BW_c) +$
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	$(SA_a \times ED_a \times 1/BW_a)$
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-19	
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
			Tap Water While Bathing/ Showering	FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-19	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-19	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-19	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-19	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-19	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-19	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	0.66	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$
	Resident	Child (Non-cancer Only)	Tap Water While Bathing	SA	Skin Surface Area Available for Contact	6,600	cm^2	EPA, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-19	$DA_{EVENT} \times EV \times SA \times EF \times ED \times 1/BW \times 1/AT$
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	6	years	EPA, 2002c	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-19	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-19	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-19	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-19	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-19	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-19	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	1.00	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$

TABLE D-18

RAGS Part D Table 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Groundwater/Wastewater
Exposure Medium: Groundwater/Wastewater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Resident	Adult	Tap Water While Showering	SA	Skin Surface Area Available for Contact	18,000	cm^2	EPA, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-19	DA_{EVENT} x EV x SA x EF x ED x 1/BW x 1/AT
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	24	years	EPA, 2002c	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-19	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-19	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-19	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-19	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-19	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-19	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	0.58	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

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Table D-19

Dermally Absorbed Dose per Event (DA_{event}) Calculations[a]
Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

COPC	EPC[b,c] (µg/L)	EPC[b,c] (mg/cm^3)	FA[e] (unitless)	K_p (cm/hr)	τ_{event} (hr/event)	B (unitless)	t^* (hr)	DA_{event} (mg/cm^2-event)[c] Age-Adjusted Resident	Child Resident	Adult Resident	Construction Worker	Industrial Worker	Older Child Trespasser
Groundwater													
2,4-Dimethylphenol	1.00E+02	1.00E-04	1.00E+00	1.10E-02	5.20E-01	0.00E+00	1.24E+00	1.78E-06	2.19E-06	1.67E-06	3.34E-06	NE	NE
Tetrachloroethene	4.40E+00	4.40E-06	1.00E+00	3.30E-02	9.10E-01	2.00E-01	2.18E+00	3.11E-07	3.83E-07	2.92E-07	5.42E-07	NE	NE
Arsenic	1.50E+01	1.50E-05	NA	1.00E-03	NA	NA	NA	9.90E-09	1.50E-08	8.70E-09	3.00E-08	NE	NE
Chromium	1.70E+01	1.70E-05	NA	2.00E-03	NA	NA	NA	2.24E-08	3.40E-08	1.97E-08	6.80E-08	NE	NE
Cobalt	7.10E+00	7.10E-06	NA	1.00E-03	NA	NA	NA	4.69E-09	7.10E-09	4.12E-09	1.42E-08	NE	NE
Iron	6.67E+03	6.67E-03	NA	1.00E-03	NA	NA	NA	4.40E-06	6.67E-06	3.87E-06	1.33E-05	NE	NE
Manganese	1.49E+03	1.49E-03	NA	1.00E-03	NA	NA	NA	9.85E-07	1.49E-06	8.66E-07	2.99E-06	NE	NE
Waste Water													
Iron	1.50E+04	1.50E-02	NA	1.00E-03	NA	NA	NA	NE	NE	NE	3.00E-05	7.50E-06	3.90E-05
Lead	2.90E+01	2.90E-05	NA	1.00E-03	NA	NA	NA	NE	NE	NE	5.80E-08	1.45E-08	7.54E-08
Manganese	1.70E+02	1.70E-04	NA	1.00E-03	NA	NA	NA	NE	NE	NE	3.40E-07	8.50E-08	4.42E-07

[a] U.S. EPA, 2004b. Risk Assessment Guidance for Superfund, Vol. I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. July 2004. EPA/540/R/99/005.

[b] See Table D-13.

[c] See Table D-15.

[d] Calculated based on Equation 3.2 or 3.3 for organics and Equation 3.4 for inorganics in EPA, 2004b where t_{event} equals 0.50 and 2.0 for commercial/industrial workers and construction workers, respectively.

[e] In the absence of chemical-specific data, the FA was conservatively assumed to be 1.

B = Ratio of the permeability coefficient of a COPC through the stratum corneum relative to its permeability coefficient across the viable epidermis.

FA = Fraction absorbed.

K_p = Dermal permeability coefficient.

NA = Not applicable.

NE = Not evaluated.

τ_{event} = Lag time per event.

t^* = Time to reach steady-state.

TABLE D-20

RAGS Part D Table 4.4

VALUES USED FOR DAILY INTAKE CALCULATIONS FOR ADULT INHALATION OF VOCs WHILE SHOWERING

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Child/Adult (Cancer Only)	Vapors While Bathing/ Showering	CA	Chemical Concentration in Air	Chemical-specific	µg/m^3	see equation below	Chronic daily intake (CDI)(mg/m^3) =
				CF	Conversion Factor	1.00E-03	mg/µg	-----	CA x CF x IFV_{adj} x EF x 1/AT
				IFV_{adj}	Age-adjusted inhalation of vapors factor	19.92	hour-year/day	Calculated	
				ET_c	Exposure Time - Child	1.00	hours/day	EPA, 2004	Where
				ET_a	Exposure Time - Adult	0.58	hours/day	EPA, 2004	IFV_{adj} = (ETc x EDc) + (ETa x EDa)
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED_c	Exposure Duration - Child	6	years	EPA, 2002c	
				ED_a	Exposure Duration - Adult	24	years	EPA, 2002c	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989, 2009b	
				EPC	Exposure Point Concentration	Chemical-specific	µg/L	[2] See Table D-13	Concentration in air (CA)(µg/m^3) =
				FV	Fraction Volatilized	1	unitless	[1]	EPC x FV x FR x SD x 1/BV
				FR	Flow Rate	30	L/minute	[1]	
				SD_{adj}	Shower Duration	40	minutes	EPA, 2004b	
				SD_a	Shower Duration	35	minutes	EPA, 2004b	
				BV	Bathroom Volume	12	m^3	[1]	
		Adult	Vapors While Showering	CA	Chemical Concentration in Air	Chemical-specific	µg/m^3	see equation below	Chronic daily intake (CDI)(mg/m^3) =
				CF	Conversion Factor	1.00E-03	mg/µg	-----	CA x CF x ET x EF x ED x 1/AT
				ET	Exposure Time	0.58	hours/day	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	24	years	EPA, 2002c	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989, 2009b	
				AT-NC	Averaging Time (Non-Cancer)	210,240	hours	EPA, 1989, 2009b	
				EPC	Exposure Point Concentration	Chemical-specific	µg/L	[2] See Table D-13	Concentration in air (CA)(µg/m^3) =
				FV	Fraction Volatilized	1	unitless	[1]	EPC x FV x FR x SD x 1/BV
				FR	Flow Rate	30	L/minute	[1]	
				SD	Shower Duration	35	minutes	EPA, 2004b	
				BV	Bathroom Volume	12	m^3	[1]	

TABLE D-20

RAGS Part D Table 4.4

VALUES USED FOR DAILY INTAKE CALCULATIONS FOR ADULT INHALATION OF VOCs WHILE SHOWERING

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Child (Non-cancer Only)	Vapors While Bathing	CA	Chemical Concentration in Air	Chemical-specific	$\mu g/m^3$	see equation below	Chronic daily intake (CDI)(mg/m^3) =
				CF	Conversion Factor	1.00E-03	mg/µg	-----	CA x CF x ET x EF x ED x 1/AT
				ET	Exposure Time	1.0	hours/day	EPA, 2004b	
				EF	Exposure Frequency	350	days/year	EPA, 2002c	
				ED	Exposure Duration	6	years	EPA, 2002c	
				AT-NC	Averaging Time (Non-Cancer)	52,560	hours	EPA, 1989, 2009b	
				EPC	Exposure Point Concentration	Chemical-specific	µg/L	[2] See Table D-13	Concentration in air (CA)($\mu g/m^3$) =
				FV	Fraction Volatilized	1	unitless	[1]	EPC x FV x FR x SD x 1/BV
				FR	Flow Rate	30	L/minute	[1]	
				SD	Shower Duration	60	minutes	EPA, 2004b	
				BV	Bathroom Volume	12	m^3	[1]	

[1] Foster-Chrostowski (1987) Model.

[2] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

United States Environmental Protection Agency (U.S. EPA). 1989. Risk Assessment Guidance for Superfund: Volume I, Human Health Evaluation Manual, Part A, Interim Final. Office of Solid Waste and Emergency Response. OSWER Directive 9285.7-01a

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TABLE D-21

RAGS Part D Table 4.5

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Trespasser	Adolescent Child	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Chronic daily intake (CDI)(mg/kg-day) =
				IR-SD	Ingestion Rate of Sediment	100	mg/day	EPA, 2002c	EPC x IR-SD x CF x FI x EF x ED x ET x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ET	Exposure Time	2	hour/day	Professional Judgement	
				ED	Exposure Duration	10	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	42	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	87,600	hours	EPA, 1989	
	Resident	Child/Adult (Cancer Only)	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Chronic daily intake (CDI)(mg/kg-day) =
				$IFSD_{adj}$	Age-adjusted sediment ingestion factor	114	mg-year/kg-day	Calculated	$EPC \times IFS_{adj} \times CF \times FI \times EF \times ET \times 1/AT$
				FI	Fraction Ingested	1	unitless	Professional Judgement	Where
				EF	Exposure Frequency	50	days/year	Professional Judgement	$IFS_{adj} = (IRS_c \times ED_c \times 1/BW_c) + (IRS_a \times ED_a \times 1/BW_a)$
				ET	Exposure Time	4	hour/day	Professional Judgement	
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	
				$IR\text{-}SD_c$	Ingestion Rate of Sediment - child	200	mg/day	EPA, 1997	
				$IR\text{-}SD_a$	Ingestion Rate of Sediment - adult	100	mg/day	EPA, 1997	
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989	
		Child (Non-cancer Only)	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Chronic daily intake (CDI)(mg/kg-day) =
				IR-SD	Ingestion Rate of Sediment	200	mg/day	EPA, 2002c	EPC x IR-SD x CF x FI x EF x ED x ET x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ET	Exposure Time	4	hour/day	Professional Judgement	
				ED	Exposure Duration	6	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	52,560	hours	EPA, 1989	
		Adult	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Chronic daily intake (CDI)(mg/kg-day) =
				IR-SD	Ingestion Rate of Sediment	100	mg/day	EPA, 2002c	EPC x IR-SD x CF x FI x EF x ED x ET x 1/BW x 1/AT
				FI	Fraction Ingested	1	unitless	Professional Judgement	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ET	Exposure Time	4	hour/day	Professional Judgement	
				ED	Exposure Duration	24	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	613,200	hours	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	87,600	hours	EPA, 1989	

TABLE D-21

RAGS Part D Table 4.5

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Trespasser	Adolescent Child	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,500	cm^2/day	EPA, 2004b	EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SSAF	Soil/Sediment to Skin Adherence Factor	0.2	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	10	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW	Body Weight	42	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	
	Resident	Child/Adult (Cancer Only)	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Chronic daily intake (CDI)(mg/kg-day) =
				SFS_{adj}	Age-adjusted dermal factor	361	mg-year/kg-day	Calculated	$EPC \times SFS_{adj} \times DABS \times CF \times EF \times 1/AT$
				EF	Exposure Frequency	50	days/year	Professional Judgement	Where
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	$SFS_{adj} = (SA_c \times AF_c \times ED_c \times 1/BW_c) +$
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	$(SA_a \times AF_a \times ED_a \times 1/BW_a)$
				SA_c	Exposed Skin Surface Area - child	2,800	cm^2/day	EPA, 2004b	
				SA_a	Exposed Skin Surface Area - adult	5,700	cm^2/day	EPA, 2004b	
				$SSAF_c$	Sediment to Skin Adherence Factor - child	0.2	mg/cm^2	EPA, 2004b	
				$SSAF_a$	Sediment to Skin Adherence Factor - adult	0.07	mg/cm^2	EPA, 2004b	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
		Child (Non-cancer Only)	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				SA	Exposed Skin Surface Area	2,800	cm^2/day	EPA, 2004b	EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SSAF	Sediment to Skin Adherence Factor	0.2	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	6	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	

TABLE D-21

RAGS Part D Table 4.5

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Resident	Adult	Sediment in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	mg/kg	[1] No sediment COPCs	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				SA	Exposed Skin Surface Area	5,700	cm^2/day	EPA, 2004b	EPC x CF x SA x SSAF x DABS x EF x ED x 1/BW x 1/AT
				SSAF	Sediment to Skin Adherence Factor	0.07	mg/cm^2	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	24	years	EPA, 2002c	
				CF	Conversion Factor	1.00E-06	kg/mg	-----	
				DABS	Dermal Absorption Factor	Chemical-specific	unitless	EPA, 2004b	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

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TABLE D-22

RAGS Part D Table 4.6

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Trespasser	Adolescent Child	Surface Water in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	µg/L	[1] See Table D-14	Chronic daily intake (CDI)(mg/kg-day) =
				IR-SW	Ingestion Rate of Surface Water	50	ml/hr	EPA, 1989	EPC x IR-SW x CF1 x CF2 x ET x EF x ED x 1/BW x 1/AT
				ET	Exposure Time	2.6	hr/day	EPA, 1989	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	10	years	EPA, 2002c	
				CF_1	Conversion Factor	1.00E-03	L/ml	-----	
				CF_2	Conversion Factor	1.00E-03	mg/µg	-----	
				BW	Body Weight	42	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	
	Resident	Child/Adult (Cancer)	Surface Water in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	µg/L	[1] See Table D-14	Chronic daily intake (CDI)(mg/kg-day) =
				$IFSW_{adj}$	Age-adjusted surface water ingestion factor	96.6	ml-year/kg-day	Calculated	$EPC \times IF\text{-}SW_{adj} \times CF_1 \times CF_2 \times EF \times 1/AT$
				EF	Exposure Frequency	50	days/year	Professional Judgement	Where
				ET	Exposure Time	2.6	hr/day	Professional Judgement	
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	$IF\text{-}SW_{adj} = (IR\text{-}SW_c \times ET \times ED_c \times 1/BW_c) +$
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	(IR-SWa x ET x EDa x 1/BWa)
				$IR\text{-}SW_c$	Ingestion Rate of Surface Water - child	50	ml/hr	EPA, 1989	
				$IR\text{-}SW_a$	Ingestion Rate of Surface Water - adult	50	ml/hr	EPA, 1989	
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	
				CF_1	Conversion Factor	1.00E-03	L/ml		
				CF_2	Conversion Factor	1.00E-03	mg/µg	-----	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
		Child (Noncancer)	Surface Water in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	µg/L	[1] See Table D-14	Chronic daily intake (CDI)(mg/kg-day) =
				IR-SW	Ingestion Rate of Surface Water	50	ml/hr	Professional Judgement	EPC x IR-SW x CF1 x CF2 x ET x EF x ED x 1/BW x 1/AT
				ET	Exposure Time	2.6	hr/day	Professional Judgement	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	6	years	EPA, 2002c	
				CF_1	Conversion Factor	1.00E-03	L/ml	-----	
				CF_2	Conversion Factor	1.00E-03	mg/µg	-----	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	

TABLE D-22

RAGS Part D Table 4.6

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion (continued)	Resident	Adult	Surface Water in Intermittent Stream	EPC	Exposure Point Concentration	Chemical-specific	µg/L	[1] See Table D-14	Chronic daily intake (CDI)(mg/kg-day) =
				IR-SW	Ingestion Rate of Surface Water	50	ml/hr	Professional Judgement	EPC x IR-SW x CF1 x CF2 x ET x EF x ED x 1/BW x 1/AT
				ET	Exposure Time	2.6	hr/day	Professional Judgement	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	24	years	EPA, 2002c	
				CF_1	Conversion Factor	1.00E-03	L/ml	-----	
				CF_2	Conversion Factor	1.00E-03	mg/µg	-----	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
Dermal	Trespasser	Adolescent Child	Surface Water in Intermittent Stream	SA	Skin Surface Area Available for Contact	3,500	cm^2	EPA, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-23	DA_{EVENT} x EV x SA x EF x ED x 1/BW x 1/AT
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	10	years	EPA, 2002c	
				BW	Body Weight	42	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-23	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-23	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-23	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-23	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-23	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-23	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	2.6	hr/event	EPA, 1989	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$
	Resident	Child/Adult (Cancer)	Surface Water in Intermittent Stream	SFW_{adj}	Age-adjusted dermal surface water factor	3,074	cm^2	Calculated	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				SA_c	Skin Surface Area Available for Contact - ch	2,800	cm^2	EPA, 2004b	$SFW_{adj} \times DA_{EVENT} \times EV \times EF \times 1/AT$
				SA_a	Skin Surface Area Available for Contact - ad	5,700	cm^2	EPA, 2004b	Where
				ED_c	Exposure Duration - child	6	years	EPA, 2002c	$SFW_{adj} = (SA_c \times ED_c \times 1/BW_c) +$
				ED_a	Exposure Duration - adult	24	years	EPA, 2002c	$(SA_a \times ED_a \times 1/BW_a)$
				BW_c	Body Weight - child	15	kg	EPA, 1997	
				BW_a	Body Weight - adult	70	kg	EPA, 1997	

TABLE D-22

RAGS Part D Table 4.6

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Resident	Child/Adult (Cancer)	Surface Water in Intermittent Stream	DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b	
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	2.60	hr/event	EPA, 2004b	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$
	Resident	Child (Noncancer)	Surface Water in Intermittent Stream	SA	Skin Surface Area Available for Contact	2,800	cm^2	EPA, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
				DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-23	$DA_{EVENT} \times EV \times SA \times EF \times ED \times 1/BW \times 1/AT$
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	6	years	EPA, 2002c	
				BW	Body Weight	15	kg	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-23	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-23	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-23	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-23	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-23	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-23	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	2.6	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$

TABLE D-22

RAGS Part D Table 4.6

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site WWTP - Wallops Flight Facility

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Resident	Adult	Surface Water	SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004b	Dermally Absorbed Dose (DAD)(mg/kg-day) =
(continued)			in Intermittent Stream	DA_{EVENT}	Absorbed Dose Per Event	Chemical-specific	mg/cm^2-event	EPA, 2004b; See Table D-23	DA_{EVENT} x EV x SA x EF x ED x 1/BW x 1/AT
				EV	Event Frequency	1	event/day	EPA, 2004b	
				EF	Exposure Frequency	50	days/year	Professional Judgement	
				ED	Exposure Duration	24	years	EPA, 2002c	
				BW	Body Weight	70	kg	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-NC	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
				FA	Fraction Absorbed Water	Chemical-specific	unitless	EPA, 2004b; See Table D-23	if $t_{event} \leq t^*$, then DA_{EVENT} (Organic) =
				K_p	Dermal Permeability Coefficient	Chemical-specific	cm/hour	EPA, 2004b; See Table D-23	$2\ FA \times K_p \times C_w \times CF_1 \times CF_2 \times \sqrt{(6\tau_{event} \times t_{event}/\pi)}$
				C_w	Chemical Concentration in Water	Chemical-specific	µg/L	EPA, 2004b; See Table D-23	
				CF_1	Conversion Factor	1.0E-03	mg/µg	-----	otherwise if $t_{event} > t^*$, then DA_{EVENT} (Organic) =
				CF_2	Conversion Factor	1.0E-03	L/cm^3	-----	$FA \times K_p \times C_w \times CF_1 \times CF_2 \times$
				B	Ratio of Permeability Coefficient	Chemical-specific	unitless	EPA, 2004b; See Table D-23	$[((t_{event})/(1+B)) + 2\tau_{event}((1 + 3B + 3B^2)/(1+B)^2)$
				t*	Time to Reach Steady State	Chemical-specific	hour	EPA, 2004b; See Table D-23	
				τ_{event}	Lag Time Per Event	Chemical-specific	hr/event	EPA, 2004b; See Table D-23	DA_{EVENT} (Inorganic) =
				t_{event}	Event Duration	2.6	hr/event	Professional Judgement	$K_p \times C_w \times CF_1 \times CF_2 \times t_{event}$

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

United States Environmental Protection Agency (U.S. EPA). 1989. Risk Assessment Guidance for Superfund: Volume I, Human Health Evaluation Manual, Part A, Interim Final. Office of Solid Waste and Emergency Response. OSWER Directive 9285.7-01a

U.S. EPA, 1989. Risk Assessment Guidance for Superfund (RAGS), Volume I, Human Health Evaluation (Part A) Interim Final. USEPA/540/1-89/002. December 1989.

U.S. EPA, 1997. Exposure Factors Handbook. August. EPA/600/P-95/002Fa.

U.S. EPA, 2002c. Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites. OSWER 9355.4-24. December 2002.

U.S. EPA, 2004b. Risk Assessment Guidance for Superfund, Vol. I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. July 2004. EPA/540/R/99/005.

Table D-23

Dermally Absorbed Dose per Event (DA_{event}) Calculations[a]
Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

COPC	EPC[b] (µg/L)	EPC[b] (mg/cm^3)	FA (unitless)	K_p (cm/hr)	τ_{event} (hr/event)	B (unitless)	t^* (hr)	DA_{event} (mg/cm^2-event)[c] Older Child Trespasser	DA_{event} (mg/cm^2-event)[c] Age-Adjusted Resident	DA_{event} (mg/cm^2-event)[c] Child Resident	DA_{event} (mg/cm^2-event)[c] Adult Resident
Iron	7.20E+03	7.20E-03	NA	1.00E-03	NA	NA	NA	1.87E-05	1.87E-05	1.87E-05	1.87E-05
Manganese	4.60E+02	4.60E-04	NA	1.00E-03	NA	NA	NA	1.20E-06	1.20E-06	1.20E-06	1.20E-06

[a] U.S. EPA, 2004b. Risk Assessment Guidance for Superfund, Vol. I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. July 2004. EPA/540/R/99/005.

[b] See Table D-14.

[c] Calculated based on Equation 3.2 or 3.3 for organics and Equation 3.4 for inorganics in EPA, 2004b where t_{event} equals 2.6 for older child trespasser.

B = Ratio of the permeability coefficient of a COPC through the stratum corneum relative to its permeability coefficient across the viable epidermis.

FA = Fraction absorbed.

K_p = Dermal permeability coefficient.

NA = Not applicable.

τ_{event} = Lag time per event.

t^* = Time to reach steady-state.

TABLE D-24

RAGS Part D TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD		Oral Absorption Efficiency for Dermal (1)	Absorbed RfD for Dermal (1)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD: Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (2) (MM/DD/YYYY)
Benzo[a]anthracene	---	NA	---	---	NA	---	---	---	---	---
Benzo[a]pyrene	---	NA	---	---	NA	---	---	---	---	---
Benzo[b]fluoranthene	---	NA	---	---	NA	---	---	---	---	---
Benzo[k]fluoranthene	---	NA	---	---	NA	---	---	---	---	---
Carbazole	---	NA	---	---	NA	---	---	---	---	---
Dibenz(a,h)anthracene	---	NA	---	---	NA	---	---	---	---	---
2,4-Dimethylphenol	Chronic	2.00E-02	mg/kg/day	1.00E+00	2.00E-02	mg/kg/day	CNS/Blood	3,000	IRIS	11/10/2009
2-Hexanone	---	NA	---	---	NA	---	---	---	---	---
Indeno[1,2,3-cd]pyrene	---	NA	---	---	NA	---	---	---	---	---
PCB-1260	---	NA	---	---	NA	---	---	---	---	---
Tetrachloroethene	Chronic	1.00E-02	mg/kg/day	1.00E+00	1.00E-02	mg/kg/day	Liver/Body weight	1,000	IRIS	11/10/2009
Aluminum	Chronic	1.00E+00	mg/kg/day	1.00E+00	1.00E+00	mg/kg/day	CNS	---	PPRTV	RSL Table (05/09)
Antimony	Chronic	4.00E-04	mg/kg/day	1.50E-01	6.00E-05	mg/kg/day	Blood	1,000	IRIS	11/10/2009
Arsenic	Chronic	3.00E-04	mg/kg/day	1.00E+00	3.00E-04	mg/kg/day	Skin	3	IRIS	11/10/2009
Chromium	Chronic	NA	mg/kg/day	---	NA	mg/kg/day	NOEL	900	IRIS	11/10/2009
Cobalt	Chronic	3.00E-04	mg/kg/day	1.00E+00	3.00E-04	mg/kg/day	---	---	PPRTV	RSL Table (05/09)
Iron	Chronic	7.00E-01	mg/kg/day	1.00E+00	7.00E-01	mg/kg/day	---	---	PPRTV	RSL Table (05/09)
Lead	---	NA	---	---	NA	---	---	---	---	---
Manganese (Diet)	Chronic	1.40E-01	mg/kg/day	4.00E-02	5.60E-03	mg/kg/day	CNS	1	IRIS	11/10/2009
Manganese (Water)	Chronic	2.40E-02	mg/kg/day	4.00E-02	9.60E-04	mg/kg/day	CNS	1	IRIS	11/10/2009
Mercury	Chronic	3.00E-04	mg/kg/day	7.00E-02	2.10E-05	mg/kg/day	Immune System	---	IRIS	11/10/2009
Silver	Chronic	5.00E-03	mg/kg/day	4.00E-02	2.00E-04	mg/kg/day	Skin	3	IRIS	11/10/2009

(1) EPA, 2009a.

(2) Represents date source was searched.

Definitions: CNS=Central nervous system.

IRIS=Integrated Risk Information System.

NA=Not available.

PPRTV = EPA provisional peer-reviewed toxicity value.

TABLE D-25

RAGS Part D TABLE 5.2

NON-CANCER TOXICITY DATA -- INHALATION

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC: Target Organ(s)	
		Value	Units			Source(s)	Date(s) (1) (MM/DD/YYYY)
Benzo[a]anthracene	---	NA	---	---	---	---	---
Benzo[a]pyrene	---	NA	---	---	---	---	---
Benzo[b]fluoranthene	---	NA	---	---	---	---	---
Benzo[k]fluoranthene	---	NA	---	---	---	---	---
Carbazole	---	NA	---	---	---	---	---
Dibenz(a,h)anthracene	---	NA	---	---	---	---	---
2,4-Dimethylphenol	---	NA	---	---	---	---	---
2-Hexanone	---	NA	---	---	---	---	---
Indeno[1,2,3-cd]pyrene	---	NA	---	---	---	---	---
PCB-1260	---	NA	---	---	---	---	---
Tetrachloroethene	Chronic	2.70E-01	mg/m3	---	---	ATSDR	RSL Table (05/09)
Aluminum	Chronic	5.00E-03	mg/m3	---	---	PPRTV	RSL Table (05/09)
Antimony	---	NA	---	---	---	---	---
Arsenic	Chronic	1.50E-05	mg/m3	---	---	Cal EPA	RSL Table (05/09)
Chromium	---	NA	---	Lung	300	IRIS	11/10/2009
Cobalt	Chronic	6.00E-06	mg/m3	---	---	PPRTV	RSL Table (05/09)
Iron	---	NA	---	---	---	---	---
Lead	---	NA	---	---	---	---	---
Manganese (Diet)	Chronic	5.00E-05	mg/m3	CNS	1,000	IRIS	11/10/2009
Manganese (Water)	Chronic	5.00E-05	mg/m3	CNS	1,000	IRIS	11/10/2009
Mercury	---	NA	---	CNS	30	IRIS	11/10/2009
Silver	---	NA	---	---	---	---	---

(1) Represents date source was searched.

ATSDR = Agency for Toxic Substances and Disease Registry.

Cal EPA = California Environmental Protection Agency.

CNS=Central nervous system

IRIS=Integrated Risk Information System

NA=Not available

PPRTV = EPA provisional peer-reviewed toxicity value

TABLE D-26

RAGS Part D TABLE 6.1

CANCER TOXICITY DATA -- ORAL/DERMAL

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal (1)	Absorbed Cancer Slope Factor for Dermal (1)		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (2) (MM/DD/YYYY)
Benzo[a]anthracene	7.30E-01	1/mg/kg/day	1.00E+00	7.30E-01	1/mg/kg/day	B2	IRIS	11/10/2009
Benzo[a]pyrene	7.30E+00	1/mg/kg/day	1.00E+00	7.30E+00	1/mg/kg/day	B2	IRIS	11/10/2009
Benzo[b]fluoranthene	7.30E-01	1/mg/kg/day	1.00E+00	7.30E-01	1/mg/kg/day	B2	IRIS	11/10/2009
Benzo[k]fluoranthene	7.30E-02	1/mg/kg/day	1.00E+00	7.30E-02	1/mg/kg/day	B2	IRIS	11/10/2009
Carbazole	NA	---	---	NA	---	---	---	---
Dibenz(a,h)anthracene	7.30E+00	1/mg/kg/day	1.00E+00	7.30E+00	1/mg/kg/day	B2	IRIS	11/10/2009
2,4-Dimethylphenol	NA	---	---	NA	---	---	---	---
2-Hexanone	NA	---	---	NA	---	---	---	---
Indeno[1,2,3-cd]pyrene	7.30E-01	1/mg/kg/day	1.00E+00	7.30E-01	1/mg/kg/day	B2	IRIS	11/10/2009
PCB-1260	2.00E+00	1/mg/kg/day	1.00E+00	2.00E+00	1/mg/kg/day	B2	IRIS	11/10/2009
Tetrachloroethene	5.40E-01	1/mg/kg/day	1.00E+00	5.40E-01	1/mg/kg/day	---	Cal EPA	RSL Table (05/09)
Aluminum	NA	---	---	NA	---	---	---	---
Antimony	NA	---	---	NA	---	---	---	---
Arsenic	1.50E+00	1/mg/kg/day	1.00E+00	1.50E+00	1/mg/kg/day	A	IRIS	11/10/2009
Chromium	NA	---	---	NA	---	---	---	---
Cobalt	NA	---	---	NA	---	---	---	---
Iron	NA	---	---	NA	---	---	---	---
Lead	NA	---	---	NA	---	---	---	---
Manganese (Diet)	NA	---	---	NA	---	---	---	---
Manganese (Water)	NA	---	---	NA	---	---	---	---
Mercury	NA	---	---	NA	---	---	---	---
Silver	NA	---	---	NA	---	---	---	---

(1) EPA, 2009a.

(2) Represents date source was searched.

Definitions: Cal EPA = California Environmental Protection Agency.
HEAST = Health Effects Assessment Summary Table.
IRIS = Integrated Risk Information System.
NA = Not available.

A - Human carcinogen.
B1 - Probable human carcinogen - indicates that limited human data are available.
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans.
C - Possible human carcinogen.
D - Not classifiable as a human carcinogen.

TABLE D-27

RAGS Part D TABLE 6.2

CANCER TOXICITY DATA -- INHALATION

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Chemical of Potential Concern	Unit Risk		Weight of Evidence/ Cancer Guideline Description	Unit Risk: Inhalation CSF	
	Value	Units		Source(s)	Date(s) (1) (MM/DD/YYYY)
Benzo[a]anthracene	1.10E-04	1/µg/m3	B2	Cal EPA	RSL Table (05/09)
Benzo[a]pyrene	1.10E-03	1/µg/m3	B2	Cal EPA	RSL Table (05/09)
Benzo[b]fluoranthene	1.10E-04	1/µg/m3	B2	Cal EPA	RSL Table (05/09)
Benzo[k]fluoranthene	1.10E-04	1/µg/m3	B2	Cal EPA	RSL Table (05/09)
Carbazole	NA	---	---	---	---
Dibenz(a,h)anthracene	1.20E-03	1/µg/m3	B2	Cal EPA	RSL Table (05/09)
2,4-Dimethylphenol	NA	---	---	---	---
2-Hexanone	NA	---	---	---	---
Indeno[1,2,3-cd]pyrene	1.10E-04	1/µg/m3	B2	Cal EPA	RSL Table (05/09)
PCB-1260	5.71E-04	1/µg/m3	B2	IRIS	11/10/2009
Tetrachloroethene	5.90E-06	1/µg/m3	NA	Cal EPA	RSL Table (05/09)
Aluminum	NA	---	---	---	---
Antimony	NA	---	---	---	---
Arsenic	4.30E-03	1/µg/m3	A	IRIS	11/10/2009
Chromium	1.20E-02	1/µg/m3	A	IRIS	11/10/2009
Cobalt	9.00E-03	1/µg/m3	NA	PPRTV	RSL Table (05/09)
Iron	NA	---	---	---	---
Lead	NA	---	---	---	---
Manganese (Diet)	NA	---	---	---	---
Manganese (Water)	NA	---	---	---	---
Mercury	NA	---	---	---	---
Silver	NA	---	---	---	---

(1) Represents date source was searched.

Definitions:

Cal EPA = California Environmental Protection Agency.

HEAST = Health Effects Assessment Summary Table.

IRIS = Integrated Risk Information System.

NA = Not available.

PPRTV = EPA provisional peer-reviewed toxicity value

Table D-28

RAGS Part D TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soils	Surface Soils at WWTP	Ingestion	Benzo[a]pyrene	3.40E-02	mg/kg	1.32E-10	mg/kg/day	7.30E+00	1/mg/kg/day	1E-09	9.24E-10	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	1.94E-10	mg/kg/day	7.30E+00	1/mg/kg/day	1E-09	1.36E-09	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	1.13E-09	mg/kg/day	2.00E+00	1/mg/kg/day	2E-09	7.88E-09	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	5.05E-05	mg/kg/day	NA	NA	NA	3.53E-04	mg/kg/day	1.00E+00	mg/kg/day	4E-04
				Antimony	3.20E+00	mg/kg	1.24E-08	mg/kg/day	NA	NA	NA	8.70E-08	mg/kg/day	4.00E-04	mg/kg/day	2E-04
				Arsenic	5.40E+00	mg/kg	2.10E-08	mg/kg/day	1.50E+00	1/mg/kg/day	3E-08	1.47E-07	mg/kg/day	3.00E-04	mg/kg/day	5E-04
				Cobalt	3.30E+00	mg/kg	1.28E-08	mg/kg/day	NA	NA	NA	8.97E-08	mg/kg/day	3.00E-04	mg/kg/day	3E-04
				Iron	1.00E+04	mg/kg	3.88E-05	mg/kg/day	NA	NA	NA	2.72E-04	mg/kg/day	7.00E-01	mg/kg/day	4E-04
				Lead	4.60E+02	mg/kg	1.79E-06	mg/kg/day	NA	NA	NA	1.25E-05	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	1.24E-06	mg/kg/day	NA	NA	NA	8.70E-06	mg/kg/day	1.40E-01	mg/kg/day	6E-05
			Exp. Route Total								4E-08					2E-03
			Dermal	Benzo[a]pyrene	3.40E-02	mg/kg	1.44E-09	mg/kg/day	7.30E+00	1/mg/kg/day	1E-08	1.01E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	2.12E-09	mg/kg/day	7.30E+00	1/mg/kg/day	2E-08	1.48E-08	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	1.32E-08	mg/kg/day	2.00E+00	1/mg/kg/day	3E-08	9.27E-08	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	4.24E-05	mg/kg/day	NA	NA	NA	2.97E-04	mg/kg/day	1.00E+00	mg/kg/day	3E-04
				Antimony	3.20E+00	mg/kg	1.04E-08	mg/kg/day	NA	NA	NA	7.31E-08	mg/kg/day	6.00E-05	mg/kg/day	1E-03
				Arsenic	5.40E+00	mg/kg	5.28E-08	mg/kg/day	1.50E+00	1/mg/kg/day	8E-08	3.70E-07	mg/kg/day	3.00E-04	mg/kg/day	1E-03
				Cobalt	3.30E+00	mg/kg	1.08E-08	mg/kg/day	NA	NA	NA	7.53E-08	mg/kg/day	3.00E-04	mg/kg/day	3E-04
				Iron	1.00E+04	mg/kg	3.26E-05	mg/kg/day	NA	NA	NA	2.28E-04	mg/kg/day	7.00E-01	mg/kg/day	3E-04
				Lead	4.60E+02	mg/kg	1.50E-06	mg/kg/day	NA	NA	NA	1.05E-05	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	1.04E-06	mg/kg/day	NA	NA	NA	7.31E-06	mg/kg/day	5.60E-03	mg/kg/day	1E-03
			Exp. Route Total								1E-07					5E-03
		Exposure Point Total									2E-07					6E-03
	Exposure Medium Total										2E-07					6E-03
	Air	Airborne Dust/Particulates at WWTP	Inhalation	Benzo[a]pyrene	3.40E-02	mg/kg	3.13E-14	mg/kg/day	1.10E-03	1/mg/kg/day	3E-17	2.19E-13	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	4.61E-14	mg/kg/day	1.20E-03	1/mg/kg/day	6E-17	3.22E-13	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	2.67E-13	mg/kg/day	5.71E-04	1/mg/kg/day	2E-16	1.87E-12	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	1.20E-08	mg/kg/day	NA	NA	NA	8.38E-08	mg/kg/day	5.00E-03	mg/kg/day	2E-05
				Antimony	3.20E+00	mg/kg	2.95E-12	mg/kg/day	NA	NA	NA	2.06E-11	mg/kg/day	NA	NA	NA
				Arsenic	5.40E+00	mg/kg	4.98E-12	mg/kg/day	4.30E-03	1/mg/kg/day	2E-14	3.48E-11	mg/kg/day	1.50E-05	mg/kg/day	2E-06
				Cobalt	3.30E+00	mg/kg	3.04E-12	mg/kg/day	9.00E-03	1/mg/kg/day	3E-14	2.13E-11	mg/kg/day	6.00E-06	mg/kg/day	4E-06
				Iron	1.00E+04	mg/kg	9.21E-09	mg/kg/day	NA	NA	NA	6.45E-08	mg/kg/day	NA	NA	NA
				Lead	4.60E+02	mg/kg	4.24E-10	mg/kg/day	NA	NA	NA	2.97E-09	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	2.95E-10	mg/kg/day	NA	NA	NA	2.06E-09	mg/kg/day	5.00E-05	mg/kg/day	4E-05
			Exp. Route Total								5E-14					6E-05
		Exposure Point Total									5E-14					6E-05
	Exposure Medium Total										5E-14					6E-05

Table D-28

RAGS Part D TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil Total											2E-07					7E-03
Sludge	Sludge	Sludge at WWTP	Ingestion	Benzo[a]anthracene	2.10E+00	mg/kg	8.15E-09	mg/kg/day	7.30E-01	1/mg/kg/day	6E-09	5.71E-08	mg/kg/day	NA	NA	NA
				Benzo[a]pyrene	9.10E-01	mg/kg	3.53E-09	mg/kg/day	7.30E+00	1/mg/kg/day	3E-08	2.47E-08	mg/kg/day	NA	NA	NA
				Benzo[b]fluoranthene	4.80E+00	mg/kg	1.86E-08	mg/kg/day	7.30E-01	1/mg/kg/day	1E-08	1.30E-07	mg/kg/day	NA	NA	NA
				Benzo[k]fluoranthene	2.40E+00	mg/kg	9.32E-09	mg/kg/day	7.30E-02	1/mg/kg/day	7E-10	6.52E-08	mg/kg/day	NA	NA	NA
				Carbazole	5.30E-02	mg/kg	2.06E-10	mg/kg/day	NA	NA	NA	1.44E-09	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	7.60E-02	mg/kg	2.95E-10	mg/kg/day	7.30E+00	1/mg/kg/day	2E-09	2.07E-09	mg/kg/day	NA	NA	NA
				2-Hexanone	1.30E-01	mg/kg	5.05E-10	mg/kg/day	NA	NA	NA	3.53E-09	mg/kg/day	NA	NA	NA
				Indeno[1,2,3-cd]pyrene	1.40E+00	mg/kg	5.44E-09	mg/kg/day	7.30E-01	1/mg/kg/day	4E-09	3.81E-08	mg/kg/day	NA	NA	NA
				Antimony	2.00E+01	mg/kg	7.77E-08	mg/kg/day	NA	NA	NA	5.44E-07	mg/kg/day	4.00E-04	mg/kg/day	1E-03
				Arsenic	3.20E+00	mg/kg	1.24E-08	mg/kg/day	1.50E+00	1/mg/kg/day	2E-08	8.70E-08	mg/kg/day	3.00E-04	mg/kg/day	3E-04
				Chromium	6.50E+01	mg/kg	2.52E-07	mg/kg/day	NA	NA	NA	1.77E-06	mg/kg/day	NA	NA	NA
				Cobalt	2.60E+00	mg/kg	1.01E-08	mg/kg/day	NA	NA	NA	7.07E-08	mg/kg/day	3.00E-04	mg/kg/day	2E-04
				Iron	1.50E+04	mg/kg	5.82E-05	mg/kg/day	NA	NA	NA	4.08E-04	mg/kg/day	7.00E-01	mg/kg/day	6E-04
				Lead	5.30E+02	mg/kg	2.06E-06	mg/kg/day	NA	NA	NA	1.44E-05	mg/kg/day	NA	NA	NA
				Manganese	2.70E+02	mg/kg	1.05E-06	mg/kg/day	NA	NA	NA	7.34E-06	mg/kg/day	1.40E-01	mg/kg/day	5E-05
				Mercury	2.80E+01	mg/kg	1.09E-07	mg/kg/day	NA	NA	NA	7.61E-07	mg/kg/day	3.00E-04	mg/kg/day	3E-03
				Silver	1.30E+02	mg/kg	5.05E-07	mg/kg/day	NA	NA	NA	3.53E-06	mg/kg/day	5.00E-03	mg/kg/day	7E-04
			Exp. Route Total								7E-08					6E-03
			Dermal	Benzo[a]anthracene	2.10E+00	mg/kg	8.90E-08	mg/kg/day	7.30E-01	1/mg/kg/day	7E-08	6.23E-07	mg/kg/day	NA	NA	NA
				Benzo[a]pyrene	9.10E-01	mg/kg	3.86E-08	mg/kg/day	7.30E+00	1/mg/kg/day	3E-07	2.70E-07	mg/kg/day	NA	NA	NA
				Benzo[b]fluoranthene	4.80E+00	mg/kg	2.04E-07	mg/kg/day	7.30E-01	1/mg/kg/day	1E-07	1.42E-06	mg/kg/day	NA	NA	NA
				Benzo[k]fluoranthene	2.40E+00	mg/kg	1.02E-07	mg/kg/day	7.30E-02	1/mg/kg/day	7E-09	7.12E-07	mg/kg/day	NA	NA	NA
				Carbazole	5.30E-02	mg/kg	2.25E-09	mg/kg/day	NA	NA	NA	1.57E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	7.60E-02	mg/kg	3.22E-09	mg/kg/day	7.30E+00	1/mg/kg/day	2E-08	2.26E-08	mg/kg/day	NA	NA	NA
				2-Hexanone	1.30E-01	mg/kg	4.24E-09	mg/kg/day	NA	NA	NA	2.97E-08	mg/kg/day	NA	NA	NA
				Indeno[1,2,3-cd]pyrene	1.40E+00	mg/kg	5.94E-08	mg/kg/day	7.30E-01	1/mg/kg/day	4E-08	4.16E-07	mg/kg/day	NA	NA	NA
				Antimony	2.00E+01	mg/kg	6.52E-08	mg/kg/day	NA	NA	NA	4.57E-07	mg/kg/day	6.00E-05	mg/kg/day	8E-03
				Arsenic	3.20E+00	mg/kg	3.13E-08	mg/kg/day	1.50E+00	1/mg/kg/day	5E-08	2.19E-07	mg/kg/day	3.00E-04	mg/kg/day	7E-04
				Chromium	6.50E+01	mg/kg	2.12E-07	mg/kg/day	NA	NA	NA	1.48E-06	mg/kg/day	NA	NA	NA
				Cobalt	2.60E+00	mg/kg	8.48E-09	mg/kg/day	NA	NA	NA	5.94E-08	mg/kg/day	3.00E-04	mg/kg/day	2E-04
				Iron	1.50E+04	mg/kg	4.89E-05	mg/kg/day	NA	NA	NA	3.42E-04	mg/kg/day	7.00E-01	mg/kg/day	5E-04
				Lead	5.30E+02	mg/kg	1.73E-06	mg/kg/day	NA	NA	NA	1.21E-05	mg/kg/day	NA	NA	NA
				Manganese	2.70E+02	mg/kg	8.81E-07	mg/kg/day	NA	NA	NA	6.16E-06	mg/kg/day	5.60E-03	mg/kg/day	1E-03

Table D-28

RAGS Part D TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sludge (continued)	Sludge	Sludge at WWTP	Dermal	Mercury	2.80E+01	mg/kg	9.13E-08	mg/kg/day	NA	NA	NA	6.39E-07	mg/kg/day	2.10E-05	mg/kg/day	3E-02
				Silver	1.30E+02	mg/kg	4.24E-07	mg/kg/day	NA	NA	NA	2.97E-06	mg/kg/day	2.00E-04	mg/kg/day	1E-02
			Exp. Route Total								6E-07					6E-02
		Exposure Point Total									7E-07					6E-02
	Exposure Medium Total										7E-07					6E-02
Sludge Total											7E-07					6E-02
Waste Water	Waste Water	Waste Water at WWTP	Dermal	Iron	1.50E+04	µg/L	6.36E-05	mg/kg/day	NA	NA	NA	4.45E-04	mg/kg/day	7.00E-01	mg/kg/day	6E-04
				Lead	2.90E+01	µg/L	1.23E-07	mg/kg/day	NA	NA	NA	8.61E-07	mg/kg/day	NA	NA	NA
				Manganese	1.70E+02	µg/L	7.21E-07	mg/kg/day	NA	NA	NA	5.05E-06	mg/kg/day	5.60E-03	mg/kg/day	9E-04
			Exp. Route Total								---					2E-03
		Exposure Point Total									---					2E-03
	Exposure Medium Total										---					2E-03
Waste Water Total											---					2E-03
Sediment	Sediment	Sediment	Ingestion	No COPCs												
			Exp. Route Total													
			Dermal	No COPCs												
			Exp. Route Total													
		Exposure Point Total														
	Exposure Medium Total															
Sediment Total																
Surface Water	Surface Water	Surface Water at WWTP	Ingestion	Iron	7.20E+03	µg/L	4.36E-04	mg/kg/day	NA	NA	NA	3.05E-03	mg/kg/day	7.00E-01	mg/kg/day	4E-03
				Manganese	4.60E+02	µg/L	2.79E-05	mg/kg/day	NA	NA	NA	1.95E-04	mg/kg/day	1.40E-01	mg/kg/day	1E-03
			Exp. Route Total								---					6E-03
			Dermal	Iron	7.20E+03	µg/L	3.05E-05	mg/kg/day	NA	NA	NA	2.14E-04	mg/kg/day	7.00E-01	mg/kg/day	3E-04
				Manganese	4.60E+02	µg/L	1.95E-06	mg/kg/day	NA	NA	NA	1.37E-05	mg/kg/day	5.60E-03	mg/kg/day	2E-03
			Exp. Route Total								---					3E-03
		Exposure Point Total									---					8E-03
	Exposure Medium Total										---					8E-03
Surface Water Total											---					8E-03
											Total of Receptor Risks Across All Media	9E-07				Total of Receptor Hazards Across All Media	8E-02

Table D-29

RAGS Part D TABLE 7.2.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Ingestion	Benzo[a]pyrene	3.40E-02	mg/kg	5.94E-09	mg/kg/day	7.30E+00	1/mg/kg/day	4E-08	1.66E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	8.74E-09	mg/kg/day	7.30E+00	1/mg/kg/day	6E-08	2.45E-08	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	5.07E-08	mg/kg/day	2.00E+00	1/mg/kg/day	1E-07	1.42E-07	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	2.27E-03	mg/kg/day	NA	NA	NA	6.36E-03	mg/kg/day	1.00E+00	mg/kg/day	6E-03
				Antimony	3.20E+00	mg/kg	5.59E-07	mg/kg/day	NA	NA	NA	1.57E-06	mg/kg/day	4.00E-04	mg/kg/day	4E-03
				Arsenic	5.40E+00	mg/kg	9.44E-07	mg/kg/day	1.50E+00	1/mg/kg/day	1E-06	2.64E-06	mg/kg/day	3.00E-04	mg/kg/day	9E-03
				Cobalt	3.30E+00	mg/kg	5.77E-07	mg/kg/day	NA	NA	NA	1.61E-06	mg/kg/day	3.00E-04	mg/kg/day	5E-03
				Iron	1.00E+04	mg/kg	1.75E-03	mg/kg/day	NA	NA	NA	4.89E-03	mg/kg/day	7.00E-01	mg/kg/day	7E-03
				Lead	4.60E+02	mg/kg	8.04E-05	mg/kg/day	NA	NA	NA	2.25E-04	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	5.59E-05	mg/kg/day	NA	NA	NA	1.57E-04	mg/kg/day	1.40E-01	mg/kg/day	1E-03
			Exp. Route Total								2E-06					3E-02
			Dermal	Benzo[a]pyrene	3.40E-02	mg/kg	5.35E-09	mg/kg/day	7.30E+00	1/mg/kg/day	4E-08	1.50E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	7.87E-09	mg/kg/day	7.30E+00	1/mg/kg/day	6E-08	2.20E-08	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	4.92E-08	mg/kg/day	2.00E+00	1/mg/kg/day	1E-07	1.38E-07	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	1.57E-04	mg/kg/day	NA	NA	NA	4.41E-04	mg/kg/day	1.00E+00	mg/kg/day	4E-04
				Antimony	3.20E+00	mg/kg	3.87E-08	mg/kg/day	NA	NA	NA	1.08E-07	mg/kg/day	6.00E-05	mg/kg/day	2E-03
				Arsenic	5.40E+00	mg/kg	1.96E-07	mg/kg/day	1.50E+00	1/mg/kg/day	3E-07	5.49E-07	mg/kg/day	3.00E-04	mg/kg/day	2E-03
				Cobalt	3.30E+00	mg/kg	4.00E-08	mg/kg/day	NA	NA	NA	1.12E-07	mg/kg/day	3.00E-04	mg/kg/day	4E-04
				Iron	1.00E+04	mg/kg	1.21E-04	mg/kg/day	NA	NA	NA	3.39E-04	mg/kg/day	7.00E-01	mg/kg/day	5E-04
				Lead	4.60E+02	mg/kg	5.57E-06	mg/kg/day	NA	NA	NA	1.56E-05	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	3.87E-06	mg/kg/day	NA	NA	NA	1.08E-05	mg/kg/day	5.60E-03	mg/kg/day	2E-03
			Exp. Route Total								5E-07					7E-03
		Exposure Point Total									2E-06					4E-02
	Exposure Medium Total										2E-06					4E-02
	Air	Airborne Dust/Particulates at WWTP	Inhalation	Benzo[a]pyrene	3.40E-02	mg/kg	1.57E-12	mg/kg/day	1.10E-03	1/mg/kg/day	2E-15	4.39E-12	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	2.30E-12	mg/kg/day	1.20E-03	1/mg/kg/day	3E-15	6.45E-12	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	1.34E-11	mg/kg/day	5.71E-04	1/mg/kg/day	8E-15	3.74E-11	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	5.99E-07	mg/kg/day	NA	NA	NA	1.68E-06	mg/kg/day	5.00E-03	mg/kg/day	3E-04
				Antimony	3.20E+00	mg/kg	1.47E-10	mg/kg/day	NA	NA	NA	4.13E-10	mg/kg/day	NA	NA	NA
				Arsenic	5.40E+00	mg/kg	2.49E-10	mg/kg/day	4.30E-03	1/mg/kg/day	1E-12	6.97E-10	mg/kg/day	1.50E-05	mg/kg/day	5E-05
				Cobalt	3.30E+00	mg/kg	1.52E-10	mg/kg/day	9.00E-03	1/mg/kg/day	1E-12	4.26E-10	mg/kg/day	6.00E-06	mg/kg/day	7E-05
				Iron	1.00E+04	mg/kg	4.61E-07	mg/kg/day	NA	NA	NA	1.29E-06	mg/kg/day	NA	NA	NA
				Lead	4.60E+02	mg/kg	2.12E-08	mg/kg/day	NA	NA	NA	5.93E-08	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	1.47E-08	mg/kg/day	NA	NA	NA	4.13E-08	mg/kg/day	5.00E-05	mg/kg/day	8E-04

Table D-29
RAGS Part D TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soils (continued)	Air	Airborne Dust/Particulates	Exp. Route Total								2E-12					1E-03
		Exposure Point Total									2E-12					1E-03
	Exposure Medium Total										2E-12					1E-03
Soil Total											2E-06					4E-02
Sludge	Sludge	Sludge at WWTP	Ingestion	Benzo[a]anthracene	2.10E+00	mg/kg	3.67E-07	mg/kg/day	7.30E-01	1/mg/kg/day	3E-07	1.03E-06	mg/kg/day	NA	NA	NA
				Benzo[a]pyrene	9.10E-01	mg/kg	1.59E-07	mg/kg/day	7.30E+00	1/mg/kg/day	1E-06	4.45E-07	mg/kg/day	NA	NA	NA
				Benzo[b]fluoranthene	4.80E+00	mg/kg	8.39E-07	mg/kg/day	7.30E-01	1/mg/kg/day	6E-07	2.35E-06	mg/kg/day	NA	NA	NA
				Benzo[k]fluoranthene	2.40E+00	mg/kg	4.19E-07	mg/kg/day	7.30E-02	1/mg/kg/day	3E-08	1.17E-06	mg/kg/day	NA	NA	NA
				Carbazole	5.30E-02	mg/kg	9.26E-09	mg/kg/day	NA	NA	NA	2.59E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	7.60E-02	mg/kg	1.33E-08	mg/kg/day	7.30E+00	1/mg/kg/day	1E-07	3.72E-08	mg/kg/day	NA	NA	NA
				2-Hexanone	1.30E-01	mg/kg	2.27E-08	mg/kg/day	NA	NA	NA	6.36E-08	mg/kg/day	NA	NA	NA
				Indeno[1,2,3-cd]pyrene	1.40E+00	mg/kg	2.45E-07	mg/kg/day	7.30E-01	1/mg/kg/day	2E-07	6.85E-07	mg/kg/day	NA	NA	NA
				Antimony	2.00E+01	mg/kg	3.49E-06	mg/kg/day	NA	NA	NA	9.78E-06	mg/kg/day	4.00E-04	mg/kg/day	2E-02
				Arsenic	3.20E+00	mg/kg	5.59E-07	mg/kg/day	1.50E+00	1/mg/kg/day	8E-07	1.57E-06	mg/kg/day	3.00E-04	mg/kg/day	5E-03
				Chromium	6.50E+01	mg/kg	1.14E-05	mg/kg/day	NA	NA	NA	3.18E-05	mg/kg/day	NA	NA	NA
				Cobalt	2.60E+00	mg/kg	4.54E-07	mg/kg/day	NA	NA	NA	1.27E-06	mg/kg/day	3.00E-04	mg/kg/day	4E-03
				Iron	1.50E+04	mg/kg	2.62E-03	mg/kg/day	NA	NA	NA	7.34E-03	mg/kg/day	7.00E-01	mg/kg/day	1E-02
				Lead	5.30E+02	mg/kg	9.26E-05	mg/kg/day	NA	NA	NA	2.59E-04	mg/kg/day	NA	NA	NA
				Manganese	2.70E+02	mg/kg	4.72E-05	mg/kg/day	NA	NA	NA	1.32E-04	mg/kg/day	1.40E-01	mg/kg/day	9E-04
				Mercury	2.80E+01	mg/kg	4.89E-06	mg/kg/day	NA	NA	NA	1.37E-05	mg/kg/day	3.00E-04	mg/kg/day	5E-02
				Silver	1.30E+02	mg/kg	2.27E-05	mg/kg/day	NA	NA	NA	6.36E-05	mg/kg/day	5.00E-03	mg/kg/day	1E-02
			Exp. Route Total								3E-06					1E-01
			Dermal	Benzo[a]anthracene	2.10E+00	mg/kg	3.31E-07	mg/kg/day	7.30E-01	1/mg/kg/day	2E-07	9.26E-07	mg/kg/day	NA	NA	NA
				Benzo[a]pyrene	9.10E-01	mg/kg	1.43E-07	mg/kg/day	7.30E+00	1/mg/kg/day	1E-06	4.01E-07	mg/kg/day	NA	NA	NA
				Benzo[b]fluoranthene	4.80E+00	mg/kg	7.56E-07	mg/kg/day	7.30E-01	1/mg/kg/day	6E-07	2.12E-06	mg/kg/day	NA	NA	NA
				Benzo[k]fluoranthene	2.40E+00	mg/kg	3.78E-07	mg/kg/day	7.30E-02	1/mg/kg/day	3E-08	1.06E-06	mg/kg/day	NA	NA	NA
				Carbazole	5.30E-02	mg/kg	8.34E-09	mg/kg/day	NA	NA	NA	2.34E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	7.60E-02	mg/kg	1.20E-08	mg/kg/day	7.30E+00	1/mg/kg/day	9E-08	3.35E-08	mg/kg/day	NA	NA	NA
				2-Hexanone	1.30E-01	mg/kg	1.57E-08	mg/kg/day	NA	NA	NA	4.41E-08	mg/kg/day	NA	NA	NA
				Indeno[1,2,3-cd]pyrene	1.40E+00	mg/kg	2.20E-07	mg/kg/day	7.30E-01	1/mg/kg/day	2E-07	6.17E-07	mg/kg/day	NA	NA	NA
				Antimony	2.00E+01	mg/kg	2.42E-07	mg/kg/day	NA	NA	NA	6.78E-07	mg/kg/day	6.00E-05	mg/kg/day	1E-02
				Arsenic	3.20E+00	mg/kg	1.16E-07	mg/kg/day	1.50E+00	1/mg/kg/day	2E-07	3.25E-07	mg/kg/day	3.00E-04	mg/kg/day	1E-03
				Chromium	6.50E+01	mg/kg	7.87E-07	mg/kg/day	NA	NA	NA	2.20E-06	mg/kg/day	NA	NA	NA
				Cobalt	2.60E+00	mg/kg	3.15E-08	mg/kg/day	NA	NA	NA	8.82E-08	mg/kg/day	3.00E-04	mg/kg/day	3E-04
				Iron	1.50E+04	mg/kg	1.82E-04	mg/kg/day	NA	NA	NA	5.09E-04	mg/kg/day	7.00E-01	mg/kg/day	7E-04
				Lead	5.30E+02	mg/kg	6.42E-06	mg/kg/day	NA	NA	NA	1.80E-05	mg/kg/day	NA	NA	NA
				Manganese	2.70E+02	mg/kg	3.27E-06	mg/kg/day	NA	NA	NA	9.15E-06	mg/kg/day	5.60E-03	mg/kg/day	2E-03

Table D-29
RAGS Part D TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sludge (continued)	Sludge	Sludge at WWTP	Dermal	Mercury	2.80E+01	mg/kg	3.39E-07	mg/kg/day	NA	NA	NA	9.49E-07	mg/kg/day	2.10E-05	mg/kg/day	5E-02
				Silver	1.30E+02	mg/kg	1.57E-06	mg/kg/day	NA	NA	NA	4.41E-06	mg/kg/day	2.00E-04	mg/kg/day	2E-02
			Exp. Route Total								2E-06					8E-02
		Exposure Point Total									5E-06					2E-01
	Exposure Medium Total										5E-06					2E-01
Sludge Total											5E-06					2E-01
Waste Water	Waste Water	Waste Water at WWTP	Dermal	Iron	1.50E+04	µg/L	8.65E-05	mg/kg/day	NA	NA	NA	2.42E-04	mg/kg/day	7.00E-01	mg/kg/day	3E-04
				Lead	2.90E+01	µg/L	1.67E-07	mg/kg/day	NA	NA	NA	4.68E-07	mg/kg/day	NA	NA	NA
				Manganese	1.70E+02	µg/L	9.80E-07	mg/kg/day	NA	NA	NA	2.74E-06	mg/kg/day	5.60E-03	mg/kg/day	5E-04
			Exp. Route Total								---					8E-04
		Exposure Point Total									---					8E-04
	Exposure Medium Total										---					8E-04
Waste Water Total											---					8E-04
											Total of Receptor Risks Across All Media	8E-06		Total of Receptor Hazards Across All Media		2E-01

Table D-30

RAGS Part D TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Ingestion	Benzo[a]pyrene	3.40E-02	mg/kg	7.53E-10	mg/kg/day	7.30E+00	1/mg/kg/day	5E-09	5.27E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	1.11E-09	mg/kg/day	7.30E+00	1/mg/kg/day	8E-09	7.75E-08	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	6.42E-09	mg/kg/day	2.00E+00	1/mg/kg/day	1E-08	4.49E-07	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	2.88E-04	mg/kg/day	NA	NA	NA	2.01E-02	mg/kg/day	1.00E+00	mg/kg/day	2E-02
				Antimony	3.20E+00	mg/kg	7.09E-08	mg/kg/day	NA	NA	NA	4.96E-06	mg/kg/day	4.00E-04	mg/kg/day	1E-02
				Arsenic	5.40E+00	mg/kg	1.20E-07	mg/kg/day	1.50E+00	1/mg/kg/day	2E-07	8.37E-06	mg/kg/day	3.00E-04	mg/kg/day	3E-02
				Cobalt	3.30E+00	mg/kg	7.31E-08	mg/kg/day	NA	NA	NA	5.11E-06	mg/kg/day	3.00E-04	mg/kg/day	2E-02
				Iron	1.00E+04	mg/kg	2.21E-04	mg/kg/day	NA	NA	NA	1.55E-02	mg/kg/day	7.00E-01	mg/kg/day	2E-02
				Lead	4.60E+02	mg/kg	1.02E-05	mg/kg/day	NA	NA	NA	7.13E-04	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	7.09E-06	mg/kg/day	NA	NA	NA	4.96E-04	mg/kg/day	1.40E-01	mg/kg/day	4E-03
			Exp. Route Total								2E-07					1E-01
			Dermal	Benzo[a]pyrene	3.40E-02	mg/kg	2.94E-10	mg/kg/day	7.30E+00	1/mg/kg/day	2E-09	2.06E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	4.32E-10	mg/kg/day	7.30E+00	1/mg/kg/day	3E-09	3.02E-08	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	2.70E-09	mg/kg/day	2.00E+00	1/mg/kg/day	5E-09	1.89E-07	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	8.64E-06	mg/kg/day	NA	NA	NA	6.04E-04	mg/kg/day	1.00E+00	mg/kg/day	6E-04
				Antimony	3.20E+00	mg/kg	2.13E-09	mg/kg/day	NA	NA	NA	1.49E-07	mg/kg/day	6.00E-05	mg/kg/day	2E-03
				Arsenic	5.40E+00	mg/kg	1.08E-08	mg/kg/day	1.50E+00	1/mg/kg/day	2E-08	7.53E-07	mg/kg/day	3.00E-04	mg/kg/day	3E-03
				Cobalt	3.30E+00	mg/kg	2.19E-09	mg/kg/day	NA	NA	NA	1.53E-07	mg/kg/day	3.00E-04	mg/kg/day	5E-04
				Iron	1.00E+04	mg/kg	6.64E-06	mg/kg/day	NA	NA	NA	4.65E-04	mg/kg/day	7.00E-01	mg/kg/day	7E-04
				Lead	4.60E+02	mg/kg	3.06E-07	mg/kg/day	NA	NA	NA	2.14E-05	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	2.13E-07	mg/kg/day	NA	NA	NA	1.49E-05	mg/kg/day	5.60E-03	mg/kg/day	3E-03
			Exp. Route Total								3E-08					9E-03
		Exposure Point Total									2E-07					1E-01
	Exposure Medium Total										2E-07					1E-01
	Air	Airborne Dust/Particulates at WWTP	Inhalation	Benzo[a]pyrene	3.40E-02	mg/kg	3.01E-14	mg/kg/day	1.10E-03	1/mg/kg/day	3E-17	2.11E-12	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	4.42E-14	mg/kg/day	1.20E-03	1/mg/kg/day	5E-17	3.10E-12	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	2.57E-13	mg/kg/day	5.71E-04	1/mg/kg/day	1E-16	1.80E-11	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	1.15E-08	mg/kg/day	NA	NA	NA	8.05E-07	mg/kg/day	5.00E-03	mg/kg/day	2E-04
				Antimony	3.20E+00	mg/kg	2.83E-12	mg/kg/day	NA	NA	NA	1.98E-10	mg/kg/day	NA	NA	NA
				Arsenic	5.40E+00	mg/kg	4.78E-12	mg/kg/day	4.30E-03	1/mg/kg/day	2E-14	3.34E-10	mg/kg/day	1.50E-05	mg/kg/day	2E-05
				Cobalt	3.30E+00	mg/kg	2.92E-12	mg/kg/day	9.00E-03	1/mg/kg/day	3E-14	2.04E-10	mg/kg/day	6.00E-06	mg/kg/day	3E-05
				Iron	1.00E+04	mg/kg	8.84E-09	mg/kg/day	NA	NA	NA	6.19E-07	mg/kg/day	NA	NA	NA
				Lead	4.60E+02	mg/kg	4.07E-10	mg/kg/day	NA	NA	NA	2.85E-08	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	2.83E-10	mg/kg/day	NA	NA	NA	1.98E-08	mg/kg/day	5.00E-05	mg/kg/day	4E-04

Table D-30

RAGS Part D TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soils (continued)	Air	Airborne Dust/Particulates	Exp. Route Total								5E-14					6E-04
		Exposure Point Total									5E-14					6E-04
	Exposure Medium Total										5E-14					6E-04
Soil Total											2E-07					1E-01
Sludge	Sludge	Sludge at WWTP	Ingestion	Benzo[a]anthracene	2.10E+00	mg/kg	4.65E-08	mg/kg/day	7.30E-01	1/mg/kg/day	3E-08	3.25E-06	mg/kg/day	NA	NA	NA
				Benzo[a]pyrene	9.10E-01	mg/kg	2.01E-08	mg/kg/day	7.30E+00	1/mg/kg/day	1E-07	1.41E-06	mg/kg/day	NA	NA	NA
				Benzo[b]fluoranthene	4.80E+00	mg/kg	1.06E-07	mg/kg/day	7.30E-01	1/mg/kg/day	8E-08	7.44E-06	mg/kg/day	NA	NA	NA
				Benzo[k]fluoranthene	2.40E+00	mg/kg	5.31E-08	mg/kg/day	7.30E-02	1/mg/kg/day	4E-09	3.72E-06	mg/kg/day	NA	NA	NA
				Carbazole	5.30E-02	mg/kg	1.17E-09	mg/kg/day	NA	NA	NA	8.21E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	7.60E-02	mg/kg	1.68E-09	mg/kg/day	7.30E+00	1/mg/kg/day	1E-08	1.18E-07	mg/kg/day	NA	NA	NA
				2-Hexanone	1.30E-01	mg/kg	2.88E-09	mg/kg/day	NA	NA	NA	2.01E-07	mg/kg/day	NA	NA	NA
				Indeno[1,2,3-cd]pyrene	1.40E+00	mg/kg	3.10E-08	mg/kg/day	7.30E-01	1/mg/kg/day	2E-08	2.17E-06	mg/kg/day	NA	NA	NA
				Antimony	2.00E+01	mg/kg	4.43E-07	mg/kg/day	NA	NA	NA	3.10E-05	mg/kg/day	4.00E-04	mg/kg/day	8E-02
				Arsenic	3.20E+00	mg/kg	7.09E-08	mg/kg/day	1.50E+00	1/mg/kg/day	1E-07	4.96E-06	mg/kg/day	3.00E-04	mg/kg/day	2E-02
				Chromium	6.50E+01	mg/kg	1.44E-06	mg/kg/day	NA	NA	NA	1.01E-04	mg/kg/day	NA	NA	NA
				Cobalt	2.60E+00	mg/kg	5.76E-08	mg/kg/day	NA	NA	NA	4.03E-06	mg/kg/day	3.00E-04	mg/kg/day	1E-02
				Iron	1.50E+04	mg/kg	3.32E-04	mg/kg/day	NA	NA	NA	2.32E-02	mg/kg/day	7.00E-01	mg/kg/day	3E-02
				Lead	5.30E+02	mg/kg	1.17E-05	mg/kg/day	NA	NA	NA	8.21E-04	mg/kg/day	NA	NA	NA
				Manganese	2.70E+02	mg/kg	5.98E-06	mg/kg/day	NA	NA	NA	4.18E-04	mg/kg/day	1.40E-01	mg/kg/day	3E-03
				Mercury	2.80E+01	mg/kg	6.20E-07	mg/kg/day	NA	NA	NA	4.34E-05	mg/kg/day	3.00E-04	mg/kg/day	1E-01
				Silver	1.30E+02	mg/kg	2.88E-06	mg/kg/day	NA	NA	NA	2.01E-04	mg/kg/day	5.00E-03	mg/kg/day	4E-02
			Exp. Route Total								4E-07					3E-01
			Dermal	Benzo[a]anthracene	2.10E+00	mg/kg	1.81E-08	mg/kg/day	7.30E-01	1/mg/kg/day	1E-08	1.27E-06	mg/kg/day	NA	NA	NA
				Benzo[a]pyrene	9.10E-01	mg/kg	7.86E-09	mg/kg/day	7.30E+00	1/mg/kg/day	6E-08	5.50E-07	mg/kg/day	NA	NA	NA
				Benzo[b]fluoranthene	4.80E+00	mg/kg	4.14E-08	mg/kg/day	7.30E-01	1/mg/kg/day	3E-08	2.90E-06	mg/kg/day	NA	NA	NA
				Benzo[k]fluoranthene	2.40E+00	mg/kg	2.07E-08	mg/kg/day	7.30E-02	1/mg/kg/day	2E-09	1.45E-06	mg/kg/day	NA	NA	NA
				Carbazole	5.30E-02	mg/kg	4.58E-10	mg/kg/day	NA	NA	NA	3.20E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	7.60E-02	mg/kg	6.56E-10	mg/kg/day	7.30E+00	1/mg/kg/day	5E-09	4.59E-08	mg/kg/day	NA	NA	NA
				2-Hexanone	1.30E-01	mg/kg	8.64E-10	mg/kg/day	NA	NA	NA	6.04E-08	mg/kg/day	NA	NA	NA
				Indeno[1,2,3-cd]pyrene	1.40E+00	mg/kg	1.21E-08	mg/kg/day	7.30E-01	1/mg/kg/day	9E-09	8.46E-07	mg/kg/day	NA	NA	NA
				Antimony	2.00E+01	mg/kg	1.33E-08	mg/kg/day	NA	NA	NA	9.30E-07	mg/kg/day	6.00E-05	mg/kg/day	2E-02
				Arsenic	3.20E+00	mg/kg	6.38E-09	mg/kg/day	1.50E+00	1/mg/kg/day	1E-08	4.46E-07	mg/kg/day	3.00E-04	mg/kg/day	1E-03
				Chromium	6.50E+01	mg/kg	4.32E-08	mg/kg/day	NA	NA	NA	3.02E-06	mg/kg/day	NA	NA	NA
				Cobalt	2.60E+00	mg/kg	1.73E-09	mg/kg/day	NA	NA	NA	1.21E-07	mg/kg/day	3.00E-04	mg/kg/day	4E-04
				Iron	1.50E+04	mg/kg	9.96E-06	mg/kg/day	NA	NA	NA	6.97E-04	mg/kg/day	7.00E-01	mg/kg/day	1E-03
				Lead	5.30E+02	mg/kg	3.52E-07	mg/kg/day	NA	NA	NA	2.46E-05	mg/kg/day	NA	NA	NA
				Manganese	2.70E+02	mg/kg	1.79E-07	mg/kg/day	NA	NA	NA	1.26E-05	mg/kg/day	5.60E-03	mg/kg/day	2E-03

Table D-30

RAGS Part D TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk	Non-Cancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD/RfC Value	RfD/RfC Units	Hazard Quotient
Sludge (continued)	Sludge	Sludge at WWTP	Dermal	Mercury	2.80E+01	mg/kg	1.86E-08	mg/kg/day	NA	NA	NA	1.30E-06	mg/kg/day	2.10E-05	mg/kg/day	6E-02
				Silver	1.30E+02	mg/kg	8.64E-08	mg/kg/day	NA	NA	NA	6.04E-06	mg/kg/day	2.00E-04	mg/kg/day	3E-02
			Exp. Route Total								1E-07					1E-01
		Exposure Point Total									5E-07					4E-01
	Exposure Medium Total										5E-07					4E-01
Sludge Total											5E-07					4E-01
Groundwater	Groundwater	Groundwater trenches at WWTP	Dermal	2,4-Dimethylphenol	1.00E+02	µg/L	7.40E-07	mg/kg/day	NA	NA	NA	5.18E-05	mg/kg/day	2.00E-02	mg/kg/day	3E-03
				Tetrachloroethene	4.40E+00	µg/L	1.20E-07	mg/kg/day	5.40E-01	1/mg/kg/day	6E-08	8.39E-06	mg/kg/day	1.00E-02	mg/kg/day	8E-04
				Arsenic	1.50E+01	µg/L	6.64E-09	mg/kg/day	1.50E+00	1/mg/kg/day	1E-08	4.65E-07	mg/kg/day	3.00E-04	mg/kg/day	2E-03
				Chromium	1.70E+01	µg/L	1.51E-08	mg/kg/day	NA	NA	NA	1.05E-06	mg/kg/day	NA	NA	NA
				Cobalt	7.10E+00	µg/L	3.14E-09	mg/kg/day	NA	NA	NA	2.20E-07	mg/kg/day	3.00E-04	mg/kg/day	7E-04
				Iron	6.67E+03	µg/L	2.95E-06	mg/kg/day	NA	NA	NA	2.07E-04	mg/kg/day	7.00E-01	mg/kg/day	3E-04
				Manganese	1.49E+03	µg/L	6.61E-07	mg/kg/day	NA	NA	NA	4.63E-05	mg/kg/day	5.60E-03	mg/kg/day	8E-03
			Exp. Route Total								7E-08					1E-02
		Exposure Point Total									7E-08					1E-02
	Exposure Medium Total										7E-08					1E-02
Groundwater Total											7E-08					1E-02
Waste Water	Waste Water	Waste Water at WWTP	Dermal	Iron	1.50E+04	µg/L	6.64E-06	mg/kg/day	NA	NA	NA	4.65E-04	mg/kg/day	7.00E-01	mg/kg/day	7E-04
				Lead	2.90E+01	µg/L	1.28E-08	mg/kg/day	NA	NA	NA	8.99E-07	mg/kg/day	NA	NA	NA
				Manganese	1.70E+02	µg/L	7.53E-08	mg/kg/day	NA	NA	NA	5.27E-06	mg/kg/day	5.60E-03	mg/kg/day	9E-04
			Exp. Route Total								---					2E-03
		Exposure Point Total									---					2E-03
	Exposure Medium Total										---					2E-03
Waste Water Total											---					2E-03
										Total of Receptor Risks Across All Media	8E-07				Total of Receptor Hazards Across All Media	6E-01

Table D-31

RAGS Part D TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Age-adjusted

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Ingestion	Benzo[a]pyrene	3.40E-02	mg/kg	5.32E-08	mg/kg/day	7.30E+00	1/mg/kg/day	4E-07	---	---	---	---	---
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	7.83E-08	mg/kg/day	7.30E+00	1/mg/kg/day	6E-07	---	---	---	---	---
				PCB-1260	2.90E-01	mg/kg	4.54E-07	mg/kg/day	2.00E+00	1/mg/kg/day	9E-07	---	---	---	---	---
				Aluminum	1.30E+04	mg/kg	2.04E-02	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Antimony	3.20E+00	mg/kg	5.01E-06	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Arsenic	5.40E+00	mg/kg	8.45E-06	mg/kg/day	1.50E+00	1/mg/kg/day	1E-05	---	---	---	---	---
				Cobalt	3.30E+00	mg/kg	5.17E-06	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Iron	1.00E+04	mg/kg	1.57E-02	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Lead	4.60E+02	mg/kg	7.20E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Manganese	3.20E+02	mg/kg	5.01E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
			Exp. Route Total								1E-05					---
			Dermal	Benzo[a]pyrene	3.40E-02	mg/kg	2.18E-08	mg/kg/day	7.30E+00	1/mg/kg/day	2E-07	---	---	---	---	---
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	3.21E-08	mg/kg/day	7.30E+00	1/mg/kg/day	2E-07	---	---	---	---	---
				PCB-1260	2.90E-01	mg/kg	2.01E-07	mg/kg/day	2.00E+00	1/mg/kg/day	4E-07	---	---	---	---	---
				Aluminum	1.30E+04	mg/kg	6.43E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Antimony	3.20E+00	mg/kg	1.58E-07	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Arsenic	5.40E+00	mg/kg	8.01E-07	mg/kg/day	1.50E+00	1/mg/kg/day	1E-06	---	---	---	---	---
				Cobalt	3.30E+00	mg/kg	1.63E-07	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Iron	1.00E+04	mg/kg	4.94E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Lead	4.60E+02	mg/kg	2.27E-05	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Manganese	3.20E+02	mg/kg	1.58E-05	mg/kg/day	NA	NA	NA	---	---	---	---	---
			Exp. Route Total								2E-06					---
		Exposure Point Total									2E-05					---
	Exposure Medium Total										2E-05					---
	Air	Airborne Dust/Particulates at WWTP	Inhalation	Benzo[a]pyrene	3.40E-02	mg/kg	7.89E-12	mg/kg/day	1.10E-03	1/mg/kg/day	9E-15	---	---	---	---	---
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	1.16E-11	mg/kg/day	1.20E-03	1/mg/kg/day	1E-14	---	---	---	---	---
				PCB-1260	2.90E-01	mg/kg	6.73E-11	mg/kg/day	5.71E-04	1/mg/kg/day	4E-14	---	---	---	---	---
				Aluminum	1.30E+04	mg/kg	3.02E-06	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Antimony	3.20E+00	mg/kg	7.43E-10	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Arsenic	5.40E+00	mg/kg	1.25E-09	mg/kg/day	4.30E-03	1/mg/kg/day	5E-12	---	---	---	---	---
				Cobalt	3.30E+00	mg/kg	7.66E-10	mg/kg/day	9.00E-03	1/mg/kg/day	7E-12	---	---	---	---	---
				Iron	1.00E+04	mg/kg	2.32E-06	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Lead	4.60E+02	mg/kg	1.07E-07	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Manganese	3.20E+02	mg/kg	7.43E-08	mg/kg/day	NA	NA	NA	---	---	---	---	---

Table D-31

RAGS Part D TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Age-adjusted

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soils (continued)	Air	Airborne Dust/Particulate	Exp. Route Total								1E-11					---
		Exposure Point Total									1E-11					---
	Exposure Medium Total										1E-11					---
Soil Total											2E-05					---
Groundwater	Groundwater	Tap water at WWTP	Ingestion	2,4-Dimethylphenol	1.00E+02	µg/L	1.49E-03	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Tetrachloroethene	4.40E+00	µg/L	6.54E-05	mg/kg/day	5.40E-01	1/mg/kg/day	4E-05	---	---	---	---	---
				Arsenic	1.50E+01	µg/L	2.23E-04	mg/kg/day	1.50E+00	1/mg/kg/day	3E-04	---	---	---	---	---
				Chromium	1.70E+01	µg/L	2.53E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Cobalt	7.10E+00	µg/L	1.06E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Iron	6.67E+03	µg/L	9.92E-02	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Manganese	1.49E+03	µg/L	2.22E-02	mg/kg/day	NA	NA	NA	---	---	---	---	---
			Exp. Route Total								4E-04					---
			Dermal	2,4-Dimethylphenol	1.00E+02	µg/L	2.15E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Tetrachloroethene	4.40E+00	µg/L	3.76E-05	mg/kg/day	5.40E-01	1/mg/kg/day	2E-05	---	---	---	---	---
				Arsenic	1.50E+01	µg/L	1.19E-06	mg/kg/day	1.50E+00	1/mg/kg/day	2E-06	---	---	---	---	---
				Chromium	1.70E+01	µg/L	2.71E-06	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Cobalt	7.10E+00	µg/L	5.66E-07	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Iron	6.67E+03	µg/L	5.31E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Manganese	1.49E+03	µg/L	1.19E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
			Exp. Route Total								2E-05					---
		Exposure Point Total									4E-04					---
	Exposure Medium Total										4E-04					---
	Air	Water Vapors from Showerhead	Inhalation	Tetrachloroethene	4.40E+00	µg/L	5.00E-05	mg/m^3	5.90E-03	$1/mg/m^3$	3E-07	---	---	---	---	---
			Exp. Route Total								3E-07					---
		Exposure Point Total									3E-07					---
	Exposure Medium Total										3E-07					---
Groundwater Total											4E-04					---
Sediment	Sediment	Sediment	Ingestion	No COPCs												
			Exp. Route Total													
			Dermal	No COPCs												
			Exp. Route Total													
		Exposure Point Total														
	Exposure Medium Total															
Sediment Total																

Table D-31

RAGS Part D TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Age-adjusted

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Water	Surface Water	Surface Water at WWTP	Ingestion	Iron	7.20E+03	µg/L	1.36E-03	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Manganese	4.60E+02	µg/L	8.69E-05	mg/kg/day	NA	NA	NA	---	---	---	---	---
			Exp. Route Total								---					---
			Dermal	Iron	7.20E+03	µg/L	1.13E-04	mg/kg/day	NA	NA	NA	---	---	---	---	---
				Manganese	4.60E+02	µg/L	7.20E-06	mg/kg/day	NA	NA	NA	---	---	---	---	---
			Exp. Route Total								---					---
		Exposure Point Total									---					---
	Exposure Medium Total										---					---
Surface Water Total											---					---
											Total of Receptor Risks Across All Media	8E-04		Total of Receptor Hazards Across All Media		---

Table D-32

RAGS Part D TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Ingestion	Benzo[a]pyrene	3.40E-02	mg/kg	1.60E-08	mg/kg/day	7.30E+00	1/mg/kg/day	1E-07	4.66E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	2.35E-08	mg/kg/day	7.30E+00	1/mg/kg/day	2E-07	6.85E-08	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	1.36E-07	mg/kg/day	2.00E+00	1/mg/kg/day	3E-07	3.97E-07	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	6.11E-03	mg/kg/day	NA	NA	NA	1.78E-02	mg/kg/day	1.00E+00	mg/kg/day	2E-02
				Antimony	3.20E+00	mg/kg	1.50E-06	mg/kg/day	NA	NA	NA	4.38E-06	mg/kg/day	4.00E-04	mg/kg/day	1E-02
				Arsenic	5.40E+00	mg/kg	2.54E-06	mg/kg/day	1.50E+00	1/mg/kg/day	4E-06	7.40E-06	mg/kg/day	3.00E-04	mg/kg/day	2E-02
				Cobalt	3.30E+00	mg/kg	1.55E-06	mg/kg/day	NA	NA	NA	4.52E-06	mg/kg/day	3.00E-04	mg/kg/day	2E-02
				Iron	1.00E+04	mg/kg	4.70E-03	mg/kg/day	NA	NA	NA	1.37E-02	mg/kg/day	7.00E-01	mg/kg/day	2E-02
				Lead	4.60E+02	mg/kg	2.16E-04	mg/kg/day	NA	NA	NA	6.30E-04	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	1.50E-04	mg/kg/day	NA	NA	NA	4.38E-04	mg/kg/day	1.40E-01	mg/kg/day	3E-03
			Exp. Route Total								4E-06					9E-02
			Dermal	Benzo[a]pyrene	3.40E-02	mg/kg	8.28E-09	mg/kg/day	7.30E+00	1/mg/kg/day	6E-08	2.42E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	1.22E-08	mg/kg/day	7.30E+00	1/mg/kg/day	9E-08	3.55E-08	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	7.61E-08	mg/kg/day	2.00E+00	1/mg/kg/day	2E-07	2.22E-07	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	2.44E-04	mg/kg/day	NA	NA	NA	7.11E-04	mg/kg/day	1.00E+00	mg/kg/day	7E-04
				Antimony	3.20E+00	mg/kg	6.00E-08	mg/kg/day	NA	NA	NA	1.75E-07	mg/kg/day	6.00E-05	mg/kg/day	3E-03
				Arsenic	5.40E+00	mg/kg	3.04E-07	mg/kg/day	1.50E+00	1/mg/kg/day	5E-07	8.85E-07	mg/kg/day	3.00E-04	mg/kg/day	3E-03
				Cobalt	3.30E+00	mg/kg	6.18E-08	mg/kg/day	NA	NA	NA	1.80E-07	mg/kg/day	3.00E-04	mg/kg/day	6E-04
				Iron	1.00E+04	mg/kg	1.87E-04	mg/kg/day	NA	NA	NA	5.47E-04	mg/kg/day	7.00E-01	mg/kg/day	8E-04
				Lead	4.60E+02	mg/kg	8.62E-06	mg/kg/day	NA	NA	NA	2.51E-05	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	6.00E-06	mg/kg/day	NA	NA	NA	1.75E-05	mg/kg/day	5.60E-03	mg/kg/day	3E-03
			Exp. Route Total								8E-07					1E-02
		Exposure Point Total									5E-06					1E-01
	Exposure Medium Total										5E-06					1E-01
	Air	Airborne Dust/Particulates at WWTP	Inhalation	Benzo[a]pyrene	3.40E-02	mg/kg	6.32E-12	mg/m^3	1.10E+00	$1/mg/m^3$	7E-12	1.84E-11	mg/m^3	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	9.29E-12	mg/m^3	1.20E+00	$1/mg/m^3$	1E-11	2.71E-11	mg/m^3	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	5.39E-11	mg/m^3	5.71E-01	$1/mg/m^3$	3E-11	1.57E-10	mg/m^3	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	2.41E-06	mg/m^3	NA	NA	NA	7.04E-06	mg/m^3	5.00E-03	mg/m^3	1E-03
				Antimony	3.20E+00	mg/kg	5.94E-10	mg/m^3	NA	NA	NA	1.73E-09	mg/m^3	NA	NA	NA
				Arsenic	5.40E+00	mg/kg	1.00E-09	mg/m^3	4.30E+00	$1/mg/m^3$	4E-09	2.93E-09	mg/m^3	1.50E-05	mg/m^3	2E-04
				Cobalt	3.30E+00	mg/kg	6.13E-10	mg/m^3	9.00E+00	$1/mg/m^3$	6E-09	1.79E-09	mg/m^3	6.00E-06	mg/m^3	3E-04
				Iron	1.00E+04	mg/kg	1.86E-06	mg/m^3	NA	NA	NA	5.42E-06	mg/m^3	NA	NA	NA
				Lead	4.60E+02	mg/kg	8.54E-08	mg/m^3	NA	NA	NA	2.49E-07	mg/m^3	NA	NA	NA
				Manganese	3.20E+02	mg/kg	5.94E-08	mg/m^3	NA	NA	NA	1.73E-07	mg/m^3	5.00E-05	mg/m^3	3E-03

Table D-32

RAGS Part D TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soils (continued)	Air	Airborne	Exp. Route Total								1E-08					5E-03
		Exposure Point Total									1E-08					5E-03
	Exposure Medium Total										1E-08					5E-03
Soil Total											5E-06					1E-01
Groundwater	Groundwater	Tap water at WWTP	Ingestion	2,4-Dimethylphenol	1.00E+02	µg/L	9.39E-04	mg/kg/day	NA	NA	NA	2.74E-03	mg/kg/day	2.00E-02	mg/kg/day	1E-01
				Tetrachloroethene	4.40E+00	µg/L	4.13E-05	mg/kg/day	5.40E-01	1/mg/kg/day	2E-05	1.21E-04	mg/kg/day	1.00E-02	mg/kg/day	1E-02
				Arsenic	1.50E+01	µg/L	1.41E-04	mg/kg/day	1.50E+00	1/mg/kg/day	2E-04	4.11E-04	mg/kg/day	3.00E-04	mg/kg/day	1E+00
				Chromium	1.70E+01	µg/L	1.60E-04	mg/kg/day	NA	NA	NA	4.66E-04	mg/kg/day	NA	NA	NA
				Cobalt	7.10E+00	µg/L	6.67E-05	mg/kg/day	NA	NA	NA	1.95E-04	mg/kg/day	3.00E-04	mg/kg/day	6E-01
				Iron	6.67E+03	µg/L	6.26E-02	mg/kg/day	NA	NA	NA	1.83E-01	mg/kg/day	7.00E-01	mg/kg/day	3E-01
				Manganese	1.49E+03	µg/L	1.40E-02	mg/kg/day	NA	NA	NA	4.09E-02	mg/kg/day	1.40E-01	mg/kg/day	3E-01
			Exp. Route Total								2E-04					3E+00
			Dermal	2,4-Dimethylphenol	1.00E+02	µg/L	1.41E-04	mg/kg/day	NA	NA	NA	4.12E-04	mg/kg/day	2.00E-02	mg/kg/day	2E-02
				Tetrachloroethene	4.40E+00	µg/L	2.47E-05	mg/kg/day	5.40E-01	1/mg/kg/day	1E-05	7.19E-05	mg/kg/day	1.00E-02	mg/kg/day	7E-03
				Arsenic	1.50E+01	µg/L	7.35E-07	mg/kg/day	1.50E+00	1/mg/kg/day	1E-06	2.15E-06	mg/kg/day	3.00E-04	mg/kg/day	7E-03
				Chromium	1.70E+01	µg/L	1.67E-06	mg/kg/day	NA	NA	NA	4.86E-06	mg/kg/day	NA	NA	NA
				Cobalt	7.10E+00	µg/L	3.48E-07	mg/kg/day	NA	NA	NA	1.02E-06	mg/kg/day	3.00E-04	mg/kg/day	3E-03
				Iron	6.67E+03	µg/L	3.27E-04	mg/kg/day	NA	NA	NA	9.54E-04	mg/kg/day	7.00E-01	mg/kg/day	1E-03
				Manganese	1.49E+03	µg/L	7.32E-05	mg/kg/day	NA	NA	NA	2.14E-04	mg/kg/day	5.60E-03	mg/kg/day	4E-02
			Exp. Route Total								1E-05					8E-02
		Exposure Point Total									2E-04					3E+00
	Exposure Medium Total										2E-04					3E+00
	Air	Water Vapors from Showerhead	Inhalation	Tetrachloroethene	4.40E+00	µg/L	3.50E-05	mg/m^3	5.90E-03	$1/mg/m^3$	2E-07	1.02E-04	mg/m^3	2.7E-01	mg/m^3	4E-04
			Exp. Route Total								2E-07					4E-04
		Exposure Point Total									2E-07					4E-04
	Exposure Medium Total										2E-07					4E-04
Groundwater Total											2E-04					3E+00
Sediment	Sediment	Sediment	Ingestion	No COPCs												
			Exp. Route Total													
			Dermal	No COPCs												
			Exp. Route Total													
		Exposure Point Total														
	Exposure Medium Total															
Sediment Total																

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RAGS Part D TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Water	Surface Water	Surface Water at WWTP	Ingestion	Iron	7.20E+03	µg/L	6.28E-04	mg/kg/day	NA	NA	NA	1.83E-03	mg/kg/day	7.00E-01	mg/kg/day	3E-03
				Manganese	4.60E+02	µg/L	4.01E-05	mg/kg/day	NA	NA	NA	1.17E-04	mg/kg/day	1.40E-01	mg/kg/day	8E-04
			Exp. Route Total								---					3E-03
			Dermal	Iron	7.20E+03	µg/L	7.16E-05	mg/kg/day	NA	NA	NA	2.09E-04	mg/kg/day	7.00E-01	mg/kg/day	3E-04
				Manganese	4.60E+02	µg/L	4.57E-06	mg/kg/day	NA	NA	NA	1.33E-05	mg/kg/day	5.60E-03	mg/kg/day	2E-03
			Exp. Route Total								---					3E-03
		Exposure Point Total									---					6E-03
	Exposure Medium Total										---					6E-03
Surface Water Total											---					6E-03
											Total of Receptor Risks Across All Media					3E-04
															Total of Receptor Hazards Across All Media	3E+00

Table D-33

RAGS Part D TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Ingestion	Benzo[a]pyrene	3.40E-02	mg/kg	---	---	---	---	---	4.35E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	---	---	---	---	---	6.39E-07	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	---	---	---	---	---	3.71E-06	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	---	---	---	---	---	1.66E-01	mg/kg/day	1.00E+00	mg/kg/day	2E-01
				Antimony	3.20E+00	mg/kg	---	---	---	---	---	4.09E-05	mg/kg/day	4.00E-04	mg/kg/day	1E-01
				Arsenic	5.40E+00	mg/kg	---	---	---	---	---	6.90E-05	mg/kg/day	3.00E-04	mg/kg/day	2E-01
				Cobalt	3.30E+00	mg/kg	---	---	---	---	---	4.22E-05	mg/kg/day	3.00E-04	mg/kg/day	1E-01
				Iron	1.00E+04	mg/kg	---	---	---	---	---	1.28E-01	mg/kg/day	7.00E-01	mg/kg/day	2E-01
				Lead	4.60E+02	mg/kg	---	---	---	---	---	5.88E-03	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	---	---	---	---	---	4.09E-03	mg/kg/day	1.40E-01	mg/kg/day	3E-02
			Exp. Route Total													9E-01
			Dermal	Benzo[a]pyrene	3.40E-02	mg/kg	---	---	---	---	---	1.58E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	---	---	---	---	---	2.33E-07	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	---	---	---	---	---	1.45E-06	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	---	---	---	---	---	4.65E-03	mg/kg/day	1.00E+00	mg/kg/day	5E-03
				Antimony	3.20E+00	mg/kg	---	---	---	---	---	1.15E-06	mg/kg/day	6.00E-05	mg/kg/day	2E-02
				Arsenic	5.40E+00	mg/kg	---	---	---	---	---	5.80E-06	mg/kg/day	3.00E-04	mg/kg/day	2E-02
				Cobalt	3.30E+00	mg/kg	---	---	---	---	---	1.18E-06	mg/kg/day	3.00E-04	mg/kg/day	4E-03
				Iron	1.00E+04	mg/kg	---	---	---	---	---	3.58E-03	mg/kg/day	7.00E-01	mg/kg/day	5E-03
				Lead	4.60E+02	mg/kg	---	---	---	---	---	1.65E-04	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	---	---	---	---	---	1.15E-04	mg/kg/day	5.60E-03	mg/kg/day	2E-02
			Exp. Route Total													7E-02
		Exposure Point Total														9E-01
	Exposure Medium Total															9E-01
	Air	Airborne Dust/Particulates at WWTP	Inhalation	Benzo[a]pyrene	3.40E-02	mg/kg	---	---	---	---	---	1.84E-11	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	5.00E-02	mg/kg	---	---	---	---	---	2.71E-11	mg/kg/day	NA	NA	NA
				PCB-1260	2.90E-01	mg/kg	---	---	---	---	---	1.57E-10	mg/kg/day	NA	NA	NA
				Aluminum	1.30E+04	mg/kg	---	---	---	---	---	7.04E-06	mg/kg/day	5.00E-03	mg/kg/day	1E-03
				Antimony	3.20E+00	mg/kg	---	---	---	---	---	1.73E-09	mg/kg/day	NA	NA	NA
				Arsenic	5.40E+00	mg/kg	---	---	---	---	---	2.93E-09	mg/kg/day	1.50E-05	mg/kg/day	2E-04
				Cobalt	3.30E+00	mg/kg	---	---	---	---	---	1.79E-09	mg/kg/day	6.00E-06	mg/kg/day	3E-04
				Iron	1.00E+04	mg/kg	---	---	---	---	---	5.42E-06	mg/kg/day	NA	NA	NA
				Lead	4.60E+02	mg/kg	---	---	---	---	---	2.49E-07	mg/kg/day	NA	NA	NA
				Manganese	3.20E+02	mg/kg	---	---	---	---	---	1.73E-07	mg/kg/day	5.00E-05	mg/kg/day	3E-03

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RAGS Part D TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soils (continued)	Air	Airborne Dust/Particulates	Exp. Route Total													5E-03
		Exposure Point Total														5E-03
	Exposure Medium Total															5E-03
Soil Total																9E-01
Groundwater	Groundwater	Tap water at WWTP	Ingestion	2,4-Dimethylphenol	1.00E+02	µg/L	---	---	---	---	---	6.39E-03	mg/kg/day	2.00E-02	mg/kg/day	3E-01
				Tetrachloroethene	4.40E+00	µg/L	---	---	---	---	---	2.81E-04	mg/kg/day	1.00E-02	mg/kg/day	3E-02
				Arsenic	1.50E+01	µg/L	---	---	---	---	---	9.59E-04	mg/kg/day	3.00E-04	mg/kg/day	3E+00
				Chromium	1.70E+01	µg/L	---	---	---	---	---	1.09E-03	mg/kg/day	NA	NA	NA
				Cobalt	7.10E+00	µg/L	---	---	---	---	---	4.54E-04	mg/kg/day	3.00E-04	mg/kg/day	2E+00
				Iron	6.67E+03	µg/L	---	---	---	---	---	4.26E-01	mg/kg/day	7.00E-01	mg/kg/day	6E-01
				Manganese	1.49E+03	µg/L	---	---	---	---	---	9.54E-02	mg/kg/day	1.40E-01	mg/kg/day	7E-01
			Exp. Route Total													6E+00
			Dermal	2,4-Dimethylphenol	1.00E+02	µg/L	---	---	---	---	---	9.25E-04	mg/kg/day	2.00E-02	mg/kg/day	5E-02
				Tetrachloroethene	4.40E+00	µg/L	---	---	---	---	---	1.62E-04	mg/kg/day	1.00E-02	mg/kg/day	2E-02
				Arsenic	1.50E+01	µg/L	---	---	---	---	---	6.33E-06	mg/kg/day	3.00E-04	mg/kg/day	2E-02
				Chromium	1.70E+01	µg/L	---	---	---	---	---	1.43E-05	mg/kg/day	NA	NA	NA
				Cobalt	7.10E+00	µg/L	---	---	---	---	---	3.00E-06	mg/kg/day	3.00E-04	mg/kg/day	1E-02
				Iron	6.67E+03	µg/L	---	---	---	---	---	2.81E-03	mg/kg/day	7.00E-01	mg/kg/day	4E-03
				Manganese	1.49E+03	µg/L	---	---	---	---	---	6.30E-04	mg/kg/day	5.60E-03	mg/kg/day	1E-01
			Exp. Route Total													2E-01
		Exposure Point Total														7E+00
	Exposure Medium Total															7E+00
	Air	Water Vapors from Showerhead	Inhalation	Tetrachloroethene	4.40E+00	µg/L	---	---	---	---	---	1.76E-04	mg/m^3	2.7E-01	mg/m^3	7E-04
			Exp. Route Total													7E-04
		Exposure Point Total														7E-04
	Exposure Medium Total															7E-04
Groundwater Total																7E+00
Sediment	Sediment	Sediment	Ingestion	No COPCs												
			Exp. Route Total													
			Dermal	No COPCs												
			Exp. Route Total													
		Exposure Point Total														
	Exposure Medium Total															
Sediment Total																

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RAGS Part D TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Water	Surface Water	Surface Water at WWTP	Ingestion	Iron	7.20E+03	µg/L	---	---	---	---	---	8.55E-03	mg/kg/day	7.00E-01	mg/kg/day	1E-02
				Manganese	4.60E+02	µg/L	---	---	---	---	---	5.46E-04	mg/kg/day	1.40E-01	mg/kg/day	4E-03
			Exp. Route Total								---					2E-02
			Dermal	Iron	7.20E+03	µg/L	---	---	---	---	---	4.79E-04	mg/kg/day	7.00E-01	mg/kg/day	7E-04
				Manganese	4.60E+02	µg/L	---	---	---	---	---	3.06E-05	mg/kg/day	5.60E-03	mg/kg/day	5E-03
			Exp. Route Total								---					6E-03
		Exposure Point Total									---					2E-02
	Exposure Medium Total										---					2E-02
Surface Water Total											---					2E-02
											Total of Receptor Risks Across All Media					Total of Receptor Hazards Across All Media 7E+00

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TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soils	Surface Soils at WWTP	Benzo[a]pyrene	9.64E-10	3.45E-17	1.05E-08	1E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	1.42E-09	5.53E-17	1.55E-08	2E-08	---	---	---	---	---
			PCB-1260	2.25E-09	1.53E-16	2.65E-08	3E-08	---	---	---	---	---
			Aluminum	---	---	---	---	CNS	3.53E-04	1.68E-05	2.97E-04	7E-04
			Antimony	---	---	---	---	Blood	2.17E-04	---	1.22E-03	1E-03
			Arsenic	3.15E-08	2.14E-14	7.93E-08	1E-07	Skin	4.89E-04	2.32E-06	1.23E-03	2E-03
			Cobalt	---	2.74E-14	---	3E-14	---	2.99E-04	3.55E-06	2.51E-04	6E-04
			Iron	---	---	---	---	---	3.88E-04	---	3.26E-04	7E-04
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	6.21E-05	4.13E-05	1.30E-03	1E-03
			Chemical Total	3.61E-08	4.90E-14	1.32E-07	2E-07		1.81E-03	6.39E-05	4.63E-03	7E-03
		Exposure Point Total					2E-07					7E-03
	Exposure Medium Total						2E-07					7E-03
Soil Total							2E-07					7E-03
Sludge	Sludge	Sludge at WWTP	Benzo[a]anthracene	5.95E-09	---	6.50E-08	7E-08	---	---	---	---	---
			Benzo[a]pyrene	2.58E-08	---	2.82E-07	3E-07	---	---	---	---	---
			Benzo[b]fluoranthene	1.36E-08	---	1.49E-07	2E-07	---	---	---	---	---
			Benzo[k]fluoranthene	6.80E-10	---	7.43E-09	8E-09	---	---	---	---	---
			Carbazole	---	---	---	---	---	---	---	---	---
			Dibenz(a,h)anthracene	2.15E-09	---	2.35E-08	3E-08	---	---	---	---	---
			2-Hexanone	---	---	---	---	---	---	---	---	---
			Indeno[1,2,3-cd]pyrene	3.97E-09	---	4.33E-08	5E-08	---	---	---	---	---
			Antimony	---	---	---	---	Blood	1.36E-03	---	7.61E-03	9E-03
			Arsenic	1.86E-08	---	4.70E-08	7E-08	Skin	2.90E-04	---	7.31E-04	1E-03
			Chromium	---	---	---	---	NOEL	---	---	---	---
			Cobalt	---	---	---	---	---	2.36E-04	---	1.98E-04	4E-04
			Iron	---	---	---	---	---	5.82E-04	---	4.89E-04	1E-03
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	5.24E-05	---	1.10E-03	1E-03
			Mercury	---	---	---	---	Immune System	2.54E-03	---	3.04E-02	3E-02
			Silver	---	---	---	---	Skin	7.07E-04	---	1.48E-02	2E-02
			Chemical Total	7.08E-08	---	6.16E-07	7E-07		5.76E-03	---	5.54E-02	6E-02
		Exposure Point Total					7E-07					6E-02
	Exposure Medium Total						7E-07					6E-02
Sludge Total							7E-07					6E-02

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TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Current/Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Waste Water	Waste Water	Waste Water at WWTP	Iron	---	---	---	---	---	---	---	6.36E-04	6E-04
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	---	---	9.01E-04	9E-04
			Chemical Total	---	---	---	---		---	---	1.54E-03	2E-03
		Exposure Point Total					---					2E-03
	Exposure Medium Total						---					2E-03
Waste Water Total							---					2E-03
Sediment	Sediment	Sediment at WWTP	No COPCs									
			Chemical Total									
		Exposure Point Total										
	Exposure Medium Total											
Sediment Total												
Surface Water	Surface Water	Surface Water at WWTP	Iron	---	---	---	---	---	4.36E-03	---	3.05E-04	5E-03
			Manganese	---	---	---	---	CNS	1.39E-03	---	2.44E-03	4E-03
			Chemical Total	---	---	---	---		5.75E-03	---	2.74E-03	8E-03
		Exposure Point Total					---					8E-03
	Exposure Medium Total						---					8E-03
Surface Water Total							---					8E-03
Receptor Total							2E-07					2E-02

Total Risk Across All Media	2E-07
Total Hazard Across All Media	2E-02
Total CNS HI Across All Media	8E-03
Total Blood HI Across All Media	1E-02
Total Skin HI Across All Media	2E-02
Total Immune System HI Across All Media	3E-02

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TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Benzo[a]pyrene	4.34E-08	1.72E-15	3.91E-08	8E-08	---	---	---	---	---
			Dibenz(a,h)anthracene	6.38E-08	2.76E-15	5.75E-08	1E-07	---	---	---	---	---
			PCB-1260	1.01E-07	7.63E-15	9.83E-08	2E-07	---	---	---	---	---
			Aluminum	---	---	---	---	CNS	6.36E-03	3.35E-04	4.41E-04	7E-03
			Antimony	---	---	---	---	Blood	3.91E-03	---	1.81E-03	6E-03
			Arsenic	1.42E-06	1.07E-12	2.94E-07	2E-06	Skin	8.81E-03	4.64E-05	1.83E-03	1E-02
			Cobalt	---	1.37E-12	---	1E-12	---	5.38E-03	7.09E-05	3.73E-04	6E-03
			Iron	---	---	---	---	---	6.99E-03	---	4.84E-04	7E-03
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	1.12E-03	8.26E-04	1.94E-03	4E-03
			Chemical Total	1.62E-06	2.45E-12	4.89E-07	2E-06		3.26E-02	1.28E-03	6.87E-03	4E-02
		Exposure Point Total					2E-06					4E-02
	Exposure Medium Total						2E-06					4E-02
Soil Total							2E-06					4E-02
Sludge	Sludge	Sludge at WWTP	Benzo[a]anthracene	2.68E-07	---	2.41E-07	5E-07	---	---	---	---	---
			Benzo[a]pyrene	1.16E-06	---	1.05E-06	2E-06	---	---	---	---	---
			Benzo[b]fluoranthene	6.12E-07	---	5.52E-07	1E-06	---	---	---	---	---
			Benzo[k]fluoranthene	3.06E-08	---	2.76E-08	6E-08	---	---	---	---	---
			Carbazole	---	---	---	---	---	---	---	---	---
			Dibenz(a,h)anthracene	9.69E-08	---	8.73E-08	2E-07	---	---	---	---	---
			2-Hexanone	---	---	---	---	---	---	---	---	---
			Indeno[1,2,3-cd]pyrene	1.79E-07	---	1.61E-07	3E-07	---	---	---	---	---
			Antimony	---	---	---	---	Blood	2.45E-02	---	1.13E-02	4E-02
			Arsenic	8.39E-07	---	1.74E-07	1E-06	Skin	5.22E-03	---	1.08E-03	6E-03
			Chromium	---	---	---	---	NOEL	---	---	---	---
			Cobalt	---	---	---	---	---	4.24E-03	---	2.94E-04	5E-03
			Iron	---	---	---	---	---	1.05E-02	---	7.27E-04	1E-02
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	9.44E-04	---	1.63E-03	3E-03
			Mercury	---	---	---	---	Immune System	4.57E-02	---	4.52E-02	9E-02
			Silver	---	---	---	---	Skin	1.27E-02	---	2.20E-02	3E-02
			Chemical Total	3.19E-06	---	2.29E-06	5E-06		1.04E-01	---	8.23E-02	2E-01
		Exposure Point Total					5E-06					2E-01
	Exposure Medium Total						5E-06					2E-01
Sludge Total							5E-06					2E-01

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TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Waste Water	Waste Water	Waste Water at WWTP	Iron	---	---	---	---	---	---	---	3.46E-04	3E-04
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	---	---	4.90E-04	5E-04
			Chemical Total	---	---	---	---		---	---	8.36E-04	8E-04
		Exposure Point Total					---					8E-04
	Exposure Medium Total						---					8E-04
Waste Water Total							---					8E-04
Receptor Total							8E-06					2E-01
						Total Risk Across All Media	8E-06				Total Hazard Across All Media	2E-01
											Total CNS HI Across All Media	1E-02
											Total Blood HI Across All Media	4E-02
											Total Skin HI Across All Media	5E-02
											Total Immune System HI Across All Media	9E-02

Table D-36

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Benzo[a]pyrene	5.50E-09	3.31E-17	2.14E-09	8E-09	---	---	---	---	---
			Dibenz(a,h)anthracene	8.08E-09	5.31E-17	3.15E-09	1E-08	---	---	---	---	---
			PCB-1260	1.28E-08	1.47E-16	5.39E-09	2E-08	---	---	---	---	---
			Aluminum	---	---	---	---	CNS	2.01E-02	1.61E-04	6.04E-04	2E-02
			Antimony	---	---	---	---	Blood	1.24E-02	---	2.48E-03	1E-02
			Arsenic	1.79E-07	2.05E-14	1.61E-08	2E-07	Skin	2.79E-02	2.23E-05	2.51E-03	3E-02
			Cobalt	---	2.63E-14	---	3E-14	---	1.70E-02	3.41E-05	5.11E-04	2E-02
			Iron	---	---	---	---	---	2.21E-02	---	6.64E-04	2E-02
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	3.54E-03	3.96E-04	2.66E-03	7E-03
			Chemical Total	2.06E-07	4.70E-14	2.68E-08	2E-07		1.03E-01	6.14E-04	9.43E-03	1E-01
		Exposure Point Total					2E-07					1E-01
	Exposure Medium Total						2E-07					1E-01
Soil Total							2E-07					1E-01
Groundwater	Groundwater	Groundwater trenches at WWTP	2,4-Dimethylphenol	---	---	---	---	CNS/Blood	---	---	2.59E-03	3E-03
			Tetrachloroethene	---	---	6.48E-08	6E-08	Liver/Body weight	---	---	8.39E-04	8E-04
			Arsenic	---	---	9.96E-09	1E-08	Skin	---	---	1.55E-03	2E-03
			Chromium	---	---	---	---	NOEL	---	---	---	---
			Cobalt	---	---	---	---	---	---	---	7.34E-04	7E-04
			Iron	---	---	---	---	---	---	---	2.95E-04	3E-04
			Manganese	---	---	---	---	CNS	---	---	8.26E-03	8E-03
			Chemical Total	---	---	7.47E-08	7E-08		---	---	1.43E-02	1E-02
		Exposure Point Total					7E-08					1E-02
	Exposure Medium Total						7E-08					1E-02
Groundwater Total							7E-08					1E-02
Sludge	Sludge	Sludge at WWTP	Benzo[a]anthracene	3.39E-08	---	1.32E-08	5E-08	---	---	---	---	---
			Benzo[a]pyrene	1.47E-07	---	5.74E-08	2E-07	---	---	---	---	---
			Benzo[b]fluoranthene	7.76E-08	---	3.03E-08	1E-07	---	---	---	---	---
			Benzo[k]fluoranthene	3.88E-09	---	1.51E-09	5E-09	---	---	---	---	---
			Carbazole	---	---	---	---	---	---	---	---	---
			Dibenz(a,h)anthracene	1.23E-08	---	4.79E-09	2E-08	---	---	---	---	---
			2-Hexanone	---	---	---	---	---	---	---	---	---
			Indeno[1,2,3-cd]pyrene	2.26E-08	---	8.83E-09	3E-08	---	---	---	---	---
			Antimony	---	---	---	---	Blood	7.75E-02	---	1.55E-02	9E-02
			Arsenic	1.06E-07	---	9.57E-09	1E-07	Skin	1.65E-02	---	1.49E-03	2E-02
			Chromium	---	---	---	---	NOEL	---	---	---	---
			Cobalt	---	---	---	---	---	1.34E-02	---	4.03E-04	1E-02
			Iron	---	---	---	---	---	3.32E-02	---	9.96E-04	3E-02

Table D-36

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sludge (continued)	Sludge	Sludge at WWTP	Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	2.99E-03	---	2.24E-03	5E-03
			Mercury	---	---	---	---	Immune System	1.45E-01	---	6.20E-02	2E-01
			Silver	---	---	---	---	Skin	4.03E-02	---	3.02E-02	7E-02
			Chemical Total	4.04E-07	---	1.26E-07	5E-07		3.29E-01	---	1.13E-01	4E-01
		Exposure Point Total					5E-07					4E-01
	Exposure Medium Total						5E-07					4E-01
Sludge Total							5E-07					4E-01
Waste Water	Waste Water	Waste Water at WWTP	Iron	---	---	---	---	---	---	---	6.64E-04	7E-04
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	---	---	9.41E-04	9E-04
			Chemical Total	---	---	---	---		---	---	1.61E-03	2E-03
		Exposure Point Total					---					2E-03
	Exposure Medium Total						---					2E-03
Waste Water Total							---					2E-03
Receptor Total							8E-07					6E-01

Total Risk Across All Media	8E-07
Total Hazard Across All Media	6E-01
Total CNS HI Across All Media	4E-02
Total Blood HI Across All Media	1E-01
Total Skin HI Across All Media	1E-01
Total Immune System HI Across All Media	2E-01
Total Liver HI Across All Media	8E-04
Total Body Weight HI Across All Media	8E-04

Table D-37

TABLE 9.4.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Age-adjusted

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Benzo[a]pyrene	3.89E-07	8.68E-15	1.59E-07	5E-07	---	---	---	---	---
			Dibenz(a,h)anthracene	5.71E-07	1.39E-14	2.35E-07	8E-07	---	---	---	---	---
			PCB-1260	9.08E-07	3.85E-14	4.01E-07	1E-06	---	---	---	---	---
			Aluminum	---	---	---	---	---	---	---	---	---
			Antimony	---	---	---	---	---	---	---	---	---
			Arsenic	1.27E-05	5.39E-12	1.20E-06	1E-05	---	---	---	---	---
			Cobalt	---	6.90E-12	---	7E-12	---	---	---	---	---
			Iron	---	---	---	---	---	---	---	---	---
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	---	---	---	---	---
			Chemical Total	1.45E-05	1.23E-11	2.00E-06	2E-05		---	---	---	---
		Exposure Point Total					2E-05					---
	Exposure Medium Total						2E-05					---
Soil Total							2E-05					---
Groundwater	Groundwater	Tap water at WWTP	2,4-Dimethylphenol	---	---	---	---	---	---	---	---	---
			Tetrachloroethene	3.53E-05	2.95E-07	2.03E-05	6E-05	---	---	---	---	---
			Arsenic	3.35E-04	---	1.79E-06	3E-04	---	---	---	---	---
			Chromium	---	---	---	---	---	---	---	---	---
			Cobalt	---	---	---	---	---	---	---	---	---
			Iron	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	---	---	---	---	---
			Chemical Total	3.70E-04	2.95E-07	2.21E-05	4E-04		---	---	---	---
		Exposure Point Total					4E-04					---
	Exposure Medium Total						4E-04					---
Groundwater Total							4E-04					---
Sediment	Sediment	Sediment at WWTP	No COPCs									
			Chemical Total									
		Exposure Point Total										
	Exposure Medium Total											
Sediment Total												
Surface Water	Surface Water	Surface Water at WWTP	Iron	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	---	---	---	---	---
			Chemical Total	---	---	---	---		---	---	---	---
		Exposure Point Total					---					---
	Exposure Medium Total						---					---
Surface Water Total							---					---
Receptor Total							4E-04					---
						Total Risk Across All Media	4E-04				Total Hazard Across All Media	---

Table D-38

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Benzo[a]pyrene	1.17E-07	6.95E-12	6.05E-08	2E-07	---	---	---	---	---
			Dibenz(a,h)anthracene	1.71E-07	1.11E-11	8.89E-08	3E-07	---	---	---	---	---
			PCB-1260	2.72E-07	3.08E-11	1.52E-07	4E-07	---	---	---	---	---
			Aluminum	---	---	---	---	CNS	1.78E-02	1.41E-03	7.11E-04	2E-02
			Antimony	---	---	---	---	Blood	1.10E-02	---	2.92E-03	1E-02
			Arsenic	3.80E-06	4.31E-09	4.55E-07	4E-06	Skin	2.47E-02	1.95E-04	2.95E-03	3E-02
			Cobalt	---	5.52E-09	---	6E-09	---	1.51E-02	2.98E-04	6.01E-04	2E-02
			Iron	---	---	---	---	---	1.96E-02	---	7.81E-04	2E-02
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	3.13E-03	3.47E-03	3.12E-03	1E-02
			Chemical Total	4.36E-06	9.88E-09	7.57E-07	5E-06		9.12E-02	5.37E-03	1.11E-02	1E-01
		Exposure Point Total					5E-06					1E-01
	Exposure Medium Total						5E-06					1E-01
Soil Total							5E-06					1E-01
Groundwater	Groundwater	Tap water at WWTP	2,4-Dimethylphenol	---	---	---	---	CNS/Blood	1.37E-01	---	2.06E-02	2E-01
			Tetrachloroethene	2.23E-05	2.06E-07	1.33E-05	4E-05	Liver/Body weight	1.21E-02	3.78E-04	7.19E-03	2E-02
			Arsenic	2.11E-04	---	1.10E-06	2E-04	Skin	1.37E+00	---	7.15E-03	1E+00
			Chromium	---	---	---	---	NOEL	---	---	---	---
			Cobalt	---	---	---	---	---	6.48E-01	---	3.38E-03	7E-01
			Iron	---	---	---	---	---	2.61E-01	---	1.36E-03	3E-01
			Manganese	---	---	---	---	CNS	2.92E-01	---	3.81E-02	3E-01
			Chemical Total	2.34E-04	2.06E-07	1.44E-05	2E-04		2.72E+00	3.78E-04	7.78E-02	3E+00
		Exposure Point Total					2E-04					3E+00
	Exposure Medium Total						2E-04					3E+00
Groundwater Total							2E-04					3E+00
Sediment	Sediment	Sediment at WWTP	No COPCs									
			Chemical Total									
		Exposure Point Total										
	Exposure Medium Total											
Sediment Total												

Table D-38

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water at WWTP	Iron	---	---	---	---	---	2.62E-03	---	2.98E-04	3E-03
			Manganese	---	---	---	---	CNS	8.36E-04	---	2.38E-03	3E-03
			Chemical Total	---	---	---	---		3.45E-03	---	2.68E-03	6E-03
		Exposure Point Total					---					6E-03
	Exposure Medium Total						---					6E-03
Surface Water Total							---					6E-03
Receptor Total							3E-04					3E+00
						Total Risk Across All Media	3E-04	Total Hazard Across All Media				3E+00
								Total CNS HI Across All Media				5E-01
								Total Blood HI Across All Media				2E-01
								Total Skin HI Across All Media				1E+00
								Total Liver HI Across All Media				2E-02
								Total Body Weight HI Across All Media				2E-02

Table D-39

TABLE 9.6.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Benzo[a]pyrene	---	---	---	---	---	---	---	---	---
			Dibenz(a,h)anthracene	---	---	---	---	---	---	---	---	---
			PCB-1260	---	---	---	---	---	---	---	---	---
			Aluminum	---	---	---	---	CNS	1.66E-01	1.41E-03	4.65E-03	2E-01
			Antimony	---	---	---	---	Blood	1.02E-01	---	1.91E-02	1E-01
			Arsenic	---	---	---	---	Skin	2.30E-01	1.95E-04	1.93E-02	2E-01
			Cobalt	---	---	---	---	---	1.41E-01	2.98E-04	3.94E-03	1E-01
			Iron	---	---	---	---	---	1.83E-01	---	5.11E-03	2E-01
			Lead	---	---	---	---	---	---	---	---	---
			Manganese	---	---	---	---	CNS	2.92E-02	3.47E-03	2.05E-02	5E-02
			Chemical Total	---	---	---	---		8.51E-01	5.37E-03	7.26E-02	9E-01
		Exposure Point Total					---					9E-01
	Exposure Medium Total						---					9E-01
Soil Total							---					9E-01
Groundwater	Groundwater	Tap water at WWTP	2,4-Dimethylphenol	---	---	---	---	CNS/Blood	3.20E-01	---	4.63E-02	4E-01
			Tetrachloroethene	---	---	---	---	Liver/Body weight	2.81E-02	6.51E-04	1.62E-02	4E-02
			Arsenic	---	---	---	---	Skin	3.20E+00	---	2.11E-02	3E+00
			Chromium	---	---	---	---	NOEL	---	---	---	---
			Cobalt	---	---	---	---	---	1.51E+00	---	9.99E-03	2E+00
			Iron	---	---	---	---	---	6.09E-01	---	4.02E-03	6E-01
			Manganese	---	---	---	---	CNS	6.82E-01	---	1.12E-01	8E-01
			Chemical Total	---	---	---	---		6.35E+00	6.51E-04	2.10E-01	7E+00
		Exposure Point Total					---					7E+00
	Exposure Medium Total						---					7E+00
Groundwater Total							---					7E+00
Sediment	Sediment	Sediment at WWTP	No COPCs									
			Chemical Total									
		Exposure Point Total										
	Exposure Medium Total											
Sediment Total												

Table D-39

TABLE 9.6.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Surface Water at WWTP	Iron	---	---	---	---	---	1.22E-02	---	6.84E-04	1E-02
			Manganese	---	---	---	---	CNS	3.90E-03	---	5.46E-03	9E-03
			Chemical Total	---	---	---	---		1.61E-02	---	6.15E-03	2E-02
		Exposure Point Total					---					2E-02
	Exposure Medium Total						---					2E-02
Surface Water Total							---					2E-02
Receptor Total							---					8E+00
						Total Risk Across All Media	---				Total Hazard Across All Media	8E+00
											Total CNS HI Across All Media	1E+00
											Total Blood HI Across All Media	5E-01
											Total Skin HI Across All Media	3E+00
											Total Liver HI Across All Media	4E-02
											Total Body Weight HI Across All Media	4E-02

Table D-40

TABLE 10.1.RME

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Commercial/Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Arsenic	1.42E-06	---	---	1E-06	---	---	---	---	---
			Chemical Total	1.42E-06	---	---	1E-06		---	---	---	---
		Exposure Point Total					1E-06					---
	Exposure Medium Total						1E-06					---
Soil Total							1E-06					---
Sludge	Sludge	Sludge at WWTP	Benzo[a]pyrene	1.16E-06	---	1.05E-06	2E-06	---	---	---	---	---
			Chemical Total	1.16E-06	---	1.05E-06	2E-06		---	---	---	---
		Exposure Point Total					2E-06					---
	Exposure Medium Total						2E-06					---
Sludge Total							2E-06					---
Receptor Total							4E-06					---
						Total Risk Across All Media	4E-06				Total Hazard Across All Media	---

Table D-41

TABLE 10.2.RME

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Age-adjusted

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface	Surface/Subsurface Soils at WWTP	Arsenic	1.27E-05	---	1.20E-05	1E-05	---	---	---	---	---
			Chemical Total	1.27E-05	---	1.20E-05	1E-05		---	---	---	---
		Exposure Point Total					1E-05					---
	Exposure Medium Total						1E-05					---
Soil Total							1E-05					---
Groundwater	Groundwater	Tap water at WWTP	Tetrachloroethene	3.53E-05	---	2.03E-05	6E-05	---	---	---	---	---
			Arsenic	3.35E-04	---	1.79E-06	3E-04	---	---	---	---	---
			Chemical Total	3.70E-04	---	2.21E-05	4E-04		---	---	---	---
		Exposure Point Total					4E-04					---
	Exposure Medium Total						4E-04					---
Groundwater Total							4E-04					---
Receptor Total							4E-04					---
						Total Risk Across All Media	4E-04				Total Hazard Across All Media	---

Table D-42

TABLE 10.3.RME

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface/Subsurface Soils	Surface/Subsurface Soils at WWTP	Arsenic	3.80E-06	---	---	4E-06	---	---	---	---	---
			Chemical Total	3.80E-06	---	---	4E-06		---	---	---	---
		Exposure Point Total					4E-06					---
	Exposure Medium Total						4E-06					---
Soil Total							4E-06					---
Groundwater	Groundwater	Tap water at WWTP	Tetrachloroethene	2.23E-05	---	1.33E-05	4E-05	---	---	---	---	---
			Arsenic	2.11E-04	---	1.10E-06	2E-04	---	---	---	---	---
			Chemical Total	2.34E-04	---	1.44E-05	2E-04		---	---	---	---
		Exposure Point Total					2E-04					---
	Exposure Medium Total						2E-04					---
Groundwater Total							2E-04					---
Receptor Total							3E-04					---
						Total Risk Across All Media	3E-04				Total Hazard Across All Media	---

Table D-43

TABLE 10.4.RME

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

Old Wastewater Treatment Plant, Wallops Flight Facility, Virginia

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap water at WWTP	Arsenic	---	---	---	---	---	3.2E+00	---	---	3E+00
			Cobalt	---	---	---	---	---	1.5E+00	---	---	2E+00
			Chemical Total	---	---	---	---		4.7E+00	---	---	5E+00
		Exposure Point Total					---					5E+00
	Exposure Medium Total						---					5E+00
Groundwater Total							---					5E+00
Receptor Total							---					5E+00
							Total Risk Across All Media ---					Total Hazard Across All Media 5E+00

APPENDIX D2
HHRA PROUCL OUTPUT

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	Surface Soil
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Number of Valid Observations	14	Number of Distinct Observations	13

Raw Statistics		Log-transformed Statistics	
Minimum	3000	Minimum of Log Data	8.006
Maximum	13000	Maximum of Log Data	9.473
Mean	7143	Mean of log Data	8.778
Median	5650	SD of log Data	0.455
SD	3253		
Coefficient of Variation	0.455		
Skewness	0.608		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.887	Shapiro Wilk Test Statistic	0.92
Shapiro Wilk Critical Value	0.874	Shapiro Wilk Critical Value	0.874
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	8683	95% H-UCL	9271
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	11015
95% Adjusted-CLT UCL	8724	97.5% Chebyshev (MVUE) UCL	12692
95% Modified-t UCL	8706	99% Chebyshev (MVUE) UCL	15985

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	4.272	Data appear Normal at 5% Significance Level	
Theta Star	1672		
MLE of Mean	7143		
MLE of Standard Deviation	3456		
nu star	119.6		
Approximate Chi Square Value (.05)	95.36	Nonparametric Statistics	
Adjusted Level of Significance	0.0312	95% CLT UCL	8573
Adjusted Chi Square Value	92.49	95% Jackknife UCL	8683
		95% Standard Bootstrap UCL	8554
Anderson-Darling Test Statistic	0.639	95% Bootstrap-t UCL	8836
Anderson-Darling 5% Critical Value	0.738	95% Hall's Bootstrap UCL	8564
Kolmogorov-Smirnov Test Statistic	0.236	95% Percentile Bootstrap UCL	8586
Kolmogorov-Smirnov 5% Critical Value	0.229	95% BCA Bootstrap UCL	8693
Data follow Appr. Gamma Distribution at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	10933
		97.5% Chebyshev(Mean, Sd) UCL	12573
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	15794
95% Approximate Gamma UCL	8960		
95% Adjusted Gamma UCL	9238		

Potential UCL to Use			
		Use 95% Student's-t UCL	8683

Arsenic

General Statistics

Number of Valid Observations	14	Number of Distinct Observations	13

Raw Statistics		Log-transformed Statistics	
Minimum	1.2	Minimum of Log Data	0.182
Maximum	5.4	Maximum of Log Data	1.686
Mean	2.802	Mean of log Data	0.927
Median	2.25	SD of log Data	0.473
SD	1.329		
Coefficient of Variation	0.474		
Skewness	0.743		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.912	Shapiro Wilk Test Statistic	0.957
Shapiro Wilk Critical Value	0.874	Shapiro Wilk Critical Value	0.874
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	3.431	95% H-UCL	3.678
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	4.385
95% Adjusted-CLT UCL	3.462	97.5% Chebyshev (MVUE) UCL	5.069
95% Modified-t UCL	3.443	99% Chebyshev (MVUE) UCL	6.414

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	3.985	Data appear Normal at 5% Significance Level	
Theta Star	0.703		
MLE of Mean	2.802		
MLE of Standard Deviation	1.404		
nu star	111.6		
Approximate Chi Square Value (.05)	88.21	Nonparametric Statistics	
Adjusted Level of Significance	0.0312	95% CLT UCL	3.386
Adjusted Chi Square Value	85.45	95% Jackknife UCL	3.431
		95% Standard Bootstrap UCL	3.367
Anderson-Darling Test Statistic	0.33	95% Bootstrap-t UCL	3.543
Anderson-Darling 5% Critical Value	0.738	95% Hall's Bootstrap UCL	3.444
Kolmogorov-Smirnov Test Statistic	0.18	95% Percentile Bootstrap UCL	3.367
Kolmogorov-Smirnov 5% Critical Value	0.229	95% BCA Bootstrap UCL	3.443
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	4.35
		97.5% Chebyshev(Mean, Sd) UCL	5.02
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	6.335
95% Approximate Gamma UCL	3.545		
95% Adjusted Gamma UCL	3.66		

Potential UCL to Use			
		Use 95% Student's-t UCL	3.431

Cobalt

General Statistics			
Number of Valid Observations	14	Number of Distinct Observations	13

Raw Statistics		Log-transformed Statistics	
Minimum	0.57	Minimum of Log Data	-0.562
Maximum	3.3	Maximum of Log Data	1.194
Mean	1.647	Mean of log Data	0.319
Median	1.25	SD of log Data	0.639
SD	0.972		
Coefficient of Variation	0.59		
Skewness	0.426		

Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.884	Shapiro Wilk Test Statistic	0.905
Shapiro Wilk Critical Value	0.874	Shapiro Wilk Critical Value	0.874
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	2.107	95% H-UCL	2.52
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	2.947
95% Adjusted-CLT UCL	2.106	97.5% Chebyshev (MVUE) UCL	3.505
95% Modified-t UCL	2.112	99% Chebyshev (MVUE) UCL	4.599
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	2.357	Data appear Normal at 5% Significance Level	
Theta Star	0.699		
MLE of Mean	1.647		
MLE of Standard Deviation	1.073		
nu star	66.01		
Approximate Chi Square Value (.05)	48.31	Nonparametric Statistics	
Adjusted Level of Significance	0.0312	95% CLT UCL	2.074
Adjusted Chi Square Value	46.31	95% Jackknife UCL	2.107
		95% Standard Bootstrap UCL	2.056
Anderson-Darling Test Statistic	0.566	95% Bootstrap-t UCL	2.183
Anderson-Darling 5% Critical Value	0.743	95% Hall's Bootstrap UCL	2.067
Kolmogorov-Smirnov Test Statistic	0.167	95% Percentile Bootstrap UCL	2.058
Kolmogorov-Smirnov 5% Critical Value	0.231	95% BCA Bootstrap UCL	2.105
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	2.78
		97.5% Chebyshev(Mean, Sd) UCL	3.27
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	4.233
95% Approximate Gamma UCL	2.25		
95% Adjusted Gamma UCL	2.348		
Potential UCL to Use		Use 95% Student's-t UCL	2.107

Iron

General Statistics

Number of Valid Observations	14	Number of Distinct Observations	14

Raw Statistics		Log-transformed Statistics	
Minimum	2600	Minimum of Log Data	7.863
Maximum	8900	Maximum of Log Data	9.094
Mean	5055	Mean of log Data	8.42
Median	3750	SD of log Data	0.479
SD	2464		
Coefficient of Variation	0.487		
Skewness	0.595		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.831	Shapiro Wilk Test Statistic	0.861
Shapiro Wilk Critical Value	0.874	Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	6221	95% H-UCL	6642
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	7927
95% Adjusted-CLT UCL	6250	97.5% Chebyshev (MVUE) UCL	9175
95% Modified-t UCL	6238	99% Chebyshev (MVUE) UCL	11626

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	3.806	Data Follow Appr. Gamma Distribution at 5% Significance Level	
Theta Star	1328		
MLE of Mean	5055		
MLE of Standard Deviation	2591		
nu star	106.6		
Approximate Chi Square Value (.05)	83.76	Nonparametric Statistics	
Adjusted Level of Significance	0.0312	95% CLT UCL	6138
Adjusted Chi Square Value	81.07	95% Jackknife UCL	6221
		95% Standard Bootstrap UCL	6115
Anderson-Darling Test Statistic	0.877	95% Bootstrap-t UCL	6368
Anderson-Darling 5% Critical Value	0.738	95% Hall's Bootstrap UCL	6038
Kolmogorov-Smirnov Test Statistic	0.222	95% Percentile Bootstrap UCL	6112
Kolmogorov-Smirnov 5% Critical Value	0.229	95% BCA Bootstrap UCL	6150
Data follow Appr. Gamma Distribution at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	7925
		97.5% Chebyshev(Mean, Sd) UCL	9167
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	11607
95% Approximate Gamma UCL	6432		
95% Adjusted Gamma UCL	6645		

Potential UCL to Use		Use 95% Approximate Gamma UCL	6432

Lead

General Statistics

Number of Valid Observations	14	Number of Distinct Observations	14

Raw Statistics		Log-transformed Statistics	
Minimum	2.2	Minimum of Log Data	0.788
Maximum	420	Maximum of Log Data	6.04
Mean	36.28	Mean of log Data	2.055
Median	6.4	SD of log Data	1.278
SD	110.5		
Coefficient of Variation	3.046		
Skewness	3.732		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.326	Shapiro Wilk Test Statistic	0.708
Shapiro Wilk Critical Value	0.874	Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	88.6	95% H-UCL	56.46
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	42.79
95% Adjusted-CLT UCL	116.4	97.5% Chebyshev (MVUE) UCL	54.34
95% Modified-t UCL	93.51	99% Chebyshev (MVUE) UCL	77.02

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	0.381	Data do not follow a Discernable Distribution (0.05)	
Theta Star	95.25		
MLE of Mean	36.28		
MLE of Standard Deviation	58.79		
nu star	10.67		
Approximate Chi Square Value (.05)	4.362	Nonparametric Statistics	
Adjusted Level of Significance	0.0312	95% CLT UCL	84.87
Adjusted Chi Square Value	3.842	95% Jackknife UCL	88.6
		95% Standard Bootstrap UCL	82.44
Anderson-Darling Test Statistic	3.125	95% Bootstrap-t UCL	1679
Anderson-Darling 5% Critical Value	0.808	95% Hall's Bootstrap UCL	714
Kolmogorov-Smirnov Test Statistic	0.438	95% Percentile Bootstrap UCL	94.83
Kolmogorov-Smirnov 5% Critical Value	0.244	95% BCA Bootstrap UCL	125.1
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	165
		97.5% Chebyshev(Mean, Sd) UCL	220.8
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	330.2
95% Approximate Gamma UCL	88.72		
95% Adjusted Gamma UCL	100.7		

Potential UCL to Use		Use 99% Chebyshev (Mean, Sd) UCL	330.2

Manganese

General Statistics

Number of Valid Observations	14	Number of Distinct Observations	11

Raw Statistics		Log-transformed Statistics	
Minimum	15	Minimum of Log Data	2.708
Maximum	320	Maximum of Log Data	5.768
Mean	94.36	Mean of log Data	4.238
Median	70.5	SD of log Data	0.858
SD	78.76		
Coefficient of Variation	0.835		
Skewness	1.91		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.817	Shapiro Wilk Test Statistic	0.951
Shapiro Wilk Critical Value	0.874	Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	131.6	95% H-UCL	184.4
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	200.3
95% Adjusted-CLT UCL	140.5	97.5% Chebyshev (MVUE) UCL	245
95% Modified-t UCL	133.4	99% Chebyshev (MVUE) UCL	333

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.436	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	65.69		
MLE of Mean	94.36		
MLE of Standard Deviation	78.73		
nu star	40.22		
Approximate Chi Square Value (.05)	26.69	Nonparametric Statistics	
Adjusted Level of Significance	0.0312	95% CLT UCL	129
Adjusted Chi Square Value	25.23	95% Jackknife UCL	131.6
		95% Standard Bootstrap UCL	127.1
Anderson-Darling Test Statistic	0.259	95% Bootstrap-t UCL	153.2
Anderson-Darling 5% Critical Value	0.748	95% Hall's Bootstrap UCL	289.5
Kolmogorov-Smirnov Test Statistic	0.112	95% Percentile Bootstrap UCL	129.6
Kolmogorov-Smirnov 5% Critical Value	0.232	95% BCA Bootstrap UCL	140.2
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	186.1
		97.5% Chebyshev(Mean, Sd) UCL	225.8
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	303.8
95% Approximate Gamma UCL	142.2		
95% Adjusted Gamma UCL	150.4		

Potential UCL to Use		Use 95% Approximate Gamma UCL	142.2

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	Subsurface Soil
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Number of Valid Observations	10	Number of Distinct Observations	9
Raw Statistics		Log-transformed Statistics	
Minimum	1300	Minimum of Log Data	7.17
Maximum	9700	Maximum of Log Data	9.18
Mean	5350	Mean of log Data	8.409
Median	5350	SD of log Data	0.697
SD	2794		
Coefficient of Variation	0.522		
Skewness	-0.0549		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.954	Shapiro Wilk Test Statistic	0.86
Shapiro Wilk Critical Value	0.842	Shapiro Wilk Critical Value	0.842
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	6969	95% H-UCL	10287
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	11063
95% Adjusted-CLT UCL	6787	97.5% Chebyshev (MVUE) UCL	13445
95% Modified-t UCL	6967	99% Chebyshev (MVUE) UCL	18124
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	2.162	Data appear Normal at 5% Significance Level	
Theta Star	2475		
MLE of Mean	5350		
MLE of Standard Deviation	3638		
nu star	43.24		
Approximate Chi Square Value (.05)	29.16	Nonparametric Statistics	
Adjusted Level of Significance	0.0267	95% CLT UCL	6803
Adjusted Chi Square Value	27.17	95% Jackknife UCL	6969
		95% Standard Bootstrap UCL	6741
Anderson-Darling Test Statistic	0.445	95% Bootstrap-t UCL	7052
Anderson-Darling 5% Critical Value	0.732	95% Hall's Bootstrap UCL	6831
Kolmogorov-Smirnov Test Statistic	0.159	95% Percentile Bootstrap UCL	6710
Kolmogorov-Smirnov 5% Critical Value	0.268	95% BCA Bootstrap UCL	6650
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	9201
		97.5% Chebyshev(Mean, Sd) UCL	10867
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	14140
95% Approximate Gamma UCL	7933		
95% Adjusted Gamma UCL	8515		

Potential UCL to Use		Use 95% Student's-t UCL	6969

Arsenic

General Statistics

Number of Valid Data	10	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	300.00%
		Percent Non-Detects	30.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.76	Minimum Detected	-0.274
Maximum Detected	3.5	Maximum Detected	1.253
Mean of Detected	2.08	Mean of Detected	0.607
SD of Detected	1.061	SD of Detected	0.56
Minimum Non-Detect	1.1	Minimum Non-Detect	0.0953
Maximum Non-Detect	1.1	Maximum Non-Detect	0.0953

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.916	Shapiro Wilk Test Statistic	0.943
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.621	Mean	0.246
SD	1.139	SD	0.74
95% DL/2 (t) UCL	2.281	95% H-Stat (DL/2) UCL	2.151

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	1.434	Mean in Log Scale	0.318
SD	1.351	SD in Log Scale	0.667
95% MLE (t) UCL	2.217	Mean in Original Scale	1.672
95% MLE (Tiku) UCL	2.317	SD in Original Scale	1.092
		95% Percentile Bootstrap UCL	2.228
		95% BCA Bootstrap UCL	2.288

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	2.471	Data appear Normal at 5% Significance Level
Theta Star	0.842	
nu star	34.6	

A-D Test Statistic	0.268	Nonparametric Statistics	
5% A-D Critical Value	0.71	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.71	Mean	1.684
5% K-S Critical Value	0.313	SD	1.02
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.349
		95% KM (t) UCL	2.323
Assuming Gamma Distribution		95% KM (z) UCL	2.257
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	2.286
Minimum	0.725	95% KM (bootstrap t) UCL	2.497
Maximum	3.5	95% KM (BCA) UCL	2.51
Mean	1.863	95% KM (Percentile Bootstrap) UCL	2.39
Median	1.67	95% KM (Chebyshev) UCL	3.203
SD	0.977	97.5% KM (Chebyshev) UCL	3.861
k star	2.894	99% KM (Chebyshev) UCL	5.152
Theta star	0.644		
Nu star	57.88	Potential UCLs to Use	
AppChi2	41.39	95% KM (t) UCL	2.323
95% Gamma Approximate UCL	2.605	95% KM (Percentile Bootstrap) UCL	2.39
95% Adjusted Gamma UCL	2.766		

Note: DL/2 is not a recommended method.

Iron

General Statistics

Number of Valid Data	10	Number of Detected Data	8
Number of Distinct Detected Data	7	Number of Non-Detect Data	2
		Percent Non-Detects	20.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2300	Minimum Detected	7.741
Maximum Detected	6500	Maximum Detected	8.78
Mean of Detected	3588	Mean of Detected	8.122
SD of Detected	1449	SD of Detected	0.37
Minimum Non-Detect	620	Minimum Non-Detect	6.43
Maximum Non-Detect	940	Maximum Non-Detect	6.846

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	2
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	8
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	20.00%

Warning: There are only 8 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.847	Shapiro Wilk Test Statistic	0.889
5% Shapiro Wilk Critical Value	0.818	5% Shapiro Wilk Critical Value	0.818
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2948	Mean	7.686
SD	1858	SD	0.979
95% DL/2 (t) UCL	4025	95% H-Stat (DL/2) UCL	4577

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	2852	Mean in Log Scale	7.944
SD	1945	SD in Log Scale	0.497
95% MLE (t) UCL	3980	Mean in Original Scale	3147
95% MLE (Tiku) UCL	4031	SD in Original Scale	1580
		95% Percentile Bootstrap UCL	3930
		95% BCA Bootstrap UCL	4107

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	5.119	Data appear Normal at 5% Significance Level	
Theta Star	700.9		
nu star	81.9		

A-D Test Statistic	0.504	Nonparametric Statistics	
5% A-D Critical Value	0.717	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.717	Mean	3330
5% K-S Critical Value	0.295	SD	1317
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	445.2
		95% KM (t) UCL	4146
Assuming Gamma Distribution		95% KM (z) UCL	4062
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	########
Minimum	1882	95% KM (bootstrap t) UCL	4674
Maximum	6500	95% KM (BCA) UCL	4230
Mean	3246	95% KM (Percentile Bootstrap) UCL	4070
Median	2550	95% KM (Chebyshev) UCL	5270
SD	1466	97.5% KM (Chebyshev) UCL	6110
k star	4.567	99% KM (Chebyshev) UCL	7759
Theta star	710.9		
Nu star	91.33	Potential UCLs to Use	
AppChi2	70.29	95% KM (t) UCL	4146
95% Gamma Approximate UCL	4218	95% KM (Percentile Bootstrap) UCL	4070
95% Adjusted Gamma UCL	4419		

Note: DL/2 is not a recommended method.

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	Groundwater
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Iron

General Statistics

Number of Valid Observations	7	Number of Distinct Observations	7

Raw Statistics		Log-transformed Statistics	
Minimum	170	Minimum of Log Data	5.136
Maximum	10333	Maximum of Log Data	9.243
Mean	3600	Mean of log Data	7.254
Median	920	SD of log Data	1.649
SD	4178		
Coefficient of Variation	1.16		
Skewness	0.846		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.818	Shapiro Wilk Test Statistic	0.907
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	6669	95% H-UCL	245797
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	14366
95% Adjusted-CLT UCL	6737	97.5% Chebyshev (MVUE) UCL	18862
95% Modified-t UCL	6753	99% Chebyshev (MVUE) UCL	27693
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	0.468	Data appear Normal at 5% Significance Level	
Theta Star	7689		
MLE of Mean	3600		
MLE of Standard Deviation	5261		
nu star	6.556		
Approximate Chi Square Value (.05)	1.93	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0158	95% CLT UCL	6198
Adjusted Chi Square Value	1.266	95% Jackknife UCL	6669
		95% Standard Bootstrap UCL	6080
Anderson-Darling Test Statistic	0.451	95% Bootstrap-t UCL	9526
Anderson-Darling 5% Critical Value	0.742	95% Hall's Bootstrap UCL	6551
Kolmogorov-Smirnov Test Statistic	0.248	95% Percentile Bootstrap UCL	6012
Kolmogorov-Smirnov 5% Critical Value	0.324	95% BCA Bootstrap UCL	6335
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	10484
		97.5% Chebyshev(Mean, Sd) UCL	13462
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	19313
95% Approximate Gamma UCL	12229		
95% Adjusted Gamma UCL	18643		

Potential UCL to Use			
		Use 95% Student's-t UCL	6669

Manganese

General Statistics

Number of Valid Observations	7	Number of Distinct Observations	7

Raw Statistics		Log-transformed Statistics	
Minimum	22	Minimum of Log Data	3.091
Maximum	1500	Maximum of Log Data	7.313
Mean	421.5	Mean of log Data	5.037
Median	120	SD of log Data	1.678
SD	547.7		
Coefficient of Variation	1.299		
Skewness	1.525		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.79	Shapiro Wilk Test Statistic	0.904
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	823.7	95% H-UCL	32038
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	1636
95% Adjusted-CLT UCL	889.5	97.5% Chebyshev (MVUE) UCL	2149
95% Modified-t UCL	843.6	99% Chebyshev (MVUE) UCL	3159

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	0.445	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	947.2		
MLE of Mean	421.5		
MLE of Standard Deviation	631.8		
nu star	6.23		
Approximate Chi Square Value (.05)	1.758	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	762
Adjusted Chi Square Value	1.135	95% Jackknife UCL	823.7
		95% Standard Bootstrap UCL	731.3
Anderson-Darling Test Statistic	0.424	95% Bootstrap-t UCL	1304
Anderson-Darling 5% Critical Value	0.745	95% Hall's Bootstrap UCL	1154
Kolmogorov-Smirnov Test Statistic	0.234	95% Percentile Bootstrap UCL	755.5
Kolmogorov-Smirnov 5% Critical Value	0.325	95% BCA Bootstrap UCL	875.9
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	1324
		97.5% Chebyshev(Mean, Sd) UCL	1714
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	2481
95% Approximate Gamma UCL	1493		
95% Adjusted Gamma UCL	2312		

Potential UCL to Use		Use 95% Approximate Gamma UCL	1493

APPENDIX D3
IEUBK OUTPUT

Figure D.3-1
Probability Density Plot of 0 Month to 84 Old Month School Child

Former Wastewater Treatment Plant, Wallops Flight Facility, VA

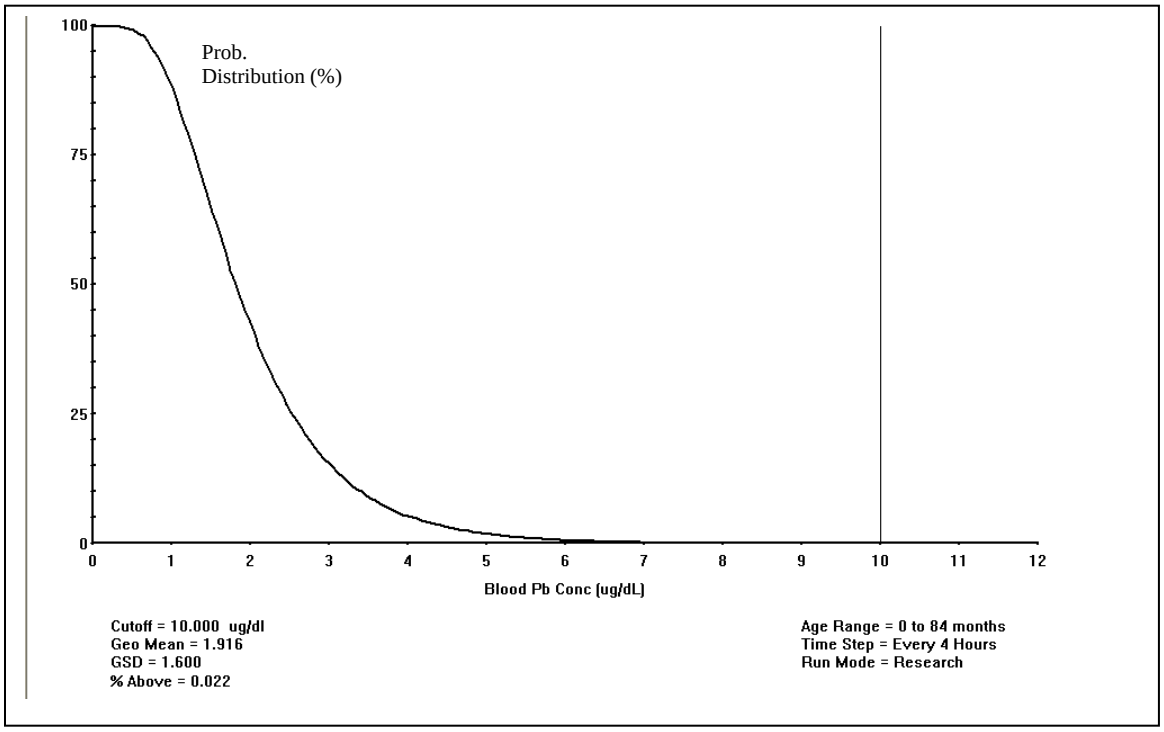


Table D.3-1
Integrated Exposure Uptake Biokinetic (IEUBK) model inputs

Former Wastewater Treatment Plant, Wallops Flight Facility, VA

LEAD MODEL FOR WINDOWS Version 1.0

==========

Model Version: 1.0 Build 263

==========

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

****** Air ******

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m^3)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

****** Diet ******

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

****** Drinking Water ******

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 4.000 ug Pb/L

****** Soil & Dust ******

Multiple Source Analysis Used
Average multiple source concentration: 35.410 ug/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	36.300	35.410
1-2	36.300	35.410
2-3	36.300	35.410
3-4	36.300	35.410
4-5	36.300	35.410
5-6	36.300	35.410
6-7	36.300	35.410

****** Alternate Intake ******

Age	Alternate (ug Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 2.500 ug Pb/dL

****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.021	2.645	0.000	0.383
1-2	0.034	2.764	0.000	0.956
2-3	0.062	3.115	0.000	0.998
3-4	0.067	3.014	0.000	1.024
4-5	0.067	2.924	0.000	1.070
5-6	0.093	3.092	0.000	1.131
6-7	0.093	3.416	0.000	1.152

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	0.874	3.923	2.2
1-2	1.387	5.142	2.2
2-3	1.392	5.568	2.1
3-4	1.401	5.507	1.9
4-5	1.045	5.106	1.7
5-6	0.943	5.259	1.6
6-7	0.891	5.553	1.6

APPENDIX E1
PHOTOGRAPHS

Photo 1. View of unnamed tributary at the WWTP at its source near a former outfall. Photograph taken - January 2007.

Photo 2. View of unnamed tributary further downstream of the WWTP facility. Photograph taken - January 2007.

Photo 3. View of primary settling tank. Sludge sample SL01 was collected from within this structure. Photograph taken – January 2007.

Photo 4. View of former sludge drying beds. Sludge samples SL02 and SL03 were collected from the sludge drying beds. Photograph taken – January 2007.

APPENDIX E2
ECOLOGICAL RECEPTORS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
6669 Short Lane
Gloucester, VA 23061

August 3, 2004

Project name: Wallops Flight Facility

Project number: 9017 City/County, VA: Accomack

Greetings:

The U.S. Fish and Wildlife Service has reviewed your request for information on federally listed or proposed endangered or threatened species and designated critical habitat for the above referenced project. The following comments are provided under provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

X You requested scoping comments. Enclosed are county lists (with species fact sheets).

X The information you requested is available at our website at http://vafo.fws.gov.

X In order to ensure coordination with the State agencies, we recommend that you contact **both** of the State agencies listed below since each agency maintains a different database and has differing expertise and/or regulatory responsibility. If either of these agencies determines that your project may impact a federally listed, proposed, or candidate species OR federally designated critical habitat, please contact this office and provide a copy of the response letter from each agency and the above referenced project number; otherwise, further contact with this office is not necessary.

Virginia Dept of Game and Inland Fisheries
Environmental Services Section
P.O. Box 11104
Richmond, VA 23230
(804) 367-1000

Virginia Dept of Conservation and Recreation
Division of Natural Heritage
217 Governor Street, 2nd Floor
Richmond, VA 23219
(804) 786-7951

_____ Enclosed is information about communication towers and how certain categories of work may not require further coordination.

_____ We concur that the proposed action is not likely to adversely affect federally listed species.

If you have any questions, please contact Eric Davis at (804) 693-6694, ext. 104.

Sincerely,

for Karen L. Mayne
Supervisor
Virginia Field Office

KEY

LE - federally listed endangered.

LT - federally listed threatened.

PE - federally proposed endangered.

PT - federally proposed threatened.

EX - believed to be extirpated in Virginia.

LE(S/A) - federally listed endangered due to similarity of appearance to a federally listed species.

LT(S/A) - federally listed threatened due to similarity of appearance to a federally listed species.

C - candidate species; the U.S. Fish and Wildlife Service has enough information to list the species as threatened or endangered, but this action is precluded by other listing activities.

SOC - species of concern; those species that have been identified as potentially imperiled or vulnerable throughout their range or a portion of their range. These species are not protected under the Endangered Species Act.

G - global rank; the species rarity throughout its total range.

G1 - extremely rare and critically imperiled with 5 or fewer occurrences or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.

G2 - very rare and imperiled with 6 to 20 occurrences or few remaining individuals; or because of some factor(s) making it vulnerable to extinction.

G3 - either very rare and local throughout its range or found locally (abundantly at some of its locations) in a restricted range; or vulnerable to extinction because of other factors. Usually fewer than 100 occurrences are documented.

G_T_ - signifies the rank of a subspecies or variety. For example, a G3T1 would apply to a subspecies of a species that is very rare and local throughout its range or found locally in a restricted range (G3) but the subspecies warrants a rank of T1, critically imperiled.

G_Q - The taxon has a questionable taxonomic assignment.

ACCOMACK COUNTY, VIRGINIA
Federally Listed, Proposed, and Candidate Species

SCIENTIFIC NAME	COMMON NAME	STATUS
BIRDS		
Charadrius melodus	Piping plover	LT
Haliaeetus leucocephalus	Bald eagle	LT
INVERTEBRATES		
Cicindela dorsalis dorsalis	Northeastern beach tiger beetle	LT
MAMMALS		
Sciurus niger cinereus	Delmarva peninsula fox squirrel	LE
REPTILES		
Caretta caretta	Loggerhead sea turtle	LT
VASCULAR PLANTS		
Amaranthus pumilus	Seabeach amaranth	LT

Species of Concern (No official Federal status)

VASCULAR PLANTS		
Polygonum glaucum	Sea-beach knotweed	G3
Trillium pusillum var virginianum	Virginia least trillium	G3T2

May 29, 2001
Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Piping Plover

Charadrius melodus

© J. Zickefoose

Description - Piping plovers occur in three disjunct populations in North America: Northern Great Plains, Great Lakes, and Atlantic Coast. The piping plover is a 5 ½ inch long pale grayish-brown shorebird with a white breast. During the breeding season, it has a black breast band which is sometimes incomplete and a black bar between its eyes. The bill is dull orange with a black tip and the legs and feet are orange.

Life History - The piping plover nesting season is from late April to late July with one brood raised per year. If there is a disturbance or the nest is lost, the birds may renest. Plovers nest on beaches, dunes, and washover areas. They also nest on areas where suitable dredged material is deposited. The nest is a shallow scrape in the sand dug by the adults and is usually lined with broken seashells and small pebbles. The female usually lays four eggs. The chicks are mobile and able to feed themselves within hours of hatching. Piping plovers feed on small invertebrates in intertidal surf zones, mud flats, tidal pool edges, barrier flats, and sand flats and along the ocean and barrier bays. Plovers migrate to breeding grounds from February through early April, and to wintering grounds from late July through September.

Conservation - The piping plover was federally listed as a threatened species along the Atlantic Coast on January 10, 1986. In the Northern Great Plains, it is federally listed threatened and in the Great Lakes, endangered. Destruction and degradation of habitat and disturbance during the nesting season by humans and pets are threats to this species. Piping plovers are extremely sensitive to disturbance during the nesting season. Predation by red foxes, skunks, raccoons, feral cats, herring gulls, fish crows, grackles, and ghost crabs is an additional threat to the eggs and young.

What You Can Do To Help - Respect all signed or fenced shorebird nesting areas; stay as far away from these areas as possible. The birds and their eggs blend in with the sand and are difficult to see. Young birds are particularly vulnerable before they can fly and can be killed by vehicles or trapped in vehicle tracks. Watch for signs of adult birds calling, displaying a feigned broken wing, or flying or running ahead of you. Keep pets leashed or indoors during the nesting season; both dogs and cats are known to prey on eggs and chicks. Take care not to discard trash or food scraps on beaches used by nesting birds, as they attract predators that may prey on eggs and/or chicks.

To find out more about the piping plover contact:

Virginia Department of Game and Inland Fisheries
P.O. Box 11104
Richmond, Virginia 23230
(804) 367-1000

References

Cross, R.C. 1991. Piping plover. Pages 501-502 in K. Terwilliger, ed. Virginia's Endangered Spcies, Proceddings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

U.S. Fish and Wildlife Service. 1985. Endangered and Threatened Wildlife and Plants: Determination of endangered and threatened status for the piping plover; final rule. Federal Register 50(238):50726-59734.

U.S. Fish and Wildlife Service, Region 5. 1994. You can help protect the piping plover. Newton Corner, Massachusetts.

U.S. Fish and Wildlife Service. 1996. Piping plover (*Charadrius melodus)* Atlantic Coast population, revised recovery plan. Hadley, Massachusetts.

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov
August 1999

Bald Eagle

Haliaeetus leucocephalus

Description - The bald eagle occurs throughout the United States. It is a large bird-of-prey with dark brown plumage, a white head and tail, and a yellow bill, feet, and eyes. Juvenile eagles generally have a dark brown body, sometimes with white patches on the tail, belly, and underwings. The head and tail become completely white when full adult plumage is reached at four to five years of age.

Life History - The majority of Virginia's eagle population is found on the coastal plain. The bald eagle breeding season begins in mid-November when large nests are built (or the previous year's nest is repaired) usually in loblolly pine trees that are in close proximity to water. Eagles lay one to three eggs between mid-January and late March. In March, most eggs hatch and by June or July most young have fledged. However, the young will continue to use the nest for several weeks. In Virginia, during the summer and winter months, juvenile and nonbreeding adult eagles congregate along large rivers in areas with abundant food and little human disturbance. During the day, these eagles feed and perch along the river shoreline. In late afternoon, they move inland to roost either singly or communally. Roosts are typically located away from human disturbance and near water and a food source. Bald eagles feed primarily on fish, but will also eat carrion, waterfowl, small mammals, snakes, and turtles.

Conservation - The bald eagle was federally listed as an endangered species in the Chesapeake Bay Region on March 11, 1967. On July 12, 1995, the bald eagle was reclassified to threatened throughout the 48 lower states because the population had increased due to the banning persistent pesticides, habitat protection, and other recovery activities. On July 6, 1999, the bald eagle was proposed for removal from the list of endangered and threatened wildlife in the lower 48 states. This action was proposed because the available data indicated that this species has recovered. The recovery is due in part to habitat protection and management actions initiated under the Endangered Species Act. It is also due to reduction in levels of persistent pesticides occurring in the environment. If and when the eagle is no longer protected by the Endangered Species Act, it will still be protected by the Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and state laws. Until the eagle is officially delisted, it will continue to receive protection pursuant to the Endangered Species Act. Bald eagles in the Chesapeake Bay are increasing. However, habitat destruction through urban and residential development and human disturbance in nesting, roosting, and foraging habitats continue to be a threat.

What You Can Do To Help - If you know of a bald eagle nest on or near property proposed for clearing, development, or logging please contact one of the following agencies for assistance:

Virginia Department of Game and Inland Fisheries
P.O. Box 11104
Richmond, Virginia 23230
(804) 367-1000

U. S. Fish and Wildlife Service
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694

References

U.S. Fish and Wildlife Service. 1990. Chesapeake Bay Region bald eagle recovery plan: first revision. Newton Corner, Massachusetts.

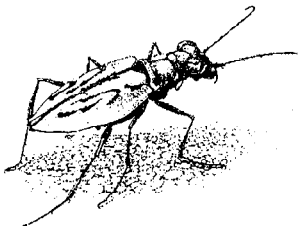
U.S. Fish and Wildlife Service. 1999. Proposed rule to remove the bald eagle in the lower 48 states from the list of endangered and threatened wildlife. Federal Register 64(128): 36453-36464.

Watts, B.D., K.W. Cline, and M.A. Byrd. 1994. The bald eagle in Virginia: An information booklet for land planners. The Center for Conservation Biology, College of William and Mary, Williamsburg, Virginia.

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov
August 1999

Northeastern Beach Tiger Beetle

Cicindela dorsalis dorsalis



© K. Brown-Wing

Description - Historically, the northeastern beach tiger beetle was common on coastal beaches from Massachusetts to central New Jersey, and along the Chesapeake Bay in Maryland and Virginia. Currently, the only populations known to exist along the Atlantic Coast are in New Jersey and southeastern Massachusetts. The majority of populations occur in the Chesapeake Bay. This insect measures 0.5 inches in length. It has white to light tan wing covers, often with several fine grayish-green lines, and a bronze-green head and body.

Life History - Adult and larval tiger beetles are found on long, wide, dynamic beaches that have little human and vehicular activity, fine sand-particle size, and a high degree of exposure to tidal action. Adult beetles are present from June through August and are active on warm, sunny days where they can be seen feeding, mating, or basking along the water's edge. Adults are active predators that forage on small invertebrates or scavenge on dead fish, crabs, and amphipods. Larvae are sedentary predators that live in well-formed burrows from which they extend to capture passing prey. During the summer, adult tiger beetles lay eggs on the beach. After hatching, the larvae pass through three developmental stages and emerge from their burrows as adults two years following egg-laying.

Conservation - The northeastern beach tiger beetle was federally listed as a threatened species on August 7, 1990. Few northeastern beach tiger beetle sites are protected and many are threatened by human activities. Loss of this beetle from most of its range has been attributed primarily to destruction and disturbance of natural beach habitat from shoreline development, beach stabilization, and high levels of recreational use. Additional threats include pollution, pesticides, oil slicks, and off-road vehicle traffic. Natural limiting factors include winter storms, beach erosion, flood tides, hurricanes, parasites, and predators. Recovery for the tiger beetle depends to a large extent on re-establishing the subspecies across its former range along the Atlantic Coast and protecting it within the Chesapeake Bay.

What You Can Do To Help - If you plan to stabilize a tidal beach along the Chesapeake Bay or its tributaries, please contact the U.S. Fish and Wildlife Service. Such activity may require a federal permit, for more information contact:

U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510-1096
(757) 441-7652

References

Knisley, C.B. 1991. Northeastern beach tiger beetle. Pages 233-234 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

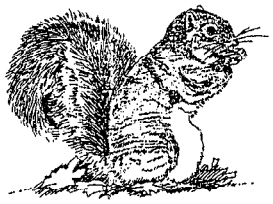
Knisley, C.B., J.I. Luebke, and D.R. Beatty. 1987. Natural history and population decline of the coastal tiger beetle, *Cicindela dorsalis dorsalis* Say (Coleoptera: Cicindelidae). Virginia Journal of Science 38: 293-303.

U.S. Fish and Wildlife Service. 1994. Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis* Say) recovery plan. Hadley, Massachusetts.

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov
August 1999

Delmarva Peninsula Fox Squirrel

Sciurus niger cinereus



Description - The Delmarva Peninsula fox squirrel is a light gray, large-bodied tree squirrel with a full, fluffy tail. The feet and underparts are white and the ears and face are whitish. This fox squirrel is easily confused with the more common gray squirrel. However, the gray squirrel is smaller with darker gray fur and its feet, tail, face, and back are rusty brown.

Distribution - Historically, the Delmarva Peninsula fox squirrel was distributed throughout the eastern shore of Maryland and Virginia, southeastern Pennsylvania, New Jersey, and Delaware. By the early 1900s, this squirrel was extinct in Virginia. However, it has been reintroduced at Chincoteague National Wildlife Refuge in Accomack County and property owned by The Nature Conservancy in Northampton County.

Habitat - This fox squirrel is typically found in open, mature loblolly pine and oak forests or in mixed stands of pine, beech, and sweetgum. Sites that contain mast and seed producing trees, have old trees that provide den sites, and have agricultural fields nearby are preferred by this squirrel.

Life History - The diet of the fox squirrel appears to be identical to that of the gray squirrel. In autumn, nuts and pine cones are usually plentiful and comprise a large portion of the fox squirrel's diet. In the spring, their diet shifts to tree buds and flowers, fruit, insects, seeds, and occasionally bird eggs and young. The fox squirrel prefers tree hollows for dens. They also construct nests composed of leaves and twigs. These nests are used for shelter and rearing young. Mating occurs in late winter and early spring and most young are born from February to April with a few as late as July or August. Offspring are raised solely by the female and food availability likely governs the size and number of the litters.

Conservation - The Delmarva Peninsula fox squirrel was federally listed as an endangered species on March 11, 1967. Destruction of habitat by timber harvest, short-rotation pine management, forest conversion to agriculture, and residential development is a continuing threat to this species. Pine-bark beetles, severe storms, and other factors causing forest die-offs are additional threats.

What You Can Do To Help - To learn more about the Delmarva Peninsula fox squirrel visit:

Chincoteague National Wildlife Refuge
U.S. Fish and Wildlife Service
P.O. Box 62
Chincoteague, Virginia 23336
(757) 336-6122

Or contact:

Virginia Department of Game and Inland Fisheries
P.O. Box 11104
Richmond, Virginia 23230
(804) 367-1000

References

Dueser, R.D. and C.O. Handley, Jr. 1991. Fox squirrel. Pages 585-587 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

U.S. Fish and Wildlife Service. 1993. Delmarva fox squirrel (*Sciurus niger cinereus*) recovery plan, second revision. Hadley, Massachusetts.

U.S. Fish and Wildlife Service
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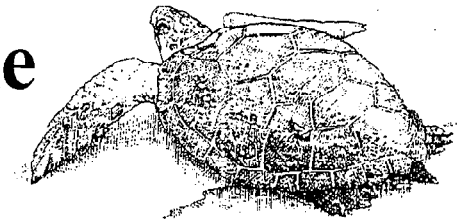
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov
August 1999

Loggerhead Sea Turtle

Caretta caretta



Description - The loggerhead sea turtle occurs in the Atlantic, Indian and Pacific Oceans; the Gulf of Mexico; and the Caribbean and Mediterranean Seas. In Virginia, loggerhead sea turtles are found throughout the Chesapeake Bay, around the barrier islands off the Eastern Shore, and off the coast in the Atlantic Ocean. The carapace (top shell) of the adult is hard, heart-shaped, and reddish-brown with an average length of 36.2 inches in the southeastern United States. The entire underside, sides of neck, and parts of the flippers are yellow or whitish. It has a large triangular head and each flipper has two claws.

Life History - This turtle is a marine species and spends most of its time in the ocean and estuaries where it feeds, breeds, and migrates. Loggerheads feed mainly on horseshoe crabs, but their diet also includes mollusks, crustaceans, jellyfish, fish, and various sea grasses. The loggerhead is the only sea turtle that nests as far north as Virginia. Loggerheads nest in small numbers along Virginia's coast and nesting usually occurs from April through September. Females dig shallow pits on the beach to deposit their eggs. Hatchlings emerge as a group and begin to crawl rapidly toward the ocean. After reaching the water, they find food and protection among floating mats of vegetation in the Gulf Stream. They can be found in Virginia's waters from May through November. They migrate south during the winter months.

Conservation - The loggerhead sea turtle was federally listed as a threatened species on July 28, 1978. Threats to this species are numerous: nest abandonment occurs from human disturbance; shoreline stabilization structures deter nesting; and beach development results in increased light intensity inland, causing hatchlings to become disoriented and travel inland where they die. Entanglement, ingestion, and contact with marine debris are hazards to sea turtles. Turtles can become entangled in trawling nets, pound nets, crab pot lines, and gill nets and subsequently drown. Boat propellers can wound or kill sea turtles.

What You Can Do To Help - Watch out for sea turtles while boating in Virginia's waters! If you find a stranded, wounded, or dead sea turtle please contact one of the following organizations:

Virginia Institute of Marine Science
(804) 642-7313

Virginia Marine Science Museum
(757) 437-4949

National Marine Fisheries Service
(508) 281-9291

References

Keinath, J.A. and J.A. Musick. 1991. Loggerhead sea turtle. Pages 445-448 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Mitchell, J.C. 1994. The reptiles of Virginia. Smithsonian Institution Press, Washington and London.

National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1991. Recovery plan for U.S. population of loggerhead turtle. National Marine Fisheries Service, Washington, D.C.

Nelson, D.A. 1988. Life history and environmental requirements of loggerhead turtles. U.S. Fish and Wildlife Service Biological Report 88(23). U.S. Army Corps of Engineers TR EL-86-2(Rev).

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
http://www.fws.gov
August 1999

VAFWIS - Department of Game and Inland Fisheries

37,51,11.0 -75,28,28.0 is the Search Point

Submit Cancel

Search Point

- **Change** to "clicked" map point
- **Fixed** at 37,51,11.0 -75,28,28.0

Show Position Rings

Yes No

1 mile and 1/4 mile at the **Search Point**

Search Point is at map center

Base Map Choices

Topography

Map Overlay Choices

Current List: Position, Search

Map Overlay Legend

Virginia Fish and Wildlife Information Service

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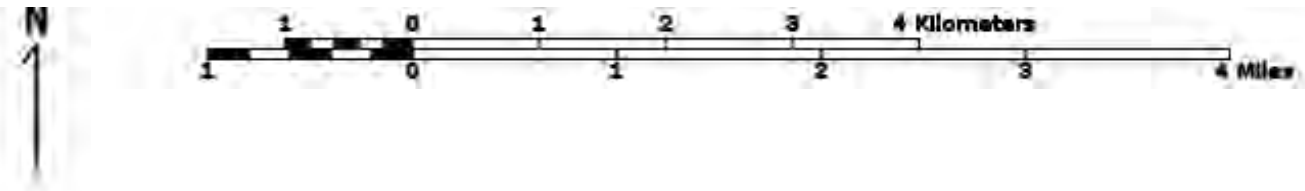
Map Click Pan Id M

Map Scale In Zoom Out

Screen Size Small Size Big

Position Rings 1 mile and 1 4 mile at the Search Point

3 mile radius Search Area



Point of Search 37,51,11.0 -75,28,28.0

Map Location 37,51,11.0 -75,28,28.0

Select **Coordinate System:**

Degrees,Minutes,Seconds Latitude - Longitude

Decimal Degrees Latitude - Longitude

Meters UTM NAD83 East North Zone

Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 453479 and top 4194431. Pixel size is 16 meters . Coordinates displayed are Degrees, Minutes, Seconds North and West.Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.16 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.59 square miles.

The United States Department of the Interior, United States Geological Survey is the source for topographic maps and Aerial photography. All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries - February 1, 2007

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Virginia Fish and Wildlife Information Service

Species List Report

List of species known or likely to occur within a **3 mile radius of (at 37,51,11.0 -75,28,28.3)** in **001 Accomack, VA.**

1-491 Species Records

Bova Code	Status*	Common Name	Scientific Name
030073	FESE	Turtle, hawksbill (= carey) sea	Eretmochelys imbricata
030074	FESE	Turtle, Kemp?s (= Atlantic) Ridley sea	Lepidochelys kempii
030075	FESE	Turtle, leatherback sea	Dermochelys coriacea
040183	FESE	Tern, roseate	Sterna dougallii dougallii
050062	FESE	Squirrel, Delmarva Peninsula fox	Sciurus niger cinereus
040093	FTST	Eagle, bald	Haliaeetus leucocephalus
040120	FTST	Plover, piping	Charadrius melodus
030071	FTST	Turtle, loggerhead sea	Caretta caretta
030072	FTST	Turtle, green sea	Chelonia mydas
030067	FS	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin
010032	FSSS	Sturgeon, Atlantic	Acipenser oxyrhynchus
040110	FS	Rail, black	Laterallus jamaicensis
040292	FSST	Shrike, migrant loggerhead	Lanius ludovicianus migrans
040320	FS	Warbler, cerulean	Dendroica cerulea
040379	FSST	Sparrow, Henslow?s	Ammodramus henslowii
040118	SE	Plover, Wilson?s	Charadrius wilsonia
040179	ST	Tern, gull-billed	Sterna nilotica
040129	ST	Sandpiper, upland	Bartramia longicauda

040293	ST	Shrike, loggerhead	Lanius ludovicianus
040096	ST	Falcon, peregrine	Falco peregrinus
040403	ST	Falcon, Arctic peregrine	Falco peregrinus tundrius
040381	SS	Sparrow, saltmarsh sharp-tailed	Ammodramus caudacutus
050110	SS	Mole, star-nosed	Condylura cristata parva
040366	SS	Finch, purple	Carpodacus purpureus
040372	SS	Crossbill, red	Loxia curvirostra
050045	SS	Otter, northern river	Lontra canadensis lataxina
040029	SS	Heron, little blue	Egretta caerulea caerulea
040032	SS	Egret, great	Ardea alba egretta
040034	SS	Heron, tricolored	Egretta tricolor
040036	SS	Night-heron, yellow-crowned	Nyctanassa violacea violacea
040020	SS	Pelican, brown	Pelecanus occidentalis carolinensis
040040	SS	Ibis, glossy	Plegadis falcinellus
040285	SS	Kinglet, golden-crowned	Regulus satrapa
040314	SS	Warbler, magnolia	Dendroica magnolia
040238	SS	Flycatcher, yellow-bellied	Empidonax flaviventris
040262	SS	Nuthatch, red-breasted	Sitta canadensis
040264	SS	Creeper, brown	Certhia americana
040266	SS	Wren, winter	Troglodytes troglodytes
040270	SS	Wren, sedge	Cistothorus platensis
040278	SS	Thrush, hermit	Catharus guttatus
040213	SS	Owl, northern saw-whet	Aegolius acadicus
040241	SS	Flycatcher, alder	Empidonax alnorum
040180	SS	Tern, Forster?s	Sterna forsteri
040094	SS	Harrier, northern	Circus cyaneus
040112	SS	Moorhen, common	Gallinula chloropus cachinnans
040186	SS	Tern, least	Sterna antillarum
040204	SS	Owl, barn	Tyto alba pratincola
040188	SS	Tern, sandwich	Sterna sandvicensis acuflavidus

040189	SS	Tern, Caspian	Sterna caspia
040190		Tern, black	Chlidonias niger
040191		Tern, white-winged	Chlidonias leucopterus
040192		Skimmer, black	Rynchops niger
040193		Razorbill	Alca torda
040195		Dovekie	Alle alle
040196		Puffin, Atlantic	Fratercula artica
040197		Pigeon, rock	Columba livia
040198		Dove, mourning	Zenaida macroura carolinensis
040202		Cuckoo, yellow-billed	Coccyzus americanus
040203		Cuckoo, black-billed	Coccyzus erythropthalmus
040205		Screech-owl, eastern	Megascops asio
040206		Owl, great horned	Bubo virginianus
040209		Owl, barred	Strix varia
040211		Owl, short-eared	Asio flammeus
040187		Tern, royal	Sterna maxima maximus
040185		Tern, bridled	Sterna anaethetus
040113		Coot, American	Fulica americana
040114		Oystercatcher, American	Haematopus palliatus
040115		Stilt, black-necked	Himantopus mexicanus
040116		Avocet, American	Recurvirostra americana
040117		Plover, semipalmated	Charadrius semipalmatus
040095		Osprey	Pandion haliaetus carolinensis
040111		Gallinule, purple	Porphyrula martinica
040181		Tern, common	Sterna hirundo
040119		Killdeer	Charadrius vociferus
040122		Golden-plover, American	Pluvialis dominicus
040123		Plover, black-bellied	Pluvialis squatarola
040124		Godwit, Hudsonian	Limosa haemastica
040125		Godwit, bar-tailed	Limosa lapponica lapponica

040126		Godwit, marbled	Limosa fedoa
040127		Whimbrel	Numenius phaeopus
040130		Yellowlegs, greater	Tringa melanoleuca
040131		Yellowlegs, lesser	Tringa flavipes
040133		Willet	Catoptrophorus semipalmatus semipalmatus
040134		Sandpiper, spotted	Actitis macularia
040135		Turnstone, ruddy	Arenaria interpres morinella
040136		Phalarope, Wilson?s	Phalaropus tricolor
040137		Phalarope, red-necked	Phalaropus lobatus
040138		Phalarope, red	Phalaropus fulicarius
040140		Woodcock, American	Scolopax minor
040141		Snipe, common	Gallinago gallinago
040142		Dowitcher, short-billed	Limnodromus griseus
040143		Dowitcher, long-billed	Limnodromus scolopaceus
040144		Knot, red	Calidris canutus rufus
040145		Sanderling	Calidris alba
040146		Sandpiper, semipalmated	Calidris pusilla
040147		Sandpiper, western	Calidris mauri
040149		Sandpiper, least	Calidris minutilla
040150		Sandpiper, white-rumped	Calidris fuscicollis
040151		Sandpiper, Baird?s	Calidris bairdii
040152		Sandpiper, pectoral	Calidris melanotos
040153		Sandpiper, purple	Calidris maritima
040154		Dunlin	Calidris alpina hudsonia
040155		Sandpiper, curlew	Calidris ferruginea
040156		Sandpiper, stilt	Calidris himantopus
040157		Sandpiper, buff-breasted	Tryngites subruficollis
040158		Ruff	Philomachus pugnax
040159		Jaeger, pomarine	Stercorarius pomarinus

040161		Jaeger, long-tailed	Stercorarius longicaudus
040162		Skua, great	Stercorarius skua
040163		Gull, glaucous	Larus hyperboreus
040165		Gull, great black-backed	Larus marinus
040166		Gull, lesser black-backed	Larus fuscus
040167		Gull, herring	Larus argentatus
040170		Gull, ring-billed	Larus delawarensis
040173		Gull, laughing	Larus atricilla
040176		Gull, little	Larus minutus
040177		Kittiwake, black-legged	Rissa tridactyla
040242		Flycatcher, least	Empidonax minimus
040243		Pewee, eastern wood	Contopus virens
040245		Lark, horned	Eremophila alpestris
040246		Swallow, tree	Tachycineta bicolor
040247		Swallow, bank	Riparia riparia
040248		Swallow, northern rough-winged	Stelgidopteryx serripennis
040249		Swallow, barn	Hirundo rustica
040250		Swallow, cliff	Petrochelidon pyrrhonota pyrrhonota
040251		Martin, purple	Progne subis
040252		Jay, blue	Cyanocitta cristata
040253		Magpie, black-billed	Pica hudsonia
040255		Crow, American	Corvus brachyrhynchos
040256		Crow, fish	Corvus ossifragus
040257		Chickadee, black-capped	Poecile atricapillus
040258		Chickadee, Carolina	Poecile carolinensis
040260		Titmouse, tufted	Baeolophus bicolor
040261		Nuthatch, white-breasted	Sitta carolinensis
040214		Chuck-will?s-widow	Caprimulgus carolinensis
040215		Whip-poor-will	Caprimulgus vociferus
040216		Nighthawk, common	Chordeiles minor

040217		Swift, chimney	Chaetura pelagica
040218		Hummingbird, ruby-throated	Archilochus colubris
040220		Kingfisher, belted	Ceryle alcyon
040221		Flicker, northern	Colaptes auratus
040222		Woodpecker, pileated	Dryocopus pileatus
040223		Woodpecker, red-bellied	Melanerpes carolinus
040224		Woodpecker, red-headed	Melanerpes erythrocephalus
040225		Sapsucker, yellow-bellied	Sphyrapicus varius
040226		Woodpecker, hairy	Picoides villosus
040227		Woodpecker, downy	Picoides pubescens medianus
040229		Kingbird, eastern	Tyrannus tyrannus
040230		Kingbird, gray	Tyrannus dominicensis
040231		Kingbird, western	Tyrannus verticalis
040234		Flycatcher, great crested	Myiarchus crinitus
040235		Flycatcher, ash-throated	Myiarchus cinerascens
040236		Phoebe, eastern	Sayornis phoebe
040281		Veery	Catharus fuscescens
040282		Bluebird, eastern	Sialia sialis
040283		Wheatear, northern	Oenanthe oenanthe
040284		Gnatcatcher, blue-gray	Polioptila caerulea
040271		Mockingbird, northern	Mimus polyglottos
040272		Catbird, gray	Dumetella carolinensis
040273		Thrasher, brown	Toxostoma rufum
040275		Robin, American	Turdus migratorius
040277		Thrush, wood	Hylocichla mustelina
040268		Wren, Carolina	Thryothorus ludovicianus
040269		Wren, marsh	Cistothorus palustris
040265		Wren, house	Troglodytes aedon
040263		Nuthatch, brown-headed	Sitta pusilla
040239		Flycatcher, Acadian	Empidonax virescens

040240		Flycatcher, willow	Empidonax traillii
040316		Warbler, black-throated blue	Dendroica caerulescens
040317		Warbler, yellow-rumped	Dendroica coronata cornata
040319		Warbler, black-throated green	Dendroica virens
040286		Kinglet, ruby-crowned	Regulus calendula
040287		Pipit, American	Anthus rubescens
040288		Pipit, Sprague?s	Anthus spragueii
040290		Waxwing, cedar	Bombycilla cedrorum
040294		Starling, European	Sturnus vulgaris
040295		Vireo, white-eyed	Vireo griseus
040297		Vireo, yellow-throated	Vireo flavifrons
040298		Vireo, blue-headed	Vireo solitarius
040299		Vireo, red-eyed	Vireo olivaceus
040302		Warbler, black-and-white	Mniotilta varia
040303		Warbler, prothonotary	Protonotaria citrea
040305		Warbler, worm-eating	Helmitheros vermivorus
040307		Warbler, blue-winged	Vermivora pinus
040310		Warbler, orange-crowned	Vermivora celata
040311		Warbler, Nashville	Vermivora ruficapilla
040312		Parula, northern	Parula americana
040313		Warbler, yellow	Dendroica petechia
040041		Ibis, white	Eudocimus albus
040042		Flamingo, greater	Phoenicopterus ruber
040043		Swan, mute	Cygnus olor
040044		Swan, tundra	Cygnus columbianus columbianus
040045		Goose, Canada	Branta canadensis
040046		Brant	Branta bernicla brota
040049		Goose, lesser snow	Chen caerulescens caerulescens
040050		Whistling-duck, fulvous	Dendrocygna bicolor
040051		Mallard	Anas platyrhynchos

040052		Duck, American black	Anas rubripes
040053		Gadwall	Anas strepera
040054		Pintail, northern	Anas acuta acuta
040055		Pintail, white-cheeked	Anas bahamensis
040056		Teal, green-winged	Anas crecca carolinensis
040057		Teal, blue-winged	Anas discors orphna
040058		Wigeon, Eurasian	Anas penelope
040059		Wigeon, American	Anas americana
040060		Shoveler, northern	Anas clypeata
040061		Duck, wood	Aix sponsa
040062		Redhead	Aythya americana
040064		Canvasback	Aythya valisineria
040065		Scaup, greater	Aythya marila
040066		Scaup, lesser	Aythya affinis
040067		Goldeneye, common	Bucephala clangula americana
040068		Bufflehead	Bucephala albeola
040069		Duck, long-tailed	Clangula hyemalis
040070		Duck, Harlequin	Histrionicus histrionicus
040071		Eider, common	Somateria mollissima
040072		Eider, king	Somateria spectabilis
040073		Scoter, white-winged	Melanitta fusca deglandi
040074		Scoter, surf	Melanitta perspicillata
040075		Scoter, black	Melanitta nigra americana
040076		Duck, ruddy	Oxyura jamaicensis
040077		Merganser, hooded	Lophodytes cucullatus
040078		Merganser, common	Mergus merganser americanus
040079		Merganser, red-breasted	Mergus serrator serrator
040080		Vulture, turkey	Cathartes aura
040081		Vulture, black	Coragyps atratus
040085		Hawk, sharp-shinned	Accipiter striatus velox

040086		Hawk, Cooper?s	Accipiter cooperii
040087		Hawk, red-tailed	Buteo jamaicensis
040088		Hawk, red-shouldered	Buteo lineatus lineatus
040089		Hawk, broad-winged	Buteo platypterus
040090		Hawk, rough-legged	Buteo lagopus johannis
040021		Booby, brown	Sula leucogaster
040023		Cormorant, great	Phalacrocorax carbo
040024		Cormorant, double-crested	Phalacrocorax auritus
040026		Frigatebird, magnificent	Fregata magnificens
040027		Heron, great blue	Ardea herodias herodias
040028		Heron, green	Butorides virescens
030068		Turtle, eastern box	Terrapene carolina carolina
040001		Loon, common	Gavia immer
040002		Loon, Arctic	Gavia arctica
040003		Loon, red-throated	Gavia stellata
040004		Grebe, red-necked	Podiceps grisegena
040005		Grebe, horned	Podiceps auritus
040006		Grebe, eared	Podiceps nigricollis
040008		Grebe, pied-billed	Podilymbus podiceps
040009		Fulmar, northern	Fulmarus glacialis
040011		Shearwater, greater	Puffinus gravis
040019		Pelican, American white	Pelecanus erythrorhynchos
040037		Bittern, least	Ixobrychus exilis exilis
040038		Bittern, American	Botaurus lentiginosus
040035		Night-heron, black-crowned	Nycticorax nycticorax hoactii
040033		Egret, snowy	Egretta thula
040030		Egret, cattle	Bubulcus ibis
040097		Merlin	Falco columbarius
040098		Kestrel, American	Falco sparverius sparverius
040100		Bobwhite, northern	Colinus virginianus

040101		Pheasant, ring-necked	Phasianus colchicus
040102		Turkey, wild	Meleagris gallopavo silvestris
040105		Rail, king	Rallus elegans
040106		Rail, clapper	Rallus longirostris crepitans
040107		Rail, Virginia	Rallus limicola
040108		Sora	Porzana carolina
040109		Rail, yellow	Coturnicops noveboracensis
010040		Shad, American	Alosa sapidissima
010045		Herring, blueback	Alosa aestivalis
010054		Mudminnow, eastern	Umbra pygmaea
010055		Pickerel, redfin	Esox americanus americanus
010056		Pickerel, chain	Esox niger
010068		Shiner, golden	Notemigonus crysoleucas
010106		Chubsucker, creek	Erimyzon oblongus
010123		Bullhead, brown	Ameiurus nebulosus
010129		Madtom, margined	Noturus insignis
010131		Eel, American	Anguilla rostrata
010140		Minnow, sheepshead	Cyprinodon variegatus
010143		Killifish, banded	Fundulus diaphanus
010148		Mosquitofish, eastern	Gambusia holbrooki
010163		Perch, pirate	Aphredoderus sayanus sayanus
010166		Perch, white	Morone americana
010178		Sunfish, bluespotted	Enneacanthus gloriosus
010182		Pumpkinseed	Lepomis gibbosus
010183		Bluegill	Lepomis macrochirus
010188		Bass, largemouth	Micropterus salmoides
010190		Crappie, black	Pomoxis nigromaculatus
010375		Shiner, ironcolor	Notropis chalybaeus
010397		Darter, tessellated	Etheostoma olmstedi
020004		Bullfrog, American	Rana catesbeiana

020006		Treefrog, Cope?s gray	Hyla chrysoscelis
020008		Frog, northern green	Rana clamitans melanota
020009		Treefrog, green	Hyla cinerea
020012		Frog, eastern cricket	Acris crepitans crepitans
020013		Frog, pickerel	Rana palustris
020016		Frog, southern leopard	Rana sphenocephala
020019		Frog, wood	Rana sylvatica
020029		Salamander, four-toed	Hemidactylium scutatum
020035		Salamander, marbled	Ambystoma opacum
020043		Salamander, eastern red-backed	Plethodon cinereus
020059		Toad, American	Bufo americanus
020061		Spadefoot, eastern	Scaphiopus holbrookii
020062		Toad, Fowler?s	Bufo fowleri
020065		Newt, red-spotted	Notophthalmus viridescens viridescens
020069		Salamander, eastern mud	Pseudotriton montanus montanus
020071		Peeper, northern spring	Pseudacris crucifer crucifer
020072		Frog, New Jersey chorus	Pseudacris feriarum kalmi
030002		Lizard, eastern fence	Sceloporus undulatus
030004		Skink, common five-lined	Eumeces fasciatus
030006		Skink, broad-headed	Eumeces laticeps
030007		Skink, little brown	Scincella lateralis
030016		Copperhead, northern	Agkistrodon contortrix mokasen
030018		Racer, northern black	Coluber constrictor constrictor
030019		Wormsnake, eastern	Carphophis amoenus amoenus
030020		Snake, northern ring-necked	Diadophis punctatus edwardsii
030021		Snake, southern ring-necked	Diadophis punctatus punctatus
030023		Ratsnake, black	Elaphe obsoleta obsoleta
030024		Snake, eastern hog-nosed	Heterodon platirhinos
030026		Kingsnake, eastern	Lampropeltis getula getula
030029		Milksnake, eastern	Lampropeltis triangulum triangulum

030034		Watersnake, northern	Nerodia sipedon sipedon
030038		Greensnake, northern rough	Opheodrys aestivus aestivus
030041		Brownsnake, northern	Storeria dekayi dekayi
030044		Gartersnake, eastern	Thamnophis sirtalis sirtalis
030045		Ribbonsnake, common	Thamnophis sauritus sauritus
030049		Earthsnake, eastern smooth	Virginia valeriae valeriae
030050		Turtle, eastern snapping	Chelydra serpentina serpentina
030051		Turtle, eastern mud	Kinosternon subrubrum subrubrum
030057		Cooter, northern red-bellied	Pseudemys rubriventris
030060		Turtle, eastern painted	Chrysemys picta picta
030063		Turtle, spotted	Clemmys guttata
050047		Skunk, striped	Mephitis mephitis nigra
050048		Skunk, striped	Mephitis mephitis mephitis
050049		Fox, red	Vulpes vulpes fulva
050050		Fox, common gray	Urocyon cinereoargenteus cinereoargenteus
050051		Bobcat	Lynx rufus rufus
050053		Nutria	Myocastor coypus
050054		Woodchuck	Marmota monax monax
050055		Chipmunk, Fisher?s eastern	Tamias striatus fisheri
050057		Squirrel, eastern gray	Sciurus carolinensis carolinensis
040373		Crossbill, white-winged	Loxia leucoptera
040375		Towhee, eastern	Pipilo erythrophthalmus
040377		Sparrow, savannah	Passerculus sandwichensis
040378		Sparrow, grasshopper	Ammodramus savannarum pratensis
040367		Finch, house	Carpodacus mexicanus
040370		Siskin, pine	Carduelis pinus
040371		Goldfinch, American	Carduelis tristis
050065		Squirrel, southern flying	Glaucomys volans volans
050069		Beaver, American	Castor canadensis

050074		Mouse, common white-footed	Peromyscus leucopus leucopus
050078		Rat, marsh rice	Oryzomys palustris palustris
050082		Vole, meadow	Microtus pennsylvanicus pennsylvanicus
050083		Vole, dark meadow	Microtus pennsylvanicus nigrans
050091		Vole, pine	Microtus pinetorum scalopsoides
050092		Muskrat, common	Ondatra zibethicus zibethicus
050093		Muskrat, large-toothed	Ondatra zibethicus macrodon
050095		Rat, Norway	Rattus norvegicus norvegicus
050098		Mouse, house	Mus musculus musculus
050099		Mouse, meadow jumping	Zapus hudsonius americanus
050103		Cottontail, eastern	Sylvilagus floridanus mallurus
050108		Deer, white-tailed	Odocoileus virginianus
050114		Deer, sika	Cervus nippon nippon
050125		Coyote	Canis latrans
060025		Mussel, eastern elliptio	Elliptio complanata
070120		CRAYFISH, WHITE RIVER	Procambarus acutus
070126		CRAYFISH	Fallicambarus fodiens
100040		Moth, codling	Cydia pomonella
100041		Borer, European corn	Ostrinia nubilatis
100042		Earworm, corn	Heliathis zea
100043		Armyworm	Pseudaletia unipuncta
100047		Moth, gypsy	Lymantria dispar
100079		Butterfly, monarch	Danaus plexippus
100082		Butterfly, silver-spotted skipper	Epargyreus clarus
100090		Butterfly, mourning cloak	Nymphalis antiopa
100092		Butterfly, black swallowtail	Papilio polyxenes asterius
100093		Butterfly, eastern tiger swallowtail	Papilio glaucus
100094		Butterfly, clouded sulphur	Colias philodice
100142		Butterfly, southern cloudywing	Thorybes bathyllus

100143		Butterfly, northern cloudywing	Thorybes pylades
100148		Butterfly, Juvenal?s duskywing	Erynnis juvenalis
100149		Butterfly, Horace?s duskywing	Erynnis horatius
100153		Butterfly, wild indigo duskywing	Erynnis baptisiae
100156		Butterfly, common checkered-skipper	Pyrgus communis
100157		Butterfly, common sootywing	Pholisora catullus
100159		Butterfly, clouded skipper	Lerema accius
100162		Butterfly, fiery skipper	Hylephila phyleus
100167		Butterfly, carus skipper	Polites carus
100174		Butterfly, sachem	Atalopedes campestris
100175		Butterfly, little glassywing	Pompeius verna
100181		Butterfly, Aaron?s skipper	Poanes aaroni
100184		Butterfly, Dion skipper	Euphyes dion
100196		Butterfly, Brazilian skipper	Calpodes ethlius
100198		Butterfly, salt marsh skipper	Panoquina panoquin
100201		Butterfly, giant swallowtail	Papilio cresphontes
100202		Butterfly, spicebush swallowtail	Papilio troilus
100203		Butterfly, Palamedes swallowtail	Papilio palamedes
100208		Butterfly, great southern white	Ascia monuste phileta
100209		Butterfly, falcate orangetip	Anthocharis midea
100211		Butterfly, orange sulphur	Colias eurytheme
100213		Butterfly, cloudless sulphur	Phoebis sennae eubule
100220		Butterfly, American copper	Lycaena phlaeas
100221		Butterfly, bronze copper	Lycaena hyllus
100227		Butterfly, white M hairstreak	Parrhasius m-album
100228		Butterfly, gray hairstreak	Strymon melinus
100235		Butterfly, red-banded hairstreak	Calycopis cecrops
100236		Butterfly, olive juniper hairstreak	Callophrys gryneus gryneus
100245		Butterfly, American snout	Libytheana carinenta

100247		Butterfly, variegated fritillary	Euptoieta claudia
100257		Butterfly, pearl crescent	Phyciodes tharos
100258		Butterfly, eastern comma	Polygonia comma
100262		Butterfly, American lady	Vanessa virginiensis
100264		Butterfly, red admiral	Vanessa atalanta
100265		Butterfly, common buckeye	Junonia coenia
100268		Butterfly, red-spotted purple	Limenitis arthemis astyanax
100269		Butterfly, tawny emperor	Asterocampa clyton
100273		Butterfly, southern pearly-eye	Enodia portlandia
100277		Butterfly, common wood-nymph	Cercyonis pegala
100278		Butterfly, Carolina satyr	Hermeuptychia sosybius
100279		Butterfly, little wood-satyr	Megisto cymela
100292		Moth, Promethea	Callosamia promethea
100359		Butterfly, Peck?s skipper	Polites peckius
110228		Tick, lone star	Amblyomma americanum
110229		Tick, winter	Dermacentor albipictus
110230		Tick, American dog	Dermacentor variabilis
110231		Tick, rabbit	Haemaphysalis leporispalustris
110232		Tick, brown dog	Rhipicephalus sanguineus
040382		Sparrow, seaside	Ammodramus maritimus
040383		Sparrow, vesper	Pooecetes gramineus
040387		Junco, dark-eyed	Junco hyemalis
040388		Sparrow, American tree	Spizella arborea
040389		Sparrow, chipping	Spizella passerina
040390		Sparrow, clay-colored	Spizella pallida
040391		Sparrow, field	Spizella pusilla
040393		Sparrow, white-crowned	Zonotrichia leucophrys
040394		Sparrow, white-throated	Zonotrichia albicollis
040395		Sparrow, fox	Passerella iliaca
040397		Sparrow, swamp	Melospiza georgiana

040398		Sparrow, song	Melospiza melodia
040400		Longspur, chestnut-collared	Calcarius ornatus
040401		Bunting, snow	Plectrophenax nivalis nivalis
040410		Goose, snow	Chen caerulescens
040412		Tern, elegant	Sterna elegans
040413		Sandpiper, sharp-tailed	Calidris acuminata
040416		Goose, Ross?	Chen rossii
040418		Sparrow, Nelson?s sharp-tailed	Ammodramus nelsoni
050001		Opossum, Virginia	Didelphis virginiana virginiana
050007		Shrew, southeastern	Sorex longirostris longirostris
050011		Shrew, southern short-tailed	Blarina carolinensis carolinensis
050015		Shrew, least	Cryptotis parva parva
050017		Mole, eastern	Scalopus aquaticus aquaticus
050020		Bat, little brown	Myotis lucifugus lucifugus
050022		Myotis, northern	Myotis septentrionalis septentrionalis
050025		Bat, silver-haired	Lasionycteris noctivagans
050027		Pipistrelle, eastern	Pipistrellus subflavus subflavus
050028		Bat, big brown	Eptesicus fuscus fuscus
050029		Bat, eastern red	Lasiurus borealis borealis
050030		Bat, hoary	Lasiurus cinereus cinereus
050033		Bat, evening	Nycticeius humeralis humeralis
050038		Raccoon	Procyon lotor lotor
050039		Raccoon	Procyon lotor maritimus
050041		Weasel, long-tailed	Mustela frenata noveboracensis
050042		Mink, common	Mustela vison mink
040321		Warbler, blackburnian	Dendroica fusca
040322		Warbler, yellow-throated	Dendroica dominica
040323		Warbler, chestnut-sided	Dendroica pensylvanica
040325		Warbler, blackpoll	Dendroica striata
040326		Warbler, pine	Dendroica pinus

040328		Warbler, prairie	Dendroica discolor
040329		Warbler, palm	Dendroica palmarum
040330		Ovenbird	Seiurus aurocapilla
040331		Waterthrush, northern	Seiurus noveboracensis
040332		Waterthrush, Louisiana	Seiurus motacilla
040333		Warbler, Kentucky	Oporornis formosus
040336		Yellowthroat, common	Geothlypis trichas
040337		Chat, yellow-breasted	Icteria virens virens
040338		Warbler, hooded	Wilsonia citrina
040340		Warbler, Canada	Wilsonia canadensis
040341		Redstart, American	Setophaga ruticilla
040342		Sparrow, house	Passer domesticus
040343		Bobolink	Dolichonyx oryzivorus
040344		Meadowlark, eastern	Sturnella magna
040346		Blackbird, red-winged	Agelaius phoeniceus
040347		Oriole, orchard	Icterus spurius
040348		Oriole, Baltimore	Icterus galbula
040351		Grackle, boat-tailed	Quiscalus major
040352		Grackle, common	Quiscalus quiscula
040353		Cowbird, brown-headed	Molothrus ater
040355		Tanager, scarlet	Piranga olivacea
040356		Tanager, summer	Piranga rubra
040357		Cardinal, northern	Cardinalis cardinalis
040358		Grosbeak, rose-breasted	Pheucticus ludovicianus
040360		Grosbeak, blue	Guiraca caerulea caerulea
040361		Bunting, indigo	Passerina cyanea
040365		Grosbeak, evening	Coccothraustes vespertinus

*FE=Federal Endangered; FT=Federal Threatened; FC=Federal Candidate; FS=Federal Species of Concern (not a legal status; list maintained by USFWS Virginia Field Office); SE=State Endangered; ST=State Threatened; SS=State Special Concern (not a legal status).

USGS Hydrological Unit(s): Mid Atlantic Region: Chincoteague Bay
Mid Atlantic Region: Eastern Lower Delmarva
Mid Atlantic Region: Lower Chesapeake Bay
Mid Atlantic Region: Pocomoke River
Mid Atlantic Region: Western Lower Delmarva

USGS 7.5' Quadrangles: Bloxom
Hallwood
Wallops Island
Chincoteague West

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Complied 2/1/2007 Visitor 115076

L. Preston Bryant, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION
217 Governor Street
Richmond, Virginia 23219-2010
(804) 786-7951 FAX (804) 371-2674

FACSIMILE TRANSMISSION

DATE: 11.9.06

TO: Ed Mackey

COMPANY: Weston Solutions, Inc.

FAX #: 919.424.2201

FROM: Bridget McGoldrick

FAX # (804) 371-2674

TOTAL PAGES: 7 **(INCLUDES COVER PAGE)**

DESCRIPTION:

Comments on Project:
#43557: Occoquan Bible Church

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (804) 786-7951

L. Preston Bryant, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street
Richmond, Virginia 23219-2010
(804) 786-7951 FAX (804) 371-2674

November 9, 2006

Ed Mackey
Weston Solutions, Inc.
4917 Waters Edge, Suite 235
Raleigh, NC 27064

Re: Wallops Island Flight Facility

Dear Mr. Mackey:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, this site is located within the Little Mosquito Creek Conservation Site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Little Mosquito Creek Conservation Site has been given a biodiversity significance ranking of B4, which represents a site of general significance. The natural heritage resources of concern at this site are Bald Eagle (*Haliaeetus leucocephalus*, G5/S2S3B,S3N/LT/LT) and Delta-spotted spiketail (*Cordulegaster diastatops*, G5/S1/NL/NL).

Bald Eagle nest sites are often found in the midst of large wooded areas near marshes or other bodies of water (Byrd, 1991). Bald Eagles feed on fish, waterfowl, seabirds (Campbell et. al., 1990), various mammals and carrion (Terres, 1980). Threats to this species include human disturbance of nest sites (Byrd, 1991), habitat loss, biocide contamination, decreasing food supply and illegal shooting (Herkert, 1992). Please note that this species is currently classified as threatened by the United States Fish and Wildlife Service (USFWS) and the Virginia Department of Game and Inland Fisheries (VDGIF). For this reason, DCR recommends coordination with the USFWS and the VDGIF to ensure compliance with protected species legislation.

Delta-spotted spiketail is found in small streams, seeps and trickles, but absent from the larger streams and small rivers. Area of adult foraging habitat surrounding breeding sites has indicated a range of 30 meters to 300 meters. Average distance traveled for a commuting flight (between reproductive and roosting or foraging sites) to be less than 200 m but sometimes greater than one km. Although little is known about dispersal, pond-breeding odonates may wander but generally stay within a few km of their emergence pond.

Adult Odonata (dragonflies and damselflies), commonly seen flitting and hovering along the shores of most freshwater habitats, are accomplished predators. Adults typically forage in clearings with scattered trees and shrubs near the parent river. They feed on mosquitoes and other smaller flying insects, and are thus considered highly beneficial. Odonates lay their eggs on emergent vegetation or debris at the water's edge. Unlike the adults, the larvae have an aquatic larval stage where they typically inhabit the sand and gravel of riffle areas. Wingless and possessing gills, they crawl about the submerged leaf litter and debris stalking their insect prey. The larvae seize unsuspecting prey with a long, hinged "grasper" that folds neatly under their chin. When larval development is complete, the aquatic larvae crawl from the water to the bank, climb up the stalk of the shoreline vegetation, and the winged adult emerges (Hoffman 1991; Thorpe and Covich 1991). Because of their aquatic lifestyle and limited mobility, the larvae are particularly vulnerable to shoreline disturbances that cause the loss of shoreline vegetation and siltation. They are also sensitive to alterations that result in poor water quality, aquatic substrate changes, and thermal fluctuations.

Due to the potential for this site to support populations of Delta-spotted spiketail, DCR recommends an inventory for the resource in the study area during the spring/summer months. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

Additionally, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks additional natural heritage resources. New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

A fee of $295.00 has been assessed for the service of providing this information. Please find enclosed an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, Department of Conservation and Recreation, 203 Governor Street, Suite 414, Richmond, VA 23219, ATTN: Cashier. Payment is due within thirty days of the invoice date.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, that may contain information not documented in this letter. Their database may be accessed from http://www.dgif.virginia.gov/wildlife/info_map/index.html , or contact Shirl Dressler at (804) 367-6913.

Should you have any questions or concerns, feel free to contact me at 804-692-0984. Thank you for the opportunity to comment on this project.

Sincerely,

Michelle E. Edwards
Locality Liaison

Cc: Eric Davis, USFWS
Andy Zadnik, VDGIF

Literature Cited

Byrd, M.A. 1991. Bald eagle. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia. Pp. 499-501.

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Herkert, J. R., editor. 1992. Endangered and threatened species of Illinois: status and distribution. Vol. 2: Animals. Illinois Endangered Species Protection Board. iv + 142 pp.

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APPENDIX E3
ERA PROUCL OUTPUT

General UCL Statistics for Data Sets with Non-Detects

User Selected Options
From File Surface Soil
Full Precision OFF
Confidence Coefficient 95%
Number of Bootstrap Operations 2000

4,4'-DDD

General Statistics

Number of Valid Data	24	Number of Detected Data	7
Number of Distinct Detected Data	6	Number of Non-Detect Data	17
		Percent Non-Detects	70.83%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.57	Minimum Detected	-0.562
Maximum Detected	12	Maximum Detected	2.485
Mean of Detected	5.321	Mean of Detected	1.137
SD of Detected	4.953	SD of Detected	1.238
Minimum Non-Detect	3.5	Minimum Non-Detect	1.253
Maximum Non-Detect	4.3	Maximum Non-Detect	1.459

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	87.50%

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.841	Shapiro Wilk Test Statistic	0.91
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.894	Mean	0.783
SD	2.99	SD	0.675
95% DL/2 (t) UCL	3.94	95% H-Stat (DL/2) UCL	4.033
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	0.316
		SD in Log Scale	0.944
		Mean in Original Scale	2.339
		SD in Original Scale	3.231
		95% Percentile Bootstrap UCL	3.514
		95% BCA Bootstrap UCL	3.738

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.707	Data appear Normal at 5% Significance Level	
Theta Star	7.522		
nu star	9.904		
A-D Test Statistic	0.324	Nonparametric Statistics	
5% A-D Critical Value	0.727	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.727	Mean	2.355
5% K-S Critical Value	0.319	SD	3.176
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.756
		95% KM (t) UCL	3.651
Assuming Gamma Distribution		95% KM (z) UCL	3.599
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	3.675
Minimum	0.57	95% KM (bootstrap t) UCL	3.975
Maximum	12	95% KM (BCA) UCL	3.878
Mean	5.311	95% KM (Percentile Bootstrap) UCL	4.142
Median	5.304	95% KM (Chebyshev) UCL	5.651
SD	2.53	97.5% KM (Chebyshev) UCL	7.077
k star	2.971	99% KM (Chebyshev) UCL	9.878
Theta star	1.787		
Nu star	142.6	Potential UCLs to Use	
AppChi2	116	95% KM (t) UCL	3.651
95% Gamma Approximate UCL	6.528	95% KM (Percentile Bootstrap) UCL	4.142
95% Adjusted Gamma UCL	6.624		

Note: DL/2 is not a recommended method.

4,4'-DDE

General Statistics			
Number of Valid Data	24	Number of Detected Data	16
Number of Distinct Detected Data	15	Number of Non-Detect Data	8
		Percent Non-Detects	33.33%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.41	Minimum Detected	-0.892
Maximum Detected	14	Maximum Detected	2.639
Mean of Detected	4.372	Mean of Detected	0.785
SD of Detected	4.5	SD of Detected	1.326
Minimum Non-Detect	3.6	Minimum Non-Detect	1.281
Maximum Non-Detect	4.1	Maximum Non-Detect	1.411
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	17
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	7
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	70.83%
UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.837	Shapiro Wilk Test Statistic	0.874
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	3.535	Mean	0.731
SD	3.83	SD	1.074
95% DL/2 (t) UCL	4.875	95% H-Stat (DL/2) UCL	9.431
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.419	Mean in Log Scale	0.495
SD	6.873	SD in Log Scale	1.186
95% MLE (t) UCL	2.823	Mean in Original Scale	3.257
95% MLE (Tiku) UCL	4.671	SD in Original Scale	3.985
		95% Percentile Bootstrap UCL	4.651
		95% BCA Bootstrap UCL	4.773
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.735	Data Follow Appr. Gamma Distribution at 5% Significance Level	
Theta Star	5.949		
nu star	23.52		
A-D Test Statistic	0.758	Nonparametric Statistics	
5% A-D Critical Value	0.77	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.77	Mean	3.272
5% K-S Critical Value	0.222	SD	3.921
Data follow Appr. Gamma Distribution at 5% Significance Level		SE of Mean	0.842
		95% KM (t) UCL	4.715
Assuming Gamma Distribution		95% KM (z) UCL	4.657
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	4.706
Minimum	0.41	95% KM (bootstrap t) UCL	4.927
Maximum	14	95% KM (BCA) UCL	4.632
Mean	4.364	95% KM (Percentile Bootstrap) UCL	4.686
Median	4.125	95% KM (Chebyshev) UCL	6.942
SD	3.646	97.5% KM (Chebyshev) UCL	8.529
k star	1.097	99% KM (Chebyshev) UCL	11.65
Theta star	3.978		
Nu star	52.66	Potential UCLs to Use	
AppChi2	36.99	95% KM (BCA) UCL	4.632
95% Gamma Approximate UCL	6.213		
95% Adjusted Gamma UCL	6.372		

Note: DL/2 is not a recommended method.

4,4'-DDT

General Statistics			
Number of Valid Data	24	Number of Detected Data	8
Number of Distinct Detected Data	8	Number of Non-Detect Data	16
		Percent Non-Detects	66.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.79	Minimum Detected	-0.236
Maximum Detected	43	Maximum Detected	3.761
Mean of Detected	15.71	Mean of Detected	1.843
SD of Detected	17.84	SD of Detected	1.614
Minimum Non-Detect	3.5	Minimum Non-Detect	1.253
Maximum Non-Detect	4.3	Maximum Non-Detect	1.459

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	4
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	83.33%

Warning: There are only 8 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.793	Shapiro Wilk Test Statistic	0.897
5% Shapiro Wilk Critical Value	0.818	5% Shapiro Wilk Critical Value	0.818
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	6.495	Mean	1.037
SD	11.88	SD	1.065
95% DL/2 (t) UCL	10.65	95% H-Stat (DL/2) UCL	7.376
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	0.749
		SD in Log Scale	1.323
		Mean in Original Scale	6.251
		SD in Original Scale	12.01
		95% Percentile Bootstrap UCL	10.4
		95% BCA Bootstrap UCL	11.52
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.5	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	31.4		
nu star	8.006		
A-D Test Statistic	0.496	Nonparametric Statistics	
5% A-D Critical Value	0.751	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.751	Mean	6.128
5% K-S Critical Value	0.306	SD	11.79
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	2.583
		95% KM (t) UCL	10.55
Assuming Gamma Distribution		95% KM (z) UCL	10.38
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	10.38
Minimum	0.79	95% KM (bootstrap t) UCL	12.88
Maximum	43	95% KM (BCA) UCL	11.12
Mean	15.82	95% KM (Percentile Bootstrap) UCL	10.76
Median	14.28	95% KM (Chebyshev) UCL	17.39
SD	11.4	97.5% KM (Chebyshev) UCL	22.26
k star	1.336	99% KM (Chebyshev) UCL	31.83
Theta star	11.84		
Nu star	64.14	Potential UCLs to Use	
AppChi2	46.71	95% KM (t) UCL	10.55
95% Gamma Approximate UCL	21.73		
95% Adjusted Gamma UCL	22.22		

Note: DL/2 is not a recommended method.

Aluminum

General Statistics

Number of Valid Observations	24	Number of Distinct Observations	18

Raw Statistics		Log-transformed Statistics	
Minimum	1400	Minimum of Log Data	7.244
Maximum	13000	Maximum of Log Data	9.473
Mean	7396	Mean of log Data	8.802
Median	8000	SD of log Data	0.514
SD	3115		
Coefficient of Variation	0.421		
Skewness	0.131		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.958	Shapiro Wilk Test Statistic	0.901
Shapiro Wilk Critical Value	0.916	Shapiro Wilk Critical Value	0.916
Data appear Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	8486	95% H-UCL	9395
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	11138
95% Adjusted-CLT UCL	8460	97.5% Chebyshev (MVUE) UCL	12695
95% Modified-t UCL	8488	99% Chebyshev (MVUE) UCL	15752

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	4.264	Data appear Normal at 5% Significance Level	
Theta Star	1734		
MLE of Mean	7396		
MLE of Standard Deviation	3581		
nu star	204.7		
Approximate Chi Square Value (.05)	172.6	Nonparametric Statistics	
Adjusted Level of Significance	0.0392	95% CLT UCL	8442
Adjusted Chi Square Value	170.5	95% Jackknife UCL	8486
		95% Standard Bootstrap UCL	8426
Anderson-Darling Test Statistic	0.495	95% Bootstrap-t UCL	8507
Anderson-Darling 5% Critical Value	0.747	95% Hall's Bootstrap UCL	8474
Kolmogorov-Smirnov Test Statistic	0.159	95% Percentile Bootstrap UCL	8413
Kolmogorov-Smirnov 5% Critical Value	0.178	95% BCA Bootstrap UCL	8425
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	10167
		97.5% Chebyshev(Mean, Sd) UCL	11366
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	13722
95% Approximate Gamma UCL	8772		
95% Adjusted Gamma UCL	8878		

Potential UCL to Use		Use 95% Student's-t UCL	8486

Antimony

General Statistics

Number of Valid Data	24	Number of Detected Data	6
Number of Distinct Detected Data	6	Number of Non-Detect Data	18
		Percent Non-Detects	75.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.54	Minimum Detected	-0.616
Maximum Detected	3.2	Maximum Detected	1.163
Mean of Detected	1.808	Mean of Detected	0.303
SD of Detected	1.313	SD of Detected	0.876
Minimum Non-Detect	2	Minimum Non-Detect	0.693
Maximum Non-Detect	2.5	Maximum Non-Detect	0.916

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	87.50%

Warning: There are only 6 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.766	Shapiro Wilk Test Statistic	0.771
5% Shapiro Wilk Critical Value	0.788	5% Shapiro Wilk Critical Value	0.788
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.256	Mean	0.127
SD	0.696	SD	0.424
95% DL/2 (t) UCL	1.5	95% H-Stat (DL/2) UCL	1.753

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	1.508	Mean in Log Scale	-0.23
SD	0.879	SD in Log Scale	0.651
95% MLE (t) UCL	1.816	Mean in Original Scale	1.002
95% MLE (Tiku) UCL	2.581	SD in Original Scale	0.824
		95% Percentile Bootstrap UCL	1.298
		95% BCA Bootstrap UCL	1.33

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.05	Data Follow Appr. Gamma Distribution at 5% Significance Level	
Theta Star	1.722		
nu star	12.6		

		Nonparametric Statistics	
A-D Test Statistic	0.796		
5% A-D Critical Value	0.705	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.705	Mean	0.915
5% K-S Critical Value	0.336	SD	0.794
Data follow Appr. Gamma Distribution at 5% Significance Level		SE of Mean	0.182
		95% KM (t) UCL	1.226
Assuming Gamma Distribution		95% KM (z) UCL	1.213
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.213
Minimum	0.54	95% KM (bootstrap t) UCL	1.28
Maximum	3.2	95% KM (BCA) UCL	1.402
Mean	1.673	95% KM (Percentile Bootstrap) UCL	1.364
Median	1.625	95% KM (Chebyshev) UCL	1.706
SD	0.754	97.5% KM (Chebyshev) UCL	2.049
k star	4.128	99% KM (Chebyshev) UCL	2.722
Theta star	0.405		
Nu star	198.1	Potential UCLs to Use	
AppChi2	166.6	95% KM (t) UCL	1.226
95% Gamma Approximate UCL	1.99		
95% Adjusted Gamma UCL	2.015		

Note: DL/2 is not a recommended method.

Dieldrin

General Statistics			
Number of Valid Data	24	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	22
		Percent Non-Detects	91.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	3.9	Minimum Detected	1.361
Maximum Detected	5.7	Maximum Detected	1.74
Mean of Detected	4.8	Mean of Detected	1.551
SD of Detected	1.273	SD of Detected	0.268
Minimum Non-Detect	3.5	Minimum Non-Detect	1.253
Maximum Non-Detect	8.1	Maximum Non-Detect	2.092

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	24
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.248	Mean	0.756
SD	0.943	SD	0.299
95% DL/2 (t) UCL	2.578	95% H-Stat (DL/2) UCL	2.44
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	Nonparametric Statistics	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	3.978
5% K-S Critical Value	N/A	SD	0.367
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.108
		95% KM (t) UCL	4.164
Assuming Gamma Distribution		95% KM (z) UCL	4.156
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	5.163
Minimum	N/A	95% KM (bootstrap t) UCL	N/A
Maximum	N/A	95% KM (BCA) UCL	5.7
Mean	N/A	95% KM (Percentile Bootstrap) UCL	5.7
Median	N/A	95% KM (Chebyshev) UCL	4.45
SD	N/A	97.5% KM (Chebyshev) UCL	4.654
k star	N/A	99% KM (Chebyshev) UCL	5.055
Theta star	N/A		
Nu star	N/A	Potential UCLs to Use	
AppChi2	N/A	95% KM (t) UCL	4.164
95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL	5.7
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

Iron

General Statistics

Number of Valid Data	24	Number of Detected Data	23
Number of Distinct Detected Data	20	Number of Non-Detect Data	1
		Percent Non-Detects	4.17%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2500	Minimum Detected	7.824
Maximum Detected	10000	Maximum Detected	9.21
Mean of Detected	5278	Mean of Detected	8.474
SD of Detected	2362	SD of Detected	0.452
Minimum Non-Detect	940	Minimum Non-Detect	6.846
Maximum Non-Detect	940	Maximum Non-Detect	6.846

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.904	Shapiro Wilk Test Statistic	0.927
5% Shapiro Wilk Critical Value	0.914	5% Shapiro Wilk Critical Value	0.914
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	5078	Mean	8.378
SD	2510	SD	0.648
95% DL/2 (t) UCL	5956	95% H-Stat (DL/2) UCL	6615

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	5054	Mean in Log Scale	8.428
SD	2513	SD in Log Scale	0.498
95% MLE (t) UCL	5933	Mean in Original Scale	5124
95% MLE (Tiku) UCL	5932	SD in Original Scale	2432
		95% Percentile Bootstrap UCL	5942
		95% BCA Bootstrap UCL	5954

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	4.652	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	1135		
nu star	214		

A-D Test Statistic	0.652	Nonparametric Statistics	
5% A-D Critical Value	0.746	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.746	Mean	5163
5% K-S Critical Value	0.182	SD	2329
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	486.1
		95% KM (t) UCL	5996
Assuming Gamma Distribution		95% KM (z) UCL	5962
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	5992
Minimum	1.00E-09	95% KM (bootstrap t) UCL	6053
Maximum	10000	95% KM (BCA) UCL	5988
Mean	5058	95% KM (Percentile Bootstrap) UCL	5963
Median	4350	95% KM (Chebyshev) UCL	7281
SD	2549	97.5% KM (Chebyshev) UCL	8198
k star	0.465	99% KM (Chebyshev) UCL	9999
Theta star	10876		
Nu star	22.32	Potential UCLs to Use	
AppChi2	12.58	95% KM (BCA) UCL	5988
95% Gamma Approximate UCL	8975		
95% Adjusted Gamma UCL	9357		

Note: DL/2 is not a recommended method.

Lead

General Statistics

Number of Valid Data	24	Number of Detected Data	23
Number of Distinct Detected Data	22	Number of Non-Detect Data	1
		Percent Non-Detects	4.17%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2.2	Minimum Detected	0.788
Maximum Detected	460	Maximum Detected	6.131
Mean of Detected	60.1	Mean of Detected	2.233
SD of Detected	142.9	SD of Detected	1.59
Minimum Non-Detect	1.7	Minimum Non-Detect	0.531
Maximum Non-Detect	1.7	Maximum Non-Detect	0.531

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.432	Shapiro Wilk Test Statistic	0.692
5% Shapiro Wilk Critical Value	0.914	5% Shapiro Wilk Critical Value	0.914
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	57.63	Mean	2.133
SD	140.3	SD	1.63
95% DL/2 (t) UCL	106.7	95% H-Stat (DL/2) UCL	98.31

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	53.68	Mean in Log Scale	2.092
SD	141.1	SD in Log Scale	1.702
95% MLE (t) UCL	103.1	Mean in Original Scale	57.61
95% MLE (Tiku) UCL	98.09	SD in Original Scale	140.3
		95% Percentile Bootstrap UCL	108.2
		95% BCA Bootstrap UCL	123

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.341	Data do not follow a Discernable Distribution (0.05)
Theta Star	176	
nu star	15.71	

		Nonparametric Statistics	
A-D Test Statistic	4.817		
5% A-D Critical Value	0.836	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.836	Mean	57.69
5% K-S Critical Value	0.195	SD	137.4
Data not Gamma Distributed at 5% Significance Level		SE of Mean	28.67
		95% KM (t) UCL	106.8
Assuming Gamma Distribution		95% KM (z) UCL	104.8
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	106.8
Minimum	1.00E-09	95% KM (bootstrap t) UCL	120.6
Maximum	460	95% KM (BCA) UCL	107.2
Mean	57.6	95% KM (Percentile Bootstrap) UCL	109.2
Median	5.75	95% KM (Chebyshev) UCL	182.6
SD	140.3	97.5% KM (Chebyshev) UCL	236.7
k star	0.251	99% KM (Chebyshev) UCL	342.9
Theta star	229.6		
Nu star	12.04	Potential UCLs to Use	
AppChi2	5.254	99% KM (Chebyshev) UCL	342.9
95% Gamma Approximate UCL	132		
95% Adjusted Gamma UCL	140.4		

Note: DL/2 is not a recommended method.

Manganese

General Statistics			
Number of Valid Observations	24	Number of Distinct Observations	18
Raw Statistics		Log-transformed Statistics	
Minimum	9.5	Minimum of Log Data	2.251
Maximum	320	Maximum of Log Data	5.768
Mean	90.44	Mean of log Data	4.196
Median	70.5	SD of log Data	0.885
SD	68.57		
Coefficient of Variation	0.758		
Skewness	1.635		
Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.863	Shapiro Wilk Test Statistic	0.929
Shapiro Wilk Critical Value	0.916	Shapiro Wilk Critical Value	0.916
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	114.4	95% H-UCL	152.8
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	180.1
95% Adjusted-CLT UCL	118.5	97.5% Chebyshev (MVUE) UCL	216.5
95% Modified-t UCL	115.2	99% Chebyshev (MVUE) UCL	287.9
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.574	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	57.45		
MLE of Mean	90.44		
MLE of Standard Deviation	72.08		
nu star	75.56		
Approximate Chi Square Value (.05)	56.54	Nonparametric Statistics	
Adjusted Level of Significance	0.0392	95% CLT UCL	113.5
Adjusted Chi Square Value	55.38	95% Jackknife UCL	114.4
		95% Standard Bootstrap UCL	112.7
Anderson-Darling Test Statistic	0.393	95% Bootstrap-t UCL	122.3
Anderson-Darling 5% Critical Value	0.758	95% Hall's Bootstrap UCL	132
Kolmogorov-Smirnov Test Statistic	0.115	95% Percentile Bootstrap UCL	113.9
Kolmogorov-Smirnov 5% Critical Value	0.181	95% BCA Bootstrap UCL	117.8
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	151.5
		97.5% Chebyshev(Mean, Sd) UCL	177.9
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	229.7
95% Approximate Gamma UCL	120.9		
95% Adjusted Gamma UCL	123.4		
Potential UCL to Use		Use 95% Approximate Gamma UCL	120.9

Mercury

General Statistics

Number of Valid Observations	24	Number of Distinct Observations	20

Raw Statistics		Log-transformed Statistics	
Minimum	0.0046	Minimum of Log Data	-5.382
Maximum	0.25	Maximum of Log Data	-1.386
Mean	0.0549	Mean of log Data	-3.306
Median	0.0325	SD of log Data	0.913
SD	0.057		
Coefficient of Variation	1.039		
Skewness	2.145		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.731	Shapiro Wilk Test Statistic	0.968
Shapiro Wilk Critical Value	0.916	Shapiro Wilk Critical Value	0.916
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.0749	95% H-UCL	0.0883
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.103
95% Adjusted-CLT UCL	0.0795	97.5% Chebyshev (MVUE) UCL	0.125
95% Modified-t UCL	0.0757	99% Chebyshev (MVUE) UCL	0.167

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.235	Data appear Lognormal at 5% Significance Level	
Theta Star	0.0445		
MLE of Mean	0.0549		
MLE of Standard Deviation	0.0494		
nu star	59.26		
Approximate Chi Square Value (.05)	42.56	Nonparametric Statistics	
Adjusted Level of Significance	0.0392	95% CLT UCL	0.0741
Adjusted Chi Square Value	41.57	95% Jackknife UCL	0.0749
		95% Standard Bootstrap UCL	0.0738
Anderson-Darling Test Statistic	0.863	95% Bootstrap-t UCL	0.0874
Anderson-Darling 5% Critical Value	0.764	95% Hall's Bootstrap UCL	0.0842
Kolmogorov-Smirnov Test Statistic	0.205	95% Percentile Bootstrap UCL	0.0742
Kolmogorov-Smirnov 5% Critical Value	0.182	95% BCA Bootstrap UCL	0.0805
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	0.106
		97.5% Chebyshev(Mean, Sd) UCL	0.128
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	0.171
95% Approximate Gamma UCL	0.0765		
95% Adjusted Gamma UCL	0.0783		

Potential UCL to Use			
		Use 95% H-UCL	0.0883

PCB-1260

General Statistics			
Number of Valid Data	24	Number of Detected Data	3
Number of Distinct Detected Data	2	Number of Non-Detect Data	21
		Percent Non-Detects	87.50%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	190	Minimum Detected	5.247
Maximum Detected	290	Maximum Detected	5.67
Mean of Detected	256.7	Mean of Detected	5.529
SD of Detected	57.74	SD of Detected	0.244
Minimum Non-Detect	35	Minimum Non-Detect	3.555
Maximum Non-Detect	44	Maximum Non-Detect	3.784

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	87.50%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.75	Shapiro Wilk Test Statistic	0.75
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	48.88	Mean	3.275
SD	82.02	SD	0.875
95% DL/2 (t) UCL	77.57	95% H-Stat (DL/2) UCL	44.04
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	4.439
		SD in Log Scale	0.531
		Mean in Original Scale	98.98
		SD in Original Scale	67.48
		95% Percentile Bootstrap UCL	121.6
		95% BCA Bootstrap UCL	127.8
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	Nonparametric Statistics	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	198.3
5% K-S Critical Value	N/A	SD	27.64
Data not Gamma Distributed at 5% Significance Level		SE of Mean	6.91
		95% KM (t) UCL	210.2
Assuming Gamma Distribution		95% KM (z) UCL	209.7
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	261.7
Minimum	N/A	95% KM (bootstrap t) UCL	204.4
Maximum	N/A	95% KM (BCA) UCL	290
Mean	N/A	95% KM (Percentile Bootstrap) UCL	290
Median	N/A	95% KM (Chebyshev) UCL	228.5
SD	N/A	97.5% KM (Chebyshev) UCL	241.5
k star	N/A	99% KM (Chebyshev) UCL	267.1
Theta star	N/A		
Nu star	N/A	Potential UCLs to Use	
AppChi2	N/A	95% KM (t) UCL	210.2
95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL	290
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

Vanadium

General Statistics			
Number of Valid Observations	24	Number of Distinct Observations	19

Raw Statistics		Log-transformed Statistics	
Minimum	2.4	Minimum of Log Data	0.875
Maximum	24	Maximum of Log Data	3.178
Mean	12.94	Mean of log Data	2.437
Median	14	SD of log Data	0.547
SD	5.876		
Coefficient of Variation	0.454		
Skewness	0.105		

Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.948	Shapiro Wilk Test Statistic	0.91
Shapiro Wilk Critical Value	0.916	Shapiro Wilk Critical Value	0.916
Data appear Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	15	95% H-UCL	16.74
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	19.93
95% Adjusted-CLT UCL	14.94	97.5% Chebyshev (MVUE) UCL	22.84
95% Modified-t UCL	15	99% Chebyshev (MVUE) UCL	28.57
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	3.723	Data appear Normal at 5% Significance Level	
Theta Star	3.476		
MLE of Mean	12.94		
MLE of Standard Deviation	6.707		
nu star	178.7		
Approximate Chi Square Value (.05)	148.8	Nonparametric Statistics	
Adjusted Level of Significance	0.0392	95% CLT UCL	14.91
Adjusted Chi Square Value	146.9	95% Jackknife UCL	15
		95% Standard Bootstrap UCL	14.84
Anderson-Darling Test Statistic	0.629	95% Bootstrap-t UCL	15.07
Anderson-Darling 5% Critical Value	0.748	95% Hall's Bootstrap UCL	15.02
Kolmogorov-Smirnov Test Statistic	0.169	95% Percentile Bootstrap UCL	14.83
Kolmogorov-Smirnov 5% Critical Value	0.179	95% BCA Bootstrap UCL	14.9
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	18.17
		97.5% Chebyshev(Mean, Sd) UCL	20.43
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	24.88
95% Approximate Gamma UCL	15.54		
95% Adjusted Gamma UCL	15.75		

Potential UCL to Use		Use 95% Student's-t UCL	15

Zinc

General Statistics

Number of Valid Data	24	Number of Detected Data	23
Number of Distinct Detected Data	19	Number of Non-Detect Data	1
		Percent Non-Detects	4.17%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	6.8	Minimum Detected	1.917
Maximum Detected	250	Maximum Detected	5.521
Mean of Detected	57.09	Mean of Detected	3.342
SD of Detected	79.48	SD of Detected	1.12
Minimum Non-Detect	2.5	Minimum Non-Detect	0.916
Maximum Non-Detect	2.5	Maximum Non-Detect	0.916

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.626	Shapiro Wilk Test Statistic	0.875
5% Shapiro Wilk Critical Value	0.914	5% Shapiro Wilk Critical Value	0.914
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	54.76	Mean	3.212
SD	78.56	SD	1.267
95% DL/2 (t) UCL	82.24	95% H-Stat (DL/2) UCL	109.3

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	52.81	Mean in Log Scale	3.23
SD	79.22	SD in Log Scale	1.226
95% MLE (t) UCL	80.53	Mean in Original Scale	54.79
95% MLE (Tiku) UCL	78.36	SD in Original Scale	78.54
		95% Percentile Bootstrap UCL	83.62
		95% BCA Bootstrap UCL	90.54

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.759	Data do not follow a Discernable Distribution (0.05)
Theta Star	75.18	
nu star	34.93	

A-D Test Statistic	2.029	Nonparametric Statistics	
5% A-D Critical Value	0.778	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.778	Mean	54.99
5% K-S Critical Value	0.188	SD	76.76
Data not Gamma Distributed at 5% Significance Level		SE of Mean	16.02
		95% KM (t) UCL	82.45
Assuming Gamma Distribution		95% KM (z) UCL	81.34
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	82.41
Minimum	1.00E-09	95% KM (bootstrap t) UCL	95.88
Maximum	250	95% KM (BCA) UCL	83.86
Mean	54.71	95% KM (Percentile Bootstrap) UCL	82.57
Median	20	95% KM (Chebyshev) UCL	124.8
SD	78.6	97.5% KM (Chebyshev) UCL	155
k star	0.375	99% KM (Chebyshev) UCL	214.4
Theta star	146		
Nu star	17.98	Potential UCLs to Use	
AppChi2	9.378	97.5% KM (Chebyshev) UCL	155
95% Gamma Approximate UCL	104.9		
95% Adjusted Gamma UCL	110		

Note: DL/2 is not a recommended method.

Cadmium

General Statistics			
Number of Valid Data	24	Number of Detected Data	5
Number of Distinct Detected Data	4	Number of Non-Detect Data	19
		Percent Non-Detects	79.17%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.29	Minimum Detected	-1.238
Maximum Detected	0.37	Maximum Detected	-0.994
Mean of Detected	0.332	Mean of Detected	-1.107
SD of Detected	0.0349	SD of Detected	0.107
Minimum Non-Detect	0.49	Minimum Non-Detect	-0.713
Maximum Non-Detect	0.62	Maximum Non-Detect	-0.478

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	24
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 4 Distinct Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.872	Shapiro Wilk Test Statistic	0.866
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.284	Mean	-1.265
SD	0.033	SD	0.109
95% DL/2 (t) UCL	0.295	95% H-Stat (DL/2) UCL	0.36

Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-1.107
		SD in Log Scale	0.0779
		Mean in Original Scale	0.331
		SD in Original Scale	0.0257
		95% Percentile Bootstrap UCL	0.34
		95% BCA Bootstrap UCL	0.34

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	44.37	Data appear Normal at 5% Significance Level
Theta Star	0.00748	
nu star	443.7	

		Nonparametric Statistics	
A-D Test Statistic	0.492	Kaplan-Meier (KM) Method	
5% A-D Critical Value	0.678	Mean	0.332
K-S Test Statistic	0.678	SD	0.0312
5% K-S Critical Value	0.357	SE of Mean	0.0156
Data appear Gamma Distributed at 5% Significance Level		95% KM (t) UCL	0.359
		95% KM (z) UCL	0.358
Assuming Gamma Distribution		95% KM (jackknife) UCL	0.361
Gamma ROS Statistics using Extrapolated Data		95% KM (bootstrap t) UCL	0.361
Minimum	0.283	95% KM (BCA) UCL	0.357
Maximum	0.37	95% KM (Percentile Bootstrap) UCL	0.358
Mean	0.334	95% KM (Chebyshev) UCL	0.4
Median	0.338	97.5% KM (Chebyshev) UCL	0.43
SD	0.0255	99% KM (Chebyshev) UCL	0.487
k star	152		
Theta star	0.0022		
Nu star	7294	Potential UCLs to Use	
AppChi2	7097	95% KM (t) UCL	0.359
95% Gamma Approximate UCL	0.343	95% KM (Percentile Bootstrap) UCL	0.358
95% Adjusted Gamma UCL	0.344		

Note: DL/2 is not a recommended method.

Acetone

General Statistics			
Number of Valid Data	24	Number of Detected Data	20
Number of Distinct Detected Data	19	Number of Non-Detect Data	4
		Percent Non-Detects	16.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	31	Minimum Detected	3.434
Maximum Detected	370	Maximum Detected	5.914
Mean of Detected	124.5	Mean of Detected	4.57
SD of Detected	88.73	SD of Detected	0.754
Minimum Non-Detect	47	Minimum Non-Detect	3.85
Maximum Non-Detect	52	Maximum Non-Detect	3.951

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	9
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	15
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	37.50%

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.878	Shapiro Wilk Test Statistic	0.935
5% Shapiro Wilk Critical Value	0.905	5% Shapiro Wilk Critical Value	0.905
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	107.9	Mean	4.343
SD	89.14	SD	0.859
95% DL/2 (t) UCL	139.1	95% H-Stat (DL/2) UCL	127.3
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	84.7	Mean in Log Scale	4.404
SD	116.5	SD in Log Scale	0.784
95% MLE (t) UCL	125.5	Mean in Original Scale	109.7
95% MLE (Tiku) UCL	129.8	SD in Original Scale	87.47
		95% Percentile Bootstrap UCL	140.7
		95% BCA Bootstrap UCL	142.6
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.836	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	67.83		
nu star	73.42		
A-D Test Statistic	0.523	Nonparametric Statistics	
5% A-D Critical Value	0.752	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.752	Mean	109.5
5% K-S Critical Value	0.196	SD	85.75
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	17.96
		95% KM (t) UCL	140.3
Assuming Gamma Distribution		95% KM (z) UCL	139.1
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	140.2
Minimum	31	95% KM (bootstrap t) UCL	147.3
Maximum	370	95% KM (BCA) UCL	139.5
Mean	110.8	95% KM (Percentile Bootstrap) UCL	140.4
Median	72	95% KM (Chebyshev) UCL	187.8
SD	86.53	97.5% KM (Chebyshev) UCL	221.7
k star	1.744	99% KM (Chebyshev) UCL	288.3
Theta star	63.52		
Nu star	83.72	Potential UCLs to Use	
AppChi2	63.63	95% KM (BCA) UCL	139.5
95% Gamma Approximate UCL	145.8		
95% Adjusted Gamma UCL	148.6		

Note: DL/2 is not a recommended method.

Bis(2-ethylhexyl)phthalate

General Statistics

Number of Valid Data	24	Number of Detected Data	1
Number of Distinct Detected Data	1	Number of Non-Detect Data	23
		Percent Non-Detects	95.83%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Bis(2-ethylhexyl)phthalate was not processed!

Cyanide

General Statistics

Number of Valid Data	25	Number of Detected Data	1
Number of Distinct Detected Data	1	Number of Non-Detect Data	24
		Percent Non-Detects	96.00%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Cyanide was not processed!

Methyl Ethyl Ketone

General Statistics			
Number of Valid Data	24	Number of Detected Data	15
Number of Distinct Detected Data	13	Number of Non-Detect Data	9
		Percent Non-Detects	37.50%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	4.6	Minimum Detected	1.526
Maximum Detected	33	Maximum Detected	3.497
Mean of Detected	13.81	Mean of Detected	2.474
SD of Detected	7.986	SD of Detected	0.572
Minimum Non-Detect	23	Minimum Non-Detect	3.135
Maximum Non-Detect	26	Maximum Non-Detect	3.258

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	23
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	1
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	95.83%

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.897	Shapiro Wilk Test Statistic	0.961
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	13.3	Mean	2.491
SD	6.275	SD	0.447
95% DL/2 (t) UCL	15.49	95% H-Stat (DL/2) UCL	19.11
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.439
		SD in Log Scale	0.48
		Mean in Original Scale	12.83
		SD in Original Scale	6.643
		95% Percentile Bootstrap UCL	15.18
		95% BCA Bootstrap UCL	15.27
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	2.814	Data appear Normal at 5% Significance Level	
Theta Star	4.906		
nu star	84.43		
A-D Test Statistic	0.37	Nonparametric Statistics	
5% A-D Critical Value	0.742	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.742	Mean	13.18
5% K-S Critical Value	0.223	SD	7.096
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	1.77
		95% KM (t) UCL	16.21
Assuming Gamma Distribution		95% KM (z) UCL	16.09
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	16.24
Minimum	4.6	95% KM (bootstrap t) UCL	16.77
Maximum	33	95% KM (BCA) UCL	15.96
Mean	13.97	95% KM (Percentile Bootstrap) UCL	16.03
Median	14	95% KM (Chebyshev) UCL	20.9
SD	6.724	97.5% KM (Chebyshev) UCL	24.24
k star	4.109	99% KM (Chebyshev) UCL	30.8
Theta star	3.401		
Nu star	197.2	Potential UCLs to Use	
AppChi2	165.7	95% KM (t) UCL	16.21
95% Gamma Approximate UCL	16.63	95% KM (Percentile Bootstrap) UCL	16.03
95% Adjusted Gamma UCL	16.83		

Note: DL/2 is not a recommended method.

Methyl isobutyl ketone

General Statistics

Number of Valid Data	24	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	17
		Percent Non-Detects	70.83%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	6.1	Minimum Detected	1.808
Maximum Detected	340	Maximum Detected	5.829
Mean of Detected	77.5	Mean of Detected	3.258
SD of Detected	125.3	SD of Detected	1.539
Minimum Non-Detect	21	Minimum Non-Detect	3.045
Maximum Non-Detect	27	Maximum Non-Detect	3.296

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	22
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	2
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	91.67%

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.664	Shapiro Wilk Test Statistic	0.859
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	31.42	Mean	2.735
SD	70.75	SD	0.859
95% DL/2 (t) UCL	56.17	95% H-Stat (DL/2) UCL	28.71

Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.621
		SD in Log Scale	1.083
		Mean in Original Scale	32.2
		SD in Original Scale	71.03
		95% Percentile Bootstrap UCL	58.81
		95% BCA Bootstrap UCL	73.74

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.421	Data Follow Appr. Gamma Distribution at 5% Significance Level	
Theta Star	184.1		
nu star	5.895		

A-D Test Statistic	0.755	Nonparametric Statistics	
5% A-D Critical Value	0.747	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.747	Mean	30.14
5% K-S Critical Value	0.326	SD	69.72
Data follow Appr. Gamma Distribution at 5% Significance Level		SE of Mean	15.45
		95% KM (t) UCL	56.62
Assuming Gamma Distribution		95% KM (z) UCL	55.55
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	55.24
Minimum	1.00E-09	95% KM (bootstrap t) UCL	200.9
Maximum	340	95% KM (BCA) UCL	61
Mean	68.62	95% KM (Percentile Bootstrap) UCL	58.75
Median	67.37	95% KM (Chebyshev) UCL	97.48
SD	75.16	97.5% KM (Chebyshev) UCL	126.6
k star	0.211	99% KM (Chebyshev) UCL	183.9
Theta star	325.1		
Nu star	10.13	Potential UCLs to Use	
AppChi2	4.024	95% KM (t) UCL	56.62
95% Gamma Approximate UCL	172.8		
95% Adjusted Gamma UCL	185.1		

Note: DL/2 is not a recommended method.

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Projects\Wallop Island\WWTP 2009\ProUCL4.0\Soil data 0-2 proUCL_rev1.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

4,4'-DDD

General Statistics

Number of Valid Data	21	Number of Detected Data	4
Number of Distinct Detected Data	4	Number of Non-Detect Data	17
		Percent Non-Detects	80.95%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.57	Minimum Detected	-0.562
Maximum Detected	3.8	Maximum Detected	1.335
Mean of Detected	1.763	Mean of Detected	0.292
SD of Detected	1.478	SD of Detected	0.863
Minimum Non-Detect	3.5	Minimum Non-Detect	1.253
Maximum Non-Detect	4.3	Maximum Non-Detect	1.459

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 4 Distinct Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.884	Shapiro Wilk Test Statistic	0.946
5% Shapiro Wilk Critical Value	0.748	5% Shapiro Wilk Critical Value	0.748
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.869	Mean	0.572
SD	0.582	SD	0.365
95% DL/2 (t) UCL	2.088	95% H-Stat (DL/2) UCL	2.968

Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.00514
		SD in Log Scale	0.495
		Mean in Original Scale	1.147
		SD in Original Scale	0.727
		95% Percentile Bootstrap UCL	1.426
		95% BCA Bootstrap UCL	1.509

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.659	Data appear Normal at 5% Significance Level
Theta Star	2.676	
nu star	5.268	

A-D Test Statistic	0.304	Nonparametric Statistics	
5% A-D Critical Value	0.661	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.661	Mean	1.253
5% K-S Critical Value	0.398	SD	0.867
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.411
		95% KM (t) UCL	1.963
Assuming Gamma Distribution		95% KM (z) UCL	1.93
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	2.1
Minimum	0.57	95% KM (bootstrap t) UCL	2.177
Maximum	3.8	95% KM (BCA) UCL	2.027
Mean	1.785	95% KM (Percentile Bootstrap) UCL	2.153
Median	1.804	95% KM (Chebyshev) UCL	3.046
SD	0.703	97.5% KM (Chebyshev) UCL	3.822
k star	5.687	99% KM (Chebyshev) UCL	5.346
Theta star	0.314		
Nu star	238.9	Potential UCLs to Use	
AppChi2	204.1	95% KM (t) UCL	1.963
95% Gamma Approximate UCL	2.089	95% KM (Percentile Bootstrap) UCL	2.153
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

4,4'-DDE

General Statistics			
Number of Valid Data	21	Number of Detected Data	13
Number of Distinct Detected Data	13	Number of Non-Detect Data	8
		Percent Non-Detects	38.10%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.41	Minimum Detected	-0.892
Maximum Detected	14	Maximum Detected	2.639
Mean of Detected	3.542	Mean of Detected	0.496
SD of Detected	4.489	SD of Detected	1.302
Minimum Non-Detect	3.6	Minimum Non-Detect	1.281
Maximum Non-Detect	4.1	Maximum Non-Detect	1.411

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	17
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	4
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	80.95%

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.744	Shapiro Wilk Test Statistic	0.872
5% Shapiro Wilk Critical Value	0.866	5% Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.902	Mean	0.543
SD	3.577	SD	1.011
95% DL/2 (t) UCL	4.249	95% H-Stat (DL/2) UCL	7.847
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	0.263
		SD in Log Scale	1.103
		Mean in Original Scale	2.578
		SD in Original Scale	3.712
		95% Percentile Bootstrap UCL	3.959
		95% BCA Bootstrap UCL	4.317
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.647	Data appear Lognormal at 5% Significance Level	
Theta Star	5.471		
nu star	16.83		
A-D Test Statistic	0.846	Nonparametric Statistics	
5% A-D Critical Value	0.769	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.769	Mean	2.601
5% K-S Critical Value	0.246	SD	3.647
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.848
		95% KM (t) UCL	4.064
Assuming Gamma Distribution		95% KM (z) UCL	3.997
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	4.05
Minimum	0.41	95% KM (bootstrap t) UCL	4.96
Maximum	14	95% KM (BCA) UCL	3.996
Mean	3.502	95% KM (Percentile Bootstrap) UCL	4.146
Median	2.725	95% KM (Chebyshev) UCL	6.299
SD	3.55	97.5% KM (Chebyshev) UCL	7.899
k star	1.012	99% KM (Chebyshev) UCL	11.04
Theta star	3.462		
Nu star	42.48	Potential UCLs to Use	
AppChi2	28.54	97.5% KM (Chebyshev) UCL	7.899
95% Gamma Approximate UCL	5.212		
95% Adjusted Gamma UCL	5.378		

Note: DL/2 is not a recommended method.

4,4'-DDT

General Statistics

Number of Valid Data	21	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	16
		Percent Non-Detects	76.19%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.79	Minimum Detected	-0.236
Maximum Detected	8	Maximum Detected	2.079
Mean of Detected	3.138	Mean of Detected	0.793
SD of Detected	2.96	SD of Detected	0.936
Minimum Non-Detect	3.5	Minimum Non-Detect	1.253
Maximum Non-Detect	4.3	Maximum Non-Detect	1.459

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	1
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	95.24%

Warning: There are only 5 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.846	Shapiro Wilk Test Statistic	0.964
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.185	Mean	0.672
SD	1.434	SD	0.427
95% DL/2 (t) UCL	2.725	95% H-Stat (DL/2) UCL	3.096

Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.338
		SD in Log Scale	0.603
		Mean in Original Scale	1.743
		SD in Original Scale	1.607
		95% Percentile Bootstrap UCL	2.362
		95% BCA Bootstrap UCL	2.676

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.763	Data appear Normal at 5% Significance Level	
Theta Star	4.113		
nu star	7.629		
A-D Test Statistic	0.272	Nonparametric Statistics	
5% A-D Critical Value	0.686	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.686	Mean	1.765
5% K-S Critical Value	0.361	SD	1.59
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.479
		95% KM (t) UCL	2.591
Assuming Gamma Distribution		95% KM (z) UCL	2.552
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	2.657
Minimum	0.79	95% KM (bootstrap t) UCL	2.807
Maximum	8	95% KM (BCA) UCL	2.653
Mean	2.849	95% KM (Percentile Bootstrap) UCL	2.948
Median	2.683	95% KM (Chebyshev) UCL	3.852
SD	1.659	97.5% KM (Chebyshev) UCL	4.755
k star	2.827	99% KM (Chebyshev) UCL	6.528
Theta star	1.008		
Nu star	118.7	Potential UCLs to Use	
AppChi2	94.56	95% KM (t) UCL	2.591
95% Gamma Approximate UCL	3.577	95% KM (Percentile Bootstrap) UCL	2.948
95% Adjusted Gamma UCL	3.641		

Note: DL/2 is not a recommended method.

Aluminum

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	15

Raw Statistics		Log-transformed Statistics	
Minimum	1400	Minimum of Log Data	7.244
Maximum	13000	Maximum of Log Data	9.473
Mean	7224	Mean of log Data	8.765
Median	6300	SD of log Data	0.541
SD	3293		
Coefficient of Variation	0.456		
Skewness	0.286		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.944	Shapiro Wilk Test Statistic	0.912
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	8463	95% H-UCL	9477
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	11309
95% Adjusted-CLT UCL	8454	97.5% Chebyshev (MVUE) UCL	13018
95% Modified-t UCL	8471	99% Chebyshev (MVUE) UCL	16375

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	3.75	Data appear Normal at 5% Significance Level	
Theta Star	1926		
MLE of Mean	7224		
MLE of Standard Deviation	3730		
nu star	157.5		
Approximate Chi Square Value (.05)	129.5	Nonparametric Statistics	
Adjusted Level of Significance	0.0383	95% CLT UCL	8406
Adjusted Chi Square Value	127.6	95% Jackknife UCL	8463
		95% Standard Bootstrap UCL	8360
Anderson-Darling Test Statistic	0.449	95% Bootstrap-t UCL	8580
Anderson-Darling 5% Critical Value	0.747	95% Hall's Bootstrap UCL	8391
Kolmogorov-Smirnov Test Statistic	0.132	95% Percentile Bootstrap UCL	8343
Kolmogorov-Smirnov 5% Critical Value	0.19	95% BCA Bootstrap UCL	8352
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	10356
		97.5% Chebyshev(Mean, Sd) UCL	11711
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	14373
95% Approximate Gamma UCL	8786		
95% Adjusted Gamma UCL	8921		

Potential UCL to Use			
		Use 95% Student's-t UCL	8463

Antimony

General Statistics

Number of Valid Data	21	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	18
		Percent Non-Detects	85.71%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.54	Minimum Detected	-0.616
Maximum Detected	0.72	Maximum Detected	-0.329
Mean of Detected	0.617	Mean of Detected	-0.491
SD of Detected	0.0929	SD of Detected	0.147
Minimum Non-Detect	2	Minimum Non-Detect	0.693
Maximum Non-Detect	2.5	Maximum Non-Detect	0.916

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 3 Distinct Detected Values in this data set
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.938	Shapiro Wilk Test Statistic	0.953
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.007	Mean	-0.0118
SD	0.176	SD	0.213
95% DL/2 (t) UCL	1.074	95% H-Stat (DL/2) UCL	1.475

Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-0.491
		SD in Log Scale	0.139
		Mean in Original Scale	0.618
		SD in Original Scale	0.0861
		95% Percentile Bootstrap UCL	0.649
		95% BCA Bootstrap UCL	0.651

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	N/A	Data appear Normal at 5% Significance Level	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	Nonparametric Statistics	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	0.617
5% K-S Critical Value	N/A	SD	0.0759
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.0536
		95% KM (t) UCL	0.709
Assuming Gamma Distribution		95% KM (z) UCL	0.705
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.727
Minimum	N/A	95% KM (bootstrap t) UCL	0.892
Maximum	N/A	95% KM (BCA) UCL	N/A
Mean	N/A	95% KM (Percentile Bootstrap) UCL	0.72
Median	N/A	95% KM (Chebyshev) UCL	0.85
SD	N/A	97.5% KM (Chebyshev) UCL	0.952
k star	N/A	99% KM (Chebyshev) UCL	1.15
Theta star	N/A		
Nu star	N/A	Potential UCLs to Use	
AppChi2	N/A	95% KM (t) UCL	0.709
95% Gamma Approximate UCL	N/A	95% KM (Percentile Bootstrap) UCL	0.72
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

Lead

General Statistics

Number of Valid Data	21	Number of Detected Data	20
Number of Distinct Detected Data	20	Number of Non-Detect Data	1
		Percent Non-Detects	4.76%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2.2	Minimum Detected	0.788
Maximum Detected	20	Maximum Detected	2.996
Mean of Detected	6.115	Mean of Detected	1.662
SD of Detected	3.906	SD of Detected	0.546
Minimum Non-Detect	1.7	Minimum Non-Detect	0.531
Maximum Non-Detect	1.7	Maximum Non-Detect	0.531

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.755	Shapiro Wilk Test Statistic	0.942
5% Shapiro Wilk Critical Value	0.905	5% Shapiro Wilk Critical Value	0.905
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	5.864	Mean	1.575
SD	3.977	SD	0.664
95% DL/2 (t) UCL	7.361	95% H-Stat (DL/2) UCL	7.712

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	5.806	Mean in Log Scale	1.599
SD	3.982	SD in Log Scale	0.606
95% MLE (t) UCL	7.305	Mean in Original Scale	5.89
95% MLE (Tiku) UCL	7.248	SD in Original Scale	3.944
		95% Percentile Bootstrap UCL	7.376
		95% BCA Bootstrap UCL	7.862

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	3.022	Data appear Gamma Distributed at 5% Significance Level
Theta Star	2.024	
nu star	120.9	
A-D Test Statistic	0.505	
5% A-D Critical Value	0.746	
K-S Test Statistic	0.746	
5% K-S Critical Value	0.195	
Data appear Gamma Distributed at 5% Significance Level		

Assuming Gamma Distribution		Nonparametric Statistics	
Gamma ROS Statistics using Extrapolated Data		Kaplan-Meier (KM) Method	
Minimum	1.00E-09	Mean	5.929
Maximum	20	SD	3.808
Mean	5.824	SE of Mean	0.853
Median	5.3	95% KM (t) UCL	7.399
SD	4.034	95% KM (z) UCL	7.331
k star	0.493	95% KM (jackknife) UCL	7.388
Theta star	11.8	95% KM (bootstrap t) UCL	8.315
Nu star	20.72	95% KM (BCA) UCL	7.362
AppChi2	11.38	95% KM (Percentile Bootstrap) UCL	7.457
95% Gamma Approximate UCL	10.6	95% KM (Chebyshev) UCL	9.645
95% Adjusted Gamma UCL	11.12	97.5% KM (Chebyshev) UCL	11.25
		99% KM (Chebyshev) UCL	14.41
		Potential UCLs to Use	
		95% KM (BCA) UCL	7.362

Note: DL/2 is not a recommended method.

Vanadium

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	18

Raw Statistics		Log-transformed Statistics	
Minimum	2.4	Minimum of Log Data	0.875
Maximum	24	Maximum of Log Data	3.178
Mean	12.17	Mean of log Data	2.37
Median	9.8	SD of log Data	0.553
SD	5.89		
Coefficient of Variation	0.484		
Skewness	0.428		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.945	Shapiro Wilk Test Statistic	0.932
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	14.39	95% H-UCL	16.05
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	19.17
95% Adjusted-CLT UCL	14.41	97.5% Chebyshev (MVUE) UCL	22.12
95% Modified-t UCL	14.41	99% Chebyshev (MVUE) UCL	27.9

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	3.492	Data appear Normal at 5% Significance Level	
Theta Star	3.486		
MLE of Mean	12.17		
MLE of Standard Deviation	6.514		
nu star	146.6		
Approximate Chi Square Value (.05)	119.7	Nonparametric Statistics	
Adjusted Level of Significance	0.0383	95% CLT UCL	14.29
Adjusted Chi Square Value	117.8	95% Jackknife UCL	14.39
		95% Standard Bootstrap UCL	14.2
Anderson-Darling Test Statistic	0.424	95% Bootstrap-t UCL	14.63
Anderson-Darling 5% Critical Value	0.747	95% Hall's Bootstrap UCL	14.45
Kolmogorov-Smirnov Test Statistic	0.151	95% Percentile Bootstrap UCL	14.25
Kolmogorov-Smirnov 5% Critical Value	0.19	95% BCA Bootstrap UCL	14.4
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	17.77
		97.5% Chebyshev(Mean, Sd) UCL	20.2
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	24.96
95% Approximate Gamma UCL	14.92		
95% Adjusted Gamma UCL	15.15		

Potential UCL to Use			
		Use 95% Student's-t UCL	14.39

Zinc

General Statistics

Number of Valid Data	21	Number of Detected Data	20
Number of Distinct Detected Data	16	Number of Non-Detect Data	1
		Percent Non-Detects	4.76%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	6.8	Minimum Detected	1.917
Maximum Detected	160	Maximum Detected	5.075
Mean of Detected	29.65	Mean of Detected	3.022
SD of Detected	35.05	SD of Detected	0.79
Minimum Non-Detect	2.5	Minimum Non-Detect	0.916
Maximum Non-Detect	2.5	Maximum Non-Detect	0.916

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.605	Shapiro Wilk Test Statistic	0.928
5% Shapiro Wilk Critical Value	0.905	5% Shapiro Wilk Critical Value	0.905
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	28.3	Mean	2.888
SD	34.72	SD	0.982
95% DL/2 (t) UCL	41.37	95% H-Stat (DL/2) UCL	45.45

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	27.38	Mean in Log Scale	2.931
SD	35.06	SD in Log Scale	0.876
95% MLE (t) UCL	40.57	Mean in Original Scale	28.38
95% MLE (Tiku) UCL	39.67	SD in Original Scale	34.65
		95% Percentile Bootstrap UCL	40.76
		95% BCA Bootstrap UCL	46.9

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.312	Data appear Lognormal at 5% Significance Level	
Theta Star	22.59		
nu star	52.49		

A-D Test Statistic	1.156	Nonparametric Statistics	
5% A-D Critical Value	0.758	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.758	Mean	28.56
5% K-S Critical Value	0.197	SD	33.69
Data not Gamma Distributed at 5% Significance Level		SE of Mean	7.543
		95% KM (t) UCL	41.57
Assuming Gamma Distribution		95% KM (z) UCL	40.97
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	41.54
Minimum	1.00E-09	95% KM (bootstrap t) UCL	57.35
Maximum	160	95% KM (BCA) UCL	42.67
Mean	28.24	95% KM (Percentile Bootstrap) UCL	41.35
Median	16	95% KM (Chebyshev) UCL	61.44
SD	34.77	97.5% KM (Chebyshev) UCL	75.67
k star	0.414	99% KM (Chebyshev) UCL	103.6
Theta star	68.19		
Nu star	17.39	Potential UCLs to Use	
AppChi2	8.953	95% KM (Chebyshev) UCL	61.44
95% Gamma Approximate UCL	54.86		
95% Adjusted Gamma UCL	57.85		

Note: DL/2 is not a recommended method.

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Projects\Mare Island\ECO\mercury.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Mercury

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	18

Raw Statistics		Log-transformed Statistics	
Minimum	0.0046	Minimum of Log Data	-5.382
Maximum	0.25	Maximum of Log Data	-1.386
Mean	0.0437	Mean of log Data	-3.491
Median	0.027	SD of log Data	0.82
SD	0.0518		
Coefficient of Variation	1.185		
Skewness	3.482		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.569	Shapiro Wilk Test Statistic	0.95
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	0.0632	95% H-UCL	0.0654
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.0773
95% Adjusted-CLT UCL	0.0715	97.5% Chebyshev (MVUE) UCL	0.0927
95% Modified-t UCL	0.0647	99% Chebyshev (MVUE) UCL	0.123

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.344	Data appear Lognormal at 5% Significance Level	
Theta Star	0.0325		
MLE of Mean	0.0437		
MLE of Standard Deviation	0.0377		
nu star	56.47		
Approximate Chi Square Value (.05)	40.2	Nonparametric Statistics	
Adjusted Level of Significance	0.0383	95% CLT UCL	0.0623
Adjusted Chi Square Value	39.14	95% Jackknife UCL	0.0632
		95% Standard Bootstrap UCL	0.0621
Anderson-Darling Test Statistic	0.966	95% Bootstrap-t UCL	0.0962
Anderson-Darling 5% Critical Value	0.758	95% Hall's Bootstrap UCL	0.14
Kolmogorov-Smirnov Test Statistic	0.216	95% Percentile Bootstrap UCL	0.0645
Kolmogorov-Smirnov 5% Critical Value	0.193	95% BCA Bootstrap UCL	0.0776
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	0.093
		97.5% Chebyshev(Mean, Sd) UCL	0.114
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	0.156
95% Approximate Gamma UCL	0.0614		
95% Adjusted Gamma UCL	0.0631		

Potential UCL to Use			
		Use 95% H-UCL	0.0654