National Aeronautics and
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January 29, 2013

Reply to Attn of: RE-13-012

New Mexico Environment Department
Attn: Mr. John E. Kieling, Chief
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Subject: NASA WSTF Periodic Monitoring Report (PMR) – 2012 Comprehensive Report

Enclosed is the NASA WSTF Comprehensive Periodic Monitoring Report (CPMR) for 2012. The 2012 comprehensive reporting period for this CPMR is November 1, 2011 and October 31, 2012. With this report and continuing with future PMRs, the reporting period for the treatment systems' operational and performance data and potentiometric surface data will be aligned with the groundwater well and systems' sampling dates. This shift will facilitate the evaluation of aquifer and contaminant plume response to systems' operation within the report.

The format for the CPMR has been modified to address NMED comments, facilitate review, and limit redundancy and report length. Detailed information for routine groundwater, Plume Front Treatment System (PFTS), and Mid-plume Interception and Treatment System (MPITS) monitoring is provided for the current analytical reporting period (August 1 through October 31, 2012). Indicator parameters, analytical data, logbooks and chains of custody, quality assurance reports, and cleanup level-exceedences included in previous 2012 quarterly PMRs are not repeated in the appendices.

Status of PFTS and MPITS operations and data evaluation are summarized for the period from November 1, 2011 through October 31, 2012 in this report. This CPMR also includes a groundwater plume capture evaluation for the same period, based on the EPA, 2008 Project Report "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems." Responses to any NMED comments received regarding the previous PMR are addressed in Section 8.0 of the report.

This reporting format includes an Executive Summary that provides important events and observations as Enclosure 1, a bound paper copy of the main body of the report (pages i-94) as Enclosure 2, a DVD-ROM containing the entire report and historical analytical database as Enclosure 3, and a CD containing all of the analytical lab reports for the year as Enclosure 4.

Routine groundwater monitoring at WSTF continues in accordance with NMED-approved monitoring plans. Groundwater monitoring data indicate that the WSTF contaminant plume is relatively stable in nature and extent at this time. The potential for continued westward

migration of the contaminant plume prompted NASA to develop and install the PFTS and the MPITS as interim measures corrective actions. Comprehensive monitoring of both treatment systems indicates there were no exceedences of Discharge Plan 1255 discharge limits in the systems' effluent.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

for Radel Bunker-Farrah
Chief, Environmental Office

4 Enclosures

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National Aeronautics and
Space Administration

NASA WSTF Periodic Monitoring Report

2012 Comprehensive Annual Report

2012 Comprehensive Reporting Period: November 1, 2011 through October 31, 2012

Analytical Reporting Period: August 1, 2012 through October 31, 2012

Report Deadline: January 31, 2013

NM8800019434
NASA Johnson Space Center White Sands Test Facility
12600 NASA Road Las Cruces, New Mexico 88012

NASA WSTF Periodic Monitoring Report

2012 Comprehensive Annual Report

2012 Comprehensive Reporting Period: November 1, 2011 through October 31, 2012

Report Deadline: January 31, 2013

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

for Radel Bunker-Farrah

Chief, NASA Environmental Office

1/29/13

Date

Executive Summary

Groundwater monitoring is performed at the National Aeronautics and Space Administration (NASA) White Sands Test Facility (WSTF) to meet regulatory requirements, monitor the effectiveness of corrective actions, develop additional corrective actions, and provide environmental data for a variety of investigations. This Comprehensive Periodic Monitoring Report (PMR) includes the following:

- Description of the purpose, scope, detailed information, and results of groundwater monitoring conducted at WSTF between November 1, 2011 and October 31, 2012.
- Discussion of applicable cleanup levels and comparisons of those cleanup levels to current groundwater contaminant concentrations.
- Detailed information related to the operation, maintenance, and status of the Plume Front Treatment System (PFTS) and the Mid-plume Interception and Treatment System (MPITS), NASA's presumptive remedy interim measures corrective actions for groundwater.
- Information related to the development and implementation of source area hazardous waste investigations and, where applicable, related corrective actions.
- Specific analytical results received from contracted analytical laboratories that correspond with sampling events performed between August 1, 2012 and October 31, 2012.
- Evaluations of groundwater and treatment systems' monitoring results and chemical analytical data as it relates to groundwater remediation effectiveness.
- Results of groundwater and remediation system monitoring analytical data presented in this report and the subsequent evaluations and interpretations of those data, as well as conclusions and recommendations based upon those results.
- Evaluation of groundwater plume capture for the time period between November 1, 2011 and October 31, 2012, based on "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems" (EPA, 2008).

Analytical data included in this report correspond to groundwater monitoring well, PFTS, and MPITS samples collected between August 1, 2012 and October 31, 2012. The data were processed through the WSTF data management system during the fourth calendar quarter of 2012 (October 1, 2012 through December 31, 2012). This report also refers to analytical data processed during the preceding three calendar quarters of 2012 and provided to NMED in the three previous quarterly 2012 PMRs (NASA, 2012[j]).

A variety of data elements including PFTS and MPITS operational and performance data, potentiometric surface maps, and plume iso-concentration maps are used to evaluate the effects of the PFTS and MPITS on the WSTF groundwater contaminant plume. Previous PMRs reported this information by the calendar quarter, resulting in a two-month offset between the system operational data and the analytical reporting period (sampling dates). However, beginning with this report, the reporting period for the systems' operational and performance data and potentiometric data will be aligned with the analytical reporting period. Thus, the analytical data presented directly corresponds to groundwater elevations and system operations.

An evaluation of the PFTS data elements indicates that the PFTS is currently achieving plume capture and contaminant extraction in the Plume Front area. Data elements related to MPITS operation are presented and contaminant mass removal for both systems is included in this report.

NASA will continue groundwater monitoring in accordance with the Groundwater Monitoring Plan (GMP) (NASA, 2012[o]). Many associated activities are underway including planning and preparation for the installation of additional groundwater monitoring wells.

NASA's groundwater monitoring objectives are addressed in more detail in the applicable sections of this report. NASA recommends that groundwater corrective action operations at the PFTS and MPITS continue as scheduled. NASA recommends that submittal dates for the source area investigations remain as listed in the Hazardous Waste Permit (NMED, 2009) with the exception of the 200 Area and 400 Area investigations. NMED and NASA agreed to postpone the 400 Area investigation in order to prioritize work at the 200 Area. NASA will advise NMED should further discussions with NMED regarding the prioritization and approach to scheduled source area investigations be required.

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List of Acronyms and Abbreviations

bgs	Below ground surface
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
COC	Contaminant of concern
DMN	N-Nitrodimethylamine
DP	Discharge plan
DWP	Drilling work plan
EPA	Environmental Protection Agency
ETU	Evaporation treatment unit
g	Gram
GMP	Groundwater Monitoring Plan
gpm	Gallons per minute
gpm/ft	Gallons per minute per foot
GSA	Gardner Spring Arroyo
h	Hour(s)
HIS	Historical information summary
ID	Identification
IDW	Investigation-derived waste
JER	Jornada Experimental Range
JSC	Johnson Space Center
MCL	Maximum contaminant level
MDL	Method detection limit
MPCA	Mid-plume Constriction Area
MPE	Mid-plume extraction
MPITS	Mid-plume Interception and Treatment System
MW	Monitoring well
NASA	National Aeronautics and Space Administration
ND	Not detected
NMED	New Mexico Environment Department
NDMA	N-Nitrosodimethylamine
NMAC	New Mexico Administrative Code
NOD	Notice of deficiency
PCE	Tetrachloroethene
PFE	Plume Front extraction
PFI	Plume Front injection
PFTS	Plume Front Treatment System
PFTSMP	Plume Front Treatment System Monitoring Plan
PLC	Programmable logic controller
PID	Portable, integral, derivative
PMR	Periodic Monitoring Report
ppb	Parts per billion
ppt	Parts per trillion
Q	Quarter
QA	Quality assurance
QC	Quality control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation report

scfm	Standard cubic feet per minute
SJMB	Southern Jornada del Muerto Basin
T-C	Time - concentration
TCE	Trichloroethene
THF	Tetrahydrofuran
TP	Toxic pollutant
UV	Ultraviolet
VOC	Volatile organic compound
WSTF	NASA Johnson Space Center White Sands Test Facility
WQCC	Water Quality Control Commission

1.0 Introduction

National Aeronautics and Space Administration (NASA) White Sands Test Facility (WSTF) is located at 12600 NASA Road near Las Cruces, New Mexico. WSTF (U.S. Environmental Protection Agency [EPA] and New Mexico Environment Department [NMED] Facility Identification Number NM8800019434) currently operates as a field test installation under the NASA Lyndon B. Johnson Space Center (JSC) in Houston, Texas. Figure 1.1 is a map showing the location of WSTF in southern Doña Ana County.

The facility provides testing services to NASA for the United States Space Program and support for the Department of Defense, Department of Energy, private industry, and foreign government agencies. The primary WSTF mission is to develop, qualify, and test the limits of spacecraft propulsion systems and subsystems. The installation operates several laboratory facilities that conduct simulated use tests for the space station and materials, as well as compatibility testing.

WSTF historical operations resulted in a groundwater plume that requires extensive investigation activities and associated corrective actions. NASA developed and implemented a strategy for remediating contaminated WSTF groundwater in 1996, based on an analysis of potential risk to human health and the environment and hydrogeological characteristics of the site. The strategy involves a sequential three-phase approach: 1) to stabilize the leading edge of the plume (the Plume Front area) in the alluvial aquifer through the implementation of the Plume Front Treatment System (PFTS); 2) to intercept the high-concentration portion of the plume within fractured bedrock in the Mid-plume area through the implementation of the Mid-plume Interception and Treatment System (MPITS); and 3) to investigate contaminant source areas and remediate, as appropriate, any continuing sources of contamination detected during the investigation.

Environmental compliance activities at WSTF are extensive and encompass all environmental media. There are currently more than 220 groundwater monitoring locations (conventional and multi-port zones) in use at WSTF. Figure 1.2 provides a map of the facility and shows the locations of groundwater monitoring wells and components of the PFTS and the MPITS.

Routine groundwater monitoring was performed in accordance with the November 2009 NMED Hazardous Waste Permit (Permit; NMED, 2009), and the Groundwater Monitoring Plan (GMP; NASA, 2012[o]).

2.0 Scope of Activities

Please note that the reporting period for this report and for future Periodic Monitoring Reports (PMRs) has been adjusted to align the dates of groundwater and remediation systems sampling event analytical results with remediation systems operational data. Although this alignment results in a two-month lag between reported data and report development, it allows for direct correlation between analytical results and remediation systems' performance and facilitates the interpretation of the effects of both systems on the plume. Activity updates that are not associated with or reliant upon analytical data will not exhibit this lag time.

NASA routinely collects groundwater and treatment system samples for the analysis of volatile organic compounds (VOCs), N-nitrosodimethylamine (NDMA), and several metals. The GMP identifies the specific samples that are collected at each groundwater monitoring well (NASA, 2012[o]). The Remediation System Monitoring Plan Annual Update (RSMP) (NASA, 2012[q]) provides sampling requirements for the PFTS and the MPITS. Other groundwater data necessary for plume capture evaluation are also collected in association with these sampling events.

Groundwater quality data, collectively referred to as indicator parameters, are collected during each sampling event. Indicator parameters may include temperature, pH, conductivity, turbidity, and (at wells sampled using low-flow procedures) oxidation-reduction potential and dissolved oxygen. Depth to groundwater is also measured at each conventional monitoring well during the sampling event. Indicator parameters associated with the August 1 through October 31, 2012 sampling events are discussed in Section 4.2.2 and included in Appendix A as follows: monitoring wells – Appendix A.1; PFTS – Appendix A.3; and MPITS – Appendix A.5.

Chemical analytical data (detections only) for sampling events between August 1 and October 31, 2012 are discussed in the following sections: groundwater monitoring wells – Section 4.3; PFTS Section – 5.1.5; and MPITS – Section 5.2.6. Data are also included in the associated appendices; Appendix A.2 (groundwater monitoring wells), Appendix A.4 (PFTS), and Appendix A.6 (MPITS).

Field data and the recording of other specific sampling-related details associated with each sampling event are discussed in Section 4.0 of this report. Logbook entries and internal chain-of-custody forms from sampling events included in the report are located in Appendix B.1. Appendix B.2 contains the external chains of custody associated with the sampling events. Appendix C provides internal monthly WSTF Quality Assurance Reports for August through October 2012. Appendix D includes the comparison of analytical results from the groundwater monitoring wells (Appendix D.1), PFTS (Appendix D.2), and MPITS (Appendix D.3) to cleanup levels. Only exceedences are included in these appendices.

A comprehensive evaluation of contaminant plume capture for the 12-month period from November 1, 2011 to October 31, 2012 can be found in Section 6.3. Plume capture evaluation is based on six steps described in “A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems” (EPA, 2008). Treatment system operational data for the 12 month period between November 1, 2011 and October 31, 2012 are also included.

During the course of groundwater, PFTS, MPITS, and other related sampling, decontamination water and purged groundwater is produced. This investigation-derived waste (IDW) is managed in accordance with the GMP, which specifies that IDW will be treated by the MPITS or disposed of in the evaporation tank unit (ETU), an NMED-permitted waste treatment unit (NASA, 2012[o]).

This report provides details for groundwater (routine and related to corrective actions), PFTS, and MPITS samples collected between August 1, 2012 and October 31, 2012. A total of 96 groundwater sampling events were performed at groundwater monitoring wells or zones, seven PFTS sampling locations (13 samples), and seven MPITS sampling locations (11 samples). Specific monitoring activities for routine groundwater sampling are discussed in Section 4.0. The sampling activity at each monitoring well, well zone, or other sampling point is identified as a specific sampling event. This report includes and discusses results from 120 sampling events.

While the report provides a comprehensive plume evaluation for the period from November 1, 2011 through October 31, 2012, analytical data, indicator parameters, chains of custody and associated logbook entries are provided herein for the period from August 1 through October 31, 2012. Refer to 2012 Quarterly PMRs previously provided to NMED for the analytical data, indicator parameters, chains of custody and associated logbook entries from November 1, 2011 through January 31, 2012 (First Quarter 2012), February 1 through April 30, 2012 (Second Quarter 2012), and May 1 through July 31, 2012 (Third Quarter 2012) (NASA, 2012[j]). A total of 456 groundwater sampling events were performed at groundwater monitoring wells or zones, 45 at PFTS locations, and 38 at MPITS locations during the comprehensive reporting period (November 1, 2011 through October 31, 2012).

The PFTS and MPITS were both operational during the 2012 comprehensive reporting period (November 1, 2011 – October 31, 2012). Specific information related to operation, maintenance, and monitoring of the PFTS is included in Section 5.1 of this report. Specific information on the MPITS and related activities is provided in Section 5.2. Environmental restoration activities of potential interest are summarized in Section 6.1.

3.0 Cleanup Levels

Cleanup levels for all hazardous constituents detected at WSTF were summarized in the GMP update for 2012 and approved by NMED on August 8, 2012 (NASA, 2012[o]). This document outlines the process for developing cleanup levels outlined in Attachment 15 of the Permit (NMED, 2009). It must be noted that the EPA Regional Screening Levels for many constituents changed with the November 2012 update, in part due to the inclusion of dermal exposure routes. NASA has not incorporated these recent changes into cleanup levels presented in this report for groundwater analytical results through October 2012. Cleanup levels will be reviewed and updated according to Attachment 15 for the first quarter 2013 PMR to be submitted to NMED in April 2013. In addition, the 2013 GMP update, scheduled for submittal to NMED in April 2013, will include revised cleanup levels.

3.1 Discharge Limits for PFTS and MPITS Effluent

The Groundwater Discharge Permit Renewal and Modification, DP-1255 (DP-1255; NMED, 2011[e]) provides specific requirements for the discharge of groundwater treated by the PFTS and MPITS. Among these requirements are discharge limits for NDMA, trichloroethene (TCE), tetrachloroethene (PCE), and chloroform. Table 3.1 includes the updated DP-1255 discharge limits and cleanup levels for WSTF contaminants of concern (COCs). Freon®[1] 113, historically considered a hazardous constituent, was reassessed in accordance with the process described in the Permit. This reevaluation resulted in the removal of Freon 113 from the list of WSTF hazardous constituents. In addition, NMED did not establish a discharge limit for Freon 113 in DP-1255. However, because it was used in large quantities at WSTF and is prevalent throughout the groundwater contaminant plume, NASA continues to monitor Freon 113 as an indicator of plume behavior and extent.

3.2 New Detections

The GMP requires that NASA report new detections of hazardous constituents in groundwater (NASA, 2012 [o]), and in February 2011, NASA added several new constituents to the list of analytes at certain WSTF groundwater wells. As a result, a number of new detections have been reported in sampling results at those wells. Most of the new detections are consistent with regional groundwater chemistry and require no action beyond continued monitoring and reporting. New detections reported in sampling events between August 1 and October 31, 2012 are provided in Table 3.2.

The GMP requires detection monitoring at specific compliance points downgradient of the closures and operational areas of the facility. The wells specified include BLM-3-182 (for the 100 and 600 areas), 200-B-240 and 200-SG-1 (for the 200 area), 300-A-120 (for the 300 area), and 400-C-118 (for the 400 area). Detection monitoring was completed at BLM-3-128, 200-B-240, 300-C-128 and 400-C-118 during the analytical reporting period. There were no new detections of hazardous constituents reported for these

[1]The trade name Freon® is a registered trademark of E.I. du Pont de Nemours & Company Corporation (DuPont).

events. New detections that were consistent with regional groundwater chemistry and required no action beyond continued monitoring and reporting were included in Table 3.2

In addition to the inorganic constituents that are characteristic of regional groundwater, NASA observed several detections that require further evaluation. The hazardous constituents in Table 3.3 have not been previously detected at the wells listed in the table. As specified in Section 3.3 of the GMP, NASA has scheduled resampling of these wells to confirm these detections. The table also includes several new detections that were reported in a previous PMR. The scheduled resampling for these analytes has not yet occurred.

Table 3.4 lists the resolution of some of the unconfirmed detections reported in previous PMRs. The wells were resampled as required and the new detections were resolved as indicated.

4.0 Routine Groundwater Monitoring

A variety of groundwater monitoring data are collected from monitoring wells and the groundwater treatment systems during routine WSTF operations. These data consist of measured groundwater elevations, calculated groundwater piezometric elevations, the graphical representations of groundwater elevation generated from these data, and groundwater indicator parameters (field water quality measurements).

Data presented in this section, including groundwater elevations and indicator parameters, were collected from groundwater monitoring locations between August 1 and October 31, 2012. Groundwater chemical analytical data, while not considered monitoring data in some contexts, are also presented in this section.

These data are reported to NMED on a quarterly basis. To limit redundancy and report length, the data included in Section 4.0 spans the analytical reporting period (August 1 through October 31, 2012). The three previous 2012 quarterly PMRs (first through third quarters) included analytical data processed through the WSTF data management system during those calendar quarters (NASA, 2012[j]). Thus, with this report, all analytical data corresponding to the 2012 comprehensive reporting period (November 1, 2011 through October 31, 2012 have been provided to NMED.

4.1 Current Status and Monitoring Performed

NASA continues to monitor groundwater to maintain a complete understanding of plume characteristics, contaminant migration, and the overall impact of ongoing corrective action efforts. This section discusses the results of routine groundwater samples collected from groundwater monitoring wells or zones between August 1, 2012 and October 31, 2012 and processed by the WSTF data management system during the fourth calendar quarter of 2012. Table 4.1 provides a list of the groundwater monitoring wells and associated sampling events for which analytical data are presented in this report.

4.2 Groundwater Monitoring Results

This section provides the basic results of groundwater monitoring, including groundwater elevations and groundwater quality measurements (indicator parameters).

4.2.1 Groundwater Elevations

Groundwater elevations in conventional monitoring wells at WSTF are determined by manually measuring the water level each time the well is sampled. Piezometric elevations within Westbay®[2] multi-port wells are calculated based on the groundwater formation pressures measured at target monitoring zones prior to sampling. Groundwater elevations are also collected monthly at wells located in the Plume Front and Mid-plume areas to document changes in the potentiometric surface in these areas that may be caused by PFTS and MPITS operation.

Groundwater elevations from multi-port wells in the Plume Front and Mid-plume are typically calculated from formation pressures collected during the same week as monthly conventional well measurements in those areas. Groundwater elevations from Westbay zones are calculated from pressure data collected at the uppermost sampling ports (proximal to the water table) using Westbay pressure measurement equipment. Potentiometric data from multi-port wells in other areas of the site were collected during the most recent formation pressure profile of that well, which usually occurred in conjunction with the latest sampling event (through the end of the analytical reporting period). Groundwater elevations are subject to rigorous quality review prior to their use in data presentations. Anomalous or erroneous values are flagged as unusable and excluded from the dataset used to generate graphical presentations of groundwater elevation.

Figure 4.1 was developed by hand-contouring the most recent water level dataset that corresponds to the analytical reporting period. These data were collected between October 31, 2012 and November 7, 2012. This figure identifies all active WSTF groundwater monitoring wells and presents the generalized groundwater elevations and groundwater flow directions for the entire facility. Groundwater elevation contours indicate a generally westward groundwater flow direction across WSTF. There is a prominent transition in hydraulic gradient from the WSTF pediment area within and east of the Western Boundary Fault Zone to the relatively flat Southern Jornada del Muerto Basin (SJMB) of the WSTF Plume Front area. With the exception of the 4,060 ft contour around the Plume Front Injection (PFI) wells, no contours are depicted in the Plume Front area because the contour interval (40 ft) exceeds the range (approximately 10 ft) of groundwater elevations in that area. Plume Front and Mid-plume groundwater elevations are presented in Section 6.3.1 of this report.

4.2.2 Groundwater Quality Measurements (Indicator Parameters)

Groundwater indicator parameters are obtained from field quality measurements performed during each sampling event. The groundwater indicator parameters associated with the groundwater monitoring well sampling events included in this report (see Table 4.1) are provided in Appendix A.1.

Indicator parameters and other specific sampling-related details associated with each monitor well sampling event are recorded by technicians in the field sampling record. Appendix B.1 provides the field sampling records and field/internal chains of custody for each sampling event performed between August 1 and October 31, 2012 and Appendix B.2 provides the laboratory chains of custody for groundwater samples collected during these sampling events.

[2] Westbay® is a registered trademark of Westbay Instruments Inc.

4.3 Groundwater Chemical Analytical Results

Table 4.1 lists groundwater monitoring wells sampled between August 1 and October 31, 2012. These groundwater chemical analytical data were processed through the WSTF data management system during the fourth quarter of 2012 and are included in Appendix A.2

NASA has included a copy of the historical analytical database with this report. The database is provided to facilitate NMED's review of groundwater analytical data provided in this report and to allow for the historical comparisons required by the Permit (NMED, 2009). NASA's historical database is an operational tool developed, maintained, and used by NASA environmental staff to manage and archive environmental data. It is not intended to serve specifically as a regulatory reporting mechanism. NASA reserves the right to implement changes to the database that are deemed appropriate to meet the internal environmental data management requirements of WSTF. Any changes will not affect the integrity of historical analytical data.

Per a recent NMED request (NMED, 2013), all laboratory analytical reports for the period between November 1, 2011 and October 31, 2012 are also provided electronically (.pdf format) with this submittal. The reports are organized by quarter and align with the date range for sampling events reported in each, therefore: first quarter 2012 (11/1/2011 – 1/31/2012); second quarter 2012 (2/1/2012 – 4/30/2012); third quarter 2012 (5/1/2012 – 7/31/2012); and fourth quarter 2012 (8/1/2012 – 10/31/2012). In the future, NASA will provide laboratory reports associated with data presented in each PMR.

A summary of internal quality assurance (QA) methods applied to groundwater chemical analytical data is provided in Appendix C. The reports included in Appendix C include analytical results from sampling events performed between August 1 and October 31, 2012.

The maximum results from chemical analytical data presented in this report were used to develop manually contoured plume iso-concentration (contour) maps for NDMA (Figure 4.2), TCE (Figure 4.3), PCE (Figure 4.4), Freon 11 (Figure 4.5), and Freon 113 (Figure 4.6). Because site-wide chloroform concentrations are below the cleanup level of 1.9 µg/L, no contour map was prepared.

5.0 Treatment System Monitoring

This section provides pertinent information related to the NASA WSTF groundwater remediation systems. The scope, operational status, and performance of the PFTS and MPITS systems pertinent to the plume capture evaluation are discussed for the period from November 1, 2011 through October 31, 2012 in this section. An evaluation of the effectiveness of the treatment systems is provided in the summary of this report. Analytical data for both systems are provided for the analytical reporting period (August 1 through October 31, 2012). Analytical data from sampling performed at the groundwater remediation systems during previous reporting periods were provided in the three previous quarterly 2012 PMRs (NASA, 2012[j]).

5.1 Plume Front Treatment System

The first phase of NASA's groundwater remediation strategy involved the implementation of the PFTS. This system is an interim measures presumptive remedy located at the leading edge of the contaminant plume that was designed to stabilize plume migration. The PFTS is a pump and treat groundwater remediation system that utilizes air stripping and ultraviolet (UV) photolysis to remove VOCs and nitrosamines from the groundwater. This section provides information related to PFTS operation, performance, capabilities, and monitoring for the 2012 comprehensive reporting period between November 1, 2011 and October 31, 2012. Chemical analytical data are also provided from PFTS sampling

events for the analytical reporting period (August 1 through October 31, 2012) processed through the WSTF data management system during the fourth quarter of 2012.

5.1.1 PFTS Operational Status

The monthly PFTS operational status for the 2012 comprehensive reporting period from November 1, 2011 through October 31, 2012 is summarized in Table 5.1. More detail has been reported in Environmental Activity Reports submitted on a monthly basis to the NMED Hazardous Waste Bureau. Power fluctuations and outages, component/system failures and repair, and scheduled maintenance activities accounted for the majority of system shutdowns.

5.1.2 PFTS Performance

This section summarizes the performance of the air strippers and UV reactor for the reporting period. Operational status of the extraction and injection wells and other system details are also presented and discussed. A variety of parameters are monitored regularly to ensure that the PFTS is functioning properly and effectively treating WSTF groundwater COCs.

5.1.2.1 PFTS Air Stripper Capabilities and Performance

The PFTS consists, in part, of two sieve tray air strippers, designed to operate in a parallel configuration, to treat VOCs of concern at WSTF. A single air stripper is used when the system is operating at half design flow or less. Both air strippers are used when the system runs at higher than half of the design flow capacity. The air strippers must maintain an air flow rate between 3,600 standard cubic feet per minute (scfm) and 4,680 scfm to ensure treatment of VOCs (per manufacturer's recommendations). Table 5.2 provides the VOC performance data for the air strippers during the 2012 comprehensive reporting period. As indicated by data referenced in Section 5.1.5 of this report, DP-1255 discharge limits and VOC cleanup levels were achieved throughout the 2012 comprehensive reporting period.

5.1.2.2 PFTS UV Reactor Capabilities and Performance

The PFTS includes a 12-lamp Rayox®[3] UV reactor that uses UV photolysis to destroy semi-volatile organics (specifically NDMA) in groundwater. The UV reactor is designed to operate at a minimum hydraulic flow rate of 200 gallons per minute (gpm) and a maximum flow rate of 3,000 gpm. Table 5.3 provides the NDMA treatment performance data for the UV reactor during the 2012 comprehensive reporting period. As indicated by these data, system design parameters and cleanup levels for NDMA were achieved during the reporting period.

5.1.3 PFTS Extraction and Injection Well Performance

Extraction and injection well performance for the reporting period is summarized below using applicable volumetric flow rates, extraction well drawdown, and water levels and injection well specific capacities to ensure that the wells are properly functioning.

[3] Rayox® is a registered trademark of Calgon Carbon Corporation.

5.1.3.1 Extraction and Injection Well Flow Rates and Specific Capacities

Figure 5.1 compares the overall average flow rates (considering both idle and active periods) and average operational flow rates (considering only active periods) to the design flow rate for each PFE well for the 2012 comprehensive reporting period from November 1, 2011 through October 31, 2012. Figure 5.2 shows PFI well flow rates and averages for the 12-month period.

Relatively low overall average flow rates for both PFE and PFI wells (Figures 5.1 and 5.2) reflect PFTS reduced flows and inactivity prior to and during PFI well rehabilitation during the second quarter of 2012. In addition, well PFE-7 was taken off line in October 2012, due to reduced contaminant concentrations in its discharge. It will be reactivated periodically to monitor changes, if any, in the concentration of COCs at that location. Well PFE-5 remains offline.

The specific capacity of a well is defined as the production rate per unit of drawdown or mounding (gallons per minute per foot [gpm/ft]), and varies with the operational flow rate. Specific capacities and flow rates are tracked daily for both injection and extraction wells during system operation. Comparisons of specific capacities for the 2012 comprehensive reporting period are provided in Table 5.4.

Generally, PFE well specific capacities are significantly higher than PFI well specific capacities, due to the differences between extraction and injection well hydraulics. During this reporting period, all active extraction wells operated within their usual production capacity ranges.

The PFI well specific capacities are expressed as gpm/ft of mounding. During this reporting period, the specific injection capacities of the PFI wells were within their typical operational ranges.

5.1.3.2 Injection Well Water Level Variations, Well Monitoring, and Maintenance

Water levels at the four PFI wells are monitored on a continual basis using dedicated pressure transducers that record at five-minute intervals. Specific well capacities are tracked daily. Periodic backflushing of the injection wells is performed when the wells exhibit rising water levels associated with decreased well capacities. Following the end of PFI well rehabilitation in June 2012, an updated backflushing schedule was established and has enabled efficient operation of the four PFI wells.

5.1.4 PFTS Monitoring Results

System monitoring involves the evaluation of a variety of data collected during routine PFTS sampling-related operations. Groundwater monitoring data consist of measured groundwater elevations, calculated groundwater piezometric elevations, graphical representations of groundwater elevation generated from the data (refer to section 6.3.3), and groundwater indicator parameters (water quality field measurements). The data presented in this section were collected from PFTS monitoring locations from August 1through October 31, 2012. Groundwater chemical analytical data from PFTS sampling events, while not considered monitoring data in some contexts, are also presented in this section.

5.1.4.1 PFTS Monitoring Events

This section and associated appendices discuss the results of routine PFTS samples processed through the WSTF data management system during the fourth calendar quarter of 2012. Groundwater samples processed and included in this report were collected at seven PFTS monitoring locations between August 1 and October 31, 2012. Table 4.1 provides a list of the PFTS monitoring locations and sampling event dates for which analytical data are presented in this report. A summary of internal QA methods applied to groundwater chemical analytical data is provided in Appendix C.

5.1.4.2 Groundwater Quality Measurements (Indicator Parameters)

Groundwater indicator parameters and other specific sampling-related details associated with each sampling event are recorded by the field technicians in the field sampling record. The groundwater indicator parameters measured at each PFTS sampling event in Table 4.1 are provided in Appendix A.3. Appendix B.1 provides the field sampling records and internal chains of custody and Appendix B.2 includes laboratory chains of custody for each of the PFTS sampling events discussed in this section.

5.1.5 PFTS Chemical Analytical Results

This section and associated appendices provide the groundwater chemical analytical data processed through the WSTF data management system during the fourth calendar quarter. Appendix A.4 provides the analytical results (detections only) from PFTS sampling events performed between August 1, 2012 and October 31, 2012.

5.1.6 PFTS Mass Removal

Table 5.5 uses available analytical data to summarize the mass of the various WSTF COCs removed by the PFTS between November 1, 2011 and October 31, 2012. The PFTS removed more than 95 kg of TCE, 76 kg of Freon 11, 3.7 kg of PCE, and over 362 g of NDMA between November 1, 2011 and October 31, 2012. Contaminant mass removal was calculated as follows:

Mass Removal =
Total Volume Treated x (Average Influent Concentration – Average Effluent Concentration)

5.1.7 PFTS Operation Costs

Table 5.6 presents the operation costs of the PFTS for the 12 months from November 2011 through October 2012. The table summarizes the cost of the labor and materials for operation and maintenance of the PFTS, and includes the electrical costs associated with system operation.

5.2 Mid-plume Interception and Treatment System

The MPITS is the second phase of NASA's overall groundwater plume remediation strategy. This interim measure has been designed to intercept high COC concentrations within the fractured bedrock of the Mid-plume constriction area (MPCA). The MPITS operational status for the 2012 comprehensive reporting period (November 1, 2011 through October 31, 2012) and related activities are summarized below. More detail has been reported in the Environmental Activity reports, submitted on a monthly basis to the NMED Hazardous Waste Bureau. Chemical analytical data from PFTS sampling events processed during the fourth quarter of 2012 is provided.

5.2.1 MPITS Operational Status

The operational status of the MPITS is summarized by month in Table 5.7. More detail has been reported in the Monthly Environmental Activity Reports submitted to the NMED Hazardous Waste Bureau. Power fluctuations and outages, component/system failures and repair, and scheduled maintenance activities accounted for the majority of shutdowns during the year. During the reporting period the MPITS remained operational 95% of the time.

5.2.1.1 MPITS Reconfiguration and Maintenance

During the first two weeks in September 2012, wells MPE-8 and MPE-9 were mechanically rehabilitated and a new set of extraction pumps were installed in all of the MPE wells. These pumps are of lower capacity than those previously installed, and allow for continuous, steady-state pumping. Wells MPE-8 and MPE-9 are operating in start-up mode and operating intermittently.

5.2.2 MPITS Pilot Scale Bioreactor

NASA partnered with Envirogen Technologies to install a pilot scale bioreactor in the MPITS building to continue studying the feasibility for bioremediation of contaminated groundwater at WSTF. The fluidized bed bioreactor contains a bed of activated carbon, in which an aerobic microorganism is grown. NASA began feeding contaminated groundwater (post-VOC removal) to the bioreactor at approximately three gpm in December 2011. Full adsorption of NDMA to the activated carbon was expected to occur in four to six weeks, after which the fluidized bed bioreactor would be inoculated with the microorganism. Bioreactor effluent is returned to the MPITS to ensure full treatment.

Envirogen Technologies determined that the fluidization of the bioreactor's activated carbon bed was not proceeding as planned and brought a technician on site for two days in January 2012 to troubleshoot the problem. The Envirogen technician determined that the recirculation pump was not operating properly and the bioreactor was taken offline while a replacement pump was acquired and installed. Envirogen replaced the reactor's recirculation pump and propane injector in February and performed maintenance of the bioreactor in March to prepare for microbial inoculation of the system.

The propane and oxygen systems were completed and tested in May 2012. On May 30, the fluidized bed was inoculated with microorganisms and bioreactor operation was initiated. Envirogen operated the bioreactor for 12 days prior to the introduction of NDMA-contaminated groundwater. The bioreactor operated at a flow rate of approximately 0.7 gpm through July. Preliminary data indicated a significant reduction in the concentration of NDMA in the treated groundwater.

The flow to the bioreactor was increased from 0.7 gallons per minute to 1.4 gallons per minute in August, from 1.4 gpm to 2.2 gpm in September, and from 2.2 to 2.4 gpm in October 2012.Analytical data continued to indicate a significant reduction in the concentration of NDMA in the treated groundwater; with some effluent concentrations less than 10 ppt. Envirogen plans to continue testing of the bioreactor through the first quarter of 2013 using various combinations of groundwater flow rate and nutrient dosage.

5.2.3 MPITS Performance

This section summarizes the MPITS air stripper and UV reactor performance during the 2012 comprehensive reporting period (November 1, 2011 through October 31, 2012). Operational status and other details may also be presented or discussed. A variety of parameters are monitored regularly to ensure that the MPITS is functioning properly and effectively treating the WSTF COCs.

5.2.3.1 Air Stripper Capabilities and Performance

The MPITS consists of a single sieve tray air stripper designed to operate at constant air flow rate for design flows between 20 gpm and 125 gpm to treat VOCs of concern in WSTF groundwater. The air stripper must maintain a minimum air flow rate of 900 scfm to ensure treatment of VOCs. Table 5.8 provides the VOC performance data for the air stripper based on MPITS analytical for the 2012 comprehensive reporting period (November 1, 2011 through October 31, 2012). As indicated by these

data, system design parameters and discharge limits for the VOCs were achieved during the reporting period.

5.2.3.2 UV Reactor Capabilities and Performance

The MPITS includes a 72-lamp reactor that uses UV photolysis to destroy NDMA in groundwater. The UV reactor is designed to operate at a minimum hydraulic flow rate of 20 gpm and a maximum flow rate of 125 gpm. The reactor is capable of automatically adjusting power to the lamps to meet a target of 4.1 orders of magnitude reduction in contaminant concentration for flows between 20 and 125 gpm, however, current electrical power to the lamps is set manually at 100 percent and remains at this level regardless of the flow through the UV reactor. The UV reactor achieved approximately four orders of magnitude reduction during the reporting period. Table 5.9 shows the UV reactor's performance for the 2012 comprehensive reporting period. System design parameters and NDMA cleanup levels were achieved.

5.2.4 MPITS Extraction Well Performance

The MPITS extraction wells MPE-1, MPE-10, and MPE-11 operated at varied flow rates during the 2012 comprehensive reporting period. NASA replaced the pumps in wells MPE-1, MPE-10, and MPE-11 to better match the extraction pumps with each well's capacity. The 10 horsepower pump in MPE-11 was replaced with a two horsepower pump. Because the relatively low COC concentrations at MPE-11 cause dilution of total influent COC concentrations, the MPE-11 flow rate was deliberately reduced to a 10 gpm steady state operation. The objective was to increase the total combined COC concentrations introduced to the MPITS.

5.2.4.1 Extraction Well Flow Rates and Specific Capacities

Extraction well performance is evaluated by measuring operational specific capacities, extraction well drawdowns, and water levels and comparing these to baseline values.

Unlike the PFE wells, the MPE wells were completed in a fractured bedrock aquifer. Previous well development and rehabilitation projects provided the data to estimate potential design flows but only long-term operation of the MPITS will provide the data required to establish operational parameters. Specific capacities for MPE wells were obtained during constant-rate pumping following well rehabilitation projects in 2008 and 2011 and wells MPE-1, MPE-10, and MPE-11 were pulse pumped after MPITS activation in March 2011.

Now that the extraction well pumps are reconfigured (as discussed in Section 5.2.1.1) the establishment of steady-state pumping will be pursued. Once achieved, data can be collected to evaluate the influence of the MPITS on the contaminant plume and the need for additional MPE wells or flow rate adjustments. Water level data during recovery periods are currently being collected and will be included in future evaluations. Implementation of a software interface to view and analyze data is pending.

Once steady-state flow rates for MPE wells have been established, operational specific capacities can be compared to initial post-development specific capacities. Operational specific capacities are expected to be lower than those initially measured due to the effects of multiple-well and long-term pumping on the aquifer.

5.2.4.2 Infiltration Basin Performance, Monitoring, and Maintenance

The infiltration basin is designed to accept up to 200 gpm, but is currently processing about 30 gpm. Monitoring of the infiltration basin consists of visual observations of flow, affected surface area, and

plant growth. The wetted area is approximately 30 percent of an individual cell at the current flow rate. There have been no operational issues.

Due to the current drought condition in New Mexico, weeds did not accumulate in the infiltration basins and no maintenance was required. Infiltration basin #2 was online for the duration of 2012. Although the current use of a polyphosphate sequestering agent will reduce the potential for mineral deposits to accumulate in the basin, any future mineral deposits will require periodic disking.

5.2.5 MPITS Monitoring Results

System monitoring involves the collection and evaluation of a variety of data during routine MPITS sampling-related operations. Groundwater monitoring data consist of measured groundwater elevations, calculated groundwater piezometric elevations, graphical representations of groundwater elevation generated from these data (refer to section 6.3.1), and groundwater indicator parameters (water quality field measurements).

The data presented in this section were collected from MPITS monitoring locations from August 1 through October 31, 2012. Groundwater chemical analytical data from MPITS sampling events, while not considered monitoring data in some contexts, are also presented in this section.

5.2.5.1 MPITS Monitoring Events

This section and associated appendices discuss the results of routine MPITS samples collected between August 1 and October 31, 2012 and processed by the WSTF data management system during the fourth calendar quarter of 2012. Table 4.1 includes the MPITS monitoring locations and sampling event dates for which analytical data are presented in this report. A summary of internal QA methods applied to groundwater chemical analytical data is provided in Appendix C.

5.2.5.2 Groundwater Quality Measurements (Indicator Parameters)

Groundwater indicator parameters and other specific sampling-related details associated with each sampling event are recorded by the field technicians in the field sampling record. The groundwater indicator parameters measured at each MPITS sampling event listed in Table 4.1 are provided in Appendix A.5. Appendix B.1 provides the field sampling records and internal chains of custody for each of the MPITS sampling events discussed in this section.

5.2.6 MPITS Chemical Analytical Results

Appendix A.6 provides the MPITS chemical analytical data for the analytical reporting period (August 1 through October 31, 2012 (detections only).

5.2.7 MPITS Mass Removal

Table 5.10 summarizes the mass of the various WSTF COCs removed by the MPITS between November 1, 2011 and October 31, 2012. Over 7.4 kg of COC mass removed by the MPITS was calculated as follows:

Mass Removal =
Total Volume Treated x (Average Influent Concentration – Average Effluent Concentration)

5.2.8 MPITS Operation Costs

Table 5.11 presents the operation costs of the MPITS for the period between November 1, 2011 and October 31, 2012. The table summarizes the cost of the labor, materials, and maintenance, as well as the electrical costs associated with system operation.

6.0 Discussion and Conclusions

Routine groundwater monitoring is conducted at WSTF to support a variety of projects. The primary objectives of routine groundwater monitoring at WSTF are to delineate the extent of the contaminant plume that has resulted from historical contaminant releases at the facility, support the development and implementation of corrective actions, and monitor the impact of these corrective actions during operation. Groundwater sampling at WSTF is currently focused on the Plume Front and Mid-plume areas, both of which are critical to NASA's overall remediation efforts.

This section provides discussion and conclusions based on the results of groundwater monitoring conducted at WSTF. Also included is a summary discussion of the remediation systems' performance, monitoring results, system modifications, and compliance with discharge requirements and/or applicable cleanup levels. Chemical analytical results from the PFTS and routine groundwater monitoring are compared to cleanup levels (refer to Appendix D). This section also provides NASA's anticipated future groundwater monitoring and related activities at WSTF.

6.1 Summary of Groundwater Monitoring

Routine groundwater monitoring is performed in accordance with currently approved permits, plans, and other regulatory requirements. In general, the WSTF contaminant plume is relatively stable in nature and extent. Because of the potential for continued migration of the plume, the phased approach to groundwater remediation was developed (discussed in Section 1.0). NASA continues to collect a variety of groundwater data from the comprehensive WSTF groundwater monitoring network. Monitoring results are presented in detail in the relevant sections of this report and in later sections of this summary. Several noteworthy elements of routine groundwater monitoring are discussed below.

6.1.1 Westbay Well Replacement

NASA submitted a schedule for the replacement of eight Westbay wells with purgeable sampling systems to NMED on June 28, 2012 as required (NASA, 2012[n]). NMED approved the schedule on July 20, 2012 and directed NASA to develop and submit a letter work plan by November 2, 2012 that provides information on the replacement well construction and groundwater purging system planned for each converted Westbay well. NASA submitted a letter work plan on November 1, 2012 (NASA, 2012[v]) and the fee for review of the work plan was remitted on December 26, 2012 (NASA, 2012[y]).

6.1.2 Additional Groundwater Monitoring Wells (Data Gap Wells)

NMED directed NASA to develop and submit a Groundwater Monitoring Well Work Plan for installation of "data gap" wells that would further delineate the extent of the groundwater contaminant plume in several areas at WSTF. The Groundwater Monitoring Well Work Plan for the required monitoring wells was submitted to NMED on June 24, 2010. NMED approved the work plan, with direction, on January 14, 2011 (NASA, 2011[a]). The approval included a requirement for NASA to install two additional groundwater/soil gas monitoring wells between the 200 and 600 Areas. The approval also required NASA to prepare drilling work plans (DWPs) for the two additional 200/600 Area wells and the four data gap monitoring wells to the west of the industrial area. NASA submitted a DWP for the 200/600 Area

groundwater/soil gas monitoring wells on May 26, 2011 (NASA, 2011[c]). NMED approved the DWP on June 17, 2011. NASA completed activities associated with the installation and initial sampling of these wells in 2011.

NASA submitted an abbreviated DWP for two of the four NMED-required off-site data gap wells (BLM-40 and BLM-41) to NMED on July 18, 2012. The DWP was approved by NMED on August 1, 2012. NASA submitted an updated DWP for the two BLM wells on September 10, 2012 (NASA, 2012[t]). The updated DWP was approved by NMED on October 16, 2012. The DWP for the remaining data-gap (JER-3 and JER-4) wells was submitted to the NMED on October 29, 2012 (NASA, 2012[w]). NMED approved the work plan on November 2, 2012.

Planning for the installation of three cluster wells is in progress for both the BLM-40 and BLM-41 wells with fieldwork to be initiated the first week in January. NASA anticipates completing and sampling these wells by February 28, 2013. Installation of three cluster wells at the JER-3 and JER-4 well sites is contingent upon NASA receiving federal fiscal year 2013 funding. NASA will notify NMED within seven days of receiving federal fiscal year 2013 funding and initiate drilling at the JER well sites within 45 days of receipt of funding, as required by NMED in the approval letter for the abbreviated JER work plan.

6.2 Comparison of Analytical Data to Cleanup Levels

This section and the associated appendix compare the chemical analytical data obtained from groundwater remediation system sampling points and groundwater monitoring wells to the approved cleanup levels provided in the GMP (NASA, 2012 [o]). Appendix D provides a comparison of groundwater data processed during the reporting period to cleanup levels.

6.2.1 Groundwater Monitoring Wells

Appendix D.1 includes a comparison of groundwater monitoring well data to applicable cleanup levels for the analytical reporting period (August 1 through October 31, 2012). Only exceedences are included in the tables.

6.2.2 Plume Front Treatment System

Groundwater samples were collected from the PFTS influent and effluent as required by the RSMP (NASA, 2012[q]) and DP-1255 (NMED, 2011[a]). Appendix D.2 includes any PFTS influent data processed during the reporting period that exceeded cleanup levels. The PFTS effluent meets all DP-1255 discharge limits and does not contain hazardous constituents at concentrations above the cleanup levels.

6.2.3 Mid-plume Interception and Treatment System

Groundwater samples were collected from the MPITS influent and effluent as required by the RSMP (NASA, 2012[q]) and DP-1255 (NMED, 2011[a]). Chemical analytical data from these sampling events were presented in Section 5.2.6 and Appendix A.6. Appendix D.3 provides MPITS influent results that exceeded cleanup levels. The MPITS effluent meets all DP-1255 discharge limits and does not contain hazardous constituents at concentrations above the cleanup levels.

6.3 Contaminant Plume Capture Evaluation

System operational and performance data, potentiometric surface maps, groundwater velocity vectors, and a variety of chemical analytical data were used to perform the plume capture evaluation for 2012. The

evaluation process is based on the six steps described in "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems" (EPA, 2008). The steps are:

1. Review site data, site conceptual model, and remedy objectives.
2. Define site-specific target capture zone(s).
3. Interpret water levels.
4. Perform calculations, particle tracking, and transport modeling.
5. Evaluate concentration trends.
6. Interpret actual capture based on steps 1-5, compare to target capture zone(s), and assess uncertainties and data gaps.

6.3.1 Evaluation of Groundwater Elevations

A manually contoured potentiometric surface map (Figure 6.1) is provided for the WSTF Plume Front area for the current analytical reporting period. Data used to generate contours for this map are identical to the data used to generate the site-wide contours (Figure 4.1). The Plume Front potentiometric surface map uses a two-foot contour interval and illustrates the prominent transition in hydraulic gradient from the WSTF pediment area (1.5E-02 m/m) within and east of the Western Boundary Fault Zone into the relatively flat SJMB at the WSTF Plume Front area (historical gradient 6.0E-05 m/m). Groundwater vectors show the resultant directions of groundwater flow, which are generally west-southwest. However, the vectors on the west side of the contaminant plume indicate groundwater flow toward the PFE wells signifying that the PFTS was operating at the time groundwater elevations were measured.

Groundwater elevations measured in the MPCA during this analytical reporting period are presented in the manually contoured Mid-Plume potentiometric surface map (Figure 6.2). The data used to generate contours for this map are the same values used to generate contours at the Mid-plume in the site-wide potentiometric map (Figure 4.1). The general west-trending groundwater gradient is apparent. MPITS pumping at wells MPE-1, MPE-10, and MPE-11 continues to cause a potentiometric low between BLM-39 and MPE-10 with its axis running through MPE-11.

Wells MPE-8 and MPE-9 continue to be evaluated and did not operate consistently during the current analytical reporting period. High turbidity in water extracted from MPE-8 currently precludes its use as an extraction well. MPE-8 is being pumped periodically to clear the turbidity. The potentiometric low is expected to increase in lateral area and depth as consistent MPITS operation is reached and preferred operational ranges for the extraction wells are established.

6.3.2 Evaluation of Plume Iso-concentration Maps

Manually-contoured iso-concentration plume maps for NDMA (Figure 6.3), TCE (Figure 6.4), PCE (Figure 6.5), Freon 11 (Figure 6.6), and Freon 113 (Figure 6.7) are illustrated using the maximum values for each contaminant from data processed during the current analytical reporting period. Although Freons are not COCs in WSTF groundwater, and their concentrations are significantly below cleanup levels, there are significant historical data for these analytes. Plume maps were prepared for Freon 11 and Freon 113 to facilitate NASA's understanding of the complex contaminant plume as it relates to historical conditions.

The manual contouring method reflects professional geologists' evaluation of plume contaminants and interpretation of hydrogeological features at the Plume Front. These features include different hydrostratigraphic units and significant structural features that cause the juxtaposition of variable hydraulic conductivities and contaminate plume distribution. The iso-concentration maps are consistent with the maps presented in previous reports, the monthly evaluation of contaminant concentrations, and

site-wide plume maps that have been developed over the last several years. The iso-concentration maps do not show any significant movement of the contaminant plume that would compromise capture.

6.3.3 Combined Plume Iso-concentration Maps and Potentiometric Surface Map

Figure 6.8 demonstrates the interrelationship of the Plume Front potentiometric surface and manually contoured TCE plume for the current analytical reporting period. TCE was selected as it has the most extensive plume distribution of the primary health-risk-driving contaminants.

Based on the demonstrated ability of the PFTS to operate near design flow conditions, continued capture of the plume is expected. PFTS well placement was designed to capture groundwater from an area that extends beyond the 5 ppb TCE plume contour. Additional discussion and comparison of the current contaminant plumes and original PFTS capture zone is provided in Section 6.3.8.

6.3.4 Time-Concentration Plots and Groundwater Data Analytical Trends

Time-concentration (T-C) plots are used to evaluate trends in chemical analytical data from groundwater monitoring at WSTF over time. To facilitate the evaluation of T-C plots, WSTF monitoring wells were grouped as listed in the GMP (NASA, 2012[o]; Table 6), and are included in the Appendix E Summary Table. The suite of groundwater contaminant T-C plots for each monitoring well and for the PFE wells were reviewed and an interpretation provided in a summary table in Appendix E. This table includes the historical maximum and current concentrations for four of the primary defining plume contaminants (Freon 11, Freon 113, TCE, and NDMA) and the overall interpretation of the T-C plots for each well. Well locations and the individual T-C plot interpretations are provided in a summary figure in Appendix E. Select T-C plots that are considered representative of each well group, or provide information of specific interest relative to the evaluation of plume movement, are also included in Appendix E. A summary of the individual well groups and a discussion of the wells for which T-C plots have been included in Appendix E are presented below.

Background Well Group: No T-C Plots were included for this group, as there have been no confirmed VOC detections in background monitoring wells.

100/600 Area Well Group: Well BLM-3-182 is considered representative and is used for detection monitoring for this area in accordance with the GMP (NASA, 2012[o]). Well BLM-3-182 displays a decreasing T-C trend for groundwater VOCs consistent with natural plume migration. The other monitoring wells in the area generally display a similar decreasing trend or results are all non-detect (ND). The shallow monitoring zone in multiport well 600-D (600-D-230) provides the one exception to this trend and currently exhibits increasing concentrations of Freon 113 and TCE.

200 Area Well Group: Wells 200-B-240 and 200-SG-1 are designated as detection monitoring wells for this area. The T-C plots for these two wells and the shallow monitoring zone of multiport well BW-4 (BW-4-270) all display a decreasing T-C trend indicating natural plume migration under the influence of the steep hydraulic gradient within this area of the aquifer. This T-C trend for VOCs is visible in all 200 Area wells that lie within the conceptualized source area for the TCE/Freon plume. The most prominent decreases over time can be observed within wells located in Gardner Spring Arroyo (GSA), which displays the highest historical concentrations of TCE on-site (e.g. well 200-D-109).

300/400 Area Well Group: Well 300-A-120 is designated as the detection monitoring well for this area. The T-C plots for this well and wells 400-A-151 and BW-1-268 are included in Appendix E. These wells are located in or adjacent to the primary drainage (arroyo) that emanates from Bear Canyon, (locally referred to as the 300/400 Area arroyo) in the vicinity of the main axis of the NDMA/Freon plume, near

the conceptualized plume source. The T-C plots for these wells all show VOC trends decreasing under the influence of the steep hydraulic gradient that is typical of the WSTF contaminant source areas adjacent to the mountain front.

Northern Boundary Well Group: The monitoring wells in this group display no visible trends or are all ND and are therefore not included. Wells JER-1 and JER-2 have shown some inconsistent low NDMA detections using a low-level analytical method, but are interpreted as ND as there have been no detections for NDMA by Method 607. The low-level method detections show no discernible pattern or defining trends.

Southern Boundary Well Group: The wells in this group generally either display no visible trends or well results have all been ND. Well BLM-6-488 is the only well that displays low ppb concentrations of Freon 113 and TCE. This well is characterized by a low-concentration fluctuating trend that is typically associated with VOCs at the plume periphery.

MPCA Well Group: T-C plots for wells in this group generally show decreasing COC trends associated with natural plume migration. However, multiport well BLM-36 (BLM-36-350) provides a significant exception with COC concentrations increasing within the shallow monitoring zone. The T-C plots from this group of wells may reflect COC trends related to the 2011 startup of the MPITS and its continued operation. It remains too early to make a determination on the system effects given the low hydraulic conductivities within the fractured bedrock aquifer, variable flow rates observed within the extraction wells, and adjustments made to the pumping rates within individual wells. Monitoring wells within the area may still reflect variable responses as the aquifer adjusts to new system stresses. Several wells were included in Appendix E for reasons discussed below.

Well BLM-14-327 is located in the western extension of GSA that runs along the east side of the 200 Area. This well also displays characteristics of the 200 source area, with lower concentrations of NDMA and Freon 11, higher concentrations of Freon 113 and TCE, and a decreasing COC trend over time, indicating plume migration.

Well BLM-15-305 is located adjacent to the western extension of the 300/400 Area arroyo. Well BLM-15-305 displays characteristics of the 300/400 source areas, with high concentrations of NDMA and Freon 11 and lower concentrations of Freon 113 and TCE, and shows an overall decreasing T-C trend related to natural plume migration. Irregularities in the NDMA concentration for this well are interpreted to be related to the arrival of higher COC concentration pulses. These pulses may result from the periodic nature of historical test discharges in the 300 and 400 Areas and/or the mobilization of contaminants during increased rainfall/recharge events.

Well BLM-21-400 is proximal to the MPE wells and is interpreted to lie near the confluence of the two contaminated groundwater areas that characterize wells BLM-14-327 and BLM-15-305. This well also shows a decreasing T-C trend associated with natural plume migration.

Multiport well BLM-36 is located in the area immediately downgradient of the MPITS and is anticipated to be one of the wells with the greatest potential to be affected by system operation. Changes in contaminant concentrations for the downgradient wells will be monitored with the operation of the MPITS and T-C plots will be included as any trends related to system operations develop. Only the T-C plots for the shallow zone in well BLM-36 (BLM-36-350) are included, as the three deeper zones are all ND and show no evidence of the WSTF plume contaminants. The upper zone is one of five monitoring zones in the Mid-plume that shows an increasing T-C trend related to natural plume migration.

Wells BLM-18-430 and BLM-5-527 are in the northwest trending arm of the WSTF plume. T-C plots for both wells show increasing trends consistent with the arrival of the plume. VOCs arrived at BLM-18 in 1991 and at BLM-5 in 2001. NDMA arrived at BLM-18 in 2005 and at BLM-5 in 2010.

Main Plume Well Group: Well PL-1-486 is located on the southwest edge of the WSTF plume, and responds to PFTS operation. VOC concentration levels within this well group typically decline during intervals of system operation, and rebound during quiescent periods. Multiport well PL-5 is especially responsive to well PFE-3 operation. Zone PL-5-595 was selected as representative of this well and is included in Appendix E. These wells show irregular T-C trends related to pumping-induced plume fluctuations.

Plume Front Well Group: The T-C plots for well PL-4-464 and three zones for well ST-6 (ST-6-535, ST-6-575, and ST-6-685) are included in Appendix E. These wells show characteristics similar to well PL-1-486, with trends related to pumping-induced plume movement. The deeper monitoring zones within multiport well ST-6 have never shown detectable contamination and are not included. Zone ST-6-685 provides evidence of the plume arrival in 2001 and system startup in September 2005. This zone is now below the method detection limit (MDL) for all analytes. Decreasing contaminant trends at ST-6-535 and ST-6-575 show evidence of PFTS operation, and following system startup, are generally near or below cleanup levels for all analytes. Two notations of interest have been made on the figure in Appendix E. Well BLM-10-517 shows irregular detections of TCE above ND. A maximum detection of 4.4 ppb was observed during the May 1, 2012 – July 30, 2012 analytical reporting period. Well ST-3-486 shows increased NDMA concentrations for the latest three sampling events (latest value 4.1 ppb; 4,100 ppt [June 1, 2012]), which are inferred to be due to pumping-related plume migration attributed to the operation of well PFE-1.

Sentinel Well Group: No T-C Plots were included as there have been no confirmed VOC detections for this well group.

Other Wells and Sampling Ports:

PFE Wells: The T-C Plots for PFE-1, PFE-2, PFE-3, PFE-4A and PFE-7 are included in Appendix E. All of the extraction wells exhibit recent downward T-C trends due to pumping-related plume migration.

PFTS sampling ports: The influent sampling port, B650-INF-1 exhibits the downward trend, similar to that of the extraction wells. The effluent port, B650-EFF-1, shows predominately ND values.

MPE Wells and MPITS sampling ports: The MPITS has been operational since March 2011. T-C plots for wells MPE-1, MPE-10, MPE-11, B655-INF, and B655-EFF are included in Appendix E.

6.3.5 Treatment Systems Contaminant Mass Removal

The objective of the MPITS is to effectively intercept contaminant mass to the east of and destined for the Plume Front area. While the PFTS treats contaminated groundwater of low to moderate contaminant concentrations (both VOCs and nitrosamines) at high flow rates, the MPITS treats relatively high nitrosamines and low to moderate VOC contaminant concentrations at a fraction of the PFTS flow rates (20–125 gpm compared to 533–1,080 gpm). Comparison of Table 5.2 and Table 5.8 shows that VOC concentrations (TCE, PCE, and Freons) treated by both systems were within an order of magnitude. A comparison of Table 5.3 and Table 5.9 shows the overall higher NDMA concentrations in the MPCA. Of the total NDMA mass removed by the two WSTF treatment systems during the comprehensive reporting period (November 1, 2011 through October 31, 2012), 20% of the mass was removed by the MPITS while the system treated less than 3.5% of the total volume of groundwater treated.

6.3.6 Evaluation of Vertical Gradient

An examination of historical water level and pressure profile data was performed to determine the impact of the PFTS on vertical hydraulic gradients measured in the WSTF Plume Front aquifer in April, 2012. This examination was performed to help determine the depth of influence of PFTS extraction well pumping. The vertical gradient study utilized data through 2011. Recent groundwater elevations at deeper monitoring zones of interest were not available for this evaluation. NASA expects additional data to be available for use in late 2013, at which time the vertical gradients at WSTF will be reevaluated.

The Plume Front aquifer is not uniform in composition or properties (heterogeneous and anisotropic). Semi-confined conditions are indicated in the Plume Front alluvial aquifer, resulting in different well clusters (one location with multiple screened depths) reflecting differing aquifer characteristics. Recharge and pumping impart effects of varying magnitude, depending on location and depth within the contaminant plume area. Accordingly, the contaminant plume is not uniformly affected by PFTS operations.

PFTS activation after 2005 resulted in visually evident responses on monitor well hydrographs, even at levels deeper than PFE well pump depths. Using water levels and pressures from Plume Front monitor wells, three levels in the aquifer were examined.

After PFTS activation in 2005 and through 2011, no discernible changes to vertical gradients in the upper aquifer were observed. PFTS operations invoked a stronger vertical gradient in the middle portion of the aquifer at some monitor well locations. The zones in the Plume Front aquifer deeper than approximately 300 ft of saturation display a generally consistent downward vertical gradient that appears to be intensifying over time. Further updates to the investigation will be applied as additional data are collected and evaluated.

6.3.7 MODPATH Particle Tracking Simulation

Particle tracking analysis was conducted to assess the capability of the PFTS to effectively capture the most extensive contaminant plumes at the Plume Front; TCE and NDMA. All other contaminant plumes fall within the footprint of these primary contaminants. Consequently, simulated capture of the TCE and NDMA plumes confirm capture of the remaining contaminant plumes.

The United States Geological Survey (USGS) particle tracking code MODPATH was used in conjunction with the NASA-WSTF groundwater flow model for this simulation. The NASA-WSTF groundwater model was originally developed to support the design of the PFTS by optimizing remediation well locations and flow rates. It uses the MODFLOW-SURFACT computer code, which is based on the USGS modular finite difference groundwater flow model code MODFLOW. MODPATH is a post-processing package developed by the USGS that produces traces of simulated particles as they travel through the flow model simulation. The NASA-WSTF groundwater model output was used by MODPATH to create three-dimensional flow paths for this analysis (Figure 6.9).

Parameters of the simulation included a PFTS start date of January 1, 2013. The PFTS was operational during most of 2012 and has been operating consistently since 2009, but the 2013 start date was chosen to conservatively account for system downtime that occurred during injection well rehabilitation and other shutdowns. PFTS system flow was simulated at 1,000 gpm from wells PFE-1, PFE-2, PFE-3, and PFE-4A. This represents its current operational state. PFE-5 was omitted because it was taken offline 2010. PFE-7 was excluded because it is currently being cycled on and off as NASA evaluates contaminant trends in that area. Particle starting locations in the simulation corresponded to the maximum extent of the 5 ppb TCE and 4.2 ppt NDMA equiconcentration lines for the current analytical reporting period.

Particles were released along a composite of the TCE-NDMA equiconcentration lines at a distance of 500 feet between each location. The MODPATH simulation began on the last day of the analytical reporting period, October 31, 2012, and ran through the end of the flow model simulation, December 31, 2052.

Results from the simulation are presented in Figure 6.9 and demonstrate successful simulated capture of the groundwater plume through the year 2052 at the Plume Front. Particle traces for each layer are identified by a different color in the figure. Traces from particles released in layers 10-12 within the main body of the plume along its western leading all terminate at PFTS extraction wells. Traces from particles released in model layer 13 near wells ST-5 and ST-6 do not terminate at an extraction well but do trend toward well PFE-3. These traces originate at an elevation of 3,700 feet above mean sea level. It is significant to note that multi-port wells ST-5 and ST-6 show no evidence of the TCE or NDMA contaminant plumes at the elevation of the these traces in Layer 13. Traces originating in this area are also within the original PFTS capture zone, as discussed in Section 6.3.8.

Particles released at the north-western extension of the Mid-plume contaminant lobe are within a fractured bedrock aquifer, east of the Western Boundary Fault Zone and SJMB alluvial aquifer. The westernmost particles in this area migrate west out of the bedrock aquifer to the Plume Front and into the PFTS capture zone as the simulation progresses. The PFTS was not specifically designed to address this feature, but the particle tracking simulation demonstrates capture of particles released in that area once they enter the alluvial aquifer. Because the finite element groundwater model was developed for use in saturated alluvium and may not be well suited for predicting contaminant migration in fractured bedrock, NASA expects to closely monitor contaminant concentrations in this area to ensure plume capture.

NASA is currently updating the NASA-WSTF groundwater model with hydrogeologic data that has become available since the current version of the model was completed. NASA anticipates finishing this update in calendar year 2013. The updated model will use be used for future plume capture MODPATH simulations.

6.3.8 Comparison of Current Contaminant Plume to Original Capture Zone

Figure 6.10 provides a comparison of the current contaminant plume location to the original capture zone for the PFTS. A composite of the 2002 5ppb TCE and 1999 10 ppt NDMA equiconcentration lines define the original PFTS capture zone. The southern and western portion of the current composite 5 ppb TCE and 4.2 ppt NDMA equiconcentration line falls within or is coincident with the original zone. The northern portion of the current composite equiconcentration line falls outside of the original capture zone. This occurs, in part, because of the lower 4.2 ppt NDMA concentration used in the current composite equiconcentration line, versus the 10 ppt used to define the original capture zone. Even though the current representation of the NDMA plume is outside the original designed capture zone, particle tracking shows that the PFTS is capable of intercepting contamination in this area (Figure 6.9).

The north-western extension of the Mid-plume contaminant lobe is located outside of the original capture zone and was not addressed during the original design of the PFTS. No monitoring data existed for this area when the system was designed. Even though the original design did not address contamination in this area, current particle tracking shows that westernmost particles in this area migrate out of the bedrock aquifer to the Plume Front and are captured by the PFTS extraction wells (Figure 6.9).

6.3.9 Uncertainties and Data Gaps

NASA has not identified any additional potential data gaps beyond those already identified in the Fourth Quarter 2010 PMR. The report identified potential data gaps at off-site areas located north of the MPCA, between wells BLM-37 and BLM-6-488, and at the northwest trending plume near wells JER-1 and JER-

2 (Figure 1.2). Preparation activities related to installing additional off-site groundwater wells were initiated after receiving direction from NMED in 2010 to develop and submit a Groundwater Monitoring Work Plan for these areas. Planning and procurement activities for this project continued throughout the current reporting period. NASA anticipates completing the off-site data gap wells in 2013. Potential data gaps and uncertainties will be reassessed after sampling and reviewing the data from these additional wells.

6.3.10 Plume Capture Conclusions

None of the evaluation elements discussed in this section identify data that suggest unanticipated migration of the current observed plume beyond the PFTS limit of capture. NASA concludes that short-term plume capture has been achieved and will be maintained through continued operation of the PFTS. This conclusion is supported by analytical data from samples collected during recent sampling events at groundwater monitoring wells PL-4-464 and ST-6-575. Concentrations of COCs in these wells, which once exceeded cleanup levels by a wide margin, have been significantly reduced since the PFTS was activated. In most cases, COC concentrations at these locations are now below cleanup levels, clearly showing the positive influence of the PFTS on the groundwater contaminant plume.

6.4 Summary of Source Area Evaluations

This section summarizes progress made on source area investigation planning, fieldwork, or reporting during the reporting period.

6.4.1 200 Area

NASA prepared and submitted the Response to NMED Disapproval – NASA WSTF 200 Area Investigation Work Plan and 200 Area Historical Information Summary on June 20, 2012 (NASA, 2012[l]) in response to NMED's May 22, 2012 Disapproval of the 200 Area Investigation Work Plan and Historical Information Summary. NMED's subsequent approval was received June 28, 2012.

NASA initiated Phase I of the 200 Area Investigation fieldwork in September 2012. Seismic refraction and electric resistivity surveys were conducted and data collected that corroborated previous studies and refined the understanding of bedrock surfaces and structures in the vicinity of the 200 Area and the adjacent GSA. A shallow soil vapor survey was also conducted in the 200 Area and the GSA in order to identify locations that retain VOC soil vapor signatures above background levels. The first round of Gore®[4] modules were installed in shallow boreholes, allowed to reside for 13 days, removed, and shipped to the off-site analytical laboratory. A review of the analytical data identified several areas with potentially elevated levels of VOCs in the soil vapor. Additional sampling was performed at these locations in December 2012. A more detailed discussion of the ongoing 200 Area Investigation will be provided in the 200 Area Phase I report, due to NMED in January 2013.

6.4.2 300 Area

NASA performed the second of three follow-on soil vapor sampling events in July that were required by NMED's October 13, 2011 Notice of Approval with Modifications of NASA's August 30, 2011 300 Area

[4] GORE® is a registered trademark of W.L. Gore & Associates, Inc.

Closure Investigation Report (NMED, 2011 [b]). NASA developed and submitted a report that provided the results of the July soil vapor samples collected on October 22, 2012 (NASA, 2012[u]). The third and final follow-on soil vapor sampling event is scheduled for January 2013. Results of that sampling event are expected to be submitted to NMED in April 2013.

6.4.3 400 Area

Investigation of the 400 Area Closure has been deferred in accordance with NMED's approval of NASA's request to accelerate submittal of the 200 Area IWP (NASA, 2011[f]).

6.4.4 600 Area

NASA completed the 600 Area Closure Soil Vapor Extraction (SVE) Pilot Test Investigation Report and submitted it to NMED on June 14, 2012. NASA received NMED's August 28, 2012 Disapproval of the report and prepared and submitted a response on September 13, 2012. The submittal included a revised investigation report, which included a recommendation to implement a small scale groundwater pump and treat project in the 600 Area to extract contaminated perched groundwater. NMED approved the revised report on September 28, 2012 and concurred with NASA's proposal to submit an abbreviated work plan for groundwater extraction and treatment by November 16, 2012 (NASA, 2012[s]). NASA submitted the 600 Area Perched Groundwater Extraction Pilot Test Work Plan to NMED on November 13, 2012 (NASA, 2012[y]).

NASA also submitted a proposal to utilize recently developed risk-based concentrations as regulatory criteria for soil vapor at WSTF (NASA, 2012 [k]). NMED review and response is pending.

7.0 Planned Activities

This section discusses NASA's planned activities associated with groundwater monitoring and related corrective actions at WSTF.

7.1 Groundwater Monitoring

NASA plans to continue routine groundwater monitoring and to sample new groundwater monitoring wells in accordance with the NMED-approved GMP (NASA, 2012 [o]).

7.2 Treatment System Monitoring

The RSMP (NASA, 2012[q]) and DP-1255 (NMED, 2011[a]) include provisions for monitoring the effectiveness of the PFTS. Sampling at designated locations, including extraction wells and remediation system sampling points, will continue as required during remediation system operational periods in accordance with the RSMP and/or DP-1255. Sampling of groundwater monitoring wells to assess remediation system effectiveness will continue in accordance with the GMP (NASA, 2012 [o]).

7.3 Source Areas

WSTF source area investigations continue and are in various stages of planning and evaluation.

7.3.1 200 Area Investigation

NASA expects to complete the 200 Area Phase I Investigation Report and 200 Area Phase II Investigation Work Plan and submit both to NMED in January 2013. Phase II of the investigation will involve the

installation of soil borings with associated soil sampling, and the installation of multiport soil vapor monitoring (MSVM) wells within the soil borings. The IWP initially proposed the installation of nine primary soil borings to be advanced from ground surface to the alluvium-bedrock interface anticipated at variable depths from approximately 20 ft to 120 ft (6.1 – 36.58 m) bgs. The plan includes two borings installed through each of the two USTs (or as close as possible), and one soil boring located in the center of each of the five SWMUs identified in the Permit. Historical data exist for four of these SWMUs from soil borings drilled and sampled in 1996. Additional soil boring locations have been selected based on the evaluation of the Phase I information. The 200 Area Phase II Investigation Work Plan includes specific information related to upcoming investigation work in the 200 Area.

7.3.2 Soil Background Investigation

The Permit requires NASA to determine background concentrations of inorganic constituents at the site. Background concentrations are used to perform baseline risk assessment of clean closure, risk-based closure, and to support corrective action. The NASA WSTF Soil Background Study Investigation Work Plan was submitted to NMED June 19, 2012 and approved by NMED on September 28, 2012 (NASA, 2012 [r]). The Soil Background Study IWP describes soil sampling activities that will be conducted to the east (upgradient), and in a small area located several miles west (downgradient) of the WSTF industrial area. All sampling will occur in areas where natural soil conditions are believed to be unaffected by site or any other human activities. An investigation report detailing the results of the field activities and statistical evaluation of analytical results will be submitted to NMED approximately 120 days after completion of field work.

7.3.3 Groundwater Tracer Testing

NASA continues to plan a groundwater tracer test, which will be conducted in the WSTF 200/600 Areas and in the Mid-plume Constriction Area (MPCA). NASA's May 10, 2012 Work Plan for Tracer Testing in the 200/600 Areas and Mid-plume Constriction Area, approved by the NMED Hazardous Waste Bureau on July 20, 2012 (NASA, 2012[m]), provides specific information regarding the planned test. Though originally scheduled for as early as August 2012, the tracer test has been postponed until early 2013 in order to allow sufficient time for the completion of work at the MPITS. Wells MPE-8 and MPE-9 were recently activated and wells MPE-1, MPE-10, and MPE-11 were equipped with new pumps to allow for consistent pumping rates. When steady-state operating conditions have been achieved in the MPCA, the groundwater tracer test can be performed as indicated in the May 10, 2012 work plan.

7.4 PFTS Configuration Change

A previous evaluation of the downward concentration trends in monitoring well ST-6, PL-4-464, and extraction well PFE-7 indicated that groundwater pumping at PFE-7 has successfully withdrawn high contaminant concentrations from that area. Recent NASA-WSTF groundwater model simulations also indicate that the remaining PFE wells will sufficiently stabilize the leading edge of the plume in that area. Recognizing this, NASA proposed in the third quarter 2012 PMR to evaluate contaminant concentrations at wells ST-6, PL-4-464 and PFE-7 while turning PFE-7 off during the fourth quarter of 2012.

NASA suspended operation of PFE-7 for the fourth quarter of 2012. This action reduced PFTS flow from approximately 1,050 gpm to 925 gpm. Flow was subsequently increased at well PFE-3, which increased overall PFTS flow to 1,000 gpm. Well PFE-7 will be reactivated during the first quarter of 2013 for several weeks and sampled. If COCs at PFE-7 are at or below their clean up level, the well will be cycled off. This cyclical pumping will be maintained indefinitely while NASA closely monitors the impact of intermittent operation on the groundwater contaminant plume. PFE-7 continues to be sampled monthly, while both online and offline, in accordance with permit requirements. Further recommendations for

PFTS configuration changes will be based on the results of groundwater monitoring and modeling conducted during the cyclical operation of PFE-7.

8.0 Errata

The following table contains the replies or resolutions for NMED comments on the Third Quarter 2012 Periodic Monitoring Report.

Comment Number, Section of Document	NASA Statement/ NMED Comment	Resolution
1. Section 5.1.7 PFTS Operation Costs, pg. 17	This section indicates that the operational costs summarized in Table 5.5 are listed from August 2011 through August 2012. The table lists estimated operational costs through July 2012. Review future PMRs for consistency between text statements and table contents.	This mistake has been corrected in this PMR.
2. Section 5.6, PFTS Mass Removal, pg. 17, Table 5.4 and Table 5.9	The PMR section and both tables indicate the abbreviated form of gram is "gm" while the list of acronyms lists "g." Review future PMRs for consistent use of abbreviations.	"G" is consistently used for abbreviation of gram in this PMR.

9.0 References

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Figures

This section provides all figures referenced in preceding sections of this document.

Figure 1.1 **WSTF and Surrounding Areas**

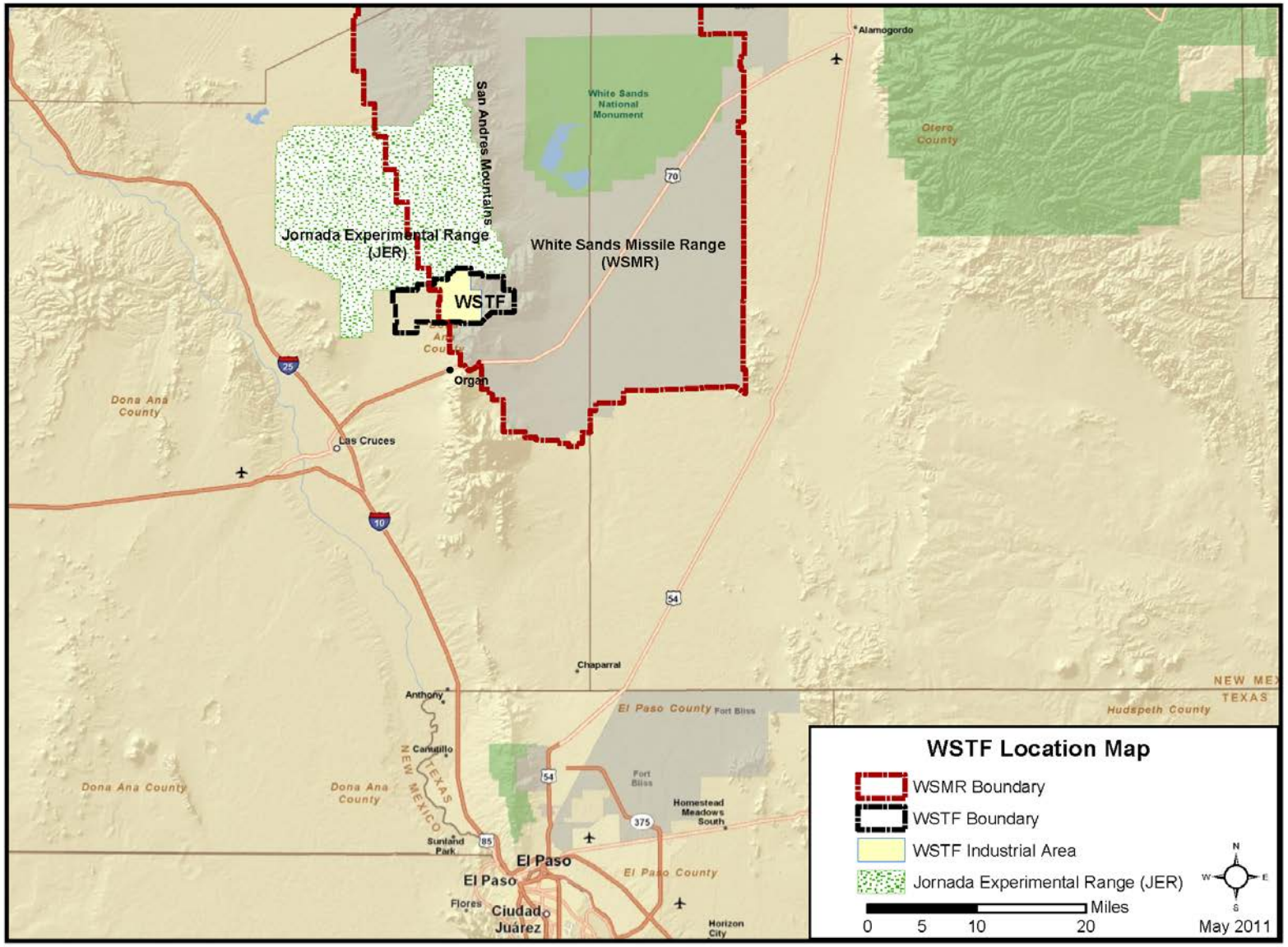


Figure 1.2 **WSTF Well Locations Map**

(SEE NEXT PAGE)

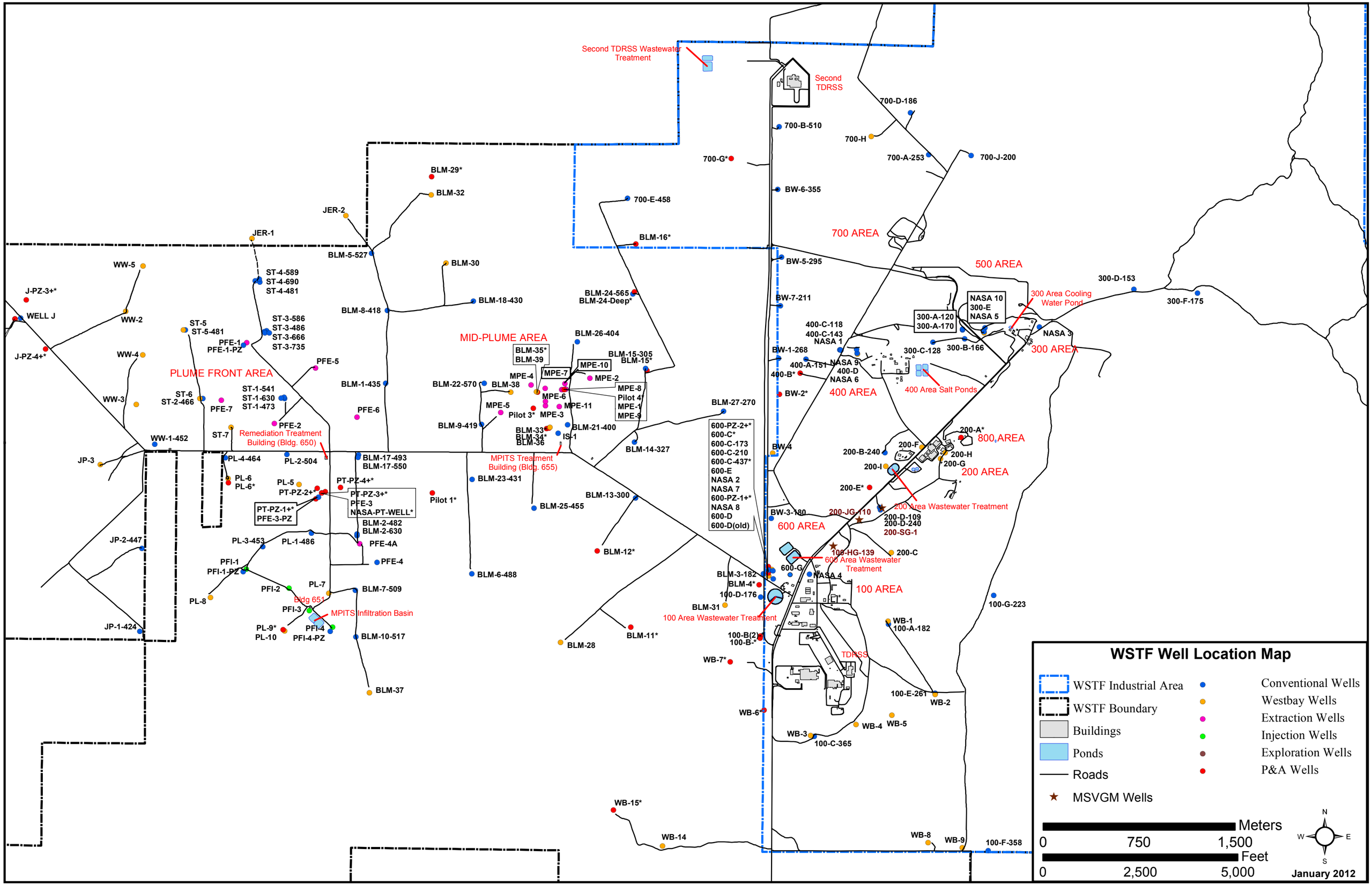
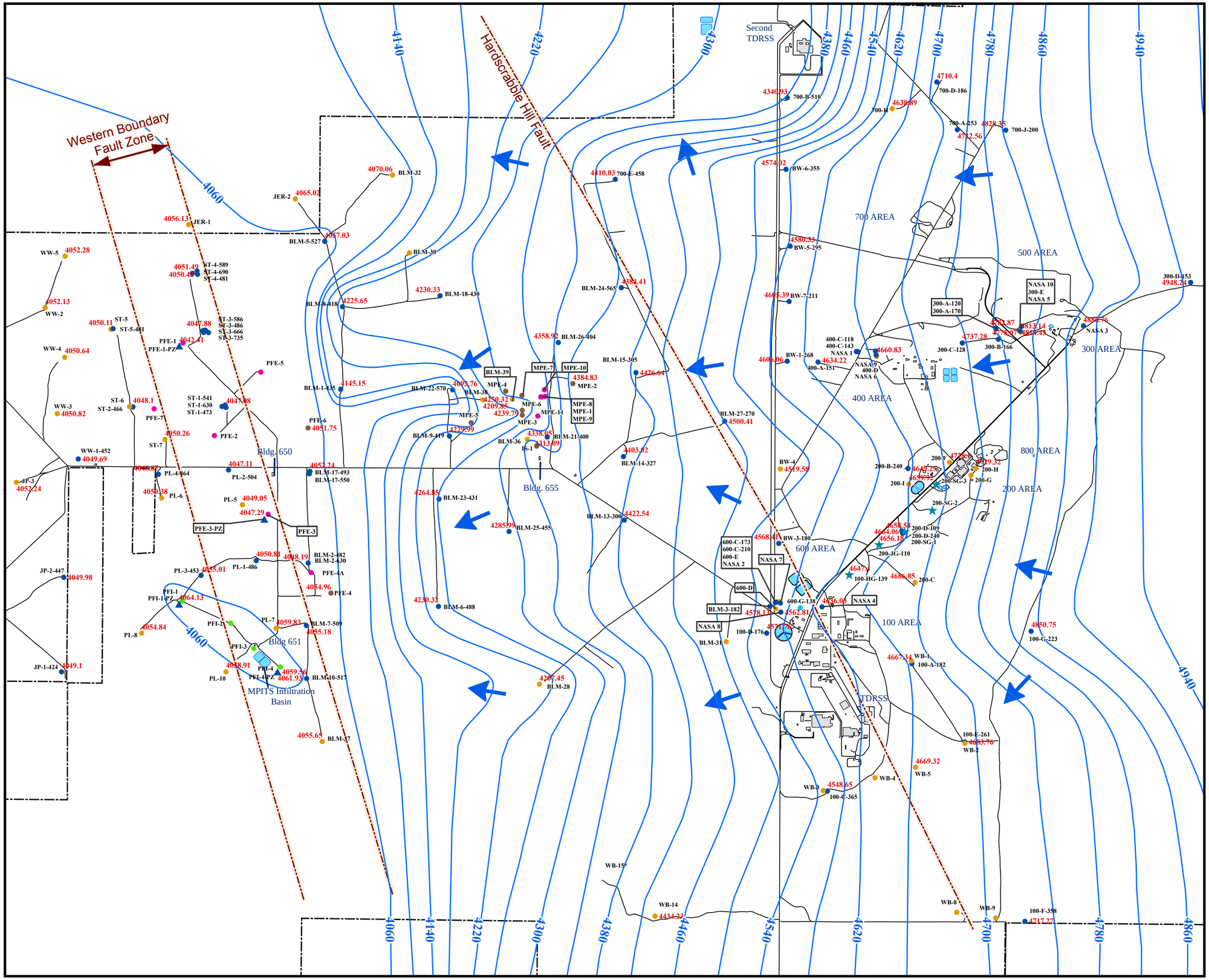

WSTF Well Location Map
WSTF Industrial Area
WSTF Boundary
Buildings
Ponds
Roads
MSVGM Wells
Conventional Wells
Westbay Wells
Extraction Wells
Injection Wells
Exploration Wells
P&A Wells
Meters
0
750
1,500
Feet
0
2,500
5,000
N
S
E
W
January 2012
700 AREA
500 AREA
300 AREA
400 AREA
800 AREA
200 AREA
600 AREA
100 AREA
MID-PLUME AREA
PLUME FRONT AREA
Second TDRSS Wastewater Treatment
Second TDRSS
300 Area Cooling Water Pond
400 Area Salt Ponds
200 Area Wastewater Treatment
600 Area Wastewater Treatment
100 Area Wastewater Treatment
MPITS Treatment Building (Bldg. 655)
Remediation Treatment Building (Bldg. 650)
MPITS Infiltration Basin
Bldg 651
TDRSS
700-D-186
700-B-510
700-H
700-A-253
700-J-200
700-G*
BW-6-355
700-E-458
BLM-29*
BLM-32
JER-2
JER-1
BLM-16*
BLM-5-527
BLM-30
BW-5-295
BW-7-211
BLM-18-430
BLM-24-565
BLM-24-Deep*
BLM-8-418
WW-5
J-PZ-3+*
WELL J
WW-2
ST-4-589
ST-4-690
ST-4-481
ST-3-586
ST-3-486
ST-3-666
ST-3-735
ST-5
ST-5-481
PFE-1
PFE-1-PZ
J-PZ-4+*
WW-4
PFE-5
BLM-26-404
BLM-35*
BLM-39
BLM-15-305
BLM-15*
MPE-7
MPE-10
MPE-2
MPE-4
BLM-22-570
BLM-38
MPE-6
MPE-8
Pilot 4*
MPE-1
MPE-9
MPE-11
MPE-5
Pilot 3*
MPE-3
BLM-1-435
PFE-6
ST-6
ST-2-466
PFE-7
ST-1-541
ST-1-630
ST-1-473
WW-3
PFE-2
BLM-27-270
BLM-9-419
BLM-33
BLM-34*
BLM-36
BLM-21-400
IS-1
BLM-14-327
600-PZ-2+*
600-C*
600-C-173
600-C-210
600-C-437*
600-E
NASA 2
NASA 7
600-PZ-1+*
NASA 8
600-D
600-D(old)
WW-1-452
ST-7
JP-3
PL-4-464
PL-2-504
BLM-17-493
BLM-17-550
PL-6
PL-6*
PL-5
PT-PZ-4+*
PT-PZ-2+*
PT-PZ-3+*
PFE-3
NASA-PT-WELL*
PT-PZ-1+*
PFE-3-PZ
Pilot 1*
BLM-23-431
BLM-25-455
BLM-13-300
BLM-2-482
BLM-2-630
JP-2-447
PL-3-453
PL-1-486
PFE-4A
PFE-4
PFI-1
PFI-1-PZ
BLM-12*
BLM-6-488
PL-7
PFI-2
BLM-7-509
PL-8
PFI-3
PL-9*
PL-10
PFI-4
PFI-4-PZ
BLM-10-517
JP-1-424
BLM-28
BLM-11*
BLM-37
WB-7*
WB-6*
WB-15*
WB-14
BW-1-268
400-A-151
400-B*
BW-2*
400-C-118
400-C-143
NASA 1
NASA 9
400-D
NASA 6
300-A-120
300-A-170
NASA 10
300-E
NASA 5
NASA 3
300-C-128
300-B-166
300-D-153
300-F-175
BW-4
200-B-240
200-A*
200-F
200-H
200-G
200-I
200-E*
BW-3-180
200-JG-110
200-D-109
200-D-240
200-SG-1
200-C
100-HG-139
600-G
NASA 4
BLM-3-182
BLM-4*
100-D-176
BLM-31
100-B(2)
100-B-*
WB-1
100-A-182
100-G-223
100-E-261
WB-2
WB-4
WB-5
WB-3
100-C-365
WB-8
WB-9
100-F-358

Figure 4.1 Map of Site-wide Groundwater Elevations

(SEE NEXT PAGE)



Site-Wide Groundwater Elevations for Fourth Quarter 2012

- 4064 Groundwater Elevation Equipotential Line (ft)
- Faults
- Roads
- Ponds
- Buildings (Bldg)
- WSTF Boundary
- Groundwater Flow Direction
- Conventional Well
- Perched Well
- Multiport Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well

Feet

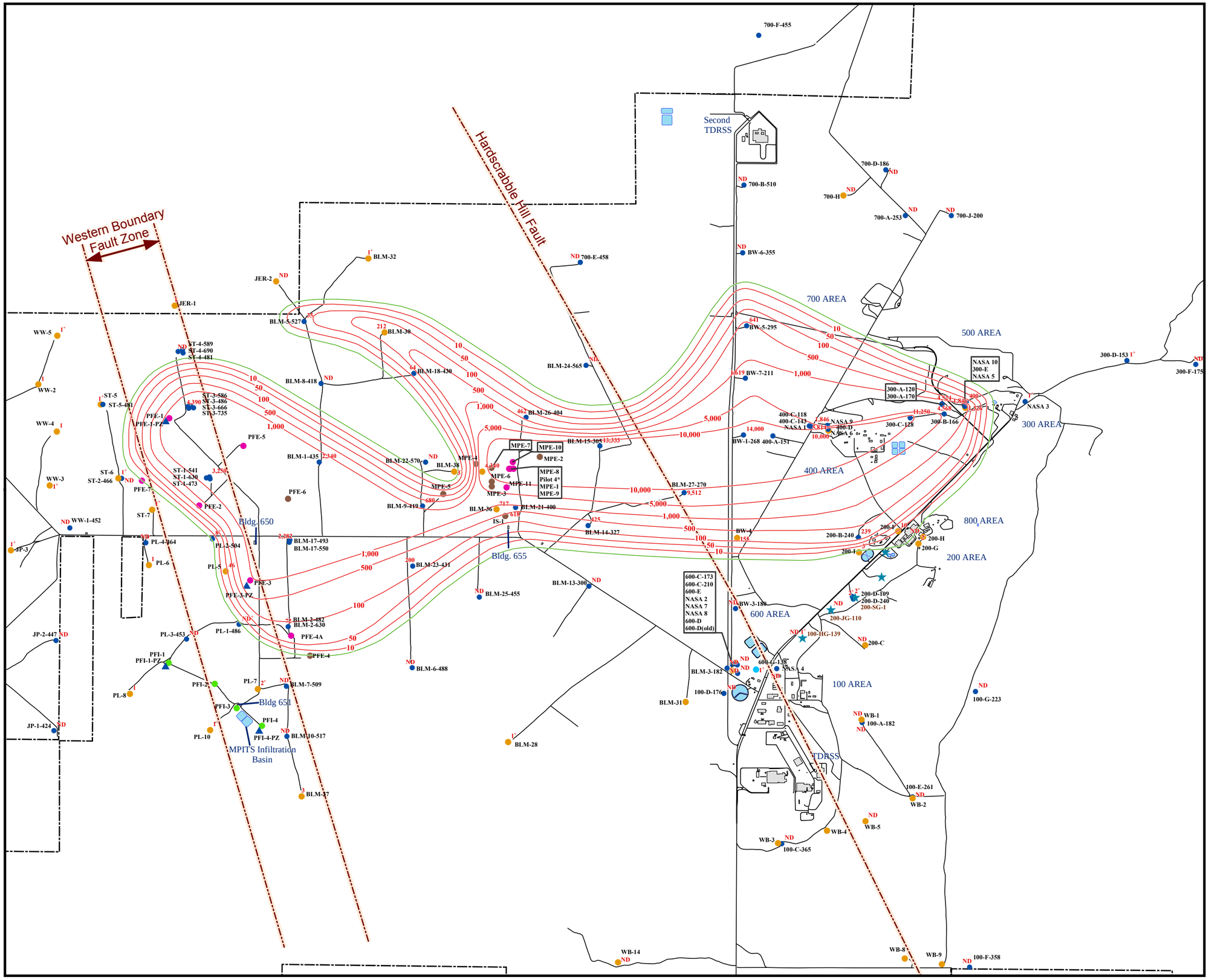
0 2,500 5,000

Contour Interval = 40 feet

N

Figure 4.2 Site-Wide N-Nitrosodimethylamine Concentrations (Fourth Quarter 2012)

(SEE NEXT PAGE)



NDMA Maximum Concentrations in Groundwater for Fourth Quarter 2012

—10— Equiconcentration Line (ppt)

NDMA Cleanup Level (4.2 ppt)

Roads

Faults

Buildings (Bldg)

WSTF Boundary

Pond

Conventional Well

Perched Well

Multiport Well

MSVGM Well

Extraction Well

Injection Well

Piezometer

Exploration Well

Production Well

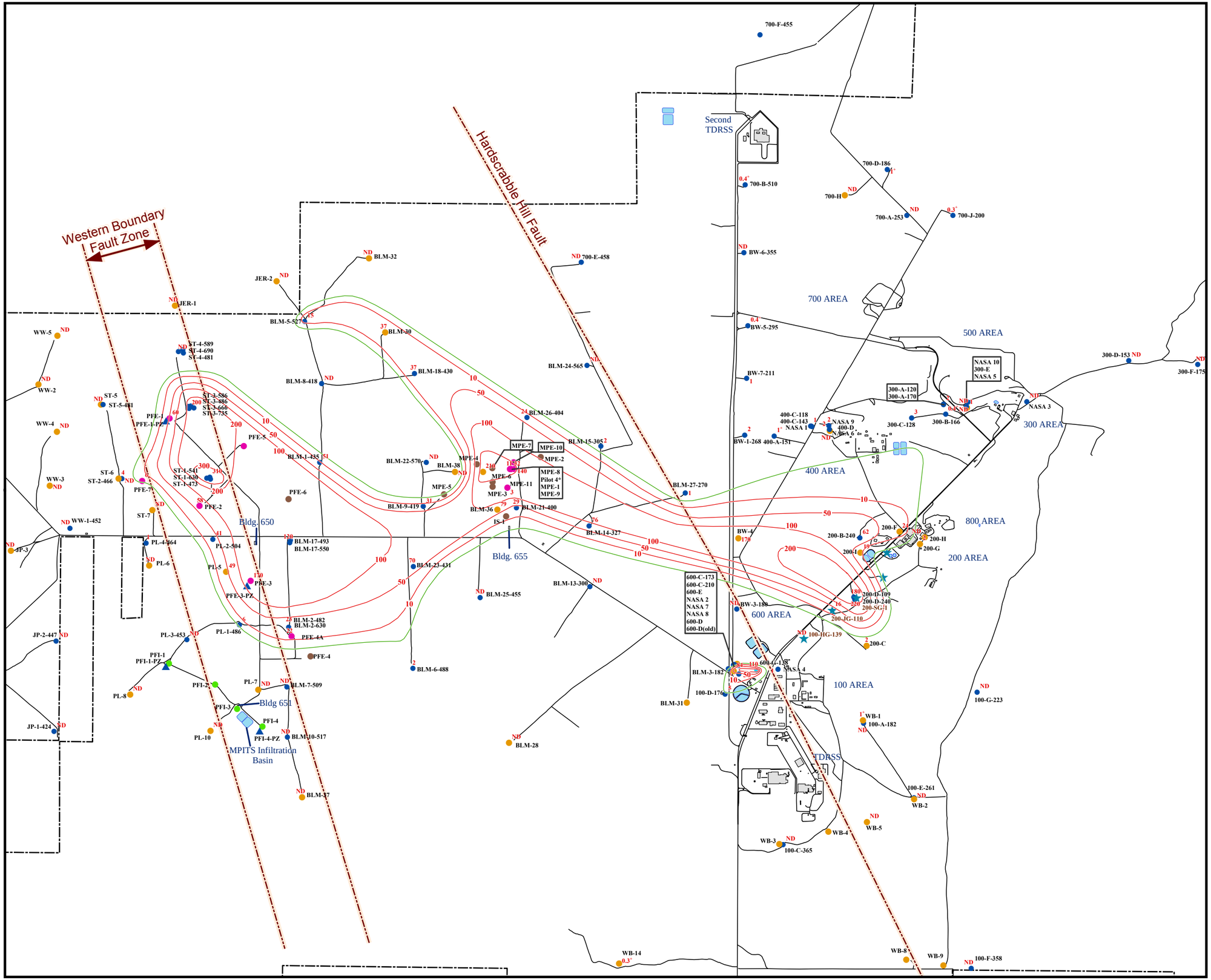
Note:
Method 607 NDMA results corrected for extraction efficiency.
+ - Data value has a QA flag. See Appendix A.2 for specific flags.
ND - Non-detect values <0.5 ppt (NDMA-LL) or <9.7 ppt (607)

0 2,500 5,000 Feet

N

Figure 4.3 Site-Wide Trichloroethene (TCE) Concentrations (Fourth Quarter 2012)

(SEE NEXT PAGE)



TCE Maximum Concentrations in Groundwater for Fourth Quarter 2012

- Equiconcentration Line (ppb)
- TCE Cleanup Level (5 ppb)
- Roads
- Faults
- Buildings (Bldg)
- WSTF Boundary
- Pond
- Conventional Well
- Perched Well
- Multiport Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well

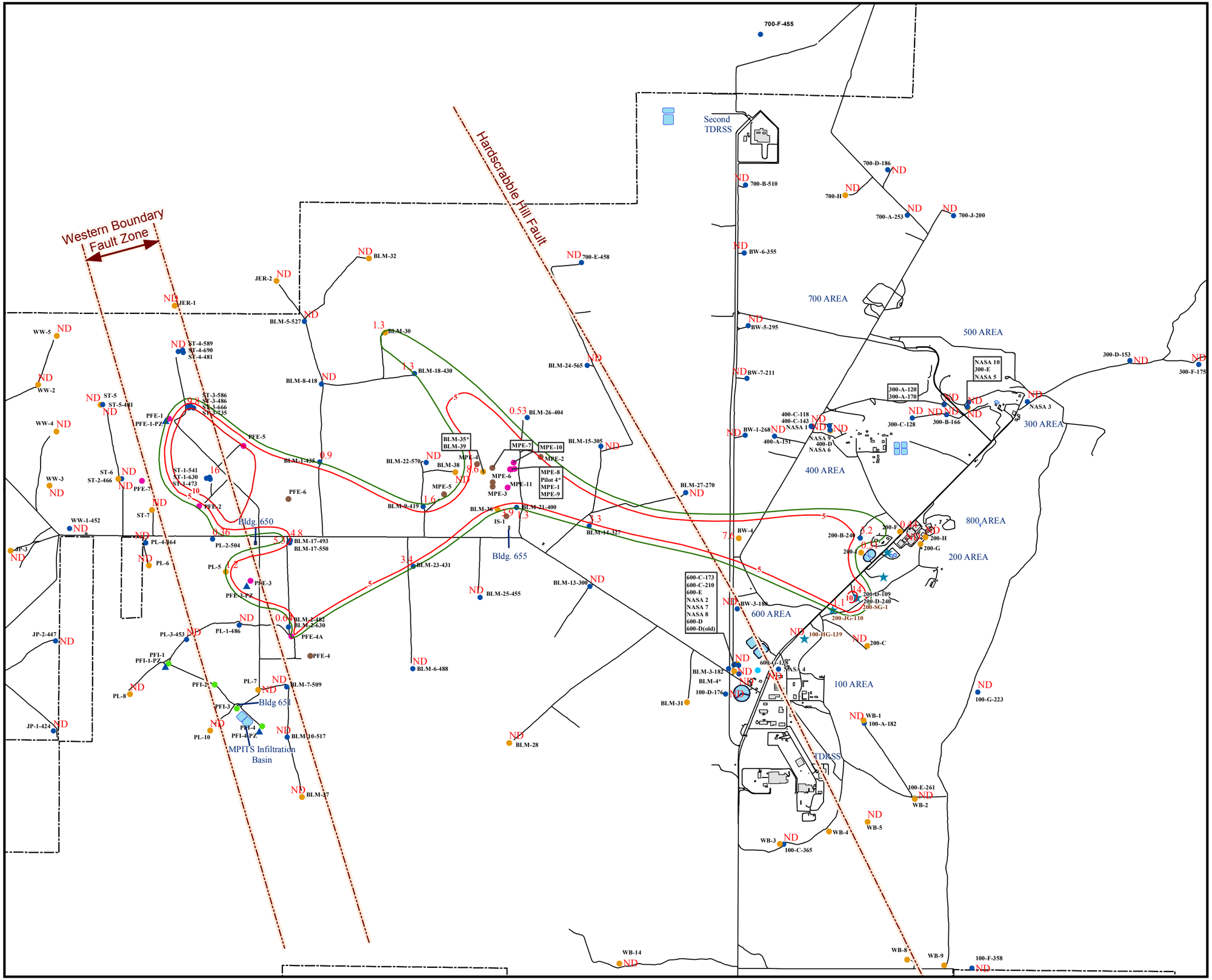
Note:
Analytical data for perched groundwater well 600-G-138 was included in contouring groundwater concentrations for TCE.
\+ - Data value has a QA flag. See Appendix A.2 for specific flags.
ND - Non-detect values <0.23 ppb

Feet
0 2,500 5,000

N

Figure 4.4 Site-wide Tetrachloroethene (PCE) Concentrations (Fourth Quarter 2012)

(SEE NEXT PAGE)



PCE Maximum Concentrations in Groundwater for Fourth Quarter 2012

- Equiconcentration Line (ppb)
- PCE Cleanup Level (1.1 ppb)
- Roads
- Faults
- Buildings (Bldg)
- WSTF Boundary
- Pond
- Conventional Well
- Perched Well
- Multiport Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well

Note:

J - J QA flag.
See Appendix A.2 for flag definition.

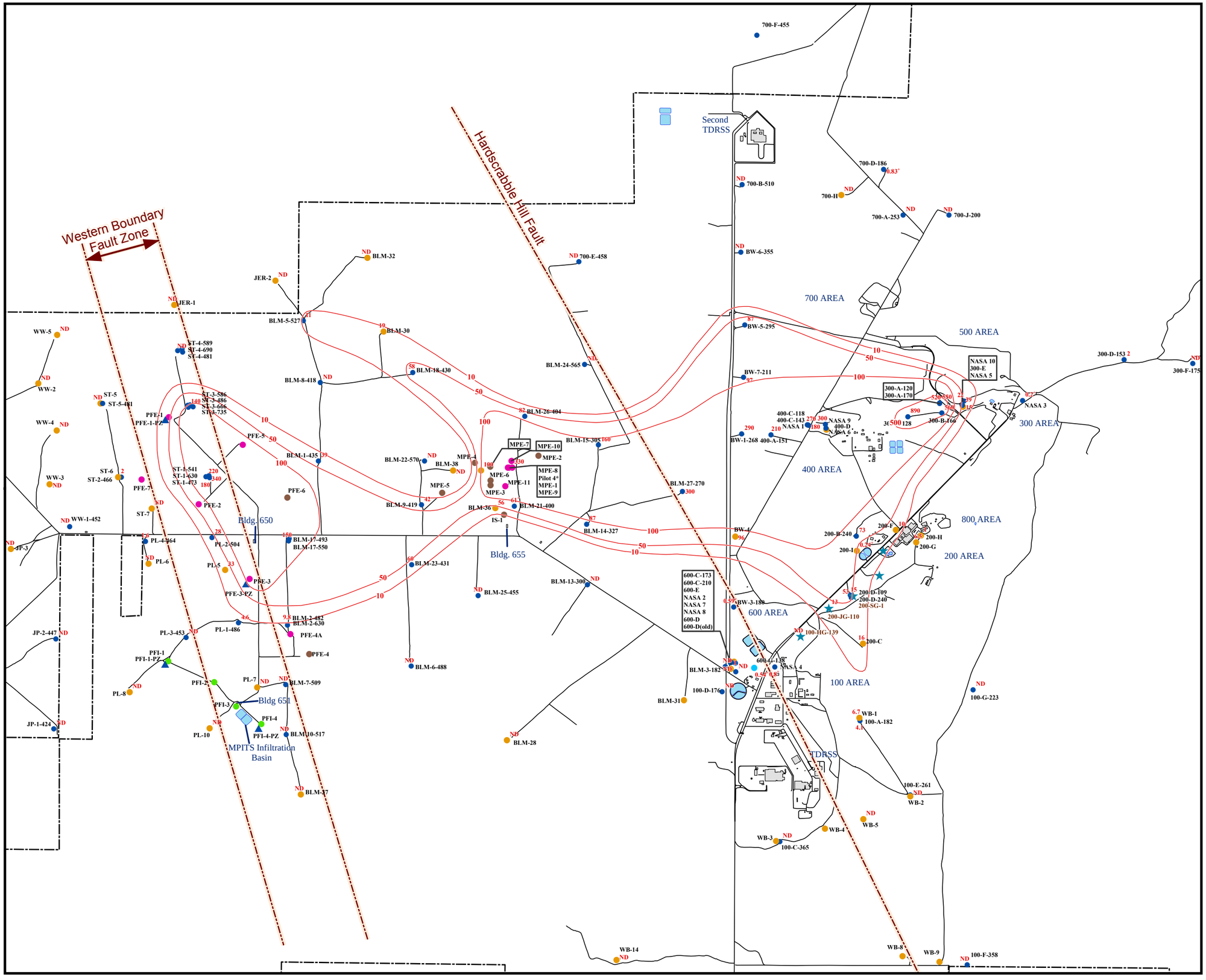
ND - Non-detect values <0.47 ppb

Feet
0 2,500 5,000

N

Figure 4.5 Site-wide Freon 11 Concentrations (Fourth Quarter 2012)

(SEE NEXT PAGE)



Freon 11 Maximum Concentrations in Groundwater for Fourth Quarter 2012

- Equiconcentration Line (ppb)
- Roads
- Faults
- Buildings (Bldg)
- WSTF Boundary
- Pond
- Conventional Well
- Perched Well
- Multiport Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well

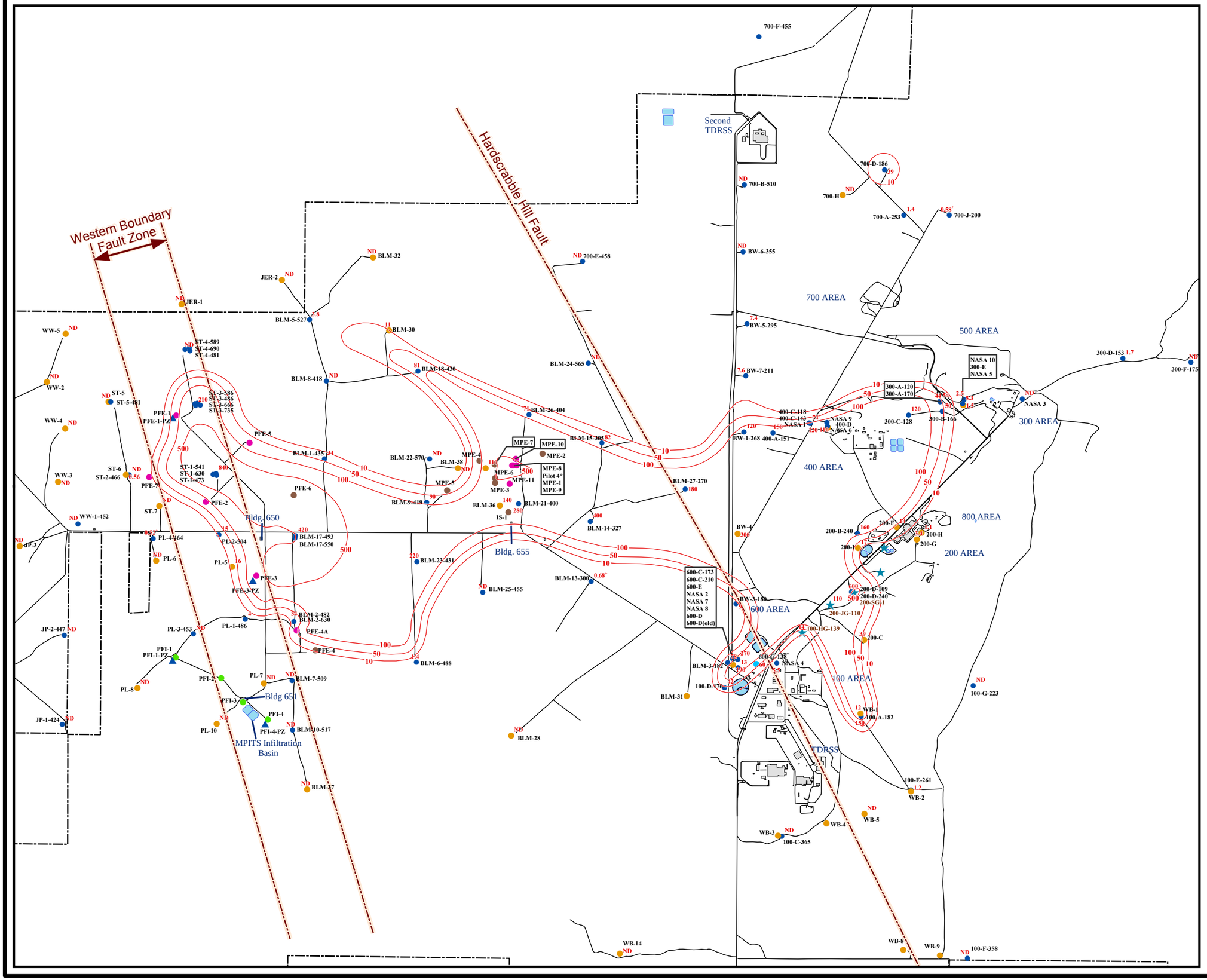
Note:
Freon 11 concentations are below the EPA RSL (1,100 ppb).
Analytical data for perched groundwater well 600-G-138 was included in contouring groundwater concentrations for Freon 11.
\+ - Data value has a QA flag. See Appendix A.2 for specific flags.
ND - Non-detect values <0.2 ppb

0 2,500 5,000 Feet

N

Figure 4.6 Site-wide Freon 113 Concentrations (Fourth Quarter 2012)

(SEE NEXT PAGE)



Freon 113 Maximum Concentrations in Groundwater for Fourth Quarter 2012

—10— Equiconcentration Line (ppb)	Multiport Well
Roads	MSVGM Well
Faults	Extraction Well
Buildings (Bldg)	Injection Well
WSTF Boundary	Piezometer
Pond	Exploration Well
Conventional Well	Production Well
Perched Well	

Note:
Freon 113 concentations are below the EPA RSL (53,000 ppb). Analytical data for perched groundwater well 600-G-138 was included in contouring groundwater concentrations for Freon 113.
+ - Data value has a QA flag. See Appendix A.2 for specific flags.
ND - Non-detect values <0.31 ppb

0 2,500 5,000 Feet

N

Figure 5.1 Plume Front Extraction Flow Rates - 2012

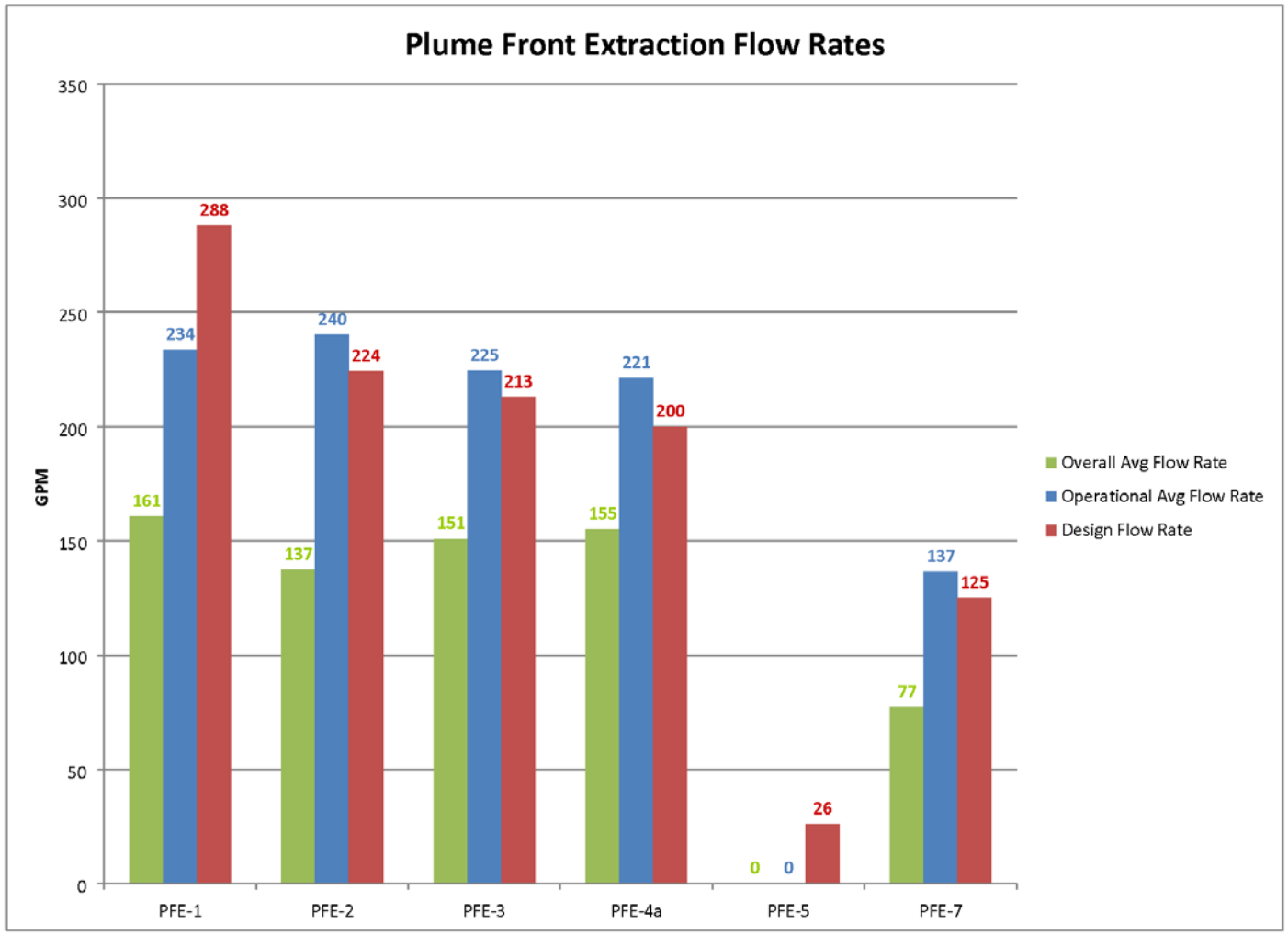


Figure 5.2 **Plume Front Injection Flow Rates - 2012**

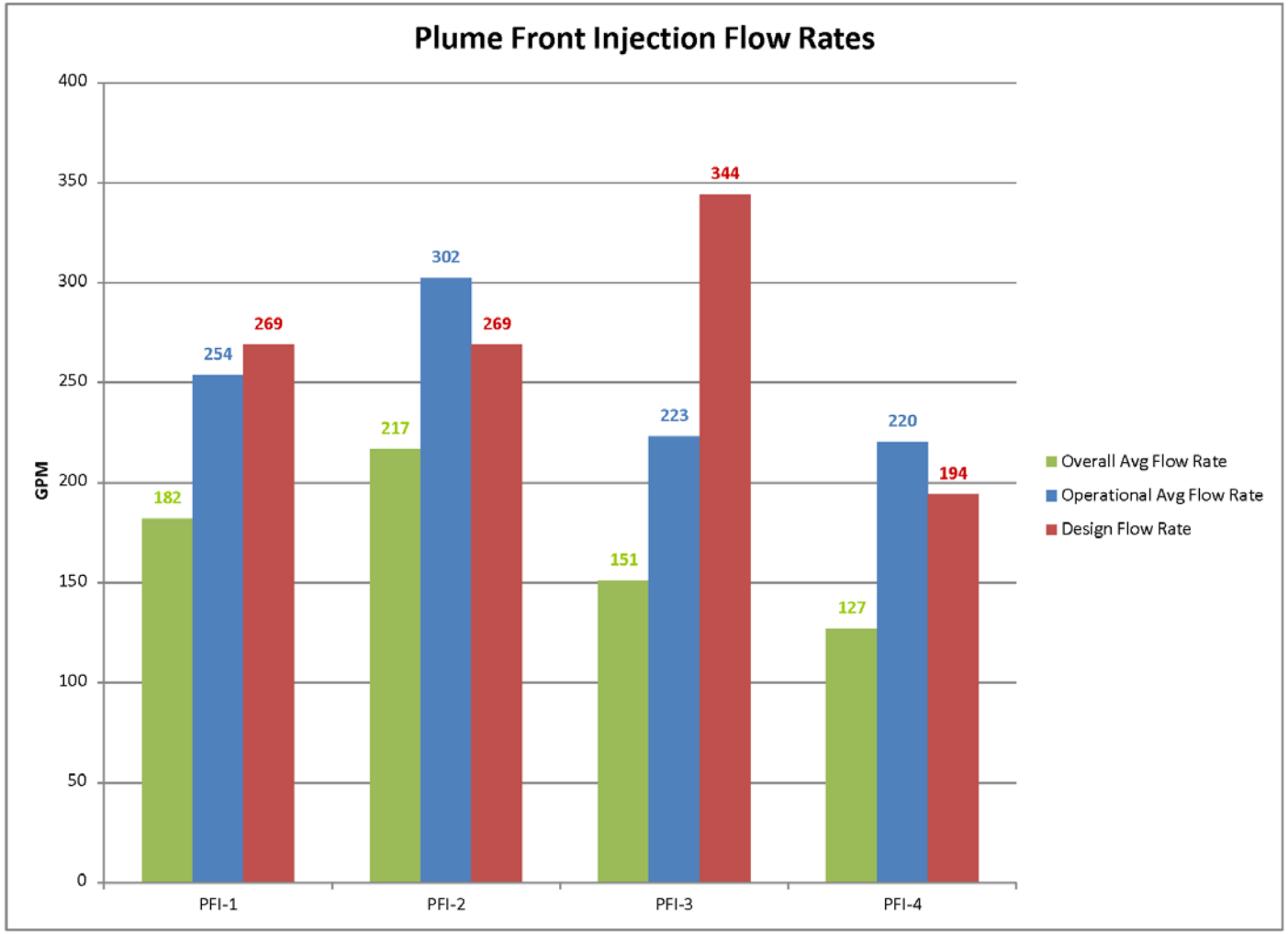


Figure 6.1 Plume Front Groundwater Elevations (Fourth Quarter 2012)

(SEE NEXT PAGE)

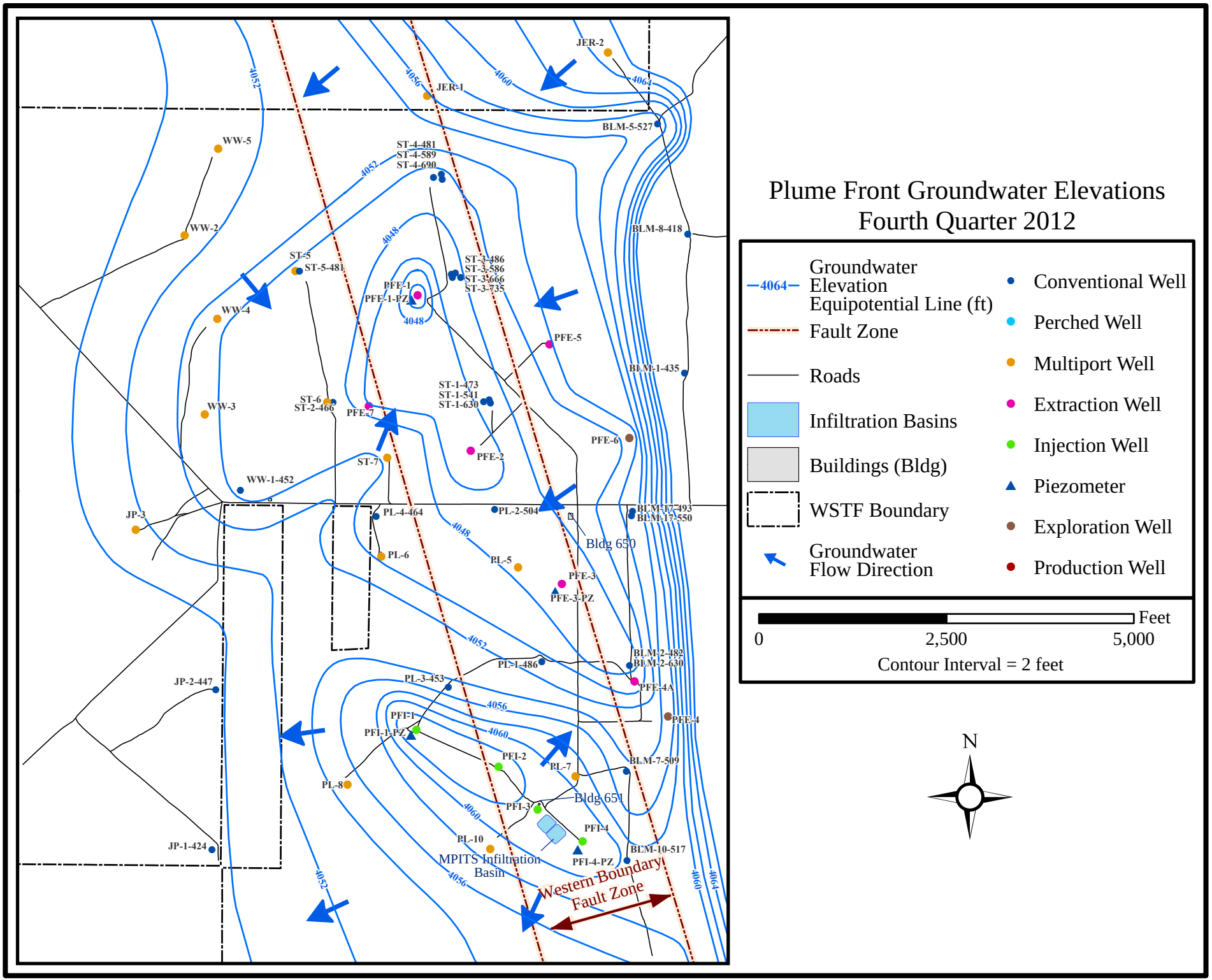

Plume Front Groundwater Elevations
Fourth Quarter 2012
Groundwater Elevation Equipotential Line (ft)
Fault Zone
Roads
Infiltration Basins
Buildings (Bldg)
WSTF Boundary
Groundwater Flow Direction
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Production Well
Feet
0
2,500
5,000
Contour Interval = 2 feet
N
4064
4060
4056
4052
4048
JER-2
JER-1
BLM-5-527
WW-5
ST-4-481
ST-4-589
ST-4-690
WW-2
BLM-8-418
ST-5
ST-5-481
ST-3-486
ST-3-586
ST-3-666
ST-3-735
PFE-1
PFE-1-PZ
WW-4
PFE-5
BLM-1-435
ST-1-473
ST-1-541
ST-1-630
ST-6
ST-2-466
WW-3
PFE-7
PFE-6
PFE-2
ST-7
WW-1-452
JP-3
PL-4-464
PL-2-504
BLM-17-493
BLM-17-550
Bldg 650
PL-6
PL-5
PFE-3
PFE-3-PZ
BLM-2-482
BLM-2-630
PL-1-486
JP-2-447
PL-3-453
PFE-4A
PFE-4
PFI-1
PFI-1-PZ
PFI-2
PL-7
BLM-7-509
PL-8
Bldg 651
PFI-3
PFI-4
PL-10
BLM-10-517
JP-1-424
MPITS Infiltration Basin
PFI-4-PZ
Western Boundary Fault Zone

Figure 6.2 Mid-plume Groundwater Elevations (Fourth Quarter 2012)

(SEE NEXT PAGE)

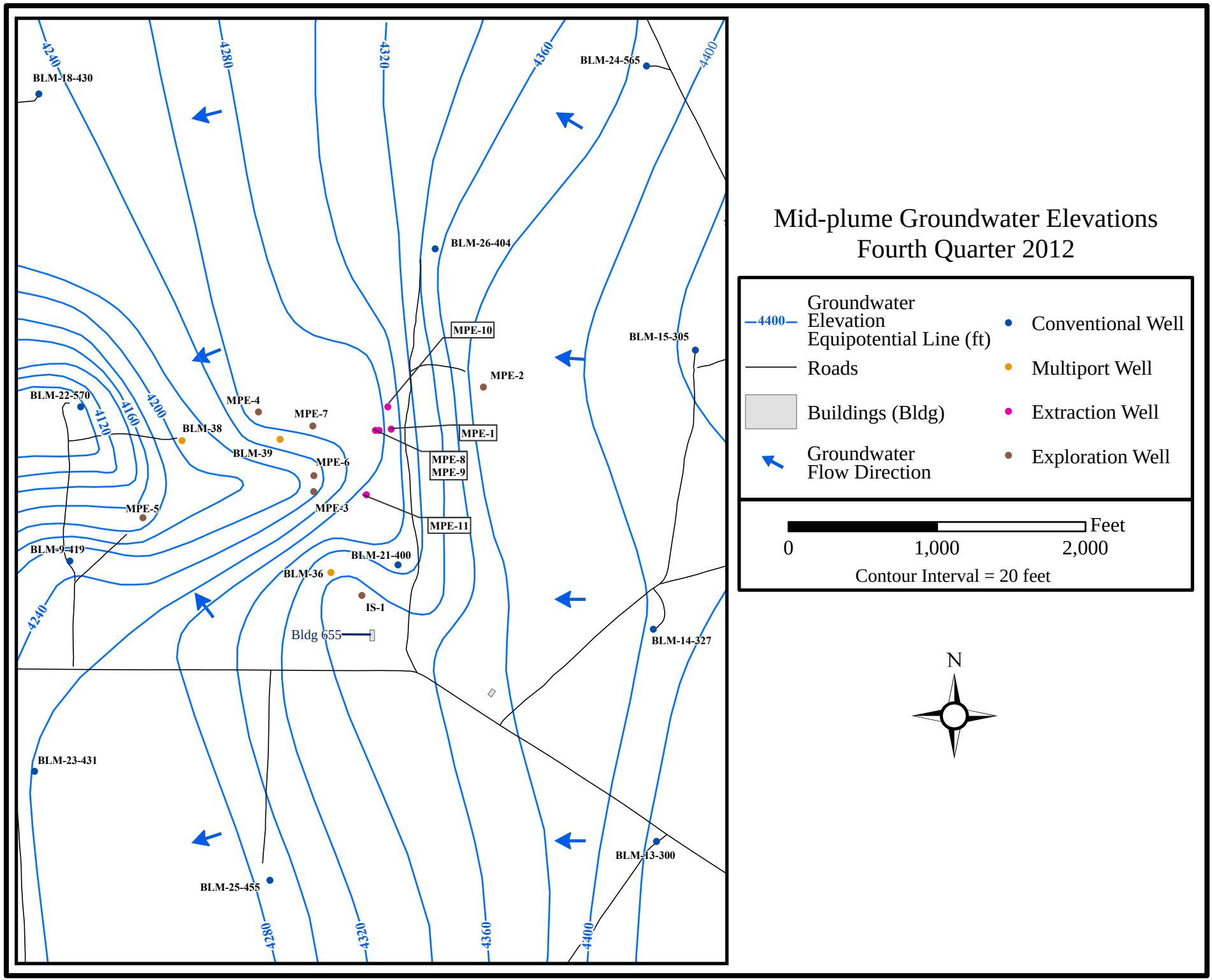

Mid-plume Groundwater Elevations
Fourth Quarter 2012
4400
Groundwater Elevation Equipotential Line (ft)
Roads
Buildings (Bldg)
Groundwater Flow Direction
Conventional Well
Multiport Well
Extraction Well
Exploration Well
Feet
0
1,000
2,000
Contour Interval = 20 feet
N
4240
4280
4320
4360
4400
4200
4160
4120
BLM-18-430
BLM-24-565
BLM-26-404
BLM-15-305
BLM-22-570
BLM-38
BLM-39
MPE-4
MPE-7
MPE-6
MPE-3
MPE-5
MPE-2
MPE-10
MPE-1
MPE-8
MPE-9
MPE-11
BLM-9-419
BLM-21-400
BLM-36
IS-1
Bldg 655
BLM-14-327
BLM-23-431
BLM-13-300
BLM-25-455

Figure 6.3 N-Nitrosodimethylamine (NDMA) Concentrations at the Plume Front (Fourth Quarter 2012)

(SEE NEXT PAGE)

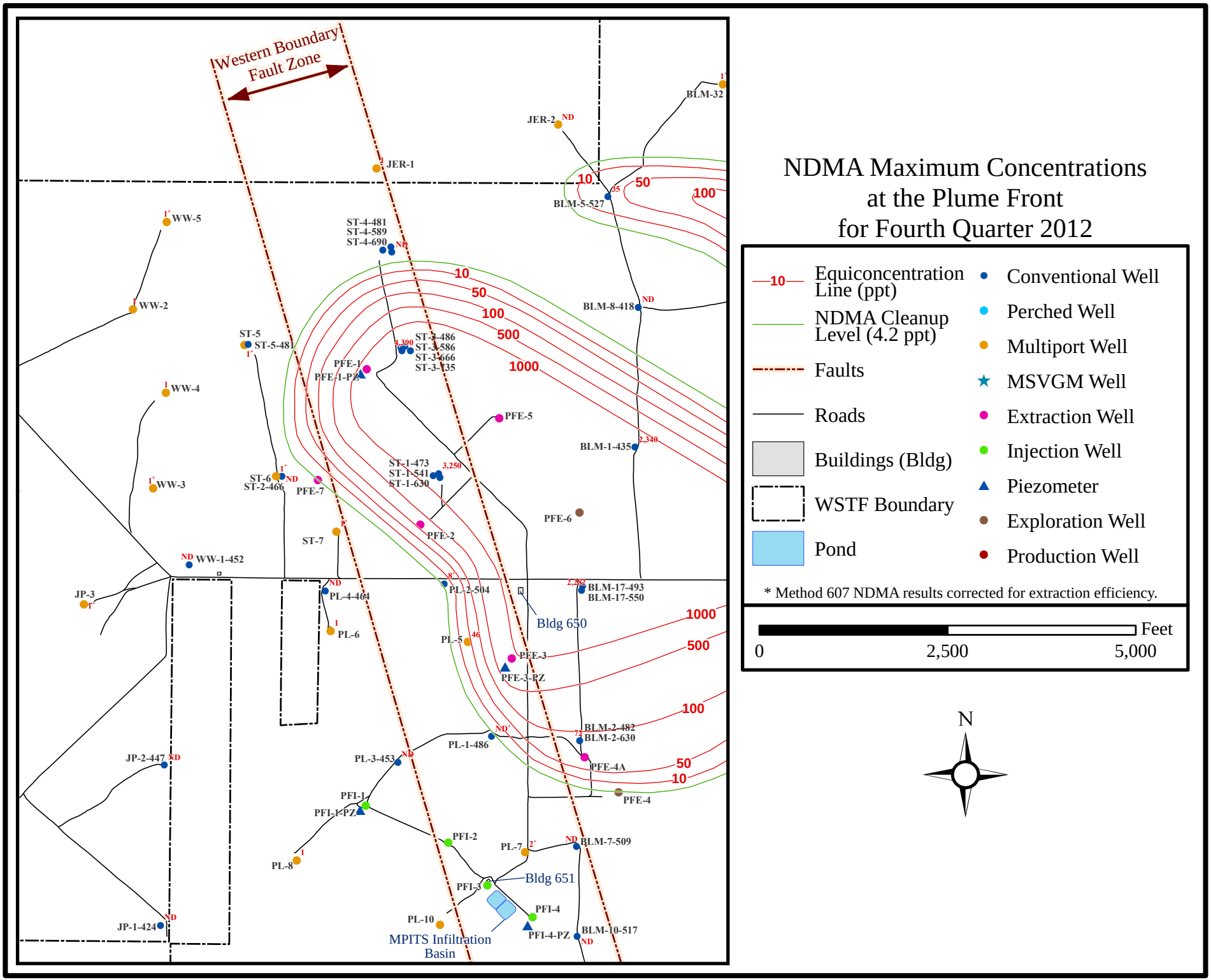

NDMA Maximum Concentrations
at the Plume Front
for Fourth Quarter 2012
Equiconcentration Line (ppt)
NDMA Cleanup Level (4.2 ppt)
Faults
Roads
Buildings (Bldg)
WSTF Boundary
Pond
Conventional Well
Perched Well
Multiport Well
MSVGM Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Production Well
* Method 607 NDMA results corrected for extraction efficiency.
Feet
0
2,500
5,000
N
Western Boundary Fault Zone
Bldg 650
Bldg 651
MPITS Infiltration Basin
BLM-32
JER-2
JER-1
BLM-5-527
WW-5
ST-4-481
ST-4-589
ST-4-690
WW-2
BLM-8-418
ST-5
ST-5-481
ST-3-486
ST-3-586
ST-3-666
ST-3-735
PFE-1
PFE-1-PZ
WW-4
PFE-5
BLM-1-435
ST-1-473
ST-1-541
ST-1-630
ST-6
ST-2-466
PFE-7
WW-3
PFE-6
ST-7
PFE-2
WW-1-452
JP-3
PL-4-464
PL-2-504
BLM-17-493
BLM-17-550
PL-6
PL-5
PFE-3
PFE-3-PZ
BLM-2-482
BLM-2-630
PL-1-486
JP-2-447
PL-3-453
PFE-4A
PFE-4
PFI-1
PFI-1-PZ
PFI-2
PL-7
BLM-7-509
PL-8
PFI-3
PFI-4
PL-10
PFI-4-PZ
BLM-10-517
JP-1-424
10
50
100
500
1000

Figure 6.4 Trichloroethene (TCE) Concentrations at the Plume Front (Fourth Quarter 2012)

(SEE NEXT PAGE)

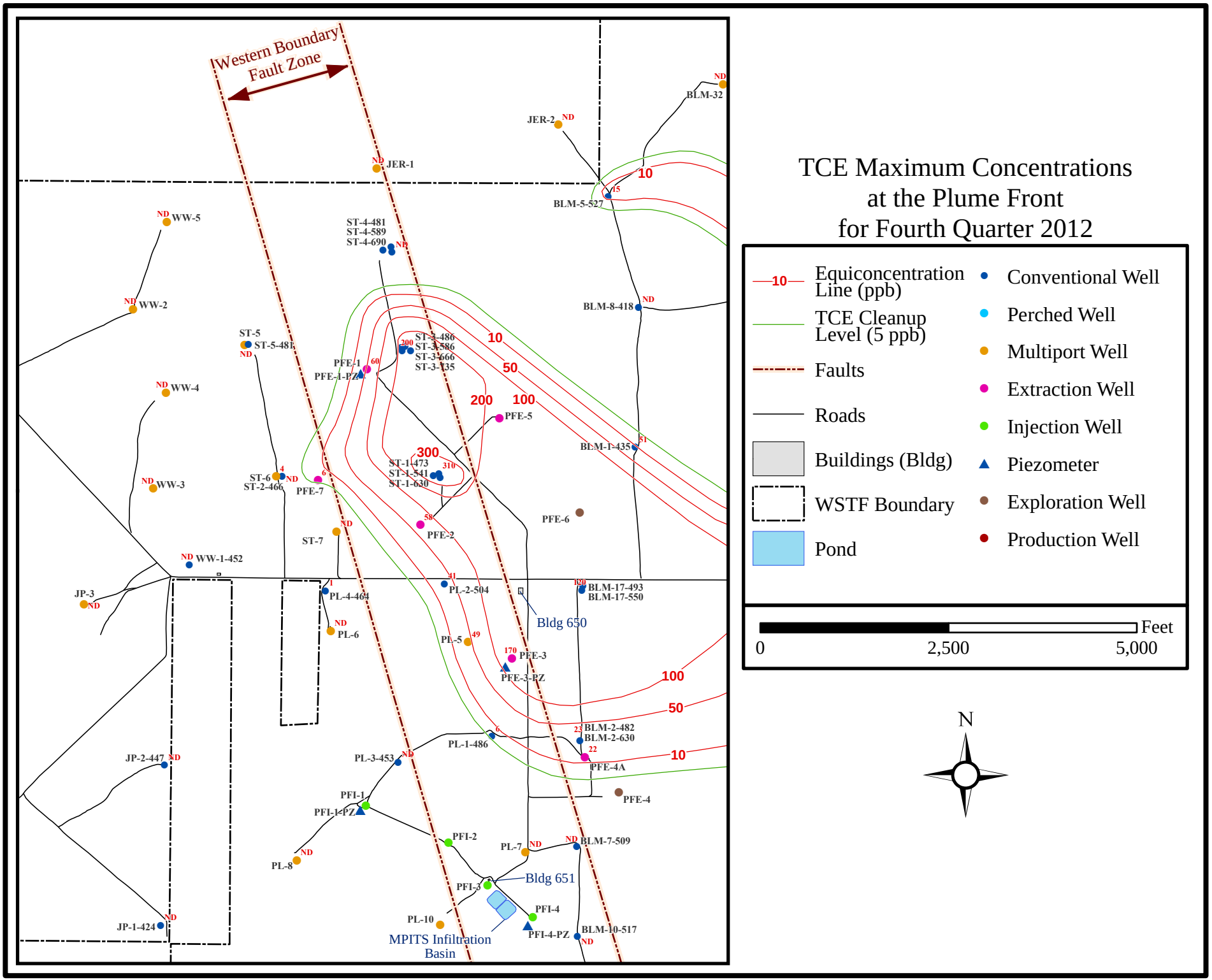

TCE Maximum Concentrations
at the Plume Front
for Fourth Quarter 2012
Equiconcentration Line (ppb)
TCE Cleanup Level (5 ppb)
Faults
Roads
Buildings (Bldg)
WSTF Boundary
Pond
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Production Well
Feet
0
2,500
5,000
N
Western Boundary Fault Zone
Bldg 650
Bldg 651
MPITS Infiltration Basin
JER-1
JER-2
BLM-32
BLM-5-527
BLM-8-418
BLM-1-435
BLM-17-493
BLM-17-550
BLM-2-482
BLM-2-630
BLM-7-509
BLM-10-517
WW-5
WW-2
WW-4
WW-3
WW-1-452
ST-4-481
ST-4-589
ST-4-690
ST-5
ST-5-481
ST-3-486
ST-3-586
ST-3-666
ST-3-735
ST-1-473
ST-1-541
ST-1-630
ST-6
ST-2-466
ST-7
PFE-1
PFE-1-PZ
PFE-5
PFE-7
PFE-2
PFE-6
PFE-3
PFE-3-PZ
PFE-4A
PFE-4
PL-4-464
PL-6
PL-2-504
PL-5
PL-1-486
PL-3-453
PL-8
PL-7
PL-10
JP-3
JP-2-447
JP-1-424
PFI-1
PFI-1-PZ
PFI-2
PFI-3
PFI-4
PFI-4-PZ
10
50
100
200
300

Figure 6.5 Tetrachloroethene (PCE) Concentrations at the Plume Front (Fourth Quarter 2012)

(SEE NEXT PAGE)

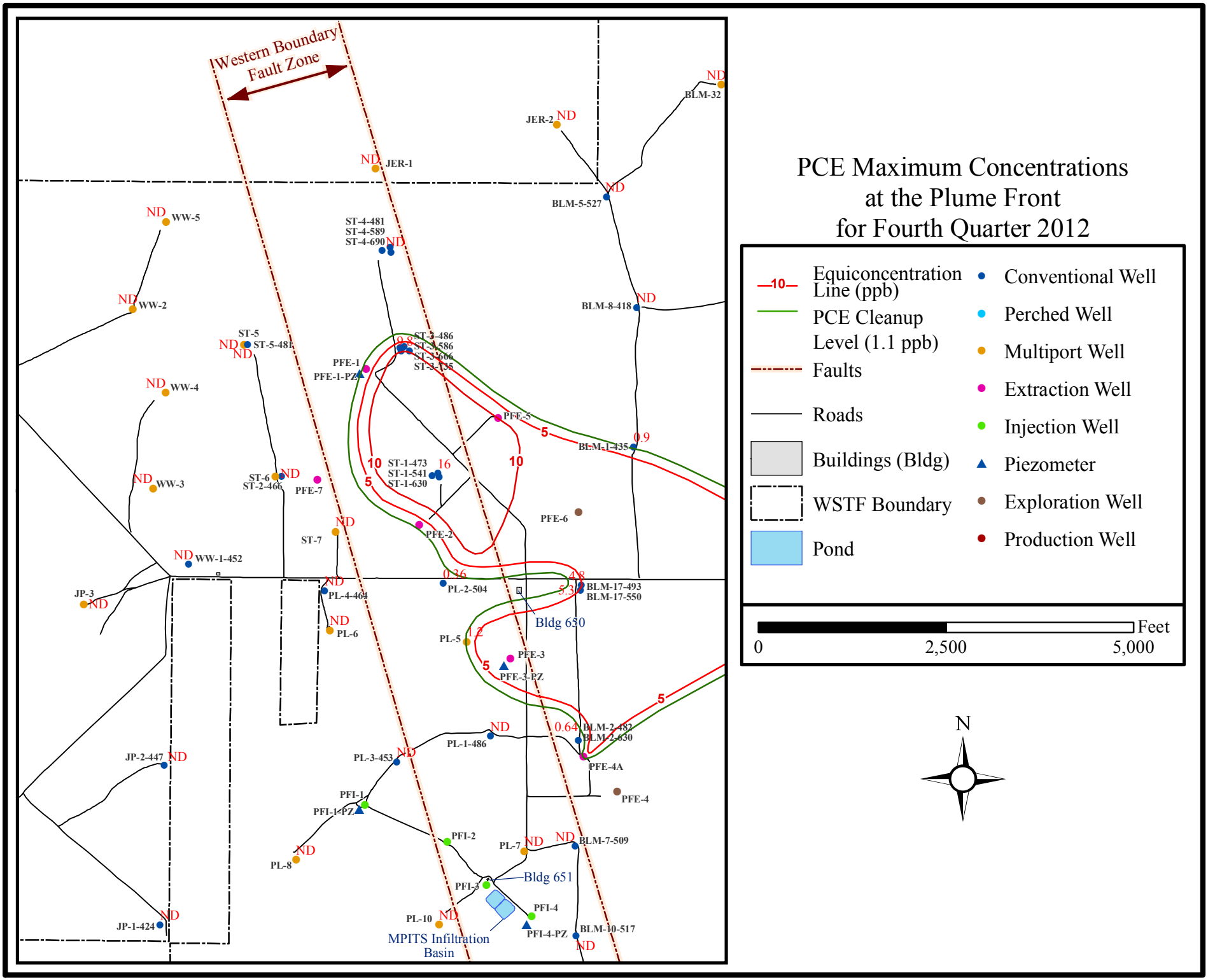

PCE Maximum Concentrations
at the Plume Front
for Fourth Quarter 2012
Equiconcentration Line (ppb)
PCE Cleanup Level (1.1 ppb)
Faults
Roads
Buildings (Bldg)
WSTF Boundary
Pond
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Production Well
Feet
0
2,500
5,000
N
Western Boundary Fault Zone
Bldg 650
Bldg 651
MPITS Infiltration Basin
BLM-32
JER-2
JER-1
BLM-5-527
WW-5
ST-4-481
ST-4-589
ST-4-690
WW-2
BLM-8-418
ST-5
ST-5-481
ST-3-486
ST-3-586
ST-3-666
ST-3-735
PFE-1
PFE-1-PZ
WW-4
PFE-5
BLM-1-435
ST-1-473
ST-1-541
ST-1-630
ST-6
ST-2-466
PFE-7
WW-3
PFE-6
PFE-2
ST-7
WW-1-452
PL-2-504
BLM-17-493
BLM-17-550
JP-3
PL-4-464
PL-6
PL-5
PFE-3
PFE-3-PZ
BLM-2-482
BLM-2-630
PL-1-486
PFE-4A
JP-2-447
PL-3-453
PFE-4
PFI-1
PFI-1-PZ
PFI-2
PL-7
BLM-7-509
PL-8
PFI-3
PFI-4
PL-10
PFI-4-PZ
BLM-10-517
JP-1-424

Figure 6.6 Freon 11 Concentrations at the Plume Front (Fourth Quarter 2012)

(SEE NEXT PAGE)

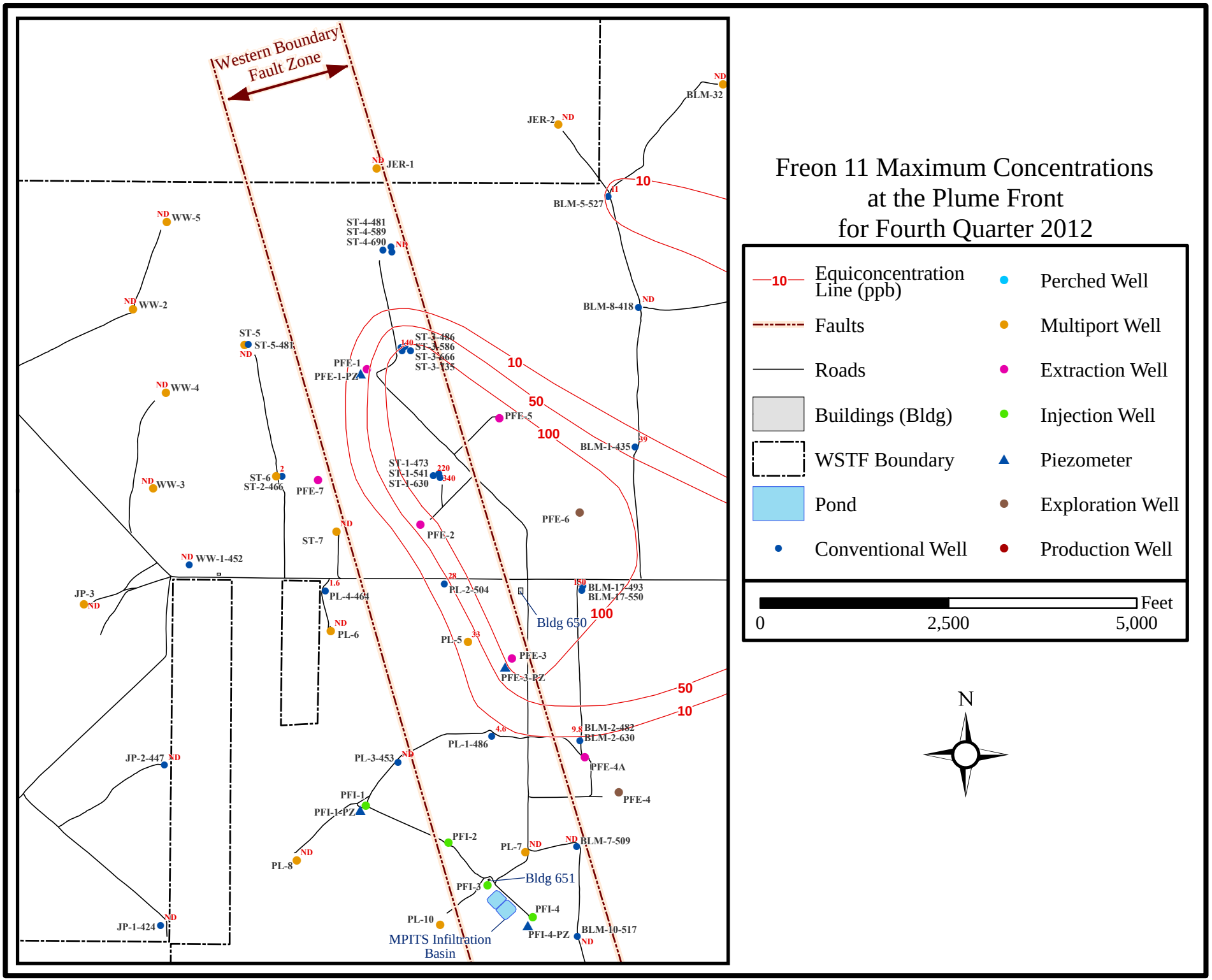

Freon 11 Maximum Concentrations
at the Plume Front
for Fourth Quarter 2012
Equiconcentration Line (ppb)
Faults
Roads
Buildings (Bldg)
WSTF Boundary
Pond
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Production Well
Feet
0
2,500
5,000
N
Western Boundary Fault Zone
10
50
100
Bldg 650
Bldg 651
MPITS Infiltration Basin
BLM-32
JER-2
JER-1
BLM-5-527
WW-5
ST-4-481
ST-4-589
ST-4-690
WW-2
BLM-8-418
ST-5
ST-5-481
ST-3-486
ST-3-586
ST-3-666
ST-3-735
PFE-1
PFE-1-PZ
WW-4
PFE-5
BLM-1-435
ST-1-473
ST-1-541
ST-1-630
ST-6
ST-2-466
PFE-7
WW-3
PFE-6
ST-7
PFE-2
WW-1-452
JP-3
PL-4-464
PL-2-504
BLM-17-493
BLM-17-550
PL-6
PL-5
PFE-3
PFE-3-PZ
BLM-2-482
BLM-2-630
PL-1-486
PL-3-453
PFE-4A
JP-2-447
PFE-4
PFI-1
PFI-1-PZ
PFI-2
PL-7
BLM-7-509
PL-8
PFI-3
PFI-4
PL-10
PFI-4-PZ
BLM-10-517
JP-1-424

Figure 6.7 Freon 113 Concentrations at the Plume Front (Fourth Quarter 2012)

(SEE NEXT PAGE)

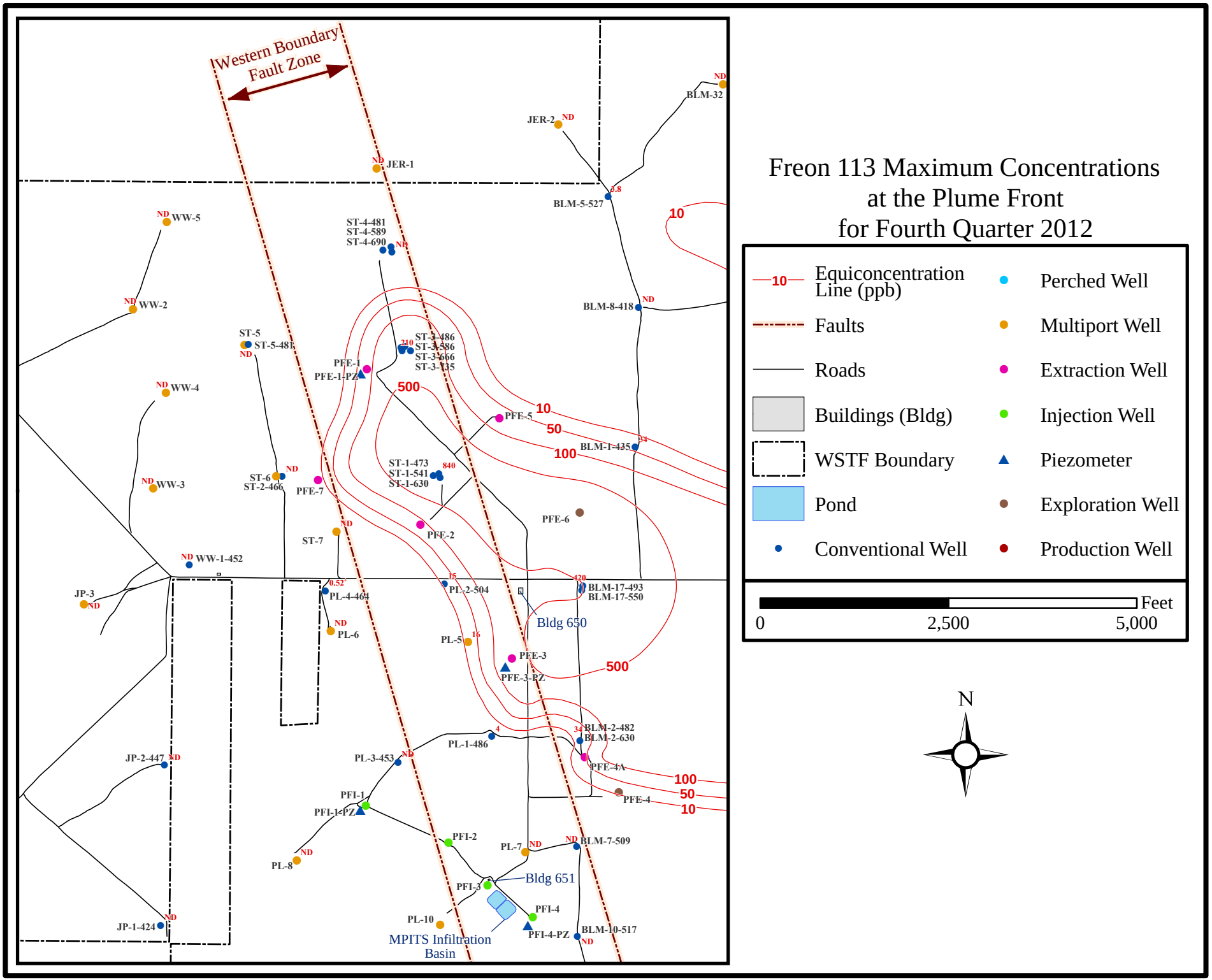

Freon 113 Maximum Concentrations
at the Plume Front
for Fourth Quarter 2012
Equiconcentration Line (ppb)
Faults
Roads
Buildings (Bldg)
WSTF Boundary
Pond
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Production Well
Feet
0
2,500
5,000
N
Western Boundary Fault Zone
Bldg 650
Bldg 651
MPITS Infiltration Basin
JER-1
JER-2
BLM-32
BLM-5-527
BLM-8-418
BLM-1-435
WW-5
WW-2
WW-4
WW-3
WW-1-452
JP-3
JP-2-447
JP-1-424
ST-5
ST-5-481
ST-6
ST-2-466
ST-7
ST-4-481
ST-4-589
ST-4-690
ST-3-486
ST-3-586
ST-3-666
ST-3-735
ST-1-473
ST-1-541
ST-1-630
PFE-1
PFE-1-PZ
PFE-2
PFE-3
PFE-3-PZ
PFE-4
PFE-4A
PFE-5
PFE-6
PFE-7
PL-4-464
PL-6
PL-2-504
PL-5
PL-1-486
PL-3-453
PL-8
PL-10
PL-7
BLM-17-493
BLM-17-550
BLM-2-482
BLM-2-630
BLM-7-509
BLM-10-517
PFI-1
PFI-1-PZ
PFI-2
PFI-3
PFI-4
PFI-4-PZ
ND
10
50
100
500

Figure 6.8 Plume Front Groundwater Elevations and TCE Concentrations (Fourth Quarter 2012)

(SEE NEXT PAGE)

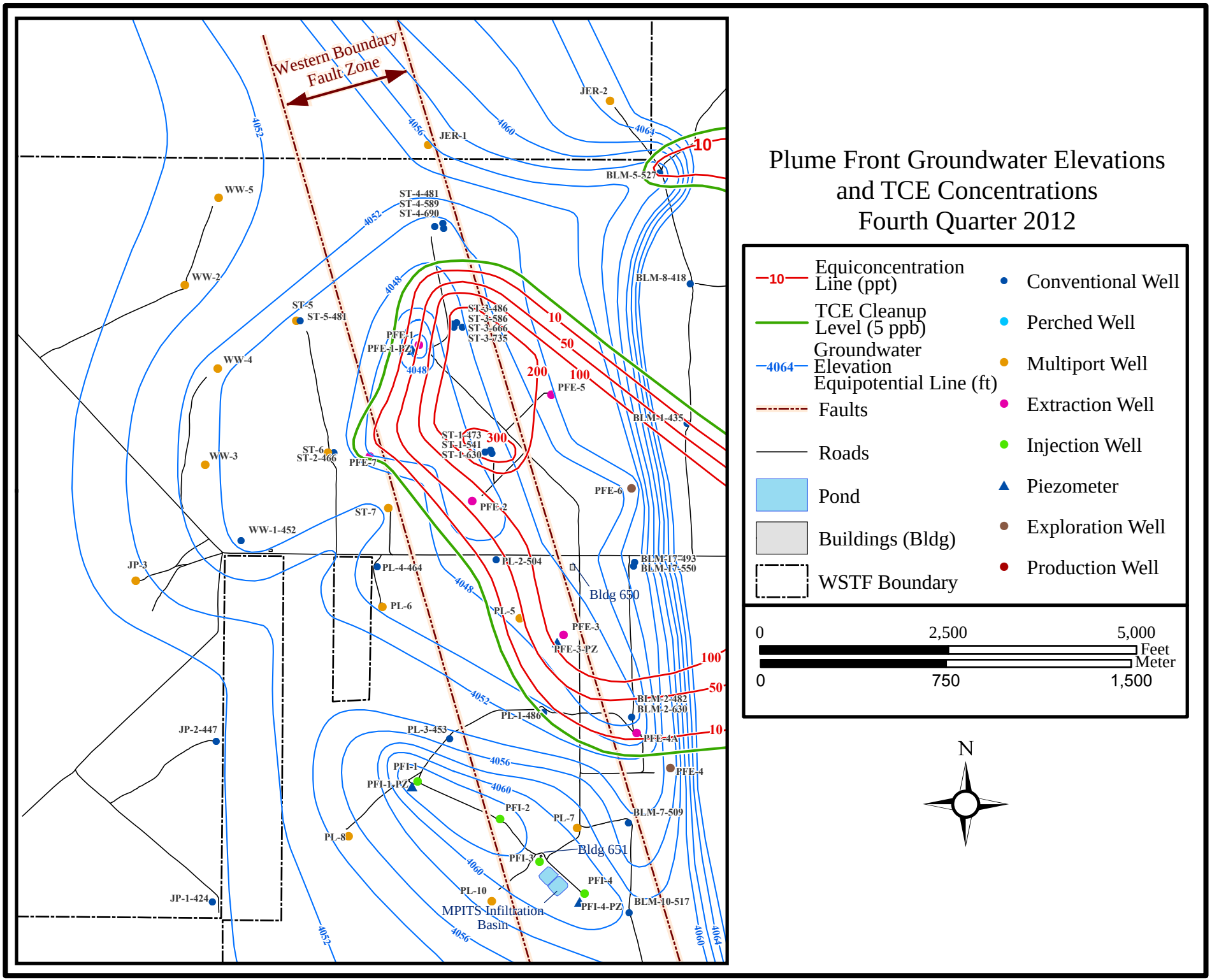

Plume Front Groundwater Elevations
and TCE Concentrations
Fourth Quarter 2012
Western Boundary
Fault Zone
Equiconcentration Line (ppt)
TCE Cleanup Level (5 ppb)
Groundwater Elevation Equipotential Line (ft)
Faults
Roads
Pond
Buildings (Bldg)
WSTF Boundary
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Production Well
0
2,500
5,000
Feet
Meter
0
750
1,500
N
Bldg 650
Bldg 651
MPITS Infiltration Basin
JER-2
JER-1
BLM-5-527
WW-5
WW-2
WW-4
WW-3
WW-1-452
JP-3
JP-2-447
JP-1-424
ST-4-481
ST-4-589
ST-4-690
ST-5
ST-5-481
ST-6
ST-2-466
ST-7
ST-3-486
ST-3-586
ST-3-666
ST-3-735
ST-1-473
ST-1-541
ST-1-630
PFE-1
PFE-1-PZ
PFE-7
PFE-5
PFE-2
PFE-6
PFE-3
PFE-3-PZ
PFE-4A
PFE-4
BLM-8-418
BLM-1-435
BLM-17-493
BLM-17-550
BLM-2-482
BLM-2-630
BLM-7-509
BLM-10-517
PL-4-464
PL-6
PL-2-504
PL-5
PL-1-486
PL-3-453
PL-8
PL-10
PL-7
PFI-1
PFI-1-PZ
PFI-2
PFI-3
PFI-4
PFI-4-PZ
10
50
100
200
300
4052
4056
4060
4064
4048

Figure 6.9 MODPATH Particle Tracking Simulation (Fourth Quarter 2012)

(SEE NEXT PAGE)

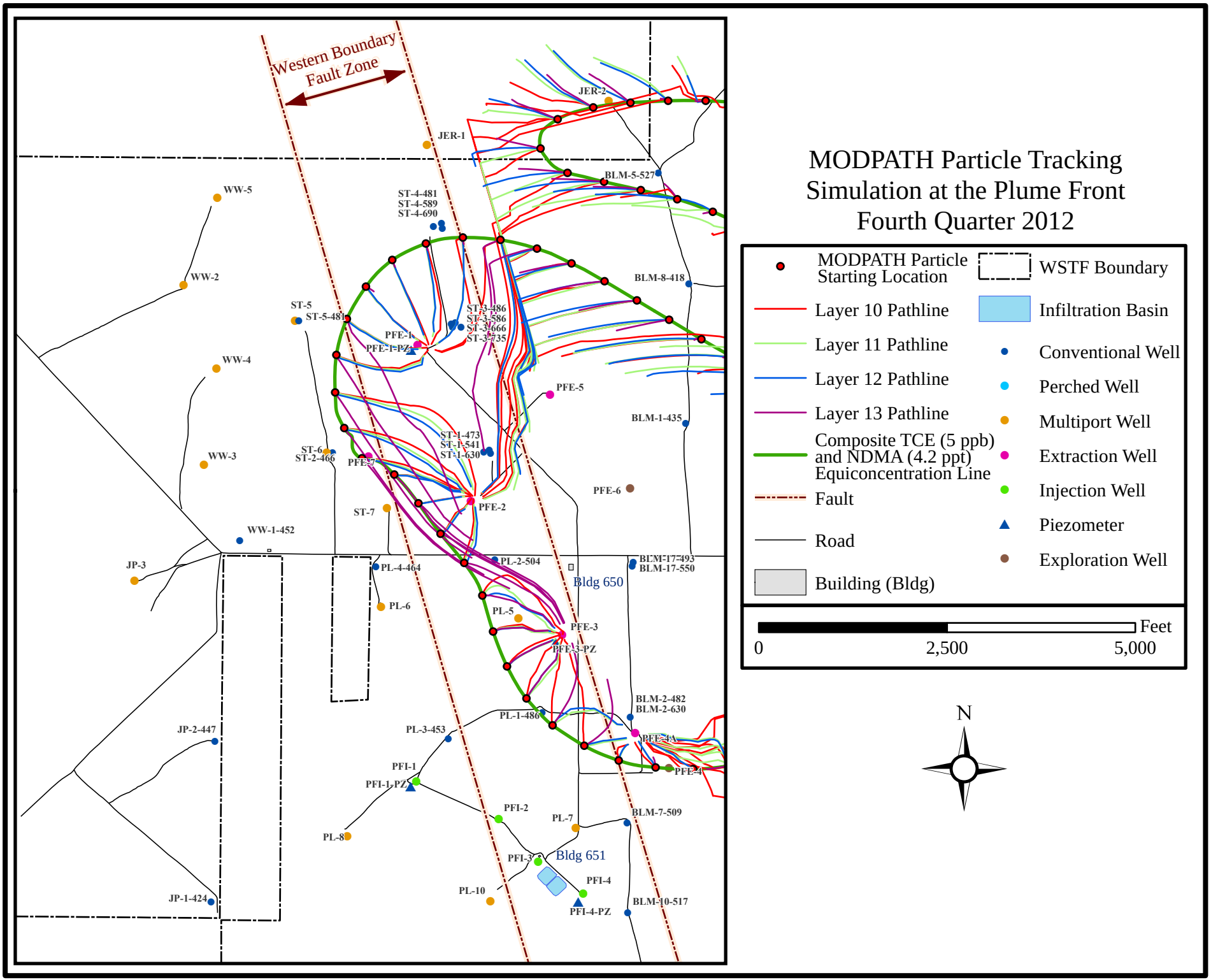
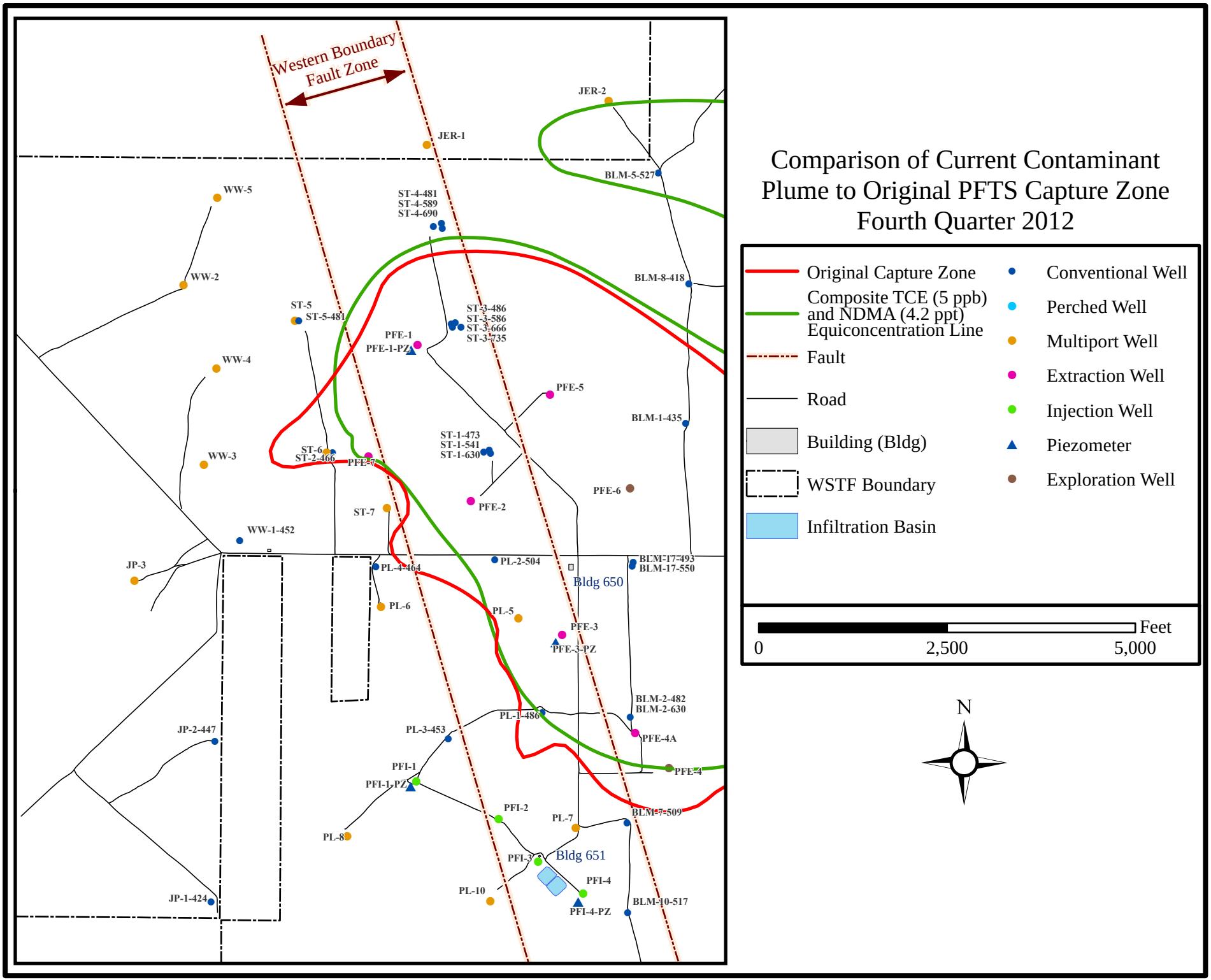

MODPATH Particle Tracking Simulation at the Plume Front Fourth Quarter 2012
Western Boundary Fault Zone
MODPATH Particle Starting Location
Layer 10 Pathline
Layer 11 Pathline
Layer 12 Pathline
Layer 13 Pathline
Composite TCE (5 ppb) and NDMA (4.2 ppt) Equiconcentration Line
Fault
Road
Building (Bldg)
WSTF Boundary
Infiltration Basin
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Feet
0
2,500
5,000
N
JER-1
JER-2
BLM-5-527
BLM-8-418
BLM-1-435
WW-5
WW-2
WW-4
WW-3
WW-1-452
JP-3
JP-2-447
JP-1-424
ST-4-481
ST-4-589
ST-4-690
ST-5
ST-5-481
ST-6
ST-2-466
ST-7
ST-3-486
ST-3-586
ST-3-666
ST-3-735
ST-1-473
ST-1-541
ST-1-630
PFE-1
PFE-1-PZ
PFE-5
PFE-7
PFE-2
PFE-6
PFE-3
PFE-3-PZ
PFE-4A
PFE-4
PL-4-464
PL-6
PL-2-504
PL-5
PL-1-486
PL-3-453
PL-8
PL-7
PL-10
BLM-17-493
BLM-17-550
Bldg 650
BLM-2-482
BLM-2-630
BLM-7-509
BLM-10-517
PFI-1
PFI-1-PZ
PFI-2
PFI-3
PFI-4
PFI-4-PZ
Bldg 651

Figure 6.10 Comparison of Current Contaminant Plume to Original PFTS Capture Zone (Fourth Quarter 2012)

(SEE NEXT PAGE)


Comparison of Current Contaminant Plume to Original PFTS Capture Zone Fourth Quarter 2012
Western Boundary Fault Zone
Original Capture Zone
Composite TCE (5 ppb) and NDMA (4.2 ppt) Equiconcentration Line
Fault
Road
Building (Bldg)
WSTF Boundary
Infiltration Basin
Conventional Well
Perched Well
Multiport Well
Extraction Well
Injection Well
Piezometer
Exploration Well
Feet
0
2,500
5,000
N
JER-2
JER-1
BLM-5-527
WW-5
ST-4-481
ST-4-589
ST-4-690
WW-2
BLM-8-418
ST-5
ST-5-481
ST-3-486
ST-3-586
ST-3-666
ST-3-735
PFE-1
PFE-1-PZ
WW-4
PFE-5
BLM-1-435
ST-1-473
ST-1-541
ST-1-630
ST-6
ST-2-466
PFE-7
WW-3
PFE-6
PFE-2
ST-7
WW-1-452
JP-3
PL-4-464
PL-2-504
BLM-17-493
BLM-17-550
Bldg 650
PL-6
PL-5
PFE-3
PFE-3-PZ
BLM-2-482
BLM-2-630
PL-1-486
JP-2-447
PL-3-453
PFE-4A
PFE-4
PFI-1
PFI-1-PZ
PFI-2
PL-7
BLM-7-509
PL-8
PFI-3
Bldg 651
PFI-4
PL-10
BLM-10-517
JP-1-424
PFI-4-PZ

Tables

This section provides all tables referenced in preceding sections of this document.

Table 3.1 Discharge Limits and Cleanup Levels

Contaminant	Chemical Abstract Number	DP-1255 Standard (µg/L)	Cleanup Level (µg/L)
Carcinogens			
NDMA	62-75-9	0.0042	0.0042[1]
TCE	79-01-6	5	5[2]
PCE	127-18-4	1.1	1.1[5]
Acrylonitrile	107-13-1	N/A	0.45[1, 4]
Chloroform	67-66-3	1.9	1.9[1]
Arsenic	7440-38-2	N/A	10[2]
Lead	7439-92-1	N/A	50[3]
Non-Carcinogens			
Freon 11	75-69-4	N/A	1,100[1]
Cadmium	7440-43-9	N/A	5[2]
Chromium	16065-83-1	N/A	50[3]
Nickel	7440-02-0	N/A	200[3]
Nitrate + Nitrite (both as N)	N/A	N/A	10,000[2]

Notes:

1 EPA Regional Screening Levels (RSL) equivalent to 1E-05 risk for carcinogens and H=1 for non-carcinogens as of 2012 GMP update approval (08/12/2012).

2 40 CFR Parts 141 and 143: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=%2Findex.tpl

3 New Mexico Administrative Code (NMAC)- Standards for Ground Water of 10,000 mg/L TDS concentration or less: Paragraphs (1-33) of Subsection A; Paragraphs (1-10) of Subsection B; and, Paragraphs (1-5) of Subsection C 20.6.2.3103 NMAC (Water Quality Control Commission Standards).

4 Current clean-up level is below MDL.

5 Note that the November 2012 RSLs for PCE have changed significantly (Hazard Index [HI] of 1 = 35 µg/L; 1.0E-05 risk= 97 µg/L).

N/A – Not Applicable

Table 3.2 New Detections for Sampling Events in this Reporting Period

Table 3.2 New Detections – this period

Well ID	CAS Number	Analyte
100-HG-139	14797-73-0	PERCHLORATE
100-HG-139	7439-89-6	IRON
100-HG-139	7439-96-5	MANGANESE
100-HG-139	7439-98-7	MOLYBDENUM
200-B-240	7440-38-2	ARSENIC, TOTAL
200-B-240	18496-25-8	SULFIDE, ACID-SOLUBLE
200-D-109	7440-50-8	COPPER
200-D-109	7440-66-6	ZINC
200-D-109	7429-90-5	ALUMINUM
200-D-109	7439-89-6	IRON
200-D-109	7439-96-5	MANGANESE
200-D-240	14808-79-8	SULFATE
200-D-240	16887-00-6	CHLORIDE
200-D-240	471-34-1	BICARBONATE AS CACO3
200-H-225	14808-79-8	SULFATE
200-H-225	471-34-1	BICARBONATE AS CACO3
200-JG-110	7782-49-2	SELENIUM
200-SG-1	14808-79-8	SULFATE
200-SG-1	16887-00-6	CHLORIDE
200-SG-1	16984-48-8	FLUORIDE
200-SG-1	NA	NITRATE/NITRITE AS N
200-SG-1	NA	TOTAL DISSOLVED SOLIDS
200-SG-1	471-34-1	BICARBONATE AS CACO3
200-SG-1	NA	TOTAL ALKALINITY AS CACO3
300-C-128	7440-66-6	ZINC
300-C-128	7440-09-7	POTASSIUM
400-C-118	14797-73-0	PERCHLORATE
400-C-118	14808-79-8	SULFATE
400-C-118	16887-00-6	CHLORIDE
400-C-118	7440-38-2	ARSENIC, TOTAL
400-C-118	NA	NITRATE+NITRITE AS NITROGEN
400-D-275	14808-79-8	SULFATE
400-D-275	16887-00-6	CHLORIDE
400-D-275	471-34-1	BICARBONATE AS CACO3
400-D-275	NA	TOTAL ALKALINITY AS CACO3
700-A-253	471-34-1	BICARBONATE (AS CACO3)
700-A-253	7440-09-7	POTASSIUM
700-D-186	471-34-1	BICARBONATE (AS CACO3)
700-D-186	7440-09-7	POTASSIUM
700-H-350	471-34-1	BICARBONATE (AS CACO3)
700-H-670	14808-79-8	SULFATE

Table 3.2 New Detections – this period

Well ID	CAS Number	Analyte
700-H-670	16887-00-6	CHLORIDE
700-H-670	471-34-1	BICARBONATE AS CACO3
700-J-200	471-34-1	BICARBONATE (AS CACO3)
700-J-200	7440-09-7	POTASSIUM
BLM-14-327	471-34-1	BICARBONATE AS CACO3
BLM-21-400	7440-23-5	SODIUM, TOTAL
BLM-21-400	7440-24-6	STRONTIUM, TOTAL
BLM-21-400	7440-38-2	ARSENIC, TOTAL
BLM-21-400	7440-66-6	ZINC, TOTAL
BLM-21-400	7439-95-4	MAGNESIUM, TOTAL
BLM-21-400	7440-09-7	POTASSIUM, TOTAL
BLM-21-400	7440-70-2	CALCIUM, TOTAL
BLM-36-610	14797-73-0	PERCHLORATE
BLM-36-610	14808-79-8	SULFATE
BLM-36-610	16887-00-6	CHLORIDE
BLM-36-610	471-34-1	BICARBONATE AS CACO3
BLM-37-750	7440-62-2	VANADIUM, TOTAL
BLM-37-750	7440-66-6	ZINC, TOTAL
BLM-37-885	14797-73-0	PERCHLORATE
BLM-37-885	7440-38-2	ARSENIC, TOTAL
BLM-37-885	7440-62-2	VANADIUM, TOTAL
BLM-38-620	471-34-1	BICARBONATE AS CACO3
BLM-6-488	14808-79-8	SULFATE
BLM-6-488	16887-00-6	CHLORIDE
BLM-6-488	471-34-1	BICARBONATE AS CACO3
BW-3-180	7440-50-8	COPPER
BW-3-180	7439-96-5	MANGANESE
BW-6-355	14808-79-8	SULFATE
BW-6-355	16887-00-6	CHLORIDE
BW-6-355	7440-24-6	STRONTIUM
BW-6-355	7440-42-8	BORON
BW-6-355	7440-66-6	ZINC
BW-6-355	471-34-1	BICARBONATE AS CACO3
NASA 5	14797-73-0	PERCHLORATE
NASA 5	14808-79-8	SULFATE
NASA 5	16887-00-6	CHLORIDE
NASA 5	471-34-1	BICARBONATE AS CACO3
NASA 6	7440-62-2	VANADIUM, TOTAL
NASA 9	7440-28-0	THALLIUM
ST-5-481	14797-73-0	PERCHLORATE
ST-5-481	14808-79-8	SULFATE
ST-5-481	16887-00-6	CHLORIDE
ST-5-481	7440-23-5	SODIUM, TOTAL
ST-5-481	7440-24-6	STRONTIUM, TOTAL

Table 3.2 New Detections – this period

Well ID	CAS Number	Analyte
ST-5-481	7440-62-2	VANADIUM, TOTAL
ST-5-481	7439-95-4	MAGNESIUM, TOTAL
ST-5-481	7440-09-7	POTASSIUM, TOTAL
ST-5-481	7440-70-2	CALCIUM, TOTAL
WB-14-520	14797-73-0	PERCHLORATE
WB-14-520	14808-79-8	SULFATE
WB-14-520	16887-00-6	CHLORIDE
WB-14-520	7440-62-2	VANADIUM
WB-14-520	471-34-1	BICARBONATE AS CaCO3
WB-14-520	7439-98-7	MOLYBDENUM
WB-14-520	7440-09-7	POTASSIUM
WB-5-250	7782-49-2	SELENIUM
WB-5-250	7439-96-5	MANGANESE
WB-5-250	7440-09-7	POTASSIUM
WB-5-280	14808-79-8	SULFATE
WB-5-280	16887-00-6	CHLORIDE
WB-5-280	NA	NITRATE/NITRITE AS N
WB-5-280	471-34-1	BICARBONATE AS CaCO3
WB-5-280	7439-96-5	MANGANESE
WB-5-280	7440-09-7	POTASSIUM
WB-5-280	NA	TOTAL ALKALINITY AS CaCO3
WB-5-345	7782-49-2	SELENIUM
WB-5-345	7439-89-6	IRON
WB-5-345	7439-96-5	MANGANESE
WB-5-345	7440-09-7	POTASSIUM

Table 3.3 Unconfirmed New Detections for Sampling Events in this Reporting Period

Well ID	CAS Number	Analyte	Scheduled Resample Date
BLM-24-565*	74-87-3	Chloromethane	11/8/2012
200-I-795*	62-75-9	N-Nitrosodimethylamine	11/14/2012
BW-5-295*	314-40-9	Bromacil	11/15/2012
200-I-185*	62-75-9	N-Nitrosodimethylamine	11/16/2012
BLM-13-300*	62-75-9	N-Nitrosodimethylamine	12/5/2012
100-F-358	74-87-3	Chloromethane	1/5/2013
WW-2-845*	75-01-4	Vinyl Chloride	1/4/2013
NASA 3*	314-40-9	Bromacil	1/11/2013
ST-6-685	74-87-3	Chloromethane	1/12/2013
BLM-38-480	62-75-9	N-Nitrosodimethylamine	2/8/2013
ST-5-485	74-87-3	Chloromethane	2/13/2013
600-G-138	354-23-4	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3/11/2013
600-G-138	62-75-9	N-Nitrosodimethylamine	3/11/2013
PL-6-1815*	107-13-1	Acrylonitrile	4/5/2013
PL-6-1815*	67-64-1	Acetone	4/5/2013
PL-6-1815*	107-12-0	Propionitrile	4/5/2013
PL-6-545*	314-40-9	Bromacil	4/10/2013
BLM-28-425*	62-75-9	N-Nitrosodimethylamine	5/31/2013
ST-5-985	74-87-3	Chloromethane	8/22/2013
ST-5-815	74-83-9	Bromomethane	8/23/2013
ST-5-815	74-87-3	Chloromethane	8/23/2013
200-D-109	62-75-9	N-Nitrosodimethylamine	8/24/2013
300-D-153	62-75-9	N-Nitrosodimethylamine	8/27/2013
200-SG-1	62-75-9	N-Nitrosodimethylamine	9/8/2013
100-HG-139	62-75-9	N-Nitrosodimethylamine	9/14/2013

*- Indicates that this was result was reported in a previous PMR, and the scheduled resampling has not occurred.

Table 3.4 Resolution of Last Quarter's Unconfirmed Detections

Well ID	CAS Number	Analyte	Resample Date	Resolution
BLM-38-620	67-63-0	2-Propanol	6/6/2012	Unconfirmed
BLM-38-620	67-64-1	Acetone	6/6/2012	Confirmed
BLM-36-610	4164-28-7	N-nitrodimethylamine	8/3/2012	Unconfirmed
BLM-36-610	75-43-4	Dichlorofluoromethane (CFC 21)	8/3/2012	Unconfirmed
BLM-36-610	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	8/3/2012	Unconfirmed
BLM-36-610	79-01-6	Trichloroethene (TCE)	8/3/2012	Unconfirmed
400-D-275	74-87-3	Chloromethane	8/4/2012	Unconfirmed
200-SG-1	62-75-9	N-Nitrosodimethylamine	9/20/2012	Confirmed
600-G-138	354-23-4	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	9/27/2012	Confirmed
600-G-138	62-75-9	N-Nitrosodimethylamine	9/27/2012	Confirmed

Table 4.1 Groundwater Monitoring Wells/Zones for Which Analytical Data Were Processed During the Year

Well Name	Event Date	Area
100-F-358	05-Sep-12	Upgradient
100-HG-139	14-Sep-12	100/600
200-B-240	04-Oct-12	200
200-D-109	24-Aug-12	200
200-D-240	20-Sep-12	200
200-H-225	28-Aug-12	200
200-H-331	27-Aug-12	200
200-H-433	27-Aug-12	200
200-JG-110	09-Aug-12	200
200-SG-1	08-Sep-12	200
300-C-128	06-Aug-12	300/400
300-D-153	27-Aug-12	300/400
400-C-118	01-Oct-12	300/400
400-C-143	02-Oct-12	300/400
400-D-195	07-Aug-12	300/400
400-D-275	07-Aug-12	300/400
400-D-355	06-Aug-12	300/400
600-G-138	19-Sep-12	100/600
700-A-253	16-Aug-12	N. Boundary
700-D-186	14-Aug-12	N. Boundary
700-H-350	14-Aug-12	N. Boundary
700-H-535	13-Aug-12	N. Boundary
700-H-670	13-Aug-12	N. Boundary
700-J-200	13-Aug-12	N. Boundary
BLM-10-517	10-Aug-12	Plume Front
BLM-10-517	11-Sep-12	Plume Front
BLM-10-517	19-Oct-12	Plume Front
BLM-13-300	05-Sep-12	S. Boundary
BLM-14-327	08-Aug-12	Mid-plume
BLM-1-435	18-Sep-12	Main Plume
BLM-15-305	14-Sep-12	Mid-plume
BLM-18-430	12-Sep-12	Mid-plume
BLM-21-400	23-Oct-12	Mid-plume
BLM-22-570	06-Aug-12	Mid-plume
BLM-23-431	13-Sep-12	Mid-plume
BLM-25-455	01-Aug-12	S. Boundary
BLM-30-585	01-Aug-12	Mid-plume
BLM-36-350	14-Aug-12	Mid-plume
BLM-36-610	09-Aug-12	Mid-plume
BLM-36-800	14-Aug-12	Mid-plume
BLM-36-860	10-Aug-12	Mid-plume
BLM-37-640	11-Oct-12	Sentinel
BLM-37-750	11-Oct-12	Sentinel
BLM-37-885	10-Oct-12	Sentinel
BLM-38-480	20-Aug-12	Mid-plume
BLM-38-620	16-Aug-12	Mid-plume
BLM-5-527	06-Sep-12	Mid-plume
BLM-6-488	01-Aug-12	S. Boundary
BLM-7-509	08-Aug-12	Plume Front
BLM-9-419	13-Sep-12	Mid-plume
BW-1-268	07-Aug-12	300/400
BW-3-180	15-Sep-12	100/600
BW-6-355	15-Sep-12	N. Boundary
JP-1-424	10-Oct-12	Sentinel
JP-2-447	18-Oct-12	Sentinel
JP-3-515	09-Oct-12	Sentinel
JP-3-695	09-Oct-12	Sentinel
JP-3-825	05-Oct-12	Sentinel
JP-3-970	05-Oct-12	Sentinel
NASA 10	05-Sep-12	300/400
NASA 5	05-Sep-12	300/400
NASA 6	03-Oct-12	300/400
NASA 7	21-Aug-12	100/600
NASA 8	21-Aug-12	100/600
NASA 9	08-Sep-12	300/400
PL-1-486	11-Sep-12	Sentinel
PL-2-504	07-Sep-12	Main Plume
PL-3-453	12-Sep-12	Plume Front
PL-4-464	14-Sep-12	Plume Front
PL-7-480	24-Aug-12	Plume Front
PL-7-560	22-Aug-12	Plume Front
ST-1-541	07-Aug-12	Main Plume
ST-2-466	02-Aug-12	Plume Front
ST-4-481	08-Sep-12	Plume Front
ST-4-589	10-Sep-12	Plume Front
ST-4-690	08-Sep-12	Plume Front
ST-5-1175	25-Aug-12	Plume Front
ST-5-481	24-Oct-12	Plume Front
ST-5-485	24-Aug-12	Plume Front
ST-5-655	21-Aug-12	Plume Front
ST-5-815	23-Aug-12	Plume Front
ST-5-985	22-Aug-12	Plume Front
ST-6-535	04-Sep-12	Plume Front
ST-6-535	21-Sep-12	Plume Front
ST-6-535	16-Oct-12	Plume Front
ST-6-575	04-Sep-12	Plume Front
ST-6-575	24-Sep-12	Plume Front
ST-6-575	17-Oct-12	Plume Front
ST-6-685	30-Aug-12	Plume Front
ST-6-685	21-Sep-12	Plume Front
ST-6-685	16-Oct-12	Plume Front
WB-14-520	02-Aug-12	S. Boundary
WB-5-250	20-Aug-12	S. Boundary
WB-5-280	16-Aug-12	S. Boundary
WB-5-345	16-Aug-12	S. Boundary
WW-1-452	07-Sep-12	Plume Front

Table 4.1 (continued) Groundwater Monitoring Wells/Zones for Which Analytical Data Were Processed During the Year

MPITS Sampling Events	
Well Name	**Event Date**
B655-EFF-2	28-Aug-12
B655-EFF-2	25-Sep-12
B655-EFF-2	17-Oct-12
B655-INF-1	28-Aug-12
B655-INF-1	25-Sep-12
B655-INF-1	17-Oct-12
MPE-1	29-Aug-12
MPE-1	19-Oct-12
MPE-10	19-Oct-12
MPE-11	29-Aug-12
MPE-11	19-Oct-12
MPE-8	26-Sep-12
MPE-8	23-Oct-12
MPE-9	23-Oct-12

PFTS Sampling Events	
Well Name	**Event Date**
B650-EFF-1	24-Aug-12
B650-EFF-1	24-Sep-12
B650-EFF-1	15-Oct-12
B650-INF-1	24-Aug-12
B650-INF-1	24-Sep-12
B650-INF-1	15-Oct-12
PFE-1	22-Oct-12
PFE-2	22-Oct-12
PFE-3	22-Oct-12
PFE-4A	22-Oct-12
PFE-7	28-Aug-12
PFE-7	24-Sep-12
PFE-7	24-Oct-12

Table 5.1 PFTS Operational Status – Comprehensive 2012

Month Year	Days Operational	Acre-Feet Groundwater Treated	Volume Discharged To Grade/ Modu-tanks (AF)	Comments
November 2011	9 of 30	36.0	12.46/0.18	System shut down (10/31/2011-11/21/2012) for scheduled maintenance and PFI-4 pump test. Restarted November 22.
December 2011	27 of 31	110.4	2.51/0.09	Four unscheduled shutdowns occurred; primarily caused by power disruptions.
January 2012	27 of 31	121.5	4.09/0.02	Power surge shut down system 12/31/11; system
February 2012	27 of 29	107.6	2.27/1,562	One unscheduled shutdown occurred. Caused by power outage. Large volume discharged to modu-tanks during startup.
March 2012	31 of 31	128.8	4.10/0.0	One short duration unplanned shutdown due to slow response of remote-activated valve.
April 2012	30 of 30	87.6	1.90/0.09	Wells PFI-3 and PFI-4 off-line to facilitate injection well rehabilitation. Wells PFE-2 and PFE-3 off-line to reduce system flow rate. Five unscheduled shutdowns of short duration for component repair/replacement.
May 2012	6 of 31	4.75	0.0/0.23	System shutdown 5/3 to facilitate injection well rehabilitation.
June 2012	9 of 30	49.1	0.38/0.82	System restarted 6/21 following injection well rehabilitation.
July 2012	23 of 31	85.5	3.73/0.82	Six unplanned shutdowns primarily attributed to lightning strikes and related communication losses. One planned shutdown (one-day) to replace UV lamps.
August 2012	31 of 31	134.0	2.33/0.0005	Two unplanned shutdowns of short duration occurred due to sluggish operation of remote operated valves during back-flushing operations.
September 2012	26 of 30	95.4	2.06/0.089	Nine unplanned shutdowns occurred due to various causes.
October 2012	31 of 31	125	0.71/0.023	Two unplanned shutdowns of short duration caused by interruptions in power supply.

Table 5.2 PFTS Air Stripper Performance

			Average Concentrations											
	Analyte	**Design Parameter (µg/L)**	**Nov. 2011 µg/L**	**Dec. 2011 µg/L**	**Jan. 2012 µg/L**	**Feb. 2012 µg/L**	**Mar. 2012 µg/L**	**Apr. 2012 µg/L**	**May 2012 µg/L**	**June 2012 µg/L**	**July 2012 µg/L**	**Aug. 2012 µg/L**	**Sep. 2012 µg/L**	**Oct. 2012 µg/L**
Influent Concentrations	TCE	130[1]	92	62	86	61	75	56	0.64	72	80	69	68	77
	PCE	4.2[1]	3.3	2.5	3.5	2.7	3	2.1	< 0.20[2]	2.4	2.7	2.8	2.9	3.2
	Freon 11	860[1]	79	48	68	49	58	47	0.5	43	69	62	55	60
	Freon 113	2,000[1]	200	110	150	100	130	110	1.0	100	150	140	120	130
	Chloroform[2]	NA[3]	<0.22	<0.22	<0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.25	< 0.25	< 0.25
Effluent Concentrations	TCE[2]	5.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	PCE[2]	5.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	Freon 11[2]	100	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	Freon 113[2]	1,200	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
	Chloroform[2]	NA[3]	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22

[1] Based on numerical modeling of groundwater flow.

[2] Analytical result for the constituent was below the MDL (provided).

[3]Chloroform was not included as an analyte in the system design criteria; not applicable (NA).

Table 5.3 PFTS UV Reactor Performance

			Average Concentrations[1]											
	Analyte	**Design Parameter (ppt)**	**Nov. 2011 ppt**	**Dec. 2011 ppt**	**Jan. 2012 ppt**	**Feb. 2012 ppt**	**Mar. 2012 ppt**	**Apr. 2012 ppt**	**May 2012 ppt**	**June 2012 ppt**	**July 2012 ppt**	**Aug. 2012 ppt**	**Sep. 2012 ppt**	**Oct. 2012 ppt**
Influent Concentrations	NDMA[2]	2,000[3]	350	230	170	190	380	360	< 0.50	225	275	180	315	390
Effluent Concentrations[5]	NDMA[4]	10	0.25	0.71	0.41	0.68	< 0.50	< 0.50	< 0.50	1.08	0.61	0.32	0.51	1.9

[1] Average concentration recorded during the month.

[2] Influent results from Analytical Method 607.

[3] Based on numerical modeling of groundwater flow.

[4] Analytical results from low-level NMDA analytical method. Results for Method 607 were ND.

[5] DP-1255 Treatment Standard and cleanup level is 0.0042 µg/L (4.2 ppt).

Table 5.4 Comparison of Specific Capacities for Plume Front Remediation Wells

Well Name	Specific Capacity at Installation (gpm/ft)	Specific Capacity Nov. 2011 (gpm/ft)	Specific Capacity March 2012 (gpm/ft)	Specific Capacity June 2012 (gpm/ft)	Specific Capacity Oct. 2012 (gpm/ft)
PFE-1	8.3	11.5	11.3	11.2	12.1
PFE-2	5.7	5.4	4.6	4.9	4.4
PFE-3	19.4	14.9	13.1	14.7	13.9
PFE-4a	3.1	5.8	5.6	5.5	5.3
PFE-5	0.14	idle	idle	idle	idle
PFE-7	6.0	10.4	11.9	11.1	idle
	Specific Injection Capacity (Normal Range) (gpm/ft)	**Specific Capacity Nov. 2011 (gpm/ft)**	**Specific Capacity March 2012 (gpm/ft)**	**Specific Capacity June 2012 (gpm/ft)**	**Specific Capacity Oct. 2012 (gpm/ft)**
PFI-1	2.8 - 5	2.7	3.3	5.0	3.3
PFI-2	2.8 - 7	2.9	2.7	3.1	3.0
PFI-3	2 - 4	1.8	1.9	2.5	2.4
PFI-4	2.3 – 3.5	2.2	2.4	2.2	2.6

Table 5.5 PFTS Mass Removal

	TCE (kg)	F11 (kg)	F113 (kg)	Chloroform(g)	PCE (g)	NDMA (g)
			2011			
November	4.0	3.5	8.8	ND	144	15
December	9.1	7.0	16	ND	353	33
			2012			
January	13	10	22	ND	521	26
February	8.0	6.5	13	ND	356	24
March	12	9.1	20	ND	473	59
April	5.9	4.9	12	ND	222	38
May[1]	0.3	0.3	0.6	ND	12	2.1
June	3.9	2.3	5.5	ND	126	12
July	8.5	7.3	16	ND	278	29
August	11	10	23	ND	443	29
September	7.9	6.4	14	ND	326	37
October	12	9.0	20	ND	466	58
Total[2]	95.1	76.5	170.8	0.0	3,720	362

Notes:

- Mass removed calculated as (Average Influent concentration - Average Effluent concentration [µg/L] * volume of water extracted [gal])
- These mass removal calculations are based on the most recent quality assured data.
- Chloroform results were non-detects for the reporting period (ND).

[1] Due to lack of system operation, no representative influent/effluent samples were taken in May 2012. April 2012 influent/effluent sample results (* volume of water extracted in May) were used for these calculations.

[2] Total mass removed during the Comprehensive PMR reporting period (November 1, 2011 – October 31, 2012).

Table 5.6 PFTS Operation Costs

Total Cost of Plume Front Operations ($ / 1,000 gals)							
	Gallons Treated	**Labor + Materials**	**L+M/ 1000 gals**	**Energy Cost**	**Energy/ 1000 gals**	**Total Cost**	**$ / thousand gallons treated**
			2011				
November	11,568,753	$36,460	$3.15	$14,041	$1.21	$50,501	$4.37
December	38,818,307	$49,966	$1.29	$28,589	$0.74	$78,555	$2.02
			2012				
January	39,312,470	$42,495	$1.08	$26,714	$0.68	$69,209	$1.76
February	34,873,028	$33,953	$0.97	$26,714	$0.77	$60,667	$1.74
March	41,642,234	$45,383	$1.09	$29,525	$0.71	$74,908	$1.80
April	27,980,404	$119,928	$4.29	$24,948	$0.89	$144,876	$5.18
May	1,534,220	$224,093	$146.06	$8,487	$5.53	$232,580	$151.60
June	14,455,702	$251,676	$17.41	$6,910	$0.48	$258,586	$17.89
July	28,236,934	$84,090	$2.98	$37,972	$1.34	$122,062	$4.32
August	43,305,765	$49,207	$1.14	$41,288	$0.95	$90,495	$2.09
September	30,804,482	$46,246	$1.50	$36,348	$1.18	$82,594	$2.68
October	39,710,914	$36,666	$0.92	$31,626	$0.80	$68,292	$1.72

Table 5.7 MPITS Operational Status – Comprehensive 2012

Month Year	Days Operational	Acre-Feet Treated and Discharged to Infiltration Basin	Comments
November 2011	30 of 30	3.0	Four short-duration shutdowns occurred. System was restarted in less than 24 hours each time.
December 2011	31 of 31	3.0	Two unplanned shutdowns occurred. Repairs were made and system was restarted within a few hours each time. Pilot scale bioreactor installed.
January 2012	31 of 31	3.0	Two planned shutdowns of short duration occurred for system maintenance and repair. One unplanned shutdown occurred to investigate a leak detection notification.
February 2012	29 of 29	3.0	Three planned shutdowns of relatively short duration occurred to replace system components.
March 2012	31 of 31	4.9	Two unplanned shutdowns to investigate leak detection notification.
April 2012	30 of 30	4.9	Two unplanned shutdowns to investigate leak detection notification. Root cause determined to be residual humidity in containment piping; clears with ambient circulation.
May 2012	30 of 31	3.7	Three unplanned and two planned shutdowns of short duration occurred, predominantly due to lightning strike and related system repairs.
June 2012	30 of 30	3.5	One unplanned shutdown due to a leak detection alarm.
July 2012	30 of 31	3.2	Four unplanned shutdowns of short duration occurred due to power outages and system component issues.
August 2012	31 of 31	2.8	Six unplanned shutdowns due to various issues with system components. The root cause was identified and repaired. Two planned shutdowns were performed to upgrade system software.
September 2012	26 of 31	1.8	Three unplanned shutdowns were primarily caused by power fluctuations. Four planned shutdowns (the longest lasted 66 hours) facilitated system maintenance and repair.
October 2012	31 of 31	1.78	One planned shutdown of short duration performed to test system component.

Table 5.8 MPITS Air Stripper Performance

			Average Concentration[1]											
	Analyte	Design Parameter µg/L	Nov. 2011 µg/L	Dec. 2011 µg/L	Jan. 2012 µg/L	Feb. 2012 µg/L	Mar. 2012 µg/L	Apr. 2012 µg/L	May 2012 µg/L	June 2012 µg/L	July 2012 µg/L	Aug. 2012 µg/L	Sep. 2012 µg/L	Oct. 2012 µg/L
Influent Concentrations	TCE	140[2]	47	31	31	19	21	19	23	19	5.6	10	46	50
	PCE	6.4[2]	2.2	1.5	1.5	0.88	0.96	0.9	1	0.82	0.38	0.38	0.58	2.0
	Freon 11	240[2]	75	60	55	30	43	41	50	27	17	17	23	100
	Freon 113	810[2]	120	90	71	39	63	57	58	37	30	30	37	180
	Chloroform[3]	NA[4]	<0.22	<0.22	<0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	<0.25	<0.25	<0.25
Effluent Concentrations	TCE[3]	1	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	<0.20	<0.20	<0.20
	PCE[3]	1	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	Freon 11[3]	50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
	Freon 113[3]	10	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
	Chloroform[3]	NA[4]	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22

[1] Average concentration recorded during the month.

[2] Based on numerical modeling of groundwater flow.

[3] Analytical result for the constituent was below the MDL (provided).

[4] Chloroform was not included in the system design analyte list; not applicable (NA).

Table 5.9 MPITS UV Reactor Performance

			Average Concentrations[1]											
	Analyte	**Design Parameter (ppt)**	**Nov. 2011 ppt**	**Dec. 2011 ppt**	**Jan. 2012 ppt**	**Feb. 2012 ppt**	**Mar. 2012 ppt**	**Apr. 2012 ppt**	**May 2012 ppt**	**June 2012 ppt**	**July 2012 ppt**	**Aug. 2012 ppt**	**Sep. 2012 ppt**	**Oct. 2012 ppt**
Influent Concentrations	NDMA[2]	25,500[3]	3,370	1,970	1,720	800	2,000	2,050	1,290	1,900	2,160	118	1,210	5,500
Effluent Concentrations	NDMA[4, 5]	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.62	0.42	<0.5	<0.5

[1] Average concentration recorded during the month.

[2] Influent results from Analytical Method 607.

[3] Based on numerical modeling of groundwater flow.

[4] Analytical results from low-level analytical method. Results for Method 607 were ND.

[5] DP-1255 Treatment Standard and cleanup level is 0.0042 µg/L (4.2 ppt).

Table 5.10 MPITS Mass Removal

	TCE (g)	F11 (g)	F113 (g)	Chloroform (g)	PCE (g)	NDMA (g)
			2011			
November	230	367	588	ND	10	17
December	127	244	370	ND	5.6	8.1
			2012			
January	111	197	254	ND	1.4	6.2
February	71	112	143	ND	2.9	3.0
March	126	259	380	ND	5.2	12
April	87	189	263	ND	3.7	9.5
May[1]	105	228	264	ND	4.1	5.9
June	83	118	161	ND	3.1	8.3
July	22	69	122	ND	1.1	8.9
August	34	80	128	ND	1.7	0.4
September	97	212	381	ND	4.0	2.6
October	137	328	575	ND	6.0	15
Total[1]	1,006	2,125	3,222	0.0	38.9	90.9

Notes:

- Mass removed calculated as (Average Influent concentration - Average Effluent concentration [µg/L] * volume of water extracted [gal]).
- These mass removal calculations are based on the most recent quality assured data.
- Chloroform results were non-detects for the reporting period (ND).

[1] Total mass removed during the Comprehensive PMR reporting period (November 1, 2011 – October 31, 2012).

Table 5.11 MPITS Operation Costs

Total Cost of Mid-plume Operations ($ / 1,000 gals)							
	Gallons Treated	**Labor + Materials**	**L+M/ 1000 gals**	**Energy Cost**	**Energy/ 1000 gals**	**Total Cost**	**$ / thousand gallons treated**
				2011			
November	1,295,584	$20,122	$15.53	$2,027	$1.56	$22,149	$17.10
December	1,087,365	$27,854	$25.62	$2,027	$1.86	$29,881	$27.48
				2012			
January	946,271	$23,654	$25.00	$2,080	$2.20	$25,734	$27.20
February	986,612	$33,953	$34.41	$1,974	$2.00	$35,927	$36.41
March	1,597,973	$27,876	$17.44	$2,279	$1.43	$30,155	$18.87
April	1,220,638	$18,166	$14.88	$2,112	$1.73	$20,278	$16.61
May	1,205,975	$21,060	$17.46	$1,858	$1.54	$22,918	$19.00
June	1,154,816	$19,427	$16.82	$2,721	$2.36	$22,148	$19.18
July	1,083,455	$15,262	$14.09	$3,333	$3.08	$18,595	$17.16
August	917,271	$21,211	$23.12	$2,551	$2.78	$23,762	$25.91
September	560,138	$23,015	$41.09	$2,294	$4.10	$25,309	$45.18
October	723,715	$18,452	$25.50	$2,206	$3.05	$20,657	$28.54

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Appendix A
Indicator Parameters and Analytical Data

Fourth Quarter 2012

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Appendix A.1
Indicator Parameters for Monitoring Well Sampling Events for Fourth Quarter 2012

Summary of Water Quality Parameters
for the Monitoring Well Sampling Events in this Reporting Period

Well ID 100-F-358 Event Date 9/5/2012

Sample	Parameter	Result	Units
1209051345	Conductivity	1296	µS/cm
1209051345	DO	1.58	mg/L
1209051345	DTW	312.12	ft
1209051345	ORP	107	mV
1209051345	pH	7.03	NA
1209051345	Temperature	22.41	ºC
1209051345	Turbidity	0.74	NTU
1209051350	Conductivity	1299	µS/cm
1209051350	DO	1.55	mg/L
1209051350	DTW	312.12	ft
1209051350	ORP	106	mV
1209051350	pH	7.03	NA
1209051350	Temperature	22.49	ºC
1209051350	Turbidity	0.56	NTU
1209051355	Conductivity	1295	µS/cm
1209051355	DO	1.41	mg/L
1209051355	DTW	312.12	ft
1209051355	ORP	103	mV
1209051355	pH	7.03	NA
1209051355	Temperature	22.57	ºC
1209051355	Turbidity	0.70	NTU

Well ID 100-HG-139 Event Date 9/14/2012

Sample	Parameter	Result	Units
1209140920B	Conductivity	984	µS/cm
1209140920B	DTW	125.67	ft
1209140920B	pH	8.19	NA
1209140920B	Temperature	18.9	ºC
1209140920B	Turbidity	13.89	NTU
1209140945B	Conductivity	970	µS/cm
1209140945B	DTW	151.75	ft
1209140945B	pH	7.95	NA
1209140945B	Temperature	19.4	ºC
1209140945B	Turbidity	18.8	NTU

Well ID	200-B-240	Event Date	10/4/2012	
Sample	**Parameter**		**Result**	**Units**
1210041030	Conductivity		1033	µS/cm
1210041030	DTW		191.12	ft
1210041030	pH		7.72	NA
1210041030	Temperature		22.9	ºC
1210041030	Turbidity		1.16	NTU
1210041320	Conductivity		1018	µS/cm
1210041320	DTW		191.12	ft
1210041320	pH		7.64	NA
1210041320	Temperature		23.5	ºC
1210041320	Turbidity		0.84	NTU
1210041339	Conductivity		1009	µS/cm
1210041339	DTW		191.12	ft
1210041339	pH		7.77	NA
1210041339	Temperature		23.9	ºC
1210041339	Turbidity		1.06	NTU
1210221130	Conductivity		1087	µS/cm
1210221130	DTW		190.98	ft
1210221130	pH		7.69	NA
1210221130	Temperature		22.5	ºC
1210221130	Turbidity		1.09	NTU
1210221330	Conductivity		1095	µS/cm
1210221330	DTW		190.98	ft
1210221330	pH		7.57	NA
1210221330	Temperature		22.9	ºC
1210221330	Turbidity		0.85	NTU
1210221340	Conductivity		1079	µS/cm
1210221340	DTW		190.98	ft
1210221340	pH		7.76	NA
1210221340	Temperature		23.1	ºC
1210221340	Turbidity		0.74	NTU

Well ID	200-D-109	Event Date	8/24/2012	
Sample	**Parameter**		**Result**	**Units**
1208241008	Conductivity		1242	µS/cm
1208241008	DTW		131.69	ft
1208241008	pH		7.25	NA
1208241008	Temperature		24.5	ºC
1208241008	Turbidity		5.43	NTU
1208241040	Conductivity		1189	µS/cm
1208241040	DTW			ft
1208241040	pH		7.18	NA
1208241040	Temperature		25.0	ºC
1208241040	Turbidity		2.89	NTU

Well ID 200-D-240 Event Date 9/20/2012

Sample	Parameter	Result	Units
1209201345	Conductivity	1154	µS/cm
1209201345	DTW	124.55	ft
1209201345	pH	7.48	NA
1209201345	Temperature	24.4	ºC
1209201345	Turbidity	0.99	NTU
1209201410	Conductivity	1141	µS/cm
1209201410	DTW	124.55	ft
1209201410	pH	7.41	NA
1209201410	Temperature	23.8	ºC
1209201410	Turbidity	0.37	NTU
1209201430	Conductivity	1151	µS/cm
1209201430	DTW	124.55	ft
1209201430	pH	7.34	NA
1209201430	Temperature	24.1	ºC
1209201430	Turbidity	0.57	NTU

Well ID 200-H-225 Event Date 8/28/2012

Sample	Parameter	Result	Units
1208280810Z	Atmospheric Pressure	12.32	psia
1208280810Z	Conductivity	1055	µS/cm
1208280810Z	DTW	36.01	ft
1208280810Z	pH	8.54	NA
1208280810Z	Temperature	23.3	ºC
1208280810Z	Turbidity	2.56	NTU
1208280936Z	Atmospheric Pressure	12.31	psia
1208280936Z	Conductivity	1078	µS/cm
1208280936Z	DTW	37.14	ft
1208280936Z	pH	8.68	NA
1208280936Z	Temperature	24.5	ºC
1208280936Z	Turbidity	0.65	NTU

Well ID 200-H-331 Event Date 8/27/2012

Sample	Parameter	Result	Units
1208270840Z	Atmospheric Pressure	12.31	psia
1208270840Z	Conductivity	2030	µS/cm
1208270840Z	DTW	31.99	ft
1208270840Z	pH	8.42	NA
1208270840Z	Temperature	23.0	ºC
1208270840Z	Turbidity	2.84	NTU
1208270955Z	Atmospheric Pressure	12.31	psia
1208270955Z	Conductivity	2080	µS/cm
1208270955Z	DTW	34.02	ft
1208270955Z	pH	8.57	NA
1208270955Z	Temperature	23.5	ºC
1208270955Z	Turbidity	4.36	NTU

Well ID 200-H-433 Event Date 8/27/2012

Sample	Parameter	Result	Units
1208271310Z	Atmospheric Pressure	12.28	psia
1208271310Z	Conductivity	2170	µS/cm
1208271310Z	DTW	34.02	ft
1208271310Z	pH	8.00	NA
1208271310Z	Temperature	26.6	ºC
1208271310Z	Turbidity	1.35	NTU
1208271440Z	Atmospheric Pressure	12.31	psia
1208271440Z	Conductivity	2200	µS/cm
1208271440Z	DTW	36.01	ft
1208271440Z	pH	8.13	NA
1208271440Z	Temperature	26.5	ºC
1208271440Z	Turbidity	0.68	NTU

Well ID 200-JG-110 Event Date 8/9/2012

Sample	Parameter	Result	Units
1208091400	Conductivity	1373	µS/cm
1208091400	DTW	118.12	ft
1208091400	pH	6.86	NA
1208091400	Temperature	26.4	ºC
1208091400	Turbidity	1.31	NTU
1208091445	Conductivity	1361	µS/cm
1208091445	DTW		ft
1208091445	pH	6.93	NA
1208091445	Temperature	26.7	ºC
1208091445	Turbidity	1.05	NTU

Well ID 200-SG-1 Event Date 9/8/2012

Sample	Parameter	Result	Units
1209081055B	Conductivity	1094	µS/cm
1209081055B	DTW	131.00	ft
1209081055B	pH	7.35	NA
1209081055B	Temperature	19.9	ºC
1209081055B	Turbidity	0.85	NTU
1209081105B	Conductivity	1119	µS/cm
1209081105B	DTW		ft
1209081105B	pH	7.59	NA
1209081105B	Temperature	19.0	ºC
1209081105B	Turbidity	0.97	NTU
1209081123B	Conductivity	1092	µS/cm
1209081123B	DTW		ft
1209081123B	pH	7.49	NA
1209081123B	Temperature	19.6	ºC
1209081123B	Turbidity	0.72	NTU
1212031355B	Conductivity	1245	µS/cm
1212031355B	DTW	130.90	ft
1212031355B	pH	7.40	NA
1212031355B	Temperature	23.5	ºC
1212031355B	Turbidity	2.48	NTU
1212031410B	Conductivity	1230	µS/cm
1212031410B	DTW	130.92	ft
1212031410B	pH	7.46	NA
1212031410B	Temperature	23.3	ºC
1212031410B	Turbidity	1.90	NTU
1212031420B	Conductivity	1248	µS/cm
1212031420B	DTW	130.92	ft
1212031420B	pH	7.36	NA
1212031420B	Temperature	23.8	ºC
1212031420B	Turbidity	1.60	NTU

Well ID 300-C-128 Event Date 8/6/2012

Sample	Parameter	Result	Units
1208061400	Conductivity	1061	µS/cm
1208061400	DO	2.11	mg/L
1208061400	DTW	142.10	ft
1208061400	ORP	99	mV
1208061400	pH	7.87	NA
1208061400	Temperature	25.52	ºC
1208061400	Turbidity	1.03	NTU
1208061405	Conductivity	1058	µS/cm
1208061405	DO	2.13	mg/L
1208061405	DTW	142.10	ft
1208061405	ORP	98	mV
1208061405	pH	7.85	NA
1208061405	Temperature	25.56	ºC
1208061405	Turbidity	1.06	NTU
1208061410	Conductivity	1063	µS/cm
1208061410	DO	2.11	mg/L
1208061410	DTW	142.10	ft
1208061410	ORP	98	mV
1208061410	pH	7.90	NA
1208061410	Temperature	25.48	ºC
1208061410	Turbidity	1.01	NTU

Well ID 300-D-153 Event Date 8/27/2012

Sample	Parameter	Result	Units
1208271300	Conductivity	1194	µS/cm
1208271300	DTW	162.25	ft
1208271300	pH	7.01	NA
1208271300	Temperature	25.4	ºC
1208271300	Turbidity	0.86	NTU
1208271359	Conductivity	1202	µS/cm
1208271359	DTW	160.73	ft
1208271359	pH	7.15	NA
1208271359	Temperature	23.7	ºC
1208271359	Turbidity	0.93	NTU
1208271430	Conductivity	1191	µS/cm
1208271430	DTW	160.73	ft
1208271430	pH	7.07	NA
1208271430	Temperature	24.7	ºC
1208271430	Turbidity	0.73	NTU

Well ID 400-C-118 Event Date 10/1/2012

Sample	Parameter	Result	Units
1210011100	Conductivity	1186	µS/cm
1210011100	DTW	138.31	ft
1210011100	pH	7.14	NA
1210011100	Temperature	22.5	ºC
1210011100	Turbidity	0.70	NTU
1210011250	Conductivity	1180	µS/cm
1210011250	DTW	138.44	ft
1210011250	pH	7.22	NA
1210011250	Temperature	22.9	ºC
1210011250	Turbidity	1.40	NTU
1210011320	Conductivity	1195	µS/cm
1210011320	DTW	138.16	ft
1210011320	pH	7.12	NA
1210011320	Temperature	23.4	ºC
1210011320	Turbidity	0.90	NTU

Well ID 400-C-143 Event Date 10/2/2012

Sample	Parameter	Result	Units
1210021100	Conductivity	1200	µS/cm
1210021100	DTW	140.28	ft
1210021100	pH	7.63	NA
1210021100	Temperature	22.9	ºC
1210021100	Turbidity	1.39	NTU
1210021255	Conductivity	1218	µS/cm
1210021255	DTW	140.23	ft
1210021255	pH	7.57	NA
1210021255	Temperature	23.0	ºC
1210021255	Turbidity	1.26	NTU
1210021303	Conductivity	1229	µS/cm
1210021303	DTW	140.14	ft
1210021303	pH	7.67	NA
1210021303	Temperature	23.2	ºC
1210021303	Turbidity	1.14	NTU

Well ID 400-D-195 Event Date 8/7/2012

Sample	Parameter	Result	Units
1208080720Z	Atmospheric Pressure	12.30	psia
1208080720Z	Conductivity	490	µS/cm
1208080720Z	DTW	205.63	ft
1208080720Z	pH	8.76	NA
1208080720Z	Temperature	22.5	ºC
1208080720Z	Turbidity	0.74	NTU
1208090732Z	Atmospheric Pressure	12.32	psia
1208090732Z	Conductivity	479	µS/cm
1208090732Z	DTW	205.86	ft
1208090732Z	pH	8.55	NA
1208090732Z	Temperature	22.3	ºC
1208090732Z	Turbidity	0.66	NTU

Well ID 400-D-275 Event Date 8/7/2012

Sample	Parameter	Result	Units
1208070915Z	Atmospheric Pressure	12.35	psia
1208070915Z	Conductivity	582	µS/cm
1208070915Z	DTW	205.56	ft
1208070915Z	pH	8.85	NA
1208070915Z	Temperature	25.7	ºC
1208070915Z	Turbidity	1.65	NTU
1208071335Z	Atmospheric Pressure	12.29	psia
1208071335Z	Conductivity	560	µS/cm
1208071335Z	DTW	205.63	ft
1208071335Z	pH	8.74	NA
1208071335Z	Temperature	25.9	ºC
1208071335Z	Turbidity	1.14	NTU

Well ID 400-D-355 Event Date 8/6/2012

Sample	Parameter	Result	Units
1208061330Z	Atmospheric Pressure	12.34	psia
1208061330Z	Conductivity	736	µS/cm
1208061330Z	DTW	205.04	ft
1208061330Z	pH	8.57	NA
1208061330Z	Temperature	25.2	ºC
1208061330Z	Turbidity	3.56	NTU
1208061440Z	Atmospheric Pressure	12.34	psia
1208061440Z	Conductivity	759	µS/cm
1208061440Z	DTW	205.56	ft
1208061440Z	pH	8.39	NA
1208061440Z	Temperature	25.8	ºC
1208061440Z	Turbidity	3.42	NTU

Well ID 600-G-138 Event Date 9/19/2012

Sample	Parameter	Result	Units
1209191350	Conductivity	1896	µS/cm
1209191350	DTW	145.21	ft
1209191350	pH	7.80	NA
1209191350	Temperature	23.2	ºC
1209191350	Turbidity	675	NTU
1209191415	Conductivity	1912	µS/cm
1209191415	DTW	145.25	ft
1209191415	pH	7.89	NA
1209191415	Temperature	23.9	ºC
1209191415	Turbidity	720	NTU

Well ID 700-A-253 Event Date 8/16/2012

Sample	Parameter	Result	Units
1208160815	Conductivity	1055	µS/cm
1208160815	DO	3.25	mg/L
1208160815	DTW	187.65	ft
1208160815	ORP	152	mV
1208160815	pH	7.57	NA
1208160815	Turbidity	1.47	NTU
1208160820	Conductivity	1053	µS/cm
1208160820	DO	3.10	mg/L
1208160820	DTW	187.78	ft
1208160820	ORP	156	mV
1208160820	pH	7.56	NA
1208160820	Temperature	20.89	ºC
1208160820	Turbidity	1.52	NTU
1208160825	Conductivity	1055	µS/cm
1208160825	DO	3.10	mg/L
1208160825	DTW	187.89	ft
1208160825	ORP	154	mV
1208160825	pH	7.57	NA
1208160825	Temperature	20.88	ºC
1208160825	Turbidity	2.17	NTU

Well ID 700-D-186 Event Date 8/14/2012

Sample	Parameter	Result	Units
1208140950	Conductivity	1281	µS/cm
1208140950	DO	2.75	mg/L
1208140950	DTW	176.52	ft
1208140950	ORP	174	mV
1208140950	pH	7.10	NA
1208140950	Temperature	21.52	ºC
1208140950	Turbidity	1.42	NTU
1208140955	Conductivity	1271	µS/cm
1208140955	DO	2.75	mg/L
1208140955	DTW	176.52	ft
1208140955	ORP	170	mV
1208140955	pH	7.12	NA
1208140955	Temperature	21.60	ºC
1208140955	Turbidity	0.68	NTU
1208140959	Conductivity	1278	µS/cm
1208140959	DO	2.76	mg/L
1208140959	DTW	176.52	ft
1208140959	ORP	167	mV
1208140959	pH	7.13	NA
1208140959	Temperature	21.70	ºC
1208140959	Turbidity	0.53	NTU

Well ID 700-H-350 Event Date 8/14/2012

Sample	Parameter	Result	Units
1208141025Y	Atmospheric Pressure	12.26	psia
1208141025Y	Conductivity	920	µS/cm
1208141025Y	DTW	238.75	ft
1208141025Y	pH	8.45	NA
1208141025Y	Temperature	24.9	ºC
1208141025Y	Turbidity	1.63	NTU
1208151425Y	Atmospheric Pressure	12.28	psia
1208151425Y	Conductivity	940	µS/cm
1208151425Y	DTW	240.13	ft
1208151425Y	pH	8.38	NA
1208151425Y	Temperature	25.2	ºC
1208151425Y	Turbidity	1.06	NTU

Well ID 700-H-535 Event Date 8/13/2012

Sample	Parameter	Result	Units
1208131435Y	Atmospheric Pressure	12.30	psia
1208131435Y	Conductivity	614	µS/cm
1208131435Y	DTW	236.99	ft
1208131435Y	pH	8.57	NA
1208131435Y	Temperature	25.0	ºC
1208131435Y	Turbidity	3.63	NTU
1208140845Y	Atmospheric Pressure	12.35	psia
1208140845Y	Conductivity	629	µS/cm
1208140845Y	DTW	238.75	ft
1208140845Y	pH	8.70	NA
1208140845Y	Temperature	24.3	ºC
1208140845Y	Turbidity	1.62	NTU

Well ID 700-H-670 Event Date 8/13/2012

Sample	Parameter	Result	Units
1208130910Y	Atmospheric Pressure	12.27	psia
1208130910Y	Conductivity	938	µS/cm
1208130910Y	DTW	234.68	ft
1208130910Y	pH	8.74	NA
1208130910Y	Temperature	22.7	ºC
1208130910Y	Turbidity	1.58	NTU
1208131325Y	Atmospheric Pressure	12.41	psia
1208131325Y	Conductivity	918	µS/cm
1208131325Y	DTW	236.99	ft
1208131325Y	pH	8.60	NA
1208131325Y	Temperature	23.9	ºC
1208131325Y	Turbidity	1.14	NTU

Well ID 700-J-200 Event Date 8/13/2012

Sample	Parameter	Result	Units
1208131300	Conductivity	1180	µS/cm
1208131300	DO	0.53	mg/L
1208131300	DTW	120.70	ft
1208131300	ORP	145	mV
1208131300	pH	7.50	NA
1208131300	Temperature	22.01	ºC
1208131300	Turbidity	0.66	NTU
1208131301	Conductivity	1180	µS/cm
1208131301	DO	0.52	mg/L
1208131301	DTW	120.70	ft
1208131301	ORP	145	mV
1208131301	pH	7.50	NA
1208131301	Temperature	22.05	ºC
1208131301	Turbidity	0.78	NTU
1208131302	Conductivity	1183	µS/cm
1208131302	DO	0.51	mg/L
1208131302	DTW	120.70	ft
1208131302	ORP	145	mV
1208131302	pH	7.57	NA
1208131302	Temperature	22.06	ºC
1208131302	Turbidity	0.80	NTU

Well ID BLM-10-517 Event Date 10/19/2012

Sample	Parameter	Result	Units
1210190920	Conductivity	1183	µS/cm
1210190920	DO	5.32	mg/L
1210190920	DTW	478.70	ft
1210190920	ORP	211	mV
1210190920	pH	7.09	NA
1210190920	Temperature	20.07	ºC
1210190920	Turbidity	1.02	NTU
1210190922	Conductivity	1182	µS/cm
1210190922	DO	5.30	mg/L
1210190922	DTW	478.70	ft
1210190922	ORP	211	mV
1210190922	pH	7.09	NA
1210190922	Temperature	20.08	ºC
1210190922	Turbidity	1.44	NTU
1210190924	Conductivity	1184	µS/cm
1210190924	DO	5.34	mg/L
1210190924	DTW	478.70	ft
1210190924	ORP	211	mV
1210190924	pH	7.08	NA
1210190924	Temperature	20.03	ºC
1210190924	Turbidity	0.77	NTU
1209110905	Conductivity	1091	µS/cm
1209110905	DO	3.98	mg/L
1209110905	DTW	480.46	ft
1209110905	ORP	208	mV
1209110905	pH	7.12	NA
1209110905	Temperature	20.62	ºC
1209110905	Turbidity	0.93	NTU
1209110907	Conductivity	1058	µS/cm
1209110907	DO	4.04	mg/L
1209110907	DTW	480.46	ft
1209110907	ORP	196	mV
1209110907	pH	7.11	NA
1209110907	Temperature	20.66	ºC
1209110907	Turbidity	0.66	NTU
1209110909	Conductivity	1087	µS/cm
1209110909	DO	4.01	mg/L
1209110909	DTW	480.46	ft
1209110909	ORP	206	mV
1209110909	pH	7.12	NA
1209110909	Temperature	20.65	ºC
1209110909	Turbidity	0.73	NTU
1208101005	Conductivity	1050	µS/cm
1208101005	DO	4.34	mg/L
1208101005	DTW	479.11	ft
1208101005	ORP	111	mV

1208101005	pH	7.28	NA
1208101005	Temperature	23.13	ºC
1208101005	Turbidity	5.14	NTU
1208101010	Conductivity	1046	µS/cm
1208101010	DO	4.31	mg/L
1208101010	DTW	479.11	ft
1208101010	ORP	112	mV
1208101010	pH	7.21	NA
1208101010	Temperature	23.21	ºC
1208101010	Turbidity	5.09	NTU
1208101015	Conductivity	1053	µS/cm
1208101015	DO	4.34	mg/L
1208101015	DTW	479.11	ft
1208101015	ORP	112	mV
1208101015	pH	7.26	NA
1208101015	Temperature	23.19	ºC
1208101015	Turbidity	5.16	NTU

Well ID BLM-13-300 Event Date 9/5/2012

Sample	Parameter	Result	Units
1209051030	Conductivity	1251	µS/cm
1209051030	DO	3.56	mg/L
1209051030	DTW	246.34	ft
1209051030	ORP	83	mV
1209051030	pH	7.41	NA
1209051030	Temperature	21.68	ºC
1209051030	Turbidity	0.77	NTU
1209051035	Conductivity	1252	µS/cm
1209051035	DO	3.30	mg/L
1209051035	DTW	246.20	ft
1209051035	ORP	85	mV
1209051035	pH	7.40	NA
1209051035	Temperature	21.79	ºC
1209051035	Turbidity	0.80	NTU
1209051040	Conductivity	1249	µS/cm
1209051040	DO	3.26	mg/L
1209051040	DTW	246.10	ft
1209051040	ORP	86	mV
1209051040	pH	7.40	NA
1209051040	Temperature	21.93	ºC
1209051040	Turbidity	0.52	NTU

Well ID	BLM-14-327	Event Date	8/8/2012	
Sample	**Parameter**		**Result**	**Units**
1208081035	Conductivity		1208	µS/cm
1208081035	DO		4.46	mg/L
1208081035	DTW		274.30	ft
1208081035	ORP		223	mV
1208081035	pH		7.07	NA
1208081035	Temperature		21.15	ºC
1208081035	Turbidity		0.49	NTU
1208081036	Conductivity		1210	µS/cm
1208081036	DO		4.39	mg/L
1208081036	DTW		274.30	ft
1208081036	ORP		219	mV
1208081036	pH		7.09	NA
1208081036	Temperature		21.17	ºC
1208081036	Turbidity		0.51	NTU
1208081037	Conductivity		1207	µS/cm
1208081037	DO		8.47	mg/L
1208081037	DTW		274.30	ft
1208081037	ORP		220	mV
1208081037	pH		7.08	NA
1208081037	Temperature		21.16	ºC
1208081037	Turbidity		0.53	NTU

Well ID	BLM-1-435	Event Date	9/18/2012	
Sample	**Parameter**		**Result**	**Units**
1209181430	Conductivity		1156	µS/cm
1209181430	DTW		408.70	ft
1209181430	pH		7.86	NA
1209181430	Temperature		28.0	ºC
1209181430	Turbidity		1.01	NTU
1209190740	Conductivity		1140	µS/cm
1209190740	DTW		408.90	ft
1209190740	pH		7.94	NA
1209190740	Temperature		23.8	ºC
1209190740	Turbidity		0.75	NTU

Well ID	BLM-15-305	Event Date	9/14/2012	
Sample	**Parameter**		**Result**	**Units**
1209140900	Conductivity		1052	µS/cm
1209140900	DO		1.45	mg/L
1209140900	DTW		278.94	ft
1209140900	ORP		89	mV
1209140900	pH		7.74	NA
1209140900	Temperature		20.17	ºC
1209140900	Turbidity		0.71	NTU
1209140905	Conductivity		1034	µS/cm
1209140905	DO		1.40	mg/L
1209140905	DTW		278.94	ft
1209140905	ORP		88	mV
1209140905	pH		7.74	NA
1209140905	Temperature		20.22	ºC
1209140905	Turbidity		0.66	NTU
1209140910	Conductivity		1045	µS/cm
1209140910	DO		1.44	mg/L
1209140910	DTW		278.94	ft
1209140910	ORP		88	mV
1209140910	pH		7.74	NA
1209140910	Temperature		20.19	ºC
1209140910	Turbidity		0.58	NTU

Well ID	BLM-18-430	Event Date	9/12/2012	
Sample	**Parameter**		**Result**	**Units**
1209121350	Conductivity		1065	µS/cm
1209121350	DO		5.25	mg/L
1209121350	DTW		382.09	ft
1209121350	ORP		128	mV
1209121350	pH		7.21	NA
1209121350	Temperature		22.37	ºC
1209121350	Turbidity		0.54	NTU
1209121352	Conductivity		1064	µS/cm
1209121352	DO		5.33	mg/L
1209121352	DTW		382.09	ft
1209121352	ORP		129	mV
1209121352	pH		7.22	NA
1209121352	Temperature		22.46	ºC
1209121352	Turbidity		0.87	NTU
1209121354	Conductivity		1073	µS/cm
1209121354	DO		5.10	mg/L
1209121354	DTW		382.09	ft
1209121354	ORP		128	mV
1209121354	pH		7.22	NA
1209121354	Temperature		22.44	ºC
1209121354	Turbidity		0.81	NTU

Well ID BLM-21-400 Event Date 10/23/2012

Sample	Parameter	Result	Units
1210230930B	Conductivity	1241	µS/cm
1210230930B	DO	6.95	mg/L
1210230930B	DTW	338.01	ft
1210230930B	ORP	219	mV
1210230930B	pH	6.72	NA
1210230930B	Temperature	20.77	ºC
1210230930B	Turbidity	1.14	NTU
1210230935B	Conductivity	1257	µS/cm
1210230935B	DO	6.96	mg/L
1210230935B	DTW	338.45	ft
1210230935B	ORP	218	mV
1210230935B	pH	6.95	NA
1210230935B	Temperature	20.84	ºC
1210230935B	Turbidity	0.99	NTU
1210230940B	Conductivity	1304	µS/cm
1210230940B	DO	6.95	mg/L
1210230940B	DTW	339.01	ft
1210230940B	ORP	224	mV
1210230940B	pH	7.01	NA
1210230940B	Temperature	20.79	ºC
1210230940B	Turbidity	0.93	NTU

Well ID BLM-22-570 Event Date 8/6/2012

Sample	Parameter	Result	Units
1208060900	Conductivity	1113	µS/cm
1208060900	DO	4.62	mg/L
1208060900	DTW	515.18	ft
1208060900	ORP	125	mV
1208060900	pH	7.32	NA
1208060900	Temperature	22.53	ºC
1208060900	Turbidity	0.75	NTU
1208060905	Conductivity	1115	µS/cm
1208060905	DO	4.62	mg/L
1208060905	DTW	515.18	ft
1208060905	ORP	125	mV
1208060905	pH	7.40	NA
1208060905	Temperature	22.47	ºC
1208060905	Turbidity	0.83	NTU
1208060910	Conductivity	1113	µS/cm
1208060910	DO	4.61	mg/L
1208060910	DTW	515.18	ft
1208060910	ORP	126	mV
1208060910	pH	7.36	NA
1208060910	Temperature	22.51	ºC
1208060910	Turbidity	0.73	NTU

Well ID	BLM-23-431	Event Date	9/13/2012	
Sample	**Parameter**		**Result**	**Units**
1209130905	Conductivity		1387	µS/cm
1209130905	DO		1.73	mg/L
1209130905	DTW		327.75	ft
1209130905	ORP		131	mV
1209130905	pH		7.49	NA
1209130905	Temperature		20.56	ºC
1209130905	Turbidity		1.33	NTU
1209130907	Conductivity		1387	µS/cm
1209130907	DO		1.69	mg/L
1209130907	DTW		327.75	ft
1209130907	ORP		133	mV
1209130907	pH		7.50	NA
1209130907	Temperature		20.48	ºC
1209130907	Turbidity		1.05	NTU
1209130910	Conductivity		1386	µS/cm
1209130910	DO		1.62	mg/L
1209130910	DTW		327.75	ft
1209130910	ORP		139	mV
1209130910	pH		7.50	NA
1209130910	Temperature		20.56	ºC
1209130910	Turbidity		0.98	NTU

Well ID	BLM-25-455	Event Date	8/1/2012	
Sample	**Parameter**		**Result**	**Units**
1208010930	Conductivity		829	µS/cm
1208010930	DO		2.53	mg/L
1208010930	DTW		334.50	ft
1208010930	ORP		171	mV
1208010930	pH		8.00	NA
1208010930	Temperature		20.89	ºC
1208010930	Turbidity		0.55	NTU
1208010935	Conductivity		831	µS/cm
1208010935	DO		2.47	mg/L
1208010935	DTW		334.50	ft
1208010935	ORP		169	mV
1208010935	pH		8.02	NA
1208010935	Temperature		20.80	ºC
1208010935	Turbidity		0.51	NTU
1208010940	Conductivity		833	µS/cm
1208010940	DO		2.50	mg/L
1208010940	DTW		334.50	ft
1208010940	ORP		170	mV
1208010940	pH		7.98	NA
1208010940	Temperature		20.83	ºC
1208010940	Turbidity		0.56	NTU

Well ID BLM-30-585 Event Date 8/1/2012

Sample	Parameter	Result	Units
1208011435Z	Atmospheric Pressure	12.48	psia
1208011435Z	Conductivity	920	µS/cm
1208011435Z	DTW	532.60	ft
1208011435Z	pH	8.21	NA
1208011435Z	Temperature	26.0	ºC
1208011435Z	Turbidity	2.61	NTU
1208020831Z	Atmospheric Pressure	12.29	psia
1208020831Z	Conductivity	943	µS/cm
1208020831Z	DTW	532.92	ft
1208020831Z	pH	8.15	NA
1208020831Z	Temperature	23.5	ºC
1208020831Z	Turbidity	1.16	NTU

Well ID BLM-36-350 Event Date 8/14/2012

Sample	Parameter	Result	Units
1208150815Z	Atmospheric Pressure	12.33	psia
1208150815Z	Conductivity	1130	µS/cm
1208150815Z	DTW	466.03	ft
1208150815Z	pH	7.62	NA
1208150815Z	Temperature	23.1	ºC
1208150815Z	Turbidity	0.39	NTU
1208150950Z	Atmospheric Pressure	12.34	psia
1208150950Z	Conductivity	1110	µS/cm
1208150950Z	DTW	466.22	ft
1208150950Z	pH	7.58	NA
1208150950Z	Temperature	24.2	ºC
1208150950Z	Turbidity	0.46	NTU

Well ID BLM-36-610 Event Date 8/9/2012

Sample	Parameter	Result	Units
1208091035Z	Atmospheric Pressure	12.43	psia
1208091035Z	Conductivity	927	µS/cm
1208091035Z	DTW	463.45	ft
1208091035Z	pH	8.46	NA
1208091035Z	Temperature	27.2	ºC
1208091035Z	Turbidity	4.54	NTU
1208100753Z	Atmospheric Pressure	12.41	psia
1208100753Z	Conductivity	960	µS/cm
1208100753Z	DTW	464.06	ft
1208100753Z	pH	8.06	NA
1208100753Z	Temperature	25.8	ºC
1208100753Z	Turbidity	0.75	NTU

Well ID BLM-36-800 Event Date 8/14/2012

Sample	Parameter	Result	Units
1208140856Z	Atmospheric Pressure	12.39	psia
1208140856Z	Conductivity	1006	µS/cm
1208140856Z	DTW	465.10	ft
1208140856Z	pH	7.54	NA
1208140856Z	Temperature	25.8	ºC
1208140856Z	Turbidity	0.70	NTU
1208140952Z	Atmospheric Pressure	12.38	psia
1208140952Z	Conductivity	1021	µS/cm
1208140952Z	DTW	466.03	ft
1208140952Z	pH	7.52	NA
1208140952Z	Temperature	26.8	ºC
1208140952Z	Turbidity	0.68	NTU

Well ID BLM-36-860 Event Date 8/10/2012

Sample	Parameter	Result	Units
1208100940Z	Atmospheric Pressure	12.42	psia
1208100940Z	Conductivity	818	µS/cm
1208100940Z	DTW	464.06	ft
1208100940Z	pH	7.85	NA
1208100940Z	Temperature	26.7	ºC
1208100940Z	Turbidity	2.12	NTU
1208101335Z	Atmospheric Pressure	12.36	psia
1208101335Z	Conductivity	833	µS/cm
1208101335Z	DTW	465.10	ft
1208101335Z	pH	7.95	NA
1208101335Z	Temperature	27.1	ºC
1208101335Z	Turbidity	1.60	NTU

Well ID BLM-37-640 Event Date 10/11/2012

Sample	Parameter	Result	Units
1210111420Z	Atmospheric Pressure	12.63	psia
1210111420Z	Conductivity	742	µS/cm
1210111420Z	DTW	493.02	ft
1210111420Z	pH	8.35	NA
1210111420Z	Temperature	24.3	ºC
1210111420Z	Turbidity	29.8	NTU
1210150836Z	Atmospheric Pressure	12.65	psia
1210150836Z	Conductivity	758	µS/cm
1210150836Z	DTW	493.02	ft
1210150836Z	pH	8.28	NA
1210150836Z	Temperature	22.7	ºC
1210150836Z	Turbidity	7.54	NTU

Well ID BLM-37-750 Event Date 10/11/2012

Sample	Parameter	Result	Units
1210110915Z	Atmospheric Pressure	12.60	psia
1210110915Z	Conductivity	590	µS/cm
1210110915Z	DTW	493.02	ft
1210110915Z	pH	8.44	NA
1210110915Z	Temperature	23.2	ºC
1210110915Z	Turbidity	3.42	NTU
1210111022Z	Atmospheric Pressure	12.58	psia
1210111022Z	Conductivity	612	µS/cm
1210111022Z	DTW	493.02	ft
1210111022Z	pH	8.36	NA
1210111022Z	Temperature	23.7	ºC
1210111022Z	Turbidity	1.87	NTU

Well ID BLM-37-885 Event Date 10/10/2012

Sample	Parameter	Result	Units
1210101320Z	Atmospheric Pressure	12.59	psia
1210101320Z	Conductivity	846	µS/cm
1210101320Z	DTW	493.02	ft
1210101320Z	pH	8.12	NA
1210101320Z	Temperature	26.6	ºC
1210101320Z	Turbidity	3.03	NTU
1210101503Z	Atmospheric Pressure	12.61	psia
1210101503Z	Conductivity	861	µS/cm
1210101503Z	DTW	493.02	ft
1210101503Z	pH	8.18	NA
1210101503Z	Temperature	26.4	ºC
1210101503Z	Turbidity	1.46	NTU

Well ID BLM-38-480 Event Date 8/20/2012

Sample	Parameter	Result	Units
1208200944Z	Atmospheric Pressure	12.36	psia
1208200944Z	Conductivity	873	µS/cm
1208200944Z	DTW	373.92	ft
1208200944Z	pH	8.45	NA
1208200944Z	Temperature	23.9	ºC
1208200944Z	Turbidity	0.84	NTU
1208210816Z	Atmospheric Pressure	12.41	psia
1208210816Z	Conductivity	855	µS/cm
1208210816Z	DTW	374.38	ft
1208210816Z	pH	8.61	NA
1208210816Z	Temperature	22.8	ºC
1208210816Z	Turbidity	0.64	NTU

Well ID BLM-38-620 Event Date 8/16/2012

Sample	Parameter	Result	Units
1208161045Z	Atmospheric Pressure	12.37	psia
1208161045Z	Conductivity	952	µS/cm
1208161045Z	DTW	373.35	ft
1208161045Z	pH	8.22	NA
1208161045Z	Temperature	24.6	ºC
1208161045Z	Turbidity	1.23	NTU
1208161430Z	Atmospheric Pressure	12.33	psia
1208161430Z	Conductivity	1011	µS/cm
1208161430Z	DTW	373.92	ft
1208161430Z	pH	8.49	NA
1208161430Z	Temperature	22.4	ºC
1208161430Z	Turbidity	0.78	NTU
1210151450Z	Atmospheric Pressure	12.66	psia
1210151450Z	Conductivity	1113	µS/cm
1210151450Z	DTW	373.95	ft
1210151450Z	pH	8.15	NA
1210151450Z	Temperature	24.6	ºC
1210151450Z	Turbidity	1.75	NTU
1210160811Z	Atmospheric Pressure	12.62	psia
1210160811Z	Conductivity	1091	µS/cm
1210160811Z	DTW	374.48	ft
1210160811Z	pH	8.03	NA
1210160811Z	Temperature	18.9	ºC
1210160811Z	Turbidity	2.37	NTU
1211281430Z	Atmospheric Pressure	12.46	psia
1211281430Z	Conductivity	1047	µS/cm
1211281430Z	DTW	381.72	ft
1211281430Z	pH	7.74	NA
1211281430Z	Temperature	23.0	ºC
1211281430Z	Turbidity	5.89	NTU
1211281456Z	Atmospheric Pressure		psia
1211281456Z	Conductivity	1055	µS/cm
1211281456Z	DTW	381.75	ft
1211281456Z	pH	7.83	NA
1211281456Z	Temperature	23.1	ºC
1211281456Z	Turbidity	4.18	NTU

Well ID	BLM-5-527	Event Date	9/6/2012	
Sample	**Parameter**		**Result**	**Units**
1209060900	Conductivity		1073	µS/cm
1209060900	DO		4.24	mg/L
1209060900	DTW		496.59	ft
1209060900	ORP		124	mV
1209060900	pH		7.08	NA
1209060900	Temperature		22.26	ºC
1209060900	Turbidity		0.67	NTU
1209060905	Conductivity		1067	µS/cm
1209060905	DO		3.77	mg/L
1209060905	DTW		496.59	ft
1209060905	ORP		125	mV
1209060905	pH		7.08	NA
1209060905	Temperature		22.43	ºC
1209060905	Turbidity		0.60	NTU
1209060910	Conductivity		1064	µS/cm
1209060910	DO		3.68	mg/L
1209060910	DTW		496.59	ft
1209060910	ORP		126	mV
1209060910	pH		7.06	NA
1209060910	Temperature		22.57	ºC
1209060910	Turbidity		0.48	NTU

Well ID	BLM-6-488	Event Date	8/1/2012	
Sample	**Parameter**		**Result**	**Units**
1208011415	Conductivity		1390	µS/cm
1208011415	DO		1.70	mg/L
1208011415	DTW		359.80	ft
1208011415	ORP		1.73	mV
1208011415	pH		7.95	NA
1208011415	Temperature		21.38	ºC
1208011415	Turbidity		2.17	NTU
1208011420	Conductivity		1404	µS/cm
1208011420	DO		1.68	mg/L
1208011420	DTW		359.80	ft
1208011420	ORP		1.73	mV
1208011420	pH		7.96	NA
1208011420	Temperature		21.36	ºC
1208011420	Turbidity		1.22	NTU
1208011425	Conductivity		1404	µS/cm
1208011425	DO		1.64	mg/L
1208011425	DTW		359.80	ft
1208011425	ORP		1.72	mV
1208011425	pH		7.96	NA
1208011425	Temperature		21.10	ºC
1208011425	Turbidity		0.60	NTU

Well ID	BLM-7-509	Event Date	8/8/2012

Sample	Parameter	Result	Units
1208081430	Conductivity	1062	µS/cm
1208081430	DO	3.60	mg/L
1208081430	DTW	477.66	ft
1208081430	ORP	168	mV
1208081430	pH	7.53	NA
1208081430	Temperature	22.19	ºC
1208081430	Turbidity	1.30	NTU
1208081435	Conductivity	1065	µS/cm
1208081435	DO	3.62	mg/L
1208081435	DTW	477.66	ft
1208081435	ORP	168	mV
1208081435	pH	7.46	NA
1208081435	Temperature	22.22	ºC
1208081435	Turbidity	0.90	NTU
1208081440	Conductivity	1069	µS/cm
1208081440	DO	3.66	mg/L
1208081440	DTW	477.66	ft
1208081440	ORP	167	mV
1208081440	pH	7.54	NA
1208081440	Temperature	22.18	ºC
1208081440	Turbidity	0.74	NTU

Well ID	BLM-9-419	Event Date	9/13/2012

Sample	Parameter	Result	Units
1209131300	Conductivity	1076	µS/cm
1209131300	DO	4.74	mg/L
1209131300	DTW	375.52	ft
1209131300	ORP	112	mV
1209131300	pH	7.55	NA
1209131300	Temperature	21.88	ºC
1209131300	Turbidity	1.38	NTU
1209131302	Conductivity	1077	µS/cm
1209131302	DO	4.73	mg/L
1209131302	DTW	374.52	ft
1209131302	ORP	111	mV
1209131302	pH	7.55	NA
1209131302	Temperature	21.92	ºC
1209131302	Turbidity	1.18	NTU
1209131305	Conductivity	1076	µS/cm
1209131305	DO	4.71	mg/L
1209131305	DTW	374.52	ft
1209131305	ORP	110	mV
1209131305	pH	7.56	NA
1209131305	Temperature	21.91	ºC
1209131305	Turbidity	1.22	NTU

Well ID BW-1-268 Event Date 8/7/2012

Sample	Parameter	Result	Units
1208071430	Conductivity	1218	µS/cm
1208071430	DO	4.39	mg/L
1208071430	DTW	167.81	ft
1208071430	ORP	117	mV
1208071430	pH	7.65	NA
1208071430	Temperature	24.45	ºC
1208071430	Turbidity	0.52	NTU
1208071435	Conductivity	1223	µS/cm
1208071435	DO	4.38	mg/L
1208071435	DTW	167.81	ft
1208071435	ORP	116	mV
1208071435	pH	7.60	NA
1208071435	Temperature	24.51	ºC
1208071435	Turbidity	0.63	NTU
1208071440	Conductivity	1219	µS/cm
1208071440	DO	4.38	mg/L
1208071440	DTW	167.81	ft
1208071440	ORP	117	mV
1208071440	pH	7.71	NA
1208071440	Temperature	24.47	ºC
1208071440	Turbidity	0.56	NTU

Well ID BW-3-180 Event Date 9/15/2012

Sample	Parameter	Result	Units
1209150900	Conductivity	2040	µS/cm
1209150900	DO	0.98	mg/L
1209150900	DTW	170.65	ft
1209150900	ORP	146	mV
1209150900	pH	7.61	NA
1209150900	Temperature	19.39	ºC
1209150900	Turbidity	145	NTU
1209150905	Conductivity	2180	µS/cm
1209150905	DO	0.99	mg/L
1209150905	DTW	170.65	ft
1209150905	ORP	149	mV
1209150905	pH	7.63	NA
1209150905	Temperature	19.21	ºC
1209150905	Turbidity	138	NTU
1209150910	Conductivity	2100	µS/cm
1209150910	DO	0.97	mg/L
1209150910	DTW	170.65	ft
1209150910	ORP	150	mV
1209150910	pH	7.64	NA
1209150910	Temperature	19.14	ºC
1209150910	Turbidity	148	NTU

Well ID BW-6-355 Event Date 9/15/2012

Sample	Parameter	Result	Units
1209151050	Conductivity	920	µS/cm
1209151050	DO	2.29	mg/L
1209151050	DTW	244.30	ft
1209151050	ORP	122	mV
1209151050	pH	7.49	NA
1209151050	Temperature	21.37	ºC
1209151050	Turbidity	0.97	NTU
1209151055	Conductivity	913	µS/cm
1209151055	DO	1.77	mg/L
1209151055	DTW	244.35	ft
1209151055	ORP	123	mV
1209151055	pH	7.48	NA
1209151055	Temperature	21.49	ºC
1209151055	Turbidity	0.83	NTU
1209151100	Conductivity	911	µS/cm
1209151100	DO	1.55	mg/L
1209151100	DTW	244.35	ft
1209151100	ORP	128	mV
1209151100	pH	7.48	NA
1209151100	Temperature	21.58	ºC
1209151100	Turbidity	0.60	NTU

Well ID JP-1-424 Event Date 10/10/2012

Sample	Parameter	Result	Units
1210100955	Conductivity	1051	µS/cm
1210100955	DO	3.24	mg/L
1210100955	DTW	468.10	ft
1210100955	ORP	129	mV
1210100955	pH	7.32	NA
1210100955	Temperature	21.10	ºC
1210100955	Turbidity	1.94	NTU
1210101000	Conductivity	1047	µS/cm
1210101000	DO	3.24	mg/L
1210101000	DTW	468.10	ft
1210101000	ORP	128	mV
1210101000	pH	7.28	NA
1210101000	Temperature	21.18	ºC
1210101000	Turbidity	1.87	NTU
1210101005	Conductivity	1053	µS/cm
1210101005	DO	3.24	mg/L
1210101005	DTW	468.1	ft
1210101005	ORP	128	mV
1210101005	pH	7.28	NA
1210101005	Temperature	21.20	ºC
1210101005	Turbidity	1.89	NTU

Well ID JP-2-447 Event Date 10/18/2012

Sample	Parameter	Result	Units
1210181410	Conductivity	1188	µS/cm
1210181410	DO	5.52	mg/L
1210181410	DTW	398.03	ft
1210181410	ORP	176	mV
1210181410	pH	7.31	NA
1210181410	Temperature	22.23	ºC
1210181410	Turbidity	0.59	NTU
1210181412	Conductivity	1190	µS/cm
1210181412	DO	5.59	mg/L
1210181412	DTW	398.03	ft
1210181412	ORP	173	mV
1210181412	pH	7.38	NA
1210181412	Temperature	22.27	ºC
1210181412	Turbidity	0.99	NTU
1210181414	Conductivity	1188	µS/cm
1210181414	DO	5.63	mg/L
1210181414	DTW	398.03	ft
1210181414	ORP	176	mV
1210181414	pH	7.42	NA
1210181414	Temperature	22.25	ºC
1210181414	Turbidity	0.77	NTU
1211261400B	Conductivity	1194	µS/cm
1211261400B	DO	5.45	mg/L
1211261400B	DTW	397.90	ft
1211261400B	ORP	176	mV
1211261400B	pH	7.42	NA
1211261400B	Temperature	22.25	ºC
1211261400B	Turbidity	3.32	NTU
1211261405B	Conductivity	1203	µS/cm
1211261405B	DO	5.36	mg/L
1211261405B	DTW	397.90	ft
1211261405B	ORP	177	mV
1211261405B	pH	7.45	NA
1211261405B	Temperature	22.27	ºC
1211261405B	Turbidity	3.16	NTU
1211261410B	Conductivity	1186	µS/cm
1211261410B	DO	5.39	mg/L
1211261410B	DTW	397.90	ft
1211261410B	ORP	179	mV
1211261410B	pH	7.51	NA
1211261410B	Temperature	22.34	ºC
1211261410B	Turbidity	2.98	NTU

Well ID JP-3-515 Event Date 10/9/2012

Sample	Parameter	Result	Units
1210100900Z	Atmospheric Pressure	12.70	psia
1210100900Z	Conductivity	1070	µS/cm
1210100900Z	DTW	838.91	ft
1210100900Z	pH	8.53	NA
1210100900Z	Temperature	21.0	ºC
1210100900Z	Turbidity	4.21	NTU
1210100932Z	Atmospheric Pressure	12.69	psia
1210100932Z	Conductivity	1058	µS/cm
1210100932Z	DTW	383.91	ft
1210100932Z	pH	8.46	NA
1210100932Z	Temperature	21.5	ºC
1210100932Z	Turbidity	1.91	NTU

Well ID JP-3-695 Event Date 10/9/2012

Sample	Parameter	Result	Units
1210091055Z	Atmospheric Pressure	12.69	psia
1210091055Z	Conductivity	1035	µS/cm
1210091055Z	DTW	383.86	ft
1210091055Z	pH	8.42	NA
1210091055Z	Temperature	23.6	ºC
1210091055Z	Turbidity	3.97	NTU
1210091402Z	Atmospheric Pressure	12.68	psia
1210091402Z	Conductivity	1018	µS/cm
1210091402Z	DTW	383.91	ft
1210091402Z	pH	8.33	NA
1210091402Z	Temperature	24.4	ºC
1210091402Z	Turbidity	1.89	NTU

Well ID JP-3-825 Event Date 10/5/2012

Sample	Parameter	Result	Units
1210051325Z	Atmospheric Pressure	12.65	psia
1210051325Z	Conductivity	961	µS/cm
1210051325Z	DTW	383.83	ft
1210051325Z	pH	7.98	NA
1210051325Z	Temperature	26.3	ºC
1210051325Z	Turbidity	3.75	NTU
1210051402Z	Atmospheric Pressure	12.68	psia
1210051402Z	Conductivity	976	µS/cm
1210051402Z	DTW	383.86	ft
1210051402Z	pH	8.08	NA
1210051402Z	Temperature	26.1	ºC
1210051402Z	Turbidity	1.14	NTU

Well ID JP-3-970 Event Date 10/5/2012

Sample	Parameter	Result	Units
1210050930Z	Atmospheric Pressure	12.60	psia
1210050930Z	Conductivity	767	µS/cm
1210050930Z	DTW	383.83	ft
1210050930Z	pH	8.37	NA
1210050930Z	Temperature	23.7	ºC
1210050930Z	Turbidity	4.40	NTU
1210051017Z	Atmospheric Pressure	12.73	psia
1210051017Z	Conductivity	780	µS/cm
1210051017Z	DTW	383.83	ft
1210051017Z	pH	8.34	NA
1210051017Z	Temperature	23.6	ºC
1210051017Z	Turbidity	1.96	NTU

Well ID NASA 10 Event Date 9/5/2012

Sample	Parameter	Result	Units
1209051400B	Conductivity	766	µS/cm
1209051400B	DTW	123.13	ft
1209051400B	pH	7.78	NA
1209051400B	Temperature	27.2	ºC
1209051400B	Turbidity	2.89	NTU
1209051403B	Conductivity	762	µS/cm
1209051403B	DTW		ft
1209051403B	pH	7.64	NA
1209051403B	Temperature	26.4	ºC
1209051403B	Turbidity	2.42	NTU
1209051408B	Conductivity	742	µS/cm
1209051408B	DTW	123.24	ft
1209051408B	pH	7.52	NA
1209051408B	Temperature	25.6	ºC
1209051408B	Turbidity	1.68	NTU

Well ID	NASA 5	Event Date	9/5/2012	
Sample	**Parameter**		**Result**	**Units**
1209050945B	Conductivity		1284	µS/cm
1209050945B	DTW		117.12	ft
1209050945B	pH		8.05	NA
1209050945B	Temperature		23.3	ºC
1209050945B	Turbidity		6.25	NTU
1209051000B	Conductivity		1264	µS/cm
1209051000B	DTW			ft
1209051000B	pH		8.02	NA
1209051000B	Temperature		24.2	ºC
1209051000B	Turbidity		4.98	NTU
1209051008B	Conductivity		1254	µS/cm
1209051008B	DTW		135.52	ft
1209051008B	pH		7.92	NA
1209051008B	Temperature		24.2	ºC
1209051008B	Turbidity		5.02	NTU

Well ID	NASA 6	Event Date	10/3/2012	
Sample	**Parameter**		**Result**	**Units**
1210030920	Conductivity		1303	µS/cm
1210030920	DTW		139.51	ft
1210030920	pH		7.81	NA
1210030920	Temperature		21.2	ºC
1210030920	Turbidity		2.29	NTU
1210030955	Conductivity		1295	µS/cm
1210030955	DTW		140.77	ft
1210030955	pH		7.74	NA
1210030955	Temperature		21.5	ºC
1210030955	Turbidity		1.80	NTU
1210031005	Conductivity		1285	µS/cm
1210031005	DTW		140.84	ft
1210031005	pH		7.90	NA
1210031005	Temperature		21.8	ºC
1210031005	Turbidity		1.77	NTU

Well ID	NASA 7	Event Date	8/21/2012	
Sample	**Parameter**		**Result**	**Units**
1208211255	Conductivity		2170	µS/cm
1208211255	DTW		168.44	ft
1208211255	pH		7.64	NA
1208211255	Temperature		24.7	ºC
1208211255	Turbidity		5.60	NTU
1208211410	Conductivity		2070	µS/cm
1208211410	DTW			ft
1208211410	pH		7.24	NA
1208211410	Temperature		25.6	ºC
1208211410	Turbidity		8.10	NTU
1208220835	Conductivity		2520	µS/cm
1208220835	DTW			ft
1208220835	pH		8.58	NA
1208220835	Temperature		21.3	ºC
1208220835	Turbidity		6.97	NTU

Well ID	NASA 8	Event Date	8/21/2012	
Sample	**Parameter**		**Result**	**Units**
1208210800	Conductivity		1129	µS/cm
1208210800	DTW		190.55	ft
1208210800	pH		8.66	NA
1208210800	Temperature		25.6	ºC
1208210800	Turbidity		7.17	NTU
1208210805	Conductivity		1200	µS/cm
1208210805	DTW		192.30	ft
1208210805	pH		8.73	NA
1208210805	Temperature		22.1	ºC
1208210805	Turbidity		7.09	NTU

Well ID NASA 9 Event Date 9/8/2012

Sample	Parameter	Result	Units
1209080910B	Conductivity	1292	µS/cm
1209080910B	DTW	130.02	ft
1209080910B	pH	7.72	NA
1209080910B	Temperature	19.9	ºC
1209080910B	Turbidity	4.59	NTU
1209080915B	Conductivity	1285	µS/cm
1209080915B	DTW		ft
1209080915B	pH	7.60	NA
1209080915B	Temperature	20.0	ºC
1209080915B	Turbidity	4.05	NTU
1209080925B	Conductivity	1287	µS/cm
1209080925B	DTW	130.03	ft
1209080925B	pH	7.67	NA
1209080925B	Temperature	21.2	ºC
1209080925B	Turbidity	2.53	NTU

Well ID PL-1-486 Event Date 9/11/2012

Sample	Parameter	Result	Units
1209111330	Conductivity	1088	µS/cm
1209111330	DO	3.65	mg/L
1209111330	DTW	469.10	ft
1209111330	ORP	165	mV
1209111330	pH	7.13	NA
1209111330	Temperature	21.80	ºC
1209111330	Turbidity	0.80	NTU
1209111332	Conductivity	1090	µS/cm
1209111332	DO	3.69	mg/L
1209111332	DTW	469.10	ft
1209111332	ORP	166	mV
1209111332	pH	7.15	NA
1209111332	Temperature	21.33	ºC
1209111332	Turbidity	0.70	NTU
1209111334	Conductivity	1087	µS/cm
1209111334	DO	3.62	mg/L
1209111334	DTW	469.10	ft
1209111334	ORP	167	mV
1209111334	pH	7.16	NA
1209111334	Temperature	21.83	ºC
1209111334	Turbidity	0.52	NTU

Well ID PL-2-504 Event Date 9/7/2012

Sample	Parameter	Result	Units
1209071310	Conductivity	1014	µS/cm
1209071310	DO	4.13	mg/L
1209071310	DTW	462.50	ft
1209071310	ORP	77	mV
1209071310	pH	7.56	NA
1209071310	Temperature	21.83	ºC
1209071310	Turbidity	2.27	NTU
1209071315	Conductivity	1008	µS/cm
1209071315	DO	3.50	mg/L
1209071315	DTW	462.50	ft
1209071315	ORP	81	mV
1209071315	pH	7.56	NA
1209071315	Temperature	21.94	ºC
1209071315	Turbidity	2.42	NTU
1209071320	Conductivity	1010	µS/cm
1209071320	DO	3.34	mg/L
1209071320	DTW	462.50	ft
1209071320	ORP	88	mV
1209071320	pH	7.56	NA
1209071320	Temperature	22.07	ºC
1209071320	Turbidity	1.78	NTU

Well ID PL-3-453 Event Date 9/12/2012

Sample	Parameter	Result	Units
1209120828	Conductivity	1101	µS/cm
1209120828	DO	5.09	mg/L
1209120828	DTW	444.86	ft
1209120828	ORP	162	mV
1209120828	pH	7.05	NA
1209120828	Temperature	21.38	ºC
1209120828	Turbidity	0.88	NTU
1209120830	Conductivity	1102	µS/cm
1209120830	DO	4.89	mg/L
1209120830	DTW	444.85	ft
1209120830	ORP	171	mV
1209120830	pH	7.06	NA
1209120830	Temperature	21.40	ºC
1209120830	Turbidity	0.74	NTU
1209120833	Conductivity	1105	µS/cm
1209120833	DO	4.83	mg/L
1209120833	DTW	444.86	ft
1209120833	ORP	177	mV
1209120833	pH	7.06	NA
1209120833	Temperature	21.38	ºC
1209120833	Turbidity	0.91	NTU

Well ID PL-4-464 Event Date 9/14/2012

Sample	Parameter	Result	Units
1209141020	Conductivity	1076	µS/cm
1209141020	DO	3.80	mg/L
1209141020	DTW	434.12	ft
1209141020	ORP	65	mV
1209141020	pH	7.25	NA
1209141020	Temperature	21.89	ºC
1209141020	Turbidity	2.77	NTU
1209141025	Conductivity	1068	µS/cm
1209141025	DO	3.76	mg/L
1209141025	DTW	434.12	ft
1209141025	ORP	65	mV
1209141025	pH	7.26	NA
1209141025	Temperature	21.64	ºC
1209141025	Turbidity	3.12	NTU
1209141030	Conductivity	1074	µS/cm
1209141030	DO	3.77	mg/L
1209141030	DTW	434.12	ft
1209141030	ORP	65	mV
1209141030	pH	7.26	NA
1209141030	Temperature	21.60	ºC
1209141030	Turbidity	2.39	NTU

Well ID PL-7-480 Event Date 8/24/2012

Sample	Parameter	Result	Units
1208240840Z	Atmospheric Pressure	12.47	psia
1208240840Z	Conductivity	889	µS/cm
1208240840Z	DTW	465.00	ft
1208240840Z	pH	8.67	NA
1208240840Z	Temperature	22.3	ºC
1208240840Z	Turbidity	0.74	NTU
1208241005Z	Atmospheric Pressure	12.49	psia
1208241005Z	Conductivity	961	µS/cm
1208241005Z	DTW	465.10	ft
1208241005Z	pH	7.85	NA
1208241005Z	Temperature	24.4	ºC
1208241005Z	Turbidity	0.91	NTU

Well ID PL-7-560 Event Date 8/22/2012

Sample	Parameter	Result	Units
1208221334Z	Atmospheric Pressure	12.42	psia
1208221334Z	Conductivity	933	µS/cm
1208221334Z	DTW	464.50	ft
1208221334Z	pH	8.28	NA
1208221334Z	Temperature	25.1	ºC
1208221334Z	Turbidity	1.84	NTU
1208221435Z	Atmospheric Pressure	12.41	psia
1208221435Z	Conductivity	958	µS/cm
1208221435Z	DTW	465.00	ft
1208221435Z	pH	7.38	NA
1208221435Z	Temperature	26.7	ºC
1208221435Z	Turbidity	1.72	NTU

Well ID ST-1-541 Event Date 8/7/2012

Sample	Parameter	Result	Units
1208070930	Conductivity	1104	µS/cm
1208070930	DO	4.34	mg/L
1208070930	DTW	455.47	ft
1208070930	ORP	122	mV
1208070930	pH	7.32	NA
1208070930	Temperature	22.29	ºC
1208070930	Turbidity	0.81	NTU
1208070935	Conductivity	1107	µS/cm
1208070935	DO	4.35	mg/L
1208070935	DTW	455.47	ft
1208070935	ORP	122	mV
1208070935	pH	7.34	NA
1208070935	Temperature	22.33	ºC
1208070935	Turbidity	0.76	NTU
1208070940	Conductivity	1103	µS/cm
1208070940	DO	4.34	mg/L
1208070940	DTW	455.47	ft
1208070940	ORP	124	mV
1208070940	pH	7.37	NA
1208070940	Temperature	22.31	ºC
1208070940	Turbidity	0.84	NTU

Well ID	ST-2-466	Event Date	8/2/2012	
Sample	**Parameter**		**Result**	**Units**
1208021000	Conductivity		1043	µS/cm
1208021000	DO		4.05	mg/L
1208021000	DTW		420.60	ft
1208021000	ORP		166	mV
1208021000	pH		7.48	NA
1208021000	Temperature		25.20	ºC
1208021000	Turbidity		1.06	NTU
1208021005	Conductivity		1046	µS/cm
1208021005	DO		3.98	mg/L
1208021005	DTW		420.60	ft
1208021005	ORP		168	mV
1208021005	pH		7.46	NA
1208021005	Temperature		22.41	ºC
1208021005	Turbidity		1.32	NTU
1208021010	Conductivity		1043	µS/cm
1208021010	DO		3.96	mg/L
1208021010	DTW		420.60	ft
1208021010	ORP		171	mV
1208021010	pH		7.49	NA
1208021010	Temperature		22.26	ºC
1208021010	Turbidity		1.01	NTU

Well ID	ST-4-481	Event Date	9/8/2012	
Sample	**Parameter**		**Result**	**Units**
1209080820	Conductivity		1063	µS/cm
1209080820	DO		6.92	mg/L
1209080820	DTW		444.74	ft
1209080820	ORP		261	mV
1209080820	pH		4.93	NA
1209080820	Temperature		19.47	ºC
1209080820	Turbidity		1.01	NTU
1209080825	Conductivity		1048	µS/cm
1209080825	DO		6.76	mg/L
1209080825	DTW		444.74	ft
1209080825	ORP		285	mV
1209080825	pH		5.30	NA
1209080825	Temperature		19.18	ºC
1209080825	Turbidity		0.79	NTU
1209080830	Conductivity		1053	µS/cm
1209080830	DO		6.82	mg/L
1209080830	DTW		444.74	ft
1209080830	ORP		292	mV
1209080830	pH		5.44	NA
1209080830	Temperature		19.11	ºC
1209080830	Turbidity		0.62	NTU

Well ID ST-4-589 Event Date 9/10/2012

Sample	Parameter	Result	Units
1209101300	Conductivity	782	µS/cm
1209101300	DO	2.68	mg/L
1209101300	DTW	443.73	ft
1209101300	ORP	71	mV
1209101300	pH	7.83	NA
1209101300	Temperature	22.17	ºC
1209101300	Turbidity	2.11	NTU
1209101305	Conductivity	779	µS/cm
1209101305	DO	2.67	mg/L
1209101305	DTW	443.73	ft
1209101305	ORP	71	mV
1209101305	pH	7.76	NA
1209101305	Temperature	22.20	ºC
1209101305	Turbidity	1.95	NTU
1209101310	Conductivity	781	µS/cm
1209101310	DO	2.67	mg/L
1209101310	DTW	443.73	ft
1209101310	ORP	70	mV
1209101310	pH	7.79	NA
1209101310	Temperature	22.17	ºC
1209101310	Turbidity	1.83	NTU

Well ID ST-4-690 Event Date 9/8/2012

Sample	Parameter	Result	Units
1209080950	Conductivity	782	µS/cm
1209080950	DO	1.74	mg/L
1209080950	DTW	443.88	ft
1209080950	ORP	96	mV
1209080950	pH	7.88	NA
1209080950	Temperature	20.24	ºC
1209080950	Turbidity	3.31	NTU
1209080955	Conductivity	776	µS/cm
1209080955	DO	1.68	mg/L
1209080955	DTW	443.88	ft
1209080955	ORP	96	mV
1209080955	pH	7.89	NA
1209080955	Temperature	20.30	ºC
1209080955	Turbidity	2.79	NTU
1209081000	Conductivity	777	µS/cm
1209081000	DO	1.80	mg/L
1209081000	DTW	443.88	ft
1209081000	ORP	100	mV
1209081000	pH	7.89	NA
1209081000	Temperature	20.34	ºC
1209081000	Turbidity	1.88	NTU

Well ID ST-5-1175 Event Date 8/25/2012

Sample	Parameter	Result	Units
1208250905Y	Atmospheric Pressure	12.38	psia
1208250905Y	Conductivity	1564	µS/cm
1208250905Y	DTW	420.98	ft
1208250905Y	pH	8.84	NA
1208250905Y	Temperature	23.2	ºC
1208250905Y	Turbidity	1.84	NTU
1208251032Y	Atmospheric Pressure	12.39	psia
1208251032Y	Conductivity	1529	µS/cm
1208251032Y	DTW	422.33	ft
1208251032Y	pH	8.92	NA
1208251032Y	Temperature	24.5	ºC
1208251032Y	Turbidity	1.64	NTU

Well ID ST-5-481 Event Date 10/24/2012

Sample	Parameter	Result	Units
1210240930B	Conductivity	1124	µS/cm
1210240930B	DO	8.55	mg/L
1210240930B	DTW	411.70	ft
1210240930B	ORP	225	mV
1210240930B	pH	7.28	NA
1210240930B	Temperature	21.00	ºC
1210240930B	Turbidity	1.26	NTU
1210240935B	Conductivity	1134	µS/cm
1210240935B	DO	7.61	mg/L
1210240935B	DTW	411.70	ft
1210240935B	ORP	226	mV
1210240935B	pH	7.30	NA
1210240935B	Temperature	21.05	ºC
1210240935B	Turbidity	1.13	NTU
1210240940B	Conductivity	1129	µS/cm
1210240940B	DO	7.50	mg/L
1210240940B	DTW	411.70	ft
1210240940B	ORP	226	mV
1210240940B	pH	7.19	NA
1210240940B	Temperature	21.01	ºC
1210240940B	Turbidity	1.07	NTU

Well ID ST-5-485 Event Date 8/24/2012

Sample	Parameter	Result	Units
1208241315Y	Atmospheric Pressure	12.43	psia
1208241315Y	Conductivity	984	µS/cm
1208241315Y	DTW	420.17	ft
1208241315Y	pH	8.64	NA
1208241315Y	Temperature	24.1	ºC
1208241315Y	Turbidity	1.87	NTU
1208250726Y	Atmospheric Pressure	12.41	psia
1208250726Y	Conductivity	970	µS/cm
1208250726Y	DTW	420.98	ft
1208250726Y	pH	8.51	NA
1208250726Y	Temperature	23.2	ºC
1208250726Y	Turbidity	1.11	NTU

Well ID ST-5-655 Event Date 8/21/2012

Sample	Parameter	Result	Units
1208211310Y	Atmospheric Pressure	12.35	psia
1208211310Y	Conductivity	850	µS/cm
1208211310Y	DTW	417.00	ft
1208211310Y	pH	8.43	NA
1208211310Y	Temperature	25.7	ºC
1208211310Y	Turbidity	1.71	NTU
1208211342Y	Atmospheric Pressure	12.39	psia
1208211342Y	Conductivity	844	µS/cm
1208211342Y	DTW	417.68	ft
1208211342Y	pH	8.27	NA
1208211342Y	Temperature	26.0	ºC
1208211342Y	Turbidity	1.09	NTU

Well ID ST-5-815 Event Date 8/23/2012

Sample	Parameter	Result	Units
1208231440Y	Atmospheric Pressure	12.39	psia
1208231440Y	Conductivity	826	µS/cm
1208231440Y	DTW	418.76	ft
1208231440Y	pH	8.61	NA
1208231440Y	Temperature	26.2	ºC
1208231440Y	Turbidity	2.29	NTU
1208240915Y	Atmospheric Pressure	12.43	psia
1208240915Y	Conductivity	859	µS/cm
1208240915Y	DTW	420.17	ft
1208240915Y	pH	8.53	NA
1208240915Y	Temperature	23.9	ºC
1208240915Y	Turbidity	1.40	NTU

Well ID ST-5-985 Event Date 8/22/2012

Sample	Parameter	Result	Units
1208221020Y	Atmospheric Pressure	12.45	psia
1208221020Y	Conductivity	1339	µS/cm
1208221020Y	DTW	417.68	ft
1208221020Y	pH	9.45	NA
1208221020Y	Temperature	24.5	ºC
1208221020Y	Turbidity	1.55	NTU
1208221438Y	Atmospheric Pressure	12.41	psia
1208221438Y	Conductivity	1321	µS/cm
1208221438Y	DTW	418.76	ft
1208221438Y	pH	9.33	NA
1208221438Y	Temperature	25.3	ºC
1208221438Y	Turbidity	0.88	NTU

Well ID ST-6-535 Event Date 10/16/2012

Sample	Parameter	Result	Units
1210170811Z	Atmospheric Pressure	12.64	psia
1210170811Z	Conductivity	1061	µS/cm
1210170811Z	DTW	438.95	ft
1210170811Z	pH	8.78	NA
1210170811Z	Temperature	19.4	ºC
1210170811Z	Turbidity	0.61	NTU
1210170940Z	Atmospheric Pressure	12.60	psia
1210170940Z	Conductivity	1078	µS/cm
1210170940Z	DTW	438.46	ft
1210170940Z	pH	8.20	NA
1210170940Z	Temperature	21.1	ºC
1210170940Z	Turbidity	0.44	NTU
1209040915Z	Atmospheric Pressure	12.46	psia
1209040915Z	Conductivity	1039	µS/cm
1209040915Z	DTW	438.55	ft
1209040915Z	pH	8.45	NA
1209040915Z	Temperature	23.1	ºC
1209040915Z	Turbidity	2.67	NTU
1209041025Z	Atmospheric Pressure	12.47	psia
1209041025Z	Conductivity	1053	µS/cm
1209041025Z	DTW	438.91	ft
1209041025Z	pH	8.38	NA
1209041025Z	Temperature	23.6	ºC
1209041025Z	Turbidity	3.01	NTU
1209211320Z	Atmospheric Pressure	12.51	psia
1209211320Z	Conductivity	1019	µS/cm
1209211320Z	DTW	438.70	ft
1209211320Z	pH	8.06	NA
1209211320Z	Temperature	26.8	ºC
1209211320Z	Turbidity	0.81	NTU
1209211347Z	Atmospheric Pressure	12.49	psia
1209211347Z	Conductivity	1027	µS/cm
1209211347Z	DTW	439.28	ft
1209211347Z	pH	8.19	NA
1209211347Z	Temperature	26.8	ºC
1209211347Z	Turbidity	0.61	NTU

Well ID ST-6-575 Event Date 10/17/2012

Sample	Parameter	Result	Units
1210171320Z	Atmospheric Pressure	12.58	psia
1210171320Z	Conductivity	1071	µS/cm
1210171320Z	DTW	438.46	ft
1210171320Z	pH	8.31	NA
1210171320Z	Temperature	23.6	ºC
1210171320Z	Turbidity	1.11	NTU
1210171451Z	Atmospheric Pressure	12.57	psia
1210171451Z	Conductivity	1106	µS/cm
1210171451Z	DTW	438.28	ft
1210171451Z	pH	8.26	NA
1210171451Z	Temperature	23.7	ºC
1210171451Z	Turbidity	1.28	NTU
1209041325Z	Atmospheric Pressure	12.49	psia
1209041325Z	Conductivity	1089	µS/cm
1209041325Z	DTW	438.91	ft
1209041325Z	pH	8.13	NA
1209041325Z	Temperature	24.9	ºC
1209041325Z	Turbidity	9.71	NTU
1209041430Z	Atmospheric Pressure	12.45	psia
1209041430Z	Conductivity	1067	µS/cm
1209041430Z	DTW	439.46	ft
1209041430Z	pH	8.11	NA
1209041430Z	Temperature	25.3	ºC
1209041430Z	Turbidity	2.92	NTU
1209240925Z	Atmospheric Pressure	12.48	psia
1209240925Z	Conductivity	1042	µS/cm
1209240925Z	DTW	439.28	ft
1209240925Z	pH	8.37	NA
1209240925Z	Temperature	22.5	ºC
1209240925Z	Turbidity	0.85	NTU
1209241025Z	Atmospheric Pressure	12.51	psia
1209241025Z	Conductivity	1068	µS/cm
1209241025Z	DTW	440.10	ft
1209241025Z	pH	8.42	NA
1209241025Z	Temperature	22.8	ºC
1209241025Z	Turbidity	0.58	NTU

Well ID ST-6-685 Event Date 10/16/2012

Sample	Parameter	Result	Units
1210161015Z	Atmospheric Pressure	12.58	psia
1210161015Z	Conductivity	1022	µS/cm
1210161015Z	DTW	438.40	ft
1210161015Z	pH	8.41	NA
1210161015Z	Temperature	22.1	ºC
1210161015Z	Turbidity	2.07	NTU
1210161052Z	Atmospheric Pressure	12.60	psia
1210161052Z	Conductivity	1041	µS/cm
1210161052Z	DTW	438.95	ft
1210161052Z	pH	8.33	NA
1210161052Z	Temperature	22.8	ºC
1210161052Z	Turbidity	1.18	NTU
1209210950Z	Atmospheric Pressure	12.54	psia
1209210950Z	Conductivity	1018	µS/cm
1209210950Z	DTW	438.11	ft
1209210950Z	pH	8.15	NA
1209210950Z	Temperature	23.4	ºC
1209210950Z	Turbidity	1.12	NTU
1209211027Z	Atmospheric Pressure	12.50	psia
1209211027Z	Conductivity	1028	µS/cm
1209211027Z	DTW	438.70	ft
1209211027Z	pH	8.09	NA
1209211027Z	Temperature	23.3	ºC
1209211027Z	Turbidity	0.80	NTU
1208301000Z	Atmospheric Pressure	12.48	psia
1208301000Z	Conductivity	1130	µS/cm
1208301000Z	DTW	437.90	ft
1208301000Z	pH	8.03	NA
1208301000Z	Temperature	23.5	ºC
1208301000Z	Turbidity	5.61	NTU
1208301037Z	Atmospheric Pressure	12.51	psia
1208301037Z	Conductivity	1117	µS/cm
1208301037Z	DTW	438.55	ft
1208301037Z	pH	7.92	NA
1208301037Z	Temperature	23.8	ºC
1208301037Z	Turbidity	1.48	NTU

Well ID WB-14-520 Event Date 8/2/2012

Sample	Parameter	Result	Units
1208021050Z	Atmospheric Pressure	12.38	psia
1208021050Z	Conductivity	726	µS/cm
1208021050Z	DTW	300.84	ft
1208021050Z	pH	8.68	NA
1208021050Z	Temperature	24.8	ºC
1208021050Z	Turbidity	1.77	NTU
1208060917Z	Atmospheric Pressure	12.38	psia
1208060917Z	Conductivity	710	µS/cm
1208060917Z	DTW	301.71	ft
1208060917Z	pH	8.60	NA
1208060917Z	Temperature	24.3	ºC
1208060917Z	Turbidity	0.98	NTU

Well ID WB-5-250 Event Date 8/20/2012

Sample	Parameter	Result	Units
1208200910Y	Atmospheric Pressure	12.28	psia
1208200910Y	Conductivity	1116	µS/cm
1208200910Y	DTW	212.15	ft
1208200910Y	pH	8.11	NA
1208200910Y	Temperature	23.2	ºC
1208200910Y	Turbidity	46.4	NTU
1208201017Y	Atmospheric Pressure	12.26	psia
1208201017Y	Conductivity	1131	µS/cm
1208201017Y	DTW	212.22	ft
1208201017Y	pH	8.19	NA
1208201017Y	Temperature	24.0	ºC
1208201017Y	Turbidity	42.6	NTU

Well ID WB-5-280 Event Date 8/16/2012

Sample	Parameter	Result	Units
1208161345Y	Atmospheric Pressure	12.23	psia
1208161345Y	Conductivity	1176	µS/cm
1208161345Y	DTW	212.03	ft
1208161345Y	pH	8.02	NA
1208161345Y	Temperature	26.5	ºC
1208161345Y	Turbidity	40.5	NTU
1208200752Y	Atmospheric Pressure	12.24	psia
1208200752Y	Conductivity	1160	µS/cm
1208200752Y	DTW	212.15	ft
1208200752Y	pH	7.91	NA
1208200752Y	Temperature	23.5	ºC
1208200752Y	Turbidity	32.8	NTU

Well ID WB-5-345 Event Date 8/16/2012

Sample	Parameter	Result	Units
1208160905Y	Atmospheric Pressure	12.25	psia
1208160905Y	Conductivity	1212	µS/cm
1208160905Y	DTW	211.30	ft
1208160905Y	pH	8.34	NA
1208160905Y	Temperature	23.6	ºC
1208160905Y	Turbidity	31.4	NTU
1208161006Y	Atmospheric Pressure	12.29	psia
1208161006Y	Conductivity	1227	µS/cm
1208161006Y	DTW	212.03	ft
1208161006Y	pH	8.46	NA
1208161006Y	Temperature	23.5	ºC
1208161006Y	Turbidity	51.4	NTU

Well ID WW-1-452 Event Date 9/7/2012

Sample	Parameter	Result	Units
1209070830	Conductivity	1080	µS/cm
1209070830	DO	5.16	mg/L
1209070830	DTW	406.77	ft
1209070830	ORP	172	mV
1209070830	pH	7.03	NA
1209070830	Temperature	21.70	ºC
1209070830	Turbidity	0.60	NTU
1209070835	Conductivity	1069	µS/cm
1209070835	DO	4.12	mg/L
1209070835	DTW	406.77	ft
1209070835	ORP	171	mV
1209070835	pH	7.03	NA
1209070835	Temperature	22.01	ºC
1209070835	Turbidity	0.89	NTU
1209070840	Conductivity	1062	µS/cm
1209070840	DO	4.17	mg/L
1209070840	DTW	406.77	ft
1209070840	ORP	171	mV
1209070840	pH	7.04	NA
1209070840	Temperature	22.13	ºC
1209070840	Turbidity	0.52	NTU

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Appendix A.2
Analytical Detections for Monitoring Well Sampling Events for Fourth Quarter 2012
(Detections Only)

Detections for Monitoring Well Sampling Events in this Reporting Period

Analytical Results for RFI Sampling Events at 100-F-358

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/5/2012	8260_LL	1209051400	Chloromethane	0.55	ug/L	0.50	0.20		FB
9/5/2012	8260_LL	1209051400	Bromomethane	0.25	ug/L	0.50	0.24		J RB
9/14/2012	8260	1209140925B	Acetone	1.7	ug/L	10	1.3		J
9/14/2012	8260	1209140925B	Chloromethane	0.47	ug/L	2.0	0.21		J RB FB
9/14/2012	8260	1209140925B	1,1,2-Trichloro-1,2,2-Trifluoroethane	14	ug/L	1.0	0.31		
9/14/2012	8270	1209140930B	Bis(2-ethylhexyl) Phthalate	0.41	ug/L	5.2	0.11		J
9/14/2012	METALS	1209140931B	MAGNESIUM	64	MG/L	0.5	0.06		
9/14/2012	METALS	1209140931B	IRON	0.38	MG/L	0.1	0.015		
9/14/2012	METALS	1209140931B	ALUMINUM	0.56	MG/L	0.1	0.026		
9/14/2012	METALS	1209140931B	VANADIUM	0.0024	MG/L	0.01	0.0015		J
9/14/2012	METALS	1209140931B	MANGANESE	0.037	MG/L	0.01	0.0003		
9/14/2012	METALS	1209140931B	POTASSIUM	3	MG/L	1	0.09		
9/14/2012	METALS	1209140931B	TIN	0.0047	MG/L	0.05	0.003		J
9/14/2012	METALS	1209140931B	LEAD	0.0016	MG/L	0.003	0.0009		J
9/14/2012	METALS	1209140931B	BORON	0.058	MG/L	0.1	0.012		J
9/14/2012	METALS	1209140931B	BARIUM	0.056	MG/L	0.01	0.0014		
9/14/2012	METALS	1209140931B	COPPER	0.0021	MG/L	0.01	0.0006		J
9/14/2012	METALS	1209140931B	STRONTIUM	3.6	MG/L	0.01	0.0009		
9/14/2012	METALS	1209140931B	SODIUM	35	MG/L	0.5	0.09		
9/14/2012	METALS	1209140931B	CALCIUM	130	MG/L	0.5	0.06		
9/14/2012	METALS	1209140931B	MOLYBDENUM	0.01	MG/L	0.01	0.0015		
9/14/2012	METALS	1209140931B	CHROMIUM	0.0019	MG/L	0.01	0.0006		J
9/14/2012	METALS	1209140931B	ZINC	0.0092	MG/L	0.02	0.0015		J
9/14/2012	ANIONS	1209140932B	SULFATE	370	MG/L	10	3		
9/14/2012	ANIONS	1209140932B	BICARBONATE AS CaCO3	200	MG/L	20	NA		
9/14/2012	ANIONS	1209140932B	FLUORIDE	0.88	MG/L	0.1	0.03		
9/14/2012	ANIONS	1209140932B	TOTAL ALKALINITY AS CaCO3	200	MG/L	20	NA		
9/14/2012	ANIONS	1209140932B	CHLORIDE	52	MG/L	2	0.6		
9/14/2012	ANIONS	1209140932B	TOTAL DISSOLVED SOLIDS	840	MG/L	20	NA		
9/14/2012	331.0	1209140933B	Perchlorate	0.3	ug/L	0.20	0.026		
9/14/2012	353.2	1209140934B	NITRATE/NITRITE AS N	0.7	MG/L	0.01	0.003		

Analytical Results for RFI Sampling Events at 200-B-240

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/4/2012	8260	1210041325	Trichloroethene (TCE)	62	ug/L	1.0	0.22		
10/4/2012	8260	1210041325	Trichlorofluoromethane (CFC 11)	73	ug/L	1.0	0.20		
10/4/2012	8260	1210041325	cis-1,2-Dichloroethene	0.61	ug/L	1.0	0.30		J
10/4/2012	8260	1210041325	Acetone	4.8	ug/L	10	1.3		J FB
10/4/2012	8260	1210041325	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	ug/L	1.0	0.31		
10/4/2012	8260	1210041325	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1.0	0.21		
10/4/2012	8260	1210041325	Tetrachloroethene (PCE)	3.2	ug/L	1.0	0.30		
10/4/2012	607	1210041327	Bromacil	1	ug/L	0.0089	0.0044	107	
10/4/2012	607	1210041327	N-Nitrosodimethylamine	0.09	ug/L	0.0089	0.0044	41	
10/4/2012	607	1210041327	N-Nitrodimethylamine	0.15	ug/L	0.0089	0.0044	90	
10/4/2012	607	1210041328	N-Nitrosodimethylamine	0.098	ug/L	0.0089	0.0044	41	
10/4/2012	607	1210041328	N-Nitrodimethylamine	0.16	ug/L	0.0089	0.0044	90	
10/4/2012	607	1210041328	Bromacil	1.1	ug/L	0.0089	0.0044	107	
10/4/2012	8270	1210041329	Unknown	4.2	ug/L	NA	NA		TIC RB
10/4/2012	8290	1210041331	Total HxCDF # Homologues	0	NA	NA	NA		
10/4/2012	8290	1210041331	Total PeCDF # Homologues	0	NA	NA	NA		
10/4/2012	8290	1210041331	Total TCDD # Homologues	0	NA	NA	NA		
10/4/2012	8290	1210041331	Total PeCDD # Homologues	0	NA	NA	NA		
10/4/2012	8290	1210041331	Total TCDF # Homologues	0	NA	NA	NA		
10/4/2012	8290	1210041331	Total HpCDD # Homologues	0	NA	NA	NA		
10/4/2012	8290	1210041331	Mid Point PCDD/F TEQ (WHO 2005)	4.89	pg/L	NA	NA		
10/4/2012	8290	1210041331	Lower Bound PCDD/F TEQ (WHO 2005)	0	pg/L	NA	NA		
10/4/2012	8290	1210041331	Total HpCDF # Homologues	0	NA	NA	NA		
10/4/2012	8290	1210041331	Upper Bound PCDD/F TEQ (WHO 2005)	9.78	pg/L	NA	NA		
10/4/2012	8290	1210041331	Total HxCDD # Homologues	0	NA	NA	NA		
10/4/2012	METALS	1210041335	Zinc, Total	0.012	mg/L	0.020	0.002		J
10/4/2012	METALS	1210041335	Cobalt, Total	0.0001	mg/L	0.0010	0.000008		J
10/4/2012	METALS	1210041335	Arsenic, Total	0.001	mg/L	0.0010	0.0004		
10/4/2012	METALS	1210041335	Barium, Total	0.029	mg/L	0.020	0.0004		RB
10/4/2012	METALS	1210041335	Boron, Total	0.12	mg/L	0.20	0.05		J
10/4/2012	METALS	1210041335	Calcium, Total	118	mg/L	1.0	0.2		
10/4/2012	METALS	1210041335	Magnesium, Total	61.8	mg/L	1.0	0.005		
10/4/2012	METALS	1210041335	Molybdenum, Total	0.01	mg/L	0.025	0.002		J
10/4/2012	METALS	1210041335	Potassium, Total	4.4	mg/L	2.0	0.07		
10/4/2012	METALS	1210041335	Selenium, Total	0.005	mg/L	0.010	0.004		J

Analytical Results for RFI Sampling Events at 200-B-240

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/4/2012	METALS	1210041335	Sodium, Total	47.5	mg/L	1.0	0.10		
10/4/2012	METALS	1210041335	Thallium, Total	0.0002	mg/L	0.0010	0.00007		J
10/4/2012	METALS	1210041335	Strontium, Total	1.97	mg/L	0.10	0.001		
10/4/2012	METALS	1210041336	Strontium, Total	1.99	mg/L	0.10	0.001		
10/4/2012	METALS	1210041336	Calcium, Total	119	mg/L	1.0	0.2		
10/4/2012	METALS	1210041336	Arsenic, Total	0.001	mg/L	0.0010	0.0004		J
10/4/2012	METALS	1210041336	Selenium, Total	0.004	mg/L	0.010	0.004		J
10/4/2012	METALS	1210041336	Zinc, Total	0.012	mg/L	0.020	0.002		J
10/4/2012	METALS	1210041336	Thallium, Total	0.0002	mg/L	0.0010	0.00007		J
10/4/2012	METALS	1210041336	Barium, Total	0.029	mg/L	0.020	0.0004		RB
10/4/2012	METALS	1210041336	Cobalt, Total	0.0002	mg/L	0.0010	0.000008		J
10/4/2012	METALS	1210041336	Boron, Total	0.12	mg/L	0.20	0.05		J
10/4/2012	METALS	1210041336	Vanadium, Total	0.001	mg/L	0.0020	0.0010		J
10/4/2012	METALS	1210041336	Sodium, Total	48	mg/L	1.0	0.10		
10/4/2012	METALS	1210041336	Potassium, Total	4.4	mg/L	2.0	0.07		
10/4/2012	METALS	1210041336	Molybdenum, Total	0.01	mg/L	0.025	0.002		J
10/4/2012	METALS	1210041336	Mercury, Total	0.00004	mg/L	0.00020	0.00003		J
10/4/2012	METALS	1210041336	Magnesium, Total	61.8	mg/L	1.0	0.005		
10/4/2012	METALS	1210041336	Nickel, Total	0.016	mg/L	0.040	0.003		J
10/4/2012	376.1	1210221335	Sulfide, Acid-Soluble	1.9	mg/L	1.0	0.7		

Analytical Results for RFI Sampling Events at 200-D-109

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/24/2012	8260	1208241030	1,1,2-Trichloro-1,2,2-Trifluoroethane	220	ug/L	2.5	0.78		
8/24/2012	8260	1208241030	Trichlorofluoromethane (CFC 11)	13	ug/L	1.0	0.20		
8/24/2012	8260	1208241030	Trichloroethene (TCE)	220	ug/L	2.5	0.55		
8/24/2012	8260	1208241030	Tetrachloroethene (PCE)	14	ug/L	1.0	0.30		
8/24/2012	8260	1208241030	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.3	ug/L	1.0	0.21		J Q
8/24/2012	8260	1208241030	1,1-Dichloroethene	1.1	ug/L	1.0	0.57		
8/24/2012	8260	1208241031	1,1,2-Trichloro-1,2,2-Trifluoroethane	220	ug/L	2.5	0.78		
8/24/2012	8260	1208241031	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.27	ug/L	1.0	0.21		J Q
8/24/2012	8260	1208241031	Trichlorofluoromethane (CFC 11)	13	ug/L	1.0	0.20		
8/24/2012	8260	1208241031	Trichloroethene (TCE)	210	ug/L	2.5	0.55		
8/24/2012	8260	1208241031	Tetrachloroethene (PCE)	14	ug/L	1.0	0.30		
8/24/2012	8260	1208241031	1,1,2-Trichloro-1,2,2-Trifluoroethane	220	ug/L	2.5	0.78		
8/24/2012	8260	1208241031	Trichloroethene (TCE)	210	ug/L	2.5	0.55		
8/24/2012	8260	1208241031	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.27	ug/L	1.0	0.21		J Q
8/24/2012	8260	1208241031	1,1-Dichloroethene	1.1	ug/L	1.0	0.57		
8/24/2012	8260	1208241031	Tetrachloroethene (PCE)	14	ug/L	1.0	0.30		
8/24/2012	8260	1208241031	1,1-Dichloroethene	1.1	ug/L	1.0	0.57		
8/24/2012	8260	1208241031	Trichlorofluoromethane (CFC 11)	13	ug/L	1.0	0.20		
8/24/2012	607	1208241034	Bromacil	0.09	ug/L	0.0094	0.0047	107	
8/24/2012	METALS	1208241035	ZINC	0.15	MG/L	0.02	0.0015		
8/24/2012	METALS	1208241035	COPPER	0.033	MG/L	0.01	0.0006		
8/24/2012	METALS	1208241035	IRON	2.7	MG/L	0.1	0.015		
8/24/2012	METALS	1208241035	BORON	0.073	MG/L	0.1	0.012		J
8/24/2012	METALS	1208241035	MANGANESE	0.2	MG/L	0.01	0.0003		
8/24/2012	METALS	1208241035	POTASSIUM	3.4	MG/L	1	0.09		
8/24/2012	METALS	1208241035	STRONTIUM	3.3	MG/L	0.01	0.0009		
8/24/2012	METALS	1208241035	LEAD	0.003	MG/L	0.003	0.0009		J
8/24/2012	METALS	1208241035	MAGNESIUM	70	MG/L	0.5	0.06		
8/24/2012	METALS	1208241035	MOLYBDENUM	0.009	MG/L	0.01	0.0015		J
8/24/2012	METALS	1208241035	COBALT	0.0014	MG/L	0.01	0.0006		J
8/24/2012	METALS	1208241035	THALLIUM	0.00014	MG/L	0.0002	0.00006		J
8/24/2012	METALS	1208241035	ANTIMONY	0.00016	MG/L	0.0003	0.00009		J A
8/24/2012	METALS	1208241035	SELENIUM	0.0042	MG/L	0.005	0.0032		J
8/24/2012	METALS	1208241035	CHROMIUM	0.12	MG/L	0.01	0.0006		
8/24/2012	METALS	1208241035	ALUMINUM	0.42	MG/L	0.1	0.026		
8/24/2012	METALS	1208241035	CALCIUM	150	MG/L	0.5	0.06		

Analytical Results for RFI Sampling Events at 200-D-109

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/24/2012	METALS	1208241035	BARIUM	0.045	MG/L	0.01	0.0014		
8/24/2012	METALS	1208241035	SODIUM	41	MG/L	0.5	0.09		
8/24/2012	METALS	1208241035	NICKEL	0.11	MG/L	0.02	0.0006		
8/24/2012	METALS	1208241035	VANADIUM	0.0015	MG/L	0.01	0.0015		J

Analytical Results for RFI Sampling Events at 200-D-240

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/20/2012	8260	1209201415	Acetone	10	ug/L	10	1.3		
9/20/2012	8260	1209201415	1,1-Dichloroethene	0.87	ug/L	1.0	0.57		J
9/20/2012	8260	1209201415	1,1,2-Trichloro-1,2,2-Trifluoroethane	390	ug/L	5.0	1.6		
9/20/2012	8260	1209201415	Chloroform	0.34	ug/L	1.0	0.25		J
9/20/2012	8260	1209201415	Trichlorofluoromethane (CFC 11)	53	ug/L	1.0	0.20		
9/20/2012	8260	1209201415	Trichloroethene (TCE)	22	ug/L	1.0	0.22		
9/20/2012	8260	1209201415	Tetrachloroethene (PCE)	0.59	ug/L	1.0	0.30		J
9/20/2012	8260	1209201415	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.24	ug/L	1.0	0.21		J
9/20/2012	607	1209201416	N-Nitrodimethylamine	0.0069	ug/L	0.0098	0.0049	104	J
9/20/2012	607	1209201416	Bromacil	0.56	ug/L	0.0098	0.0049	118	
9/20/2012	607	1209201416	N-Nitrodimethylamine	0.0069	ug/L	0.0098	0.0049	104	J
9/20/2012	607	1209201416	Bromacil	0.56	ug/L	0.0098	0.0049	118	
9/20/2012	METALS	1209201418	CALCIUM	130	MG/L	0.5	0.06		
9/20/2012	METALS	1209201418	THALLIUM	0.0001	MG/L	0.0002	0.00006		J
9/20/2012	METALS	1209201418	BARIUM	0.031	MG/L	0.01	0.0014		
9/20/2012	METALS	1209201418	SODIUM	59	MG/L	0.5	0.09		
9/20/2012	METALS	1209201418	NICKEL	0.0011	MG/L	0.02	0.0006		J
9/20/2012	METALS	1209201418	MAGNESIUM	66	MG/L	0.5	0.06		
9/20/2012	METALS	1209201418	POTASSIUM	3.3	MG/L	1	0.09		
9/20/2012	METALS	1209201418	STRONTIUM	2.2	MG/L	0.01	0.0009		
9/20/2012	METALS	1209201418	MOLYBDENUM	0.0088	MG/L	0.01	0.0015		J
9/20/2012	METALS	1209201418	ARSENIC	0.0026	MG/L	0.005	0.0015		J
9/20/2012	METALS	1209201418	BORON	0.11	MG/L	0.1	0.012		
9/20/2012	METALS	1209201419	SELENIUM	0.0049	MG/L	0.005	0.0032		J
9/20/2012	METALS	1209201419	ARSENIC	0.0058	MG/L	0.005	0.0015		
9/20/2012	METALS	1209201419	BARIUM	0.031	MG/L	0.01	0.0014		
9/20/2012	METALS	1209201419	TIN	0.0033	MG/L	0.05	0.003		J
9/20/2012	METALS	1209201419	POTASSIUM	3.4	MG/L	1	0.09		
9/20/2012	METALS	1209201419	NICKEL	0.0012	MG/L	0.02	0.0006		J
9/20/2012	METALS	1209201419	MOLYBDENUM	0.01	MG/L	0.01	0.0015		
9/20/2012	METALS	1209201419	MAGNESIUM	68	MG/L	0.5	0.06		
9/20/2012	METALS	1209201419	BORON	0.11	MG/L	0.1	0.012		
9/20/2012	METALS	1209201419	THALLIUM	0.00008	MG/L	0.0002	0.00006		J
9/20/2012	METALS	1209201419	SODIUM	60	MG/L	0.5	0.09		
9/20/2012	METALS	1209201419	STRONTIUM	2.2	MG/L	0.01	0.0009		
9/20/2012	METALS	1209201419	CALCIUM	140	MG/L	0.5	0.06		

Analytical Results for RFI Sampling Events at 200-D-240

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/20/2012	METALS	1209201419	VANADIUM	0.0016	MG/L	0.01	0.0015		J
9/20/2012	ANIONS	1209201420	BICARBONATE AS CaCO3	260	MG/L	20	NA		
9/20/2012	ANIONS	1209201420	TOTAL ALKALINITY AS CaCO3	260	MG/L	20	NA		
9/20/2012	ANIONS	1209201420	CHLORIDE	74	MG/L	2	0.6		
9/20/2012	ANIONS	1209201420	FLUORIDE	0.8	MG/L	0.1	0.03		
9/20/2012	ANIONS	1209201420	SULFATE	340	MG/L	10	3		
9/20/2012	ANIONS	1209201420	TOTAL DISSOLVED SOLIDS	1000	MG/L	40	NA		
9/20/2012	331.0	1209201421	Perchlorate	0.76	ug/L	0.20	0.026		
9/20/2012	353.2	1209201422	NITRATE/NITRITE AS N	2.6	MG/L	0.05	0.015		

Analytical Results for RFI Sampling Events at 200-H-225

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/28/2012	8260	1208280825Z	Tetrahydrofuran (THF)	11	ug/L	5.0	0.96		
8/28/2012	8260	1208280825Z	Dichlorofluoromethane (CFC 21)	0.81	ug/L	1.0	0.24		J
8/28/2012	8260	1208280825Z	Chloromethane	0.36	ug/L	2.0	0.21		J RB
8/28/2012	8260	1208280825Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.1	ug/L	1.0	0.31		
8/28/2012	8260	1208280825Z	Trichlorofluoromethane (CFC 11)	1	ug/L	1.0	0.20		
8/28/2012	8260	1208280825Z	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.43	ug/L	1.0	0.21		J
8/28/2012	607	1208280826Z	Bromacil	0.061	ug/L	0.0089	0.0044	106	
8/28/2012	607	1208280826Z	Bromacil	0.061	ug/L	0.0089	0.0044	106	
8/28/2012	METALS	1208280910Z	STRONTIUM	2.2	MG/L	0.01	0.0009		
8/28/2012	METALS	1208280910Z	MAGNESIUM	69	MG/L	0.5	0.06		
8/28/2012	METALS	1208280910Z	MOLYBDENUM	0.0082	MG/L	0.01	0.0015		J
8/28/2012	METALS	1208280910Z	THALLIUM	0.00007	MG/L	0.0002	0.00006		J
8/28/2012	METALS	1208280910Z	ANTIMONY	0.00017	MG/L	0.0003	0.00009		J A
8/28/2012	METALS	1208280910Z	SODIUM	31	MG/L	0.5	0.09		
8/28/2012	METALS	1208280910Z	VANADIUM	0.0016	MG/L	0.01	0.0015		J
8/28/2012	METALS	1208280910Z	POTASSIUM	2.1	MG/L	1	0.09		
8/28/2012	METALS	1208280910Z	ZINC	0.025	MG/L	0.02	0.0015		
8/28/2012	METALS	1208280910Z	BORON	0.052	MG/L	0.1	0.012		J
8/28/2012	METALS	1208280910Z	NICKEL	0.001	MG/L	0.02	0.0006		J
8/28/2012	METALS	1208280910Z	CALCIUM	150	MG/L	0.5	0.06		
8/28/2012	METALS	1208280910Z	BARIUM	0.024	MG/L	0.01	0.0014		
8/28/2012	METALS	1208280910Z	MANGANESE	0.0069	MG/L	0.01	0.0003		J
8/28/2012	ANIONS	1208280911Z	TOTAL ALKALINITY AS CaCO3	270	MG/L	20	NA		
8/28/2012	ANIONS	1208280911Z	TOTAL DISSOLVED SOLIDS	1000	MG/L	20	NA		
8/28/2012	ANIONS	1208280911Z	BICARBONATE AS CaCO3	270	MG/L	20	NA		
8/28/2012	ANIONS	1208280911Z	SULFATE	420	MG/L	10	3		
8/28/2012	ANIONS	1208280911Z	CHLORIDE	36	MG/L	2	0.6		
8/28/2012	ANIONS	1208280911Z	FLUORIDE	0.87	MG/L	0.1	0.03		
8/28/2012	331.0	1208280935Z	Perchlorate	0.18	ug/L	0.20	0.026		J

Analytical Results for RFI Sampling Events at 200-H-331

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/27/2012	METALS	1208270931Z	CALCIUM	450	MG/L	0.5	0.06		
8/27/2012	METALS	1208270931Z	BARIUM	0.01	MG/L	0.01	0.0014		
8/27/2012	METALS	1208270931Z	TIN	0.0037	MG/L	0.05	0.003		J
8/27/2012	METALS	1208270931Z	IRON	0.05	MG/L	0.1	0.015		J
8/27/2012	METALS	1208270931Z	SODIUM	33	MG/L	0.5	0.09		
8/27/2012	METALS	1208270931Z	MAGNESIUM	130	MG/L	0.5	0.06		
8/27/2012	METALS	1208270931Z	MANGANESE	0.0072	MG/L	0.01	0.0003		J
8/27/2012	METALS	1208270931Z	POTASSIUM	2.3	MG/L	1	0.09		
8/27/2012	METALS	1208270931Z	STRONTIUM	13	MG/L	0.05	0.0045		
8/27/2012	METALS	1208270931Z	ZINC	0.048	MG/L	0.02	0.0015		
8/27/2012	METALS	1208270931Z	BORON	0.066	MG/L	0.1	0.012		J
8/27/2012	8260	1208271340Z	Chloromethane	0.27	ug/L	2.0	0.21		J RB EB
8/27/2012	METALS	1208271411Z	BORON	0.067	MG/L	0.1	0.012		J
8/27/2012	METALS	1208271411Z	CALCIUM	490	MG/L	0.5	0.06		
8/27/2012	METALS	1208271411Z	MAGNESIUM	140	MG/L	0.5	0.06		
8/27/2012	METALS	1208271411Z	STRONTIUM	14	MG/L	0.05	0.0045		
8/27/2012	METALS	1208271411Z	ZINC	0.012	MG/L	0.02	0.0015		J
8/27/2012	METALS	1208271411Z	POTASSIUM	2.2	MG/L	1	0.09		
8/27/2012	METALS	1208271411Z	MANGANESE	0.0055	MG/L	0.01	0.0003		J
8/27/2012	METALS	1208271411Z	BARIUM	0.0087	MG/L	0.01	0.0014		J
8/27/2012	METALS	1208271411Z	SODIUM	32	MG/L	0.5	0.09		

Analytical Results for RFI Sampling Events at 200-JG-110

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/9/2012	8260	1208091405	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1.0	0.31		
8/9/2012	8260	1208091405	Tetrachloroethene (PCE)	1.1	ug/L	1.0	0.20		
8/9/2012	8260	1208091405	Trichloroethene (TCE)	16	ug/L	1.0	0.23		
8/9/2012	8260	1208091405	Trichlorofluoromethane (CFC 11)	13	ug/L	1.0	0.20		
8/9/2012	8260	1208091405	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.46	ug/L	1.0	0.35		J
8/9/2012	607	1208091407	Bromacil	0.088	ug/L	0.0097	0.0049	103	
8/9/2012	607	1208091407	Bromacil	0.088	ug/L	0.0097	0.0049	103	
8/9/2012	607	1208091407	Bromacil	0.088	ug/L	0.0097	0.0049	103	
8/9/2012	8270	1208091411	Bis(2-ethylhexyl) Phthalate	1.4	ug/L	4.7	0.10		J
8/9/2012	METALS	1208091412	SODIUM	42	MG/L	0.5	0.09		
8/9/2012	METALS	1208091412	STRONTIUM	3.6	MG/L	0.01	0.0009		
8/9/2012	METALS	1208091412	POTASSIUM	3.2	MG/L	1	0.09		
8/9/2012	METALS	1208091412	CALCIUM	160	MG/L	0.5	0.06		
8/9/2012	METALS	1208091412	ALUMINUM	0.029	MG/L	0.1	0.026		J
8/9/2012	METALS	1208091412	SELENIUM	0.0066	MG/L	0.005	0.0032		
8/9/2012	METALS	1208091412	MANGANESE	0.011	MG/L	0.01	0.0003		
8/9/2012	METALS	1208091412	IRON	0.11	MG/L	0.1	0.015		QD
8/9/2012	METALS	1208091412	ZINC	0.012	MG/L	0.02	0.0015		J
8/9/2012	METALS	1208091412	BORON	0.075	MG/L	0.1	0.012		J
8/9/2012	METALS	1208091412	BARIUM	0.029	MG/L	0.01	0.0014		
8/9/2012	METALS	1208091412	MOLYBDENUM	0.0074	MG/L	0.01	0.0015		J
8/9/2012	METALS	1208091412	MAGNESIUM	73	MG/L	0.5	0.06		
8/9/2012	METALS	1208091412	THALLIUM	0.00013	MG/L	0.0002	0.00006		J
8/9/2012	METALS	1208091413	ANTIMONY	0.00011	MG/L	0.0003	0.00009		J
8/9/2012	METALS	1208091413	NICKEL	0.00077	MG/L	0.02	0.0006		J
8/9/2012	METALS	1208091413	BARIUM	0.033	MG/L	0.01	0.0014		
8/9/2012	METALS	1208091413	ZINC	0.017	MG/L	0.02	0.0015		J
8/9/2012	METALS	1208091413	TIN	0.0058	MG/L	0.05	0.003		J
8/9/2012	METALS	1208091413	THALLIUM	0.0001	MG/L	0.0002	0.00006		J
8/9/2012	METALS	1208091413	BORON	0.077	MG/L	0.1	0.012		J
8/9/2012	METALS	1208091413	IRON	0.35	MG/L	0.1	0.015		QD
8/9/2012	METALS	1208091413	COPPER	0.0023	MG/L	0.01	0.0006		J
8/9/2012	METALS	1208091413	CALCIUM	150	MG/L	0.5	0.06		
8/9/2012	METALS	1208091413	STRONTIUM	3.6	MG/L	0.01	0.0009		
8/9/2012	METALS	1208091413	SODIUM	42	MG/L	0.5	0.09		
8/9/2012	METALS	1208091413	ALUMINUM	0.084	MG/L	0.1	0.026		J

Analytical Results for RFI Sampling Events at 200-JG-110

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/9/2012	METALS	1208091413	CHROMIUM	0.0021	MG/L	0.01	0.0006		J
8/9/2012	METALS	1208091413	MOLYBDENUM	0.009	MG/L	0.01	0.0015		J
8/9/2012	METALS	1208091413	MAGNESIUM	72	MG/L	0.5	0.06		
8/9/2012	METALS	1208091413	MANGANESE	0.018	MG/L	0.01	0.0003		
8/9/2012	METALS	1208091413	POTASSIUM	3.3	MG/L	1	0.09		
8/9/2012	ANIONS	1208091414	TOTAL DISSOLVED SOLIDS	1100	MG/L	40	NA		T
8/9/2012	ANIONS	1208091414	FLUORIDE	0.94	MG/L	0.1	0.03		
8/9/2012	ANIONS	1208091414	CHLORIDE	52	MG/L	4	1.2		
8/9/2012	ANIONS	1208091414	TOTAL ALKALINITY AS CaCO3	250	MG/L	20	NA		
8/9/2012	ANIONS	1208091414	SULFATE	430	MG/L	20	6		
8/9/2012	ANIONS	1208091414	BICARBONATE AS CaCO3	250	MG/L	20	NA		
8/9/2012	353.2	1208091415	NITRATE/NITRITE AS N	2	MG/L	0.01	0.003		
8/9/2012	331.0	1208091416	Perchlorate	0.39	ug/L	0.20	0.026		
8/9/2012	331.0	1208091416	Perchlorate	0.39	ug/L	0.20	0.026		

Analytical Results for RFI Sampling Events at 200-SG-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/8/2012	8260	1209081108B	Trichlorofluoromethane (CFC 11)	15	ug/L	1.0	0.20		
9/8/2012	8260	1209081108B	Trichloroethene (TCE)	180	ug/L	1.0	0.22		
9/8/2012	8260	1209081108B	Tetrachloroethene (PCE)	6.8	ug/L	1.0	0.30		
9/8/2012	8260	1209081108B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.6	ug/L	1.0	0.21		
9/8/2012	8260	1209081108B	1,1,2-Trichloro-1,2,2-Trifluoroethane	600	ug/L	10	3.1		
9/8/2012	8260	1209081108B	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1.0	0.24		
9/8/2012	8260	1209081108B	Chloromethane	0.25	ug/L	2.0	0.21		J RB FB
9/8/2012	607	1209081109B	Bromacil	0.13	ug/L	0.0089	0.0044	107	
9/8/2012	607	1209081109B	Bromacil	0.13	ug/L	0.0089	0.0044	107	
9/8/2012	ANIONS	1209081112B	TOTAL DISSOLVED SOLIDS	930	MG/L	40	NA		
9/8/2012	ANIONS	1209081112B	BICARBONATE AS CaCO3	290	MG/L	20	NA		
9/8/2012	ANIONS	1209081112B	FLUORIDE	1.1	MG/L	0.1	0.03		
9/8/2012	ANIONS	1209081112B	CHLORIDE	55	MG/L	2	0.6		
9/8/2012	ANIONS	1209081112B	TOTAL ALKALINITY AS CaCO3	290	MG/L	20	NA		
9/8/2012	ANIONS	1209081112B	SULFATE	360	MG/L	10	3		
9/8/2012	METALS	1209081118B	SODIUM	42	MG/L	0.5	0.09		*
9/8/2012	METALS	1209081118B	MOLYBDENUM	0.0083	MG/L	0.01	0.0015		J
9/8/2012	METALS	1209081118B	CALCIUM	130	MG/L	0.5	0.06		
9/8/2012	METALS	1209081118B	BORON	0.086	MG/L	0.1	0.012		J
9/8/2012	METALS	1209081118B	BARIUM	0.029	MG/L	0.01	0.0014		
9/8/2012	METALS	1209081118B	MAGNESIUM	71	MG/L	0.5	0.06		
9/8/2012	METALS	1209081118B	MANGANESE	0.011	MG/L	0.01	0.0003		
9/8/2012	METALS	1209081118B	STRONTIUM	2.5	MG/L	0.01	0.0009		
9/8/2012	METALS	1209081118B	POTASSIUM	3.2	MG/L	1	0.09		
9/8/2012	353.2	1209081120B	NITRATE/NITRITE AS N	0.38	MG/L	0.01	0.003		

Analytical Results for RFI Sampling Events at 300-C-128

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/6/2012	8260	1208061420	Trichloroethene (TCE)	2.9	ug/L	1.0	0.23		
8/6/2012	8260	1208061420	Trichlorofluoromethane (CFC 11)	890	ug/L	10	2.0		
8/6/2012	8260	1208061420	Dichlorofluoromethane (CFC 21)	0.88	ug/L	1.0	0.24		J
8/6/2012	8260	1208061420	1,1,2-Trichloro-1,2,2-Trifluoroethane	120	ug/L	1.0	0.31		
8/6/2012	607	1208061421	N-Nitrosodimethylamine	4.5	ug/L	0.01	0.005	40	
8/6/2012	607	1208061421	Bromacil	3.1	ug/L	0.01	0.005	100	
8/6/2012	607	1208061421	N-Nitrodimethylamine	7.7	ug/L	0.01	0.005	85	
8/6/2012	607	1208061422	N-Nitrodimethylamine	7.5	ug/L	0.01	0.005	85	
8/6/2012	607	1208061422	Bromacil	3	ug/L	0.01	0.005	100	
8/6/2012	607	1208061422	N-Nitrosodimethylamine	4.3	ug/L	0.01	0.005	40	
8/6/2012	METALS	1208061423	ZINC	0.022	MG/L	0.02	0.0015		
8/6/2012	METALS	1208061423	ARSENIC	0.0022	MG/L	0.005	0.0015		J
8/6/2012	METALS	1208061423	BORON	0.11	MG/L	0.1	0.012		
8/6/2012	METALS	1208061423	BARIUM	0.037	MG/L	0.01	0.0014		
8/6/2012	METALS	1208061423	SODIUM	42	MG/L	0.5	0.09		
8/6/2012	METALS	1208061423	MOLYBDENUM	0.0049	MG/L	0.01	0.0015		J
8/6/2012	METALS	1208061423	NICKEL	0.18	MG/L	0.02	0.0006		
8/6/2012	METALS	1208061423	CHROMIUM	0.0017	MG/L	0.01	0.0006		J
8/6/2012	METALS	1208061423	MAGNESIUM	69	MG/L	0.5	0.06		
8/6/2012	METALS	1208061423	MANGANESE	0.0045	MG/L	0.01	0.0003		J
8/6/2012	METALS	1208061423	POTASSIUM	2.2	MG/L	1	0.09		
8/6/2012	METALS	1208061423	STRONTIUM	3.7	MG/L	0.01	0.0009		
8/6/2012	METALS	1208061423	CALCIUM	100	MG/L	0.5	0.06		

Analytical Results for RFI Sampling Events at 300-D-153

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/27/2012	8260	1208271400	Trichlorofluoromethane (CFC 11)	2	ug/L	1.0	0.20		
8/27/2012	8260	1208271400	Acetone	1.7	ug/L	10	1.3		J FB
8/27/2012	8260	1208271400	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7	ug/L	1.0	0.31		
8/27/2012	METALS	1208271404	THALLIUM	0.00013	MG/L	0.0002	0.00006		J
8/27/2012	METALS	1208271404	MOLYBDENUM	0.0052	MG/L	0.01	0.0015		J
8/27/2012	METALS	1208271404	CALCIUM	110	MG/L	0.5	0.06		
8/27/2012	METALS	1208271404	TIN	0.0049	MG/L	0.05	0.003		J
8/27/2012	METALS	1208271404	ZINC	0.0046	MG/L	0.02	0.0015		J
8/27/2012	METALS	1208271404	BORON	0.12	MG/L	0.1	0.012		
8/27/2012	METALS	1208271404	BARIUM	0.023	MG/L	0.01	0.0014		
8/27/2012	METALS	1208271404	SODIUM	34	MG/L	0.5	0.09		
8/27/2012	METALS	1208271404	STRONTIUM	2.7	MG/L	0.01	0.0009		
8/27/2012	METALS	1208271404	MAGNESIUM	81	MG/L	0.5	0.06		
8/27/2012	METALS	1208271404	POTASSIUM	4.9	MG/L	1	0.09		
8/27/2012	METALS	1208271404	THALLIUM	0.00013	MG/L	0.0002	0.00006		J
8/27/2012	METALS	1208271404	MOLYBDENUM	0.0052	MG/L	0.01	0.0015		J
8/27/2012	METALS	1208271404	STRONTIUM	2.7	MG/L	0.01	0.0009		
8/27/2012	METALS	1208271404	MAGNESIUM	81	MG/L	0.5	0.06		
8/27/2012	METALS	1208271404	SODIUM	34	MG/L	0.5	0.09		
8/27/2012	METALS	1208271404	BARIUM	0.023	MG/L	0.01	0.0014		
8/27/2012	METALS	1208271404	BORON	0.12	MG/L	0.1	0.012		
8/27/2012	METALS	1208271404	ZINC	0.0046	MG/L	0.02	0.0015		J
8/27/2012	METALS	1208271404	TIN	0.0049	MG/L	0.05	0.003		J
8/27/2012	METALS	1208271404	CALCIUM	110	MG/L	0.5	0.06		
8/27/2012	METALS	1208271404	POTASSIUM	4.9	MG/L	1	0.09		

Analytical Results for RFI Sampling Events at 400-C-118

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/1/2012	8260	1210011300	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.4	ug/L	1.0	0.21		
10/1/2012	8260	1210011300	Trichlorofluoromethane (CFC 11)	180	ug/L	1.0	0.20		
10/1/2012	8260	1210011300	Trichloroethene (TCE)	1.1	ug/L	1.0	0.22		
10/1/2012	8260	1210011300	Dichlorofluoromethane (CFC 21)	2.8	ug/L	1.0	0.24		
10/1/2012	8260	1210011300	Acetone	1.6	ug/L	10	1.3		J FB
10/1/2012	8260	1210011300	1,1,2-Trichloro-1,2,2-Trifluoroethane	72	ug/L	1.0	0.31		
10/1/2012	8260	1210011301	1,1,2-Trichloro-1,2,2-Trifluoroethane	74	ug/L	1.0	0.31		
10/1/2012	8260	1210011301	Chloromethane	0.24	ug/L	2.0	0.21		J FB
10/1/2012	8260	1210011301	Trichlorofluoromethane (CFC 11)	180	ug/L	1.0	0.20		
10/1/2012	8260	1210011301	Trichloroethene (TCE)	1.1	ug/L	1.0	0.22		
10/1/2012	8260	1210011301	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.6	ug/L	1.0	0.21		
10/1/2012	8260	1210011301	Iodomethane	1.1	ug/L	5.0	0.98		J
10/1/2012	8260	1210011301	Dichlorofluoromethane (CFC 21)	3	ug/L	1.0	0.24		
10/1/2012	607	1210011303	N-Nitrodimethylamine	2.5	ug/L	0.0089	0.0044	92	
10/1/2012	607	1210011303	Bromacil	2.3	ug/L	0.0089	0.0044	109	
10/1/2012	607	1210011303	N-Nitrosodimethylamine	2.2	ug/L	0.0089	0.0044	43	
10/1/2012	8270	1210011304	unknown {2}	3.9	ug/L	NA	NA		TIC
10/1/2012	8270	1210011304	unknown {1}	4.8	ug/L	NA	NA		TIC
10/1/2012	8270	1210011304	N-Nitrosodimethylamine	2.6	ug/L	9.4	1.0		J
10/1/2012	8290	1210011306	Upper Bound PCDD/F TEQ (WHO 2005)	4.74	pg/L	NA	NA		
10/1/2012	8290	1210011306	Total TCDD # Homologues	0	NA	NA	NA		
10/1/2012	8290	1210011306	Total PeCDD # Homologues	0	NA	NA	NA		
10/1/2012	8290	1210011306	Total HxCDD # Homologues	0	NA	NA	NA		
10/1/2012	8290	1210011306	Lower Bound PCDD/F TEQ (WHO 2005)	0	pg/L	NA	NA		
10/1/2012	8290	1210011306	Total HpCDD # Homologues	0	NA	NA	NA		
10/1/2012	8290	1210011306	Total HxCDF # Homologues	0	NA	NA	NA		
10/1/2012	8290	1210011306	Mid Point PCDD/F TEQ (WHO 2005)	2.37	pg/L	NA	NA		
10/1/2012	8290	1210011306	Total HpCDF # Homologues	0	NA	NA	NA		
10/1/2012	8290	1210011306	Total PeCDF # Homologues	0	NA	NA	NA		
10/1/2012	8290	1210011306	Total TCDF # Homologues	0	NA	NA	NA		
10/1/2012	METALS	1210011310	Cobalt, Total	0.0003	mg/L	0.0010	0.000008		J
10/1/2012	METALS	1210011310	Copper, Total	0.002	mg/L	0.020	0.002		J RB
10/1/2012	METALS	1210011310	Zinc, Total	0.002	mg/L	0.020	0.002		J
10/1/2012	METALS	1210011310	Magnesium, Total	69.3	mg/L	1.0	0.005		
10/1/2012	METALS	1210011310	Arsenic, Total	0.0011	mg/L	0.0010	0.0004		

Analytical Results for RFI Sampling Events at 400-C-118

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/1/2012	METALS	1210011310	Barium, Total	0.035	mg/L	0.020	0.0004		J
10/1/2012	METALS	1210011310	Boron, Total	0.25	mg/L	0.20	0.05		Q
10/1/2012	METALS	1210011310	Iron, Total	0.02	mg/L	0.10	0.006		J RB
10/1/2012	METALS	1210011310	Strontium, Total	2.33	mg/L	0.10	0.001		
10/1/2012	METALS	1210011310	Vanadium, Total	0.0013	mg/L	0.0020	0.0010		J
10/1/2012	METALS	1210011310	Molybdenum, Total	0.006	mg/L	0.025	0.002		J
10/1/2012	METALS	1210011310	Potassium, Total	2.7	mg/L	2.0	0.07		
10/1/2012	METALS	1210011310	Selenium, Total	0.007	mg/L	0.010	0.004		J
10/1/2012	METALS	1210011310	Sodium, Total	96.5	mg/L	1.0	0.10		
10/1/2012	METALS	1210011310	Calcium, Total	98.5	mg/L	1.0	0.2		Q
10/1/2012	ANIONS	1210011311	Chloride	75	mg/L	2.0	0.5		
10/1/2012	ANIONS	1210011311	Fluoride	0.67	mg/L	0.10	0.04		
10/1/2012	ANIONS	1210011311	Sulfate	339	mg/L	10	3		
10/1/2012	ANIONS	1210011311	Alkalinity, Total as CaCO3	271	mg/L	2.0	0.3		
10/1/2012	331.0	1210011312	Perchlorate	0.73	ug/L	0.20	0.026		
10/1/2012	353.2	1210011313	Nitrate+Nitrite as Nitrogen	4.63	mg/L	0.20	0.02		

Analytical Results for RFI Sampling Events at 400-C-143

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/2/2012	8260	1210021300	Acetone	1.7	ug/L	10	1.3		J
10/2/2012	8260	1210021300	Dichlorofluoromethane (CFC 21)	3.6	ug/L	1.0	0.24		
10/2/2012	8260	1210021300	Trichloroethene (TCE)	1.4	ug/L	1.0	0.22		
10/2/2012	8260	1210021300	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.4	ug/L	1.0	0.21		
10/2/2012	8260	1210021300	Chloromethane	0.29	ug/L	2.0	0.21		J RB TB
10/2/2012	8260	1210021300	Trichlorofluoromethane (CFC 11)	270	ug/L	2.5	0.50		
10/2/2012	8260	1210021300	1,1,2-Trichloro-1,2,2-Trifluoroethane	120	ug/L	1.0	0.31		
10/2/2012	607	1210021301	Bromacil	2.7	ug/L	0.0089	0.0044	109	
10/2/2012	607	1210021301	N-Nitrosodimethylamine	2.5	ug/L	0.0089	0.0044	43	
10/2/2012	607	1210021301	N-Nitrodimethylamine	2.9	ug/L	0.0089	0.0044	92	
10/2/2012	METALS	1210021302	Sodium, Total	101	mg/L	5.0	0.5		
10/2/2012	METALS	1210021302	Zinc, Total	0.008	mg/L	0.020	0.002		J
10/2/2012	METALS	1210021302	Magnesium, Total	72.2	mg/L	1.0	0.005		
10/2/2012	METALS	1210021302	Selenium, Total	0.005	mg/L	0.010	0.004		J
10/2/2012	METALS	1210021302	Molybdenum, Total	0.008	mg/L	0.025	0.002		J
10/2/2012	METALS	1210021302	Arsenic, Total	0.0006	mg/L	0.0010	0.0004		J
10/2/2012	METALS	1210021302	Barium, Total	0.033	mg/L	0.020	0.0004		
10/2/2012	METALS	1210021302	Boron, Total	0.26	mg/L	0.20	0.05		
10/2/2012	METALS	1210021302	Strontium, Total	2.63	mg/L	0.10	0.001		
10/2/2012	METALS	1210021302	Cobalt, Total	0.0003	mg/L	0.0010	0.000008		J
10/2/2012	METALS	1210021302	Calcium, Total	99.3	mg/L	1.0	0.2		
10/2/2012	METALS	1210021302	Potassium, Total	3.3	mg/L	2.0	0.07		
8/7/2012	8260_LL	1208080920Z	Acetone	1.4	ug/L	5.0	0.98		J EB
8/7/2012	8260_LL	1208080920Z	Tetrahydrofuran (THF)	3.1	ug/L	5.0	0.66		J
8/7/2012	METALS	1208090731Z	BORON	0.13	MG/L	0.1	0.012		
8/7/2012	METALS	1208090731Z	MOLYBDENUM	0.0054	MG/L	0.01	0.0015		J
8/7/2012	METALS	1208090731Z	MAGNESIUM	19	MG/L	0.5	0.06		
8/7/2012	METALS	1208090731Z	MANGANESE	0.015	MG/L	0.01	0.0003		
8/7/2012	METALS	1208090731Z	BARIUM	0.015	MG/L	0.01	0.0014		
8/7/2012	METALS	1208090731Z	POTASSIUM	1.6	MG/L	1	0.09		
8/7/2012	METALS	1208090731Z	NICKEL	0.00085	MG/L	0.02	0.0006		J
8/7/2012	METALS	1208090731Z	CALCIUM	28	MG/L	0.5	0.06		
8/7/2012	METALS	1208090731Z	SODIUM	56	MG/L	0.5	0.09		
8/7/2012	METALS	1208090731Z	STRONTIUM	1.4	MG/L	0.01	0.0009		
8/7/2012	METALS	1208090731Z	ZINC	0.0089	MG/L	0.02	0.0015		J

Analytical Results for RFI Sampling Events at 400-D-275

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/7/2012	8260_LL	1208070955Z	Vinyl Chloride	0.2	ug/L	0.50	0.20		J
8/7/2012	8260_LL	1208070955Z	Acrylonitrile	4.5	ug/L	2.5	0.86		
8/7/2012	8260_LL	1208070955Z	Tetrahydrofuran (THF)	3.1	ug/L	5.0	0.66		J
8/7/2012	METALS	1208071055Z	STRONTIUM	1.9	MG/L	0.01	0.0009		
8/7/2012	METALS	1208071055Z	ZINC	0.0045	MG/L	0.02	0.0015		J
8/7/2012	METALS	1208071055Z	POTASSIUM	1.7	MG/L	1	0.09		
8/7/2012	METALS	1208071055Z	MANGANESE	0.019	MG/L	0.01	0.0003		
8/7/2012	METALS	1208071055Z	MAGNESIUM	19	MG/L	0.5	0.06		
8/7/2012	METALS	1208071055Z	ARSENIC	0.0022	MG/L	0.005	0.0015		J
8/7/2012	METALS	1208071055Z	SODIUM	73	MG/L	0.5	0.09		
8/7/2012	METALS	1208071055Z	BARIUM	0.017	MG/L	0.01	0.0014		
8/7/2012	METALS	1208071055Z	BORON	0.26	MG/L	0.1	0.012		
8/7/2012	METALS	1208071055Z	MOLYBDENUM	0.011	MG/L	0.01	0.0015		
8/7/2012	METALS	1208071055Z	CALCIUM	32	MG/L	0.5	0.06		
8/7/2012	ANIONS	1208071056Z	FLUORIDE	0.38	MG/L	0.1	0.03		
8/7/2012	ANIONS	1208071056Z	TOTAL ALKALINITY AS CaCO3	130	MG/L	20	NA		
8/7/2012	ANIONS	1208071056Z	BICARBONATE AS CaCO3	130	MG/L	20	NA		
8/7/2012	ANIONS	1208071056Z	CHLORIDE	24	MG/L	1	0.3		
8/7/2012	ANIONS	1208071056Z	TOTAL DISSOLVED SOLIDS	440	MG/L	20	NA		
8/7/2012	ANIONS	1208071056Z	SULFATE	180	MG/L	5	1.5		

Analytical Results for RFI Sampling Events at 400-D-355

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/6/2012	8260_LL	1208061355Z	Acetone	1.1	ug/L	5.0	0.98		J
8/6/2012	8260_LL	1208061355Z	Acrylonitrile	2.8	ug/L	2.5	0.86		
8/6/2012	8260_LL	1208061355Z	Tetrahydrofuran (THF)	2.2	ug/L	5.0	0.66		J
8/6/2012	METALS	1208061416Z	MOLYBDENUM	0.017	MG/L	0.01	0.0015		
8/6/2012	METALS	1208061416Z	BORON	0.32	MG/L	0.1	0.012		
8/6/2012	METALS	1208061416Z	BARIUM	0.016	MG/L	0.01	0.0014		
8/6/2012	METALS	1208061416Z	SODIUM	82	MG/L	0.5	0.09		
8/6/2012	METALS	1208061416Z	COBALT	0.00064	MG/L	0.01	0.0006		J
8/6/2012	METALS	1208061416Z	MANGANESE	0.022	MG/L	0.01	0.0003		
8/6/2012	METALS	1208061416Z	COPPER	0.00076	MG/L	0.01	0.0006		J
8/6/2012	METALS	1208061416Z	NICKEL	0.0017	MG/L	0.02	0.0006		J
8/6/2012	METALS	1208061416Z	CALCIUM	36	MG/L	0.5	0.06		
8/6/2012	METALS	1208061416Z	ZINC	0.06	MG/L	0.02	0.0015		
8/6/2012	METALS	1208061416Z	MAGNESIUM	20	MG/L	0.5	0.06		
8/6/2012	METALS	1208061416Z	STRONTIUM	2.3	MG/L	0.01	0.0009		
8/6/2012	METALS	1208061416Z	IRON	0.043	MG/L	0.1	0.015		J
8/6/2012	METALS	1208061416Z	CHROMIUM	0.0013	MG/L	0.01	0.0006		J
8/6/2012	METALS	1208061416Z	POTASSIUM	2.5	MG/L	1	0.09		
8/6/2012	METALS	1208061416Z	ARSENIC	0.0037	MG/L	0.005	0.0015		J

Analytical Results for RFI Sampling Events at 600-G-138

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/19/2012	8260	1209191400	1,1-Dichloroethene	0.76	ug/L	1.0	0.57		J
9/19/2012	8260	1209191400	1,1,2-Trichloro-1,2,2-Trifluoroethane	60	ug/L	1.0	0.31		
9/19/2012	8260	1209191400	Trichlorofluoromethane (CFC 11)	0.54	ug/L	1.0	0.20		J
9/19/2012	8260	1209191400	Trichloroethene (TCE)	110	ug/L	1.0	0.22		
9/19/2012	8260	1209191400	Chloromethane	0.21	ug/L	2.0	0.21		J
9/19/2012	8260	1209191400	Chloroform	0.66	ug/L	1.0	0.25		J
9/19/2012	8260	1209191400	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1.0	0.21		
9/19/2012	607	1209191402	Bromacil	26	ug/L	0.0089	0.0044	118	
9/19/2012	607	1209191402	Bromacil	26	ug/L	0.0089	0.0044	118	
9/19/2012	8270	1209191405	Bis(2-ethylhexyl) Phthalate	0.9	ug/L	5.6	0.12		J
9/19/2012	8270	1209191405	Bromacil	12	ug/L	NA	NA		TIC
9/19/2012	8270	1209191405	unknown {2}	4.7	ug/L	NA	NA		TIC
9/19/2012	8270	1209191405	unknown {1} B	4.8	ug/L	NA	NA		TIC
9/19/2012	METALS	1209191406	IRON	1.9	MG/L	0.1	0.015		
9/19/2012	METALS	1209191406	COPPER	0.0069	MG/L	0.01	0.0006		J
9/19/2012	METALS	1209191406	VANADIUM	0.0038	MG/L	0.01	0.0015		J
9/19/2012	METALS	1209191406	BERYLLIUM	0.00021	MG/L	0.004	0.00018		J
9/19/2012	METALS	1209191406	POTASSIUM	5.2	MG/L	1	0.09		
9/19/2012	METALS	1209191406	MANGANESE	0.063	MG/L	0.01	0.0003		
9/19/2012	METALS	1209191406	STRONTIUM	5.9	MG/L	0.01	0.0009		
9/19/2012	METALS	1209191406	NICKEL	0.0031	MG/L	0.02	0.0006		J
9/19/2012	METALS	1209191406	LEAD	0.0024	MG/L	0.003	0.0009		J
9/19/2012	METALS	1209191406	SELENIUM	0.018	MG/L	0.005	0.0032		
9/19/2012	METALS	1209191406	CALCIUM	210	MG/L	0.5	0.06		
9/19/2012	METALS	1209191406	ALUMINUM	1.9	MG/L	0.1	0.026		
9/19/2012	METALS	1209191406	BARIUM	0.075	MG/L	0.01	0.0014		
9/19/2012	METALS	1209191406	MAGNESIUM	110	MG/L	0.5	0.06		
9/19/2012	METALS	1209191406	CHROMIUM	0.0095	MG/L	0.01	0.0006		J
9/19/2012	METALS	1209191406	BORON	0.63	MG/L	0.1	0.012		
9/19/2012	METALS	1209191406	ZINC	0.019	MG/L	0.02	0.0015		J FB
9/19/2012	METALS	1209191406	SODIUM	140	MG/L	0.5	0.09		
9/19/2012	METALS	1209191406	MOLYBDENUM	0.0076	MG/L	0.01	0.0015		J
9/19/2012	ANIONS	1209191408	FLUORIDE	1.1	MG/L	0.2	0.06		
9/19/2012	ANIONS	1209191408	BICARBONATE AS CaCO3	210	MG/L	20	NA		
9/19/2012	ANIONS	1209191408	TOTAL DISSOLVED SOLIDS	1600	MG/L	40	NA		
9/19/2012	ANIONS	1209191408	CHLORIDE	300	MG/L	4	1.2		

Analytical Results for RFI Sampling Events at 600-G-138

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/19/2012	ANIONS	1209191408	TOTAL ALKALINITY AS CaCO3	210	MG/L	20	NA		
9/19/2012	ANIONS	1209191408	SULFATE	510	MG/L	20	6		
9/19/2012	331.0	1209191409	Perchlorate	2.7	ug/L	0.20	0.026		
9/19/2012	353.2	1209191410	NITRATE/NITRITE AS N	13	MG/L	0.1	0.03		
8/16/2012	8260	1208160830	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.4	ug/L	1.0	0.31		
8/16/2012	8260	1208160831	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.3	ug/L	1.0	0.31		
8/16/2012	331.0	1208160834	Perchlorate	0.33	ug/L	0.20	0.026		
8/14/2012	8260	1208141000	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.24	ug/L	1.0	0.21		J
8/14/2012	8260	1208141000	Trichloroethene (TCE)	0.5	ug/L	1.0	0.22		J
8/14/2012	8260	1208141000	1,1,2-Trichloro-1,2,2-Trifluoroethane	39	ug/L	1.0	0.31		
8/14/2012	8260	1208141000	Chloromethane	0.34	ug/L	2.0	0.21		J
8/14/2012	8260	1208141000	Trichlorofluoromethane (CFC 11)	0.83	ug/L	1.0	0.20		J
8/14/2012	8260	1208141001	1,1,2-Trichloro-1,2,2-Trifluoroethane	39	ug/L	1.0	0.31		
8/14/2012	8260	1208141001	Acetone	2	ug/L	10	1.3		J
8/14/2012	8260	1208141001	Trichloroethene (TCE)	0.48	ug/L	1.0	0.22		J
8/14/2012	8260	1208141001	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.23	ug/L	1.0	0.21		J
8/14/2012	8260	1208141001	Trichlorofluoromethane (CFC 11)	0.83	ug/L	1.0	0.20		J
8/14/2012	331.0	1208141003	Perchlorate	0.49	ug/L	0.20	0.026		
8/14/2012	8260	1208141350Y	Chloromethane	0.33	ug/L	2.0	0.21		J EB
8/14/2012	331.0	1208141415Y	Perchlorate	0.96	ug/L	0.20	0.026		

Analytical Results for RFI Sampling Events at 700-H-535

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/13/2012	METALS	1208140800Y	CALCIUM	33	MG/L	0.5	0.06		
8/13/2012	METALS	1208140800Y	NICKEL	0.0018	MG/L	0.02	0.0006		J
8/13/2012	METALS	1208140800Y	IRON	0.027	MG/L	0.1	0.015		J EB
8/13/2012	METALS	1208140800Y	ZINC	0.15	MG/L	0.02	0.0015		EB
8/13/2012	METALS	1208140800Y	BARIUM	0.022	MG/L	0.01	0.0014		
8/13/2012	METALS	1208140800Y	SELENIUM	0.0033	MG/L	0.005	0.0032		J
8/13/2012	METALS	1208140800Y	ARSENIC	0.0038	MG/L	0.005	0.0015		J RB EB
8/13/2012	METALS	1208140800Y	VANADIUM	0.0076	MG/L	0.01	0.0015		J
8/13/2012	METALS	1208140800Y	SODIUM	110	MG/L	0.5	0.09		
8/13/2012	METALS	1208140800Y	BERYLLIUM	0.00033	MG/L	0.004	0.00018		J
8/13/2012	METALS	1208140800Y	STRONTIUM	2.2	MG/L	0.01	0.0009		
8/13/2012	METALS	1208140800Y	POTASSIUM	1.1	MG/L	1	0.09		
8/13/2012	METALS	1208140800Y	BORON	0.28	MG/L	0.1	0.012		
8/13/2012	METALS	1208140800Y	MANGANESE	0.036	MG/L	0.01	0.0003		
8/13/2012	METALS	1208140800Y	MOLYBDENUM	0.016	MG/L	0.01	0.0015		
8/13/2012	METALS	1208140800Y	MAGNESIUM	13	MG/L	0.5	0.06		
8/13/2012	8260	1208130935Y	Styrene	0.47	ug/L	1.0	0.20		J
8/13/2012	8260	1208130935Y	Chloromethane	0.23	ug/L	2.0	0.21		J EB
8/13/2012	METALS	1208131010Y	ZINC	0.0087	MG/L	0.02	0.0015		J
8/13/2012	METALS	1208131010Y	MANGANESE	0.0094	MG/L	0.01	0.0003		J
8/13/2012	METALS	1208131010Y	MOLYBDENUM	0.014	MG/L	0.01	0.0015		
8/13/2012	METALS	1208131010Y	CALCIUM	24	MG/L	0.5	0.06		
8/13/2012	METALS	1208131010Y	STRONTIUM	1.7	MG/L	0.01	0.0009		
8/13/2012	METALS	1208131010Y	POTASSIUM	0.3	MG/L	1	0.09		J
8/13/2012	METALS	1208131010Y	BORON	0.21	MG/L	0.1	0.012		
8/13/2012	METALS	1208131010Y	BARIUM	0.013	MG/L	0.01	0.0014		
8/13/2012	METALS	1208131010Y	MAGNESIUM	7.8	MG/L	0.5	0.06		
8/13/2012	METALS	1208131010Y	ARSENIC	0.0028	MG/L	0.005	0.0015		J
8/13/2012	METALS	1208131010Y	SODIUM	110	MG/L	0.5	0.09		
8/13/2012	ANIONS	1208131011Y	BICARBONATE AS CaCO3	120	MG/L	20	NA		
8/13/2012	ANIONS	1208131011Y	TOTAL DISSOLVED SOLIDS	500	MG/L	20	NA		
8/13/2012	ANIONS	1208131011Y	TOTAL ALKALINITY AS CaCO3	120	MG/L	20	NA		
8/13/2012	ANIONS	1208131011Y	SULFATE	210	MG/L	5	1.5		
8/13/2012	ANIONS	1208131011Y	FLUORIDE	0.76	MG/L	0.1	0.03		
8/13/2012	ANIONS	1208131011Y	CHLORIDE	28	MG/L	1	0.3		

Analytical Results for RFI Sampling Events at 700-J-200

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/13/2012	8260	1208131305	Acetone	2.6	ug/L	10	1.3		J
8/13/2012	8260	1208131305	Trichloroethene (TCE)	0.31	ug/L	1.0	0.22		J
8/13/2012	8260	1208131305	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.58	ug/L	1.0	0.31		J
10/19/2012	8260_LL	1210190930	Chloromethane	0.48	ug/L	0.50	0.20		J FB
10/19/2012	8260_LL	1210190930	Acetone	2.8	ug/L	5.0	1.3		J RB FB
10/19/2012	8260_LL	1210190930	Acetone	2.8	ug/L	5.0	1.3		J RB FB
10/19/2012	8260_LL	1210190930	Chloromethane	0.48	ug/L	0.50	0.20		J FB
9/11/2012	8260_LL	1209110915	Chloromethane	0.21	ug/L	0.50	0.20		J
9/11/2012	8260_LL	1209110915	Chloromethane	0.21	ug/L	0.50	0.20		J
8/10/2012	8260_LL	1208101020	Acetone	1.1	ug/L	5.0	0.98		J TB
9/5/2012	8260	1209051050	Acetone	1.3	ug/L	10	1.3		J FB
9/5/2012	8260	1209051050	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.68	ug/L	1.0	0.31		J
9/5/2012	8260	1209051050	Chloromethane	0.6	ug/L	2.0	0.21		J FB
8/8/2012	8260	1208081040	1,1-Dichloroethene	1.2	ug/L	1.0	0.29		
8/8/2012	8260	1208081040	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.97	ug/L	1.0	0.35		J
8/8/2012	8260	1208081040	cis-1,2-Dichloroethene	0.2	ug/L	1.0	0.20		J
8/8/2012	8260	1208081040	Trichlorofluoromethane (CFC 11)	87	ug/L	1.0	0.20		
8/8/2012	8260	1208081040	Trichloroethene (TCE)	76	ug/L	1.0	0.23		
8/8/2012	8260	1208081040	Tetrachloroethene (PCE)	3.3	ug/L	1.0	0.20		
8/8/2012	8260	1208081040	1,1,2-Trichloro-1,2,2-Trifluoroethane	400	ug/L	2.5	0.78		
8/8/2012	607	1208081042	N-Nitrosodimethylamine	0.17	ug/L	0.01	0.005	40	
8/8/2012	607	1208081042	N-Nitrodimethylamine	0.24	ug/L	0.01	0.005	85	
8/8/2012	607	1208081042	Bromacil	0.53	ug/L	0.01	0.005	100	
8/8/2012	607	1208081043	N-Nitrodimethylamine	0.25	ug/L	0.01	0.005	85	
8/8/2012	607	1208081043	Bromacil	0.57	ug/L	0.01	0.005	100	
8/8/2012	607	1208081043	N-Nitrosodimethylamine	0.17	ug/L	0.01	0.005	40	
8/8/2012	ANIONS	1208081044	SULFATE	380	MG/L	10	3		
8/8/2012	ANIONS	1208081044	TOTAL DISSOLVED SOLIDS	1000	MG/L	20	NA		
8/8/2012	ANIONS	1208081044	TOTAL ALKALINITY AS CaCO3	250	MG/L	20	NA		
8/8/2012	ANIONS	1208081044	CHLORIDE	64	MG/L	2	0.6		
8/8/2012	ANIONS	1208081044	BICARBONATE AS CaCO3	250	MG/L	20	NA		
8/8/2012	ANIONS	1208081044	FLUORIDE	0.89	MG/L	0.1	0.03		
8/8/2012	353.2	1208081045	NITRATE/NITRITE AS N	2.7	MG/L	0.05	0.015		

Analytical Results for RFI Sampling Events at BLM-1-435

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/18/2012	8260	1209181440	Chloromethane	0.28	ug/L	2.0	0.21		J TB
9/18/2012	8260	1209181440	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.6	ug/L	1.0	0.21		J
9/18/2012	8260	1209181440	1,1,2-Trichloro-1,2,2-Trifluoroethane	34	ug/L	1.0	0.31		
9/18/2012	8260	1209181440	Dichlorofluoromethane (CFC 21)	0.64	ug/L	1.0	0.24		J
9/18/2012	8260	1209181440	Tetrachloroethene (PCE)	0.9	ug/L	1.0	0.30		J
9/18/2012	8260	1209181440	Trichloroethene (TCE)	51	ug/L	1.0	0.22		
9/18/2012	8260	1209181440	Trichlorofluoromethane (CFC 11)	39	ug/L	1.0	0.20		
9/18/2012	8260	1209181440	Acetone	2.2	ug/L	10	1.3		J TB
9/18/2012	8260	1209181441	Tetrachloroethene (PCE)	0.9	ug/L	1.0	0.30		J
9/18/2012	8260	1209181441	Chloromethane	0.25	ug/L	2.0	0.21		J TB
9/18/2012	8260	1209181441	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.74	ug/L	1.0	0.21		J
9/18/2012	8260	1209181441	Trichlorofluoromethane (CFC 11)	37	ug/L	1.0	0.20		
9/18/2012	8260	1209181441	Acetone	2	ug/L	10	1.3		J TB
9/18/2012	8260	1209181441	Dichlorofluoromethane (CFC 21)	0.54	ug/L	1.0	0.24		J
9/18/2012	8260	1209181441	1,1,2-Trichloro-1,2,2-Trifluoroethane	32	ug/L	1.0	0.31		
9/18/2012	8260	1209181441	Trichloroethene (TCE)	47	ug/L	1.0	0.22		
9/18/2012	METALS	1209181442	COPPER	0.0018	MG/L	0.01	0.0006		J
9/18/2012	METALS	1209181442	BARIUM	0.022	MG/L	0.01	0.0014		
9/18/2012	METALS	1209181442	CHROMIUM	0.0013	MG/L	0.01	0.0006		J
9/18/2012	METALS	1209181442	SODIUM	41	MG/L	0.5	0.09		
9/18/2012	METALS	1209181442	ARSENIC	0.0023	MG/L	0.005	0.0015		J
9/18/2012	METALS	1209181442	VANADIUM	0.0026	MG/L	0.01	0.0015		J
9/18/2012	METALS	1209181442	NICKEL	0.0012	MG/L	0.02	0.0006		J
9/18/2012	METALS	1209181442	MOLYBDENUM	0.0064	MG/L	0.01	0.0015		J
9/18/2012	METALS	1209181442	STRONTIUM	2.9	MG/L	0.01	0.0009		
9/18/2012	METALS	1209181442	POTASSIUM	3.1	MG/L	1	0.09		
9/18/2012	METALS	1209181442	MAGNESIUM	66	MG/L	0.5	0.06		
9/18/2012	METALS	1209181442	CALCIUM	120	MG/L	0.5	0.06		
9/18/2012	METALS	1209181442	ZINC	0.015	MG/L	0.02	0.0015		J
9/18/2012	METALS	1209181442	BORON	0.062	MG/L	0.1	0.012		J
9/18/2012	607	1209190730	Bromacil	0.29	ug/L	0.0091	0.0045	118	
9/18/2012	607	1209190730	N-Nitrodimethylamine	0.72	ug/L	0.0091	0.0045	104	
9/18/2012	607	1209190730	N-Nitrosodimethylamine	1.1	ug/L	0.0091	0.0045	47	

Analytical Results for RFI Sampling Events at BLM-15-305

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/14/2012	8260	1209140915	1,1,2-Trichloro-1,2,2-Trifluoroethane	82	ug/L	1.0	0.31		
9/14/2012	8260	1209140915	Acetone	1.7	ug/L	10	1.3		J
9/14/2012	8260	1209140915	2-Propanol	11	ug/L	50	8.6		J
9/14/2012	8260	1209140915	Dichlorofluoromethane (CFC 21)	15	ug/L	1.0	0.24		
9/14/2012	8260	1209140915	Iodomethane	2.6	ug/L	5.0	0.98		J
9/14/2012	8260	1209140915	Trichloroethene (TCE)	2.4	ug/L	1.0	0.22		
9/14/2012	8260	1209140915	Trichlorofluoromethane (CFC 11)	160	ug/L	1.0	0.20		
9/14/2012	8260	1209140915	Bromomethane	1.6	ug/L	2.0	0.29		J RB FB
9/14/2012	8260	1209140915	Chloroform	0.25	ug/L	1.0	0.25		J
9/14/2012	8260	1209140915	Carbon Disulfide	0.24	ug/L	1.0	0.22		J FB
9/14/2012	8260	1209140915	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	5.8	ug/L	1.0	0.21		
9/14/2012	8260	1209140915	Chloromethane	1.5	ug/L	2.0	0.21		J RB FB
9/14/2012	607	1209140917	Bromacil	0.71	ug/L	0.0089	0.0044	107	
9/14/2012	607	1209140917	N-Nitrosodimethylamine	10	ug/L	0.0089	0.0044	75	
9/14/2012	607	1209140917	N-Nitrodimethylamine	5.2	ug/L	0.0089	0.0044	112	
9/14/2012	607	1209140918	N-Nitrodimethylamine	5.4	ug/L	0.0089	0.0044	112	
9/14/2012	607	1209140918	Bromacil	0.7	ug/L	0.0089	0.0044	107	
9/14/2012	607	1209140918	N-Nitrosodimethylamine	10	ug/L	0.0089	0.0044	75	
9/12/2012	8260	1209121400	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.34	ug/L	1.0	0.21		J
9/12/2012	8260	1209121400	Trichloroethene (TCE)	37	ug/L	1.0	0.22		
9/12/2012	8260	1209121400	Trichlorofluoromethane (CFC 11)	58	ug/L	1.0	0.20		
9/12/2012	8260	1209121400	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.30		
9/12/2012	8260	1209121400	1,1,2-Trichloro-1,2,2-Trifluoroethane	81	ug/L	1.0	0.31		
9/12/2012	607	1209121402	Bromacil	0.0047	ug/L	0.0089	0.0044	107	J
9/12/2012	607	1209121402	N-Nitrosodimethylamine	0.048	ug/L	0.0089	0.0044	75	
9/12/2012	607	1209121402	N-Nitrodimethylamine	0.02	ug/L	0.0089	0.0044	112	

Analytical Results for RFI Sampling Events at BLM-21-400

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/23/2012	8260	1210230941B	Trichloroethene (TCE)	20	ug/L	1.0	0.22		QD
10/23/2012	8260	1210230941B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2	ug/L	1.0	0.21		
10/23/2012	8260	1210230941B	Trichlorofluoromethane (CFC 11)	47	ug/L	1.0	0.20		QD
10/23/2012	8260	1210230941B	Tetrachloroethene (PCE)	1	ug/L	1.0	0.30		
10/23/2012	8260	1210230941B	1,1,2-Trichloro-1,2,2-Trifluoroethane	240	ug/L	2.5	0.78		
10/23/2012	8260	1210230941B	Dichlorofluoromethane (CFC 21)	0.54	ug/L	1.0	0.24		J
10/23/2012	8260	1210230942B	Trichlorofluoromethane (CFC 11)	61	ug/L	1.0	0.20		QD
10/23/2012	8260	1210230942B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.4	ug/L	1.0	0.21		
10/23/2012	8260	1210230942B	Trichloroethene (TCE)	29	ug/L	1.0	0.22		QD
10/23/2012	8260	1210230942B	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.30		
10/23/2012	8260	1210230942B	Chloromethane	0.25	ug/L	2.0	0.21		J
10/23/2012	8260	1210230942B	1,1,2-Trichloro-1,2,2-Trifluoroethane	280	ug/L	2.5	0.78		
10/23/2012	8260	1210230942B	Dichlorofluoromethane (CFC 21)	0.69	ug/L	1.0	0.24		J
10/23/2012	607	1210230943B	N-Nitrodimethylamine	0.46	ug/L	0.0092	0.0046	114	
10/23/2012	607	1210230943B	N-Nitrosodimethylamine	0.47	ug/L	0.0092	0.0046	76	
10/23/2012	607	1210230943B	Bromacil	0.54	ug/L	0.0092	0.0046	112	
10/23/2012	METALS	1210230944B	Potassium, Total	3.6	mg/L	2.0	0.07		
10/23/2012	METALS	1210230944B	Cobalt, Total	0.0002	mg/L	0.0010	0.000008		J RB
10/23/2012	METALS	1210230944B	Molybdenum, Total	0.008	mg/L	0.025	0.002		J
10/23/2012	METALS	1210230944B	Selenium, Total	0.008	mg/L	0.010	0.004		J
10/23/2012	METALS	1210230944B	Calcium, Total	119	mg/L	1.0	0.2		
10/23/2012	METALS	1210230944B	Vanadium, Total	0.0014	mg/L	0.0020	0.0010		J
10/23/2012	METALS	1210230944B	Strontium, Total	3.08	mg/L	0.10	0.001		
10/23/2012	METALS	1210230944B	Sodium, Total	62.3	mg/L	1.0	0.10		
10/23/2012	METALS	1210230944B	Barium, Total	0.029	mg/L	0.020	0.0004		J RB
10/23/2012	METALS	1210230944B	Arsenic, Total	0.0011	mg/L	0.0010	0.0004		
10/23/2012	METALS	1210230944B	Boron, Total	0.1	mg/L	0.20	0.05		J
10/23/2012	METALS	1210230944B	Magnesium, Total	56.2	mg/L	1.0	0.005		
10/23/2012	METALS	1210230944B	Zinc, Total	0.026	mg/L	0.020	0.002		

Analytical Results for RFI Sampling Events at BLM-23-431

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/13/2012	8260	1209130915	Trichloroethene (TCE)	70	ug/L	1.0	0.22		
9/13/2012	8260	1209130915	Bromomethane	0.36	ug/L	2.0	0.29		J RB TB
9/13/2012	8260	1209130915	Tetrachloroethene (PCE)	3.4	ug/L	1.0	0.30		
9/13/2012	8260	1209130915	1,1,2-Trichloro-1,2,2-Trifluoroethane	220	ug/L	2.0	0.62		
9/13/2012	8260	1209130915	Trichlorofluoromethane (CFC 11)	60	ug/L	1.0	0.20		
9/13/2012	8260	1209130915	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	16	ug/L	1.0	0.21		
9/13/2012	8260	1209130915	Dichlorofluoromethane (CFC 21)	2.5	ug/L	1.0	0.24		
9/13/2012	607	1209130916	N-Nitrodimethylamine	0.18	ug/L	0.0089	0.0044	112	
9/13/2012	607	1209130916	Bromacil	0.51	ug/L	0.0089	0.0044	107	
9/13/2012	607	1209130916	N-Nitrosodimethylamine	0.15	ug/L	0.0089	0.0044	75	
8/1/2012	METALS	1208010948	MAGNESIUM	52	MG/L	0.5	0.06		
8/1/2012	METALS	1208010948	BERYLLIUM	0.00076	MG/L	0.004	0.00018		J RB
8/1/2012	METALS	1208010948	SODIUM	26	MG/L	0.5	0.09		
8/1/2012	METALS	1208010948	ZINC	0.0093	MG/L	0.02	0.0015		J
8/1/2012	METALS	1208010948	BARIUM	0.032	MG/L	0.01	0.0014		
8/1/2012	METALS	1208010948	ARSENIC	0.0016	MG/L	0.005	0.0015		J
8/1/2012	METALS	1208010948	CALCIUM	94	MG/L	0.5	0.06		
8/1/2012	METALS	1208010948	POTASSIUM	3.5	MG/L	1	0.09		
8/1/2012	METALS	1208010948	STRONTIUM	2.3	MG/L	0.01	0.0009		
8/1/2012	METALS	1208010948	MOLYBDENUM	0.011	MG/L	0.01	0.0015		
8/1/2012	METALS	1208010948	SELENIUM	0.0033	MG/L	0.005	0.0032		J
8/1/2012	METALS	1208010948	VANADIUM	0.003	MG/L	0.01	0.0015		J
8/1/2012	METALS	1208010948	CHROMIUM	0.0082	MG/L	0.01	0.0006		J
8/1/2012	METALS	1208010948	MANGANESE	0.00069	MG/L	0.01	0.0003		J
8/1/2012	METALS	1208010948	BORON	0.074	MG/L	0.1	0.012		J

Analytical Results for RFI Sampling Events at BLM-30-585

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/1/2012	8260	1208020800Z	Carbon Disulfide	0.2	ug/L	1.0	0.20		J RB
8/1/2012	8260	1208020800Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	ug/L	1.0	0.31		
8/1/2012	8260	1208020800Z	Trichlorofluoromethane (CFC 11)	19	ug/L	1.0	0.20		
8/1/2012	8260	1208020800Z	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.20		
8/1/2012	8260	1208020800Z	Dichlorofluoromethane (CFC 21)	0.38	ug/L	1.0	0.24		J
8/1/2012	8260	1208020800Z	Trichloroethene (TCE)	37	ug/L	1.0	0.23		
8/1/2012	8260	1208020801Z	Trichloroethene (TCE)	32	ug/L	1.0	0.23		
8/1/2012	8260	1208020801Z	Trichlorofluoromethane (CFC 11)	19	ug/L	1.0	0.20		
8/1/2012	8260	1208020801Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	ug/L	1.0	0.31		
8/1/2012	8260	1208020801Z	Dichlorofluoromethane (CFC 21)	0.31	ug/L	1.0	0.24		J
8/1/2012	8260	1208020801Z	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.20		
8/1/2012	607	1208020802Z	N-Nitrosodimethylamine	0.14	ug/L	0.0094	0.0047	66	
8/1/2012	607	1208020802Z	N-Nitrodimethylamine	0.079	ug/L	0.0094	0.0047	112	
8/1/2012	607	1208020802Z	Bromacil	0.013	ug/L	0.0094	0.0047	109	
8/1/2012	METALS	1208020830Z	VANADIUM	0.0027	MG/L	0.01	0.0015		J
8/1/2012	METALS	1208020830Z	MANGANESE	0.00038	MG/L	0.01	0.0003		J
8/1/2012	METALS	1208020830Z	SODIUM	38	MG/L	0.5	0.09		
8/1/2012	METALS	1208020830Z	BARIUM	0.033	MG/L	0.01	0.0014		
8/1/2012	METALS	1208020830Z	ZINC	0.014	MG/L	0.02	0.0015		J
8/1/2012	METALS	1208020830Z	MAGNESIUM	65	MG/L	0.5	0.06		
8/1/2012	METALS	1208020830Z	CALCIUM	110	MG/L	0.5	0.06		
8/1/2012	METALS	1208020830Z	POTASSIUM	3.4	MG/L	1	0.09		
8/1/2012	METALS	1208020830Z	STRONTIUM	2.2	MG/L	0.01	0.0009		
8/1/2012	METALS	1208020830Z	MOLYBDENUM	0.0065	MG/L	0.01	0.0015		J
8/1/2012	METALS	1208020830Z	BERYLLIUM	0.0007	MG/L	0.004	0.00018		J RB
8/1/2012	METALS	1208020830Z	BORON	0.072	MG/L	0.1	0.012		J

Analytical Results for RFI Sampling Events at BLM-36-350

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/14/2012	8260	1208150858Z	Tetrachloroethene (PCE)	3.9	ug/L	1.0	0.30		
8/14/2012	8260	1208150858Z	Dichlorofluoromethane (CFC 21)	23	ug/L	1.0	0.24		
8/14/2012	8260	1208150858Z	Trichlorofluoromethane (CFC 11)	56	ug/L	1.0	0.20		
8/14/2012	8260	1208150858Z	Chloromethane	0.22	ug/L	2.0	0.21		J
8/14/2012	8260	1208150858Z	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	22	ug/L	1.0	0.21		
8/14/2012	8260	1208150858Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	140	ug/L	1.0	0.31		
8/14/2012	8260	1208150858Z	Trichloroethene (TCE)	79	ug/L	1.0	0.22		
8/14/2012	607	1208150859Z	N-Nitrosodimethylamine	0.43	ug/L	0.0096	0.0048	60	
8/14/2012	607	1208150859Z	N-Nitrodimethylamine	0.39	ug/L	0.0096	0.0048	104	
8/14/2012	607	1208150859Z	Bromacil	0.66	ug/L	0.0096	0.0048	103	
8/9/2012	ANIONS	1208100750Z	BICARBONATE AS CaCO3	240	MG/L	20	NA		
8/9/2012	ANIONS	1208100750Z	CHLORIDE	37	MG/L	2	0.6		
8/9/2012	ANIONS	1208100750Z	TOTAL DISSOLVED SOLIDS	900	MG/L	40	NA		
8/9/2012	ANIONS	1208100750Z	FLUORIDE	0.79	MG/L	0.1	0.03		
8/9/2012	ANIONS	1208100750Z	TOTAL ALKALINITY AS CaCO3	240	MG/L	20	NA		
8/9/2012	ANIONS	1208100750Z	SULFATE	330	MG/L	10	3		
8/9/2012	331.0	1208100751Z	Perchlorate	0.3	ug/L	0.20	0.026		
8/9/2012	353.2	1208100752Z	NITRATE/NITRITE AS N	0.78	MG/L	0.01	0.003		
8/14/2012	8260	1208140945Z	Acetone	3.2	ug/L	10	1.3		J
8/14/2012	8260	1208140945Z	Acetone	3.2	ug/L	10	1.3		J
8/14/2012	8260	1208140945Z	Tetrahydrofuran (THF)	2.2	ug/L	5.0	0.96		J
8/14/2012	8260	1208140945Z	Chloromethane	0.21	ug/L	2.0	0.21		J EB
8/14/2012	8260	1208140945Z	Chloromethane	0.21	ug/L	2.0	0.21		J EB
8/14/2012	8260	1208140945Z	Tetrahydrofuran (THF)	2.2	ug/L	5.0	0.96		J
8/10/2012	8260	1208101020Z	Tetrahydrofuran (THF)	2.1	ug/L	5.0	0.66		J
8/10/2012	8260	1208101020Z	Tetrahydrofuran (THF)	2.1	ug/L	5.0	0.66		J
8/10/2012	8260	1208101020Z	Acetone	1.8	ug/L	10	0.98		J EB
8/10/2012	8260	1208101020Z	Acetone	1.8	ug/L	10	0.98		J EB
8/10/2012	8260	1208101020Z	Acetone	1.8	ug/L	10	0.98		J EB
8/10/2012	8260	1208101020Z	Acetone	1.8	ug/L	10	0.98		J EB
8/10/2012	8260	1208101020Z	Tetrahydrofuran (THF)	2.1	ug/L	5.0	0.66		J
8/10/2012	8260	1208101020Z	Tetrahydrofuran (THF)	2.1	ug/L	5.0	0.66		J
10/11/2012	8260_LL	1210111500Z	Chloromethane	0.29	ug/L	0.50	0.20		J
10/11/2012	8260_LL	1210111500Z	Acetone	1.8	ug/L	5.0	1.3		J RB EB

Analytical Results for RFI Sampling Events at BLM-37-750

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/11/2012	8260_LL	1210110950Z	Acetone	2.5	ug/L	5.0	1.3		J RB EB
10/11/2012	METALS	1210111021Z	Molybdenum, Total	0.014	mg/L	0.025	0.002		J
10/11/2012	METALS	1210111021Z	Potassium, Total	6.7	mg/L	2.0	0.07		
10/11/2012	METALS	1210111021Z	Magnesium, Total	27.9	mg/L	1.0	0.005		
10/11/2012	METALS	1210111021Z	Arsenic, Total	0.0009	mg/L	0.0010	0.0004		J
10/11/2012	METALS	1210111021Z	Barium, Total	0.017	mg/L	0.020	0.0004		J
10/11/2012	METALS	1210111021Z	Boron, Total	0.12	mg/L	0.20	0.05		J
10/11/2012	METALS	1210111021Z	Calcium, Total	37.3	mg/L	1.0	0.2		
10/11/2012	METALS	1210111021Z	Cobalt, Total	0.0001	mg/L	0.0010	0.000008		J
10/11/2012	METALS	1210111021Z	Selenium, Total	0.007	mg/L	0.010	0.004		J
10/11/2012	METALS	1210111021Z	Silver, Total	0.002	mg/L	0.010	0.002		J
10/11/2012	METALS	1210111021Z	Sodium, Total	56.6	mg/L	1.0	0.10		
10/11/2012	METALS	1210111021Z	Strontium, Total	1.45	mg/L	0.10	0.001		
10/11/2012	METALS	1210111021Z	Vanadium, Total	0.011	mg/L	0.0020	0.0010		
10/11/2012	METALS	1210111021Z	Manganese, Total	0.002	mg/L	0.010	0.0007		J
10/11/2012	METALS	1210111021Z	Zinc, Total	0.097	mg/L	0.020	0.002		
10/11/2012	METALS	1210111021Z	Chromium, Total	0.001	mg/L	0.010	0.0009		J

Analytical Results for RFI Sampling Events at BLM-37-885

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/10/2012	8260_LL	1210101400Z	Acetone	2	ug/L	5.0	1.3		J RB EB
10/10/2012	METALS	1210101431Z	Calcium, Total	36.1	mg/L	1.0	0.2		
10/10/2012	METALS	1210101431Z	Boron, Total	0.11	mg/L	0.20	0.05		J
10/10/2012	METALS	1210101431Z	Barium, Total	0.006	mg/L	0.020	0.0004		J
10/10/2012	METALS	1210101431Z	Antimony, Total	0.0003	mg/L	0.0010	0.0003		J
10/10/2012	METALS	1210101431Z	Cobalt, Total	0.00009	mg/L	0.0010	0.000008		J
10/10/2012	METALS	1210101431Z	Chromium, Total	0.006	mg/L	0.010	0.0009		J
10/10/2012	METALS	1210101431Z	Arsenic, Total	0.0015	mg/L	0.0010	0.0004		
10/10/2012	METALS	1210101431Z	Potassium, Total	7.3	mg/L	2.0	0.07		
10/10/2012	METALS	1210101431Z	Selenium, Total	0.01	mg/L	0.010	0.004		J
10/10/2012	METALS	1210101431Z	Sodium, Total	65.3	mg/L	1.0	0.10		
10/10/2012	METALS	1210101431Z	Zinc, Total	0.064	mg/L	0.020	0.002		
10/10/2012	METALS	1210101431Z	Strontium, Total	1.38	mg/L	0.10	0.001		
10/10/2012	METALS	1210101431Z	Magnesium, Total	26.1	mg/L	1.0	0.005		
10/10/2012	METALS	1210101431Z	Vanadium, Total	0.0127	mg/L	0.0020	0.0010		
10/10/2012	METALS	1210101431Z	Molybdenum, Total	0.021	mg/L	0.025	0.002		J
10/10/2012	ANIONS	1210101500Z	Solids, Total Dissolved	441	mg/L	10	5		
10/10/2012	ANIONS	1210101500Z	Sulfate	128	mg/L	4.0	1.1		
10/10/2012	ANIONS	1210101500Z	Alkalinity, Total as CaCO3	185	mg/L	2.0	0.3		
10/10/2012	ANIONS	1210101500Z	Fluoride	0.58	mg/L	0.10	0.04		
10/10/2012	ANIONS	1210101500Z	Chloride	21.9	mg/L	2.0	0.5		
10/10/2012	331.0	1210101501Z	Perchlorate	0.2	ug/L	0.20	0.026		
10/10/2012	353.2	1210101502Z	Nitrate+Nitrite as Nitrogen	1.03	mg/L	0.050	0.003		

Analytical Results for RFI Sampling Events at BLM-38-480

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/20/2012	8260_LL	1208210740Z	Chloromethane	0.29	ug/L	0.50	0.20		J
8/20/2012	8260_LL	1208210740Z	Chloromethane	0.29	ug/L	0.50	0.20		J
8/20/2012	METALS	1208210815Z	MANGANESE	0.0037	MG/L	0.01	0.0003		J
8/20/2012	METALS	1208210815Z	BARIUM	0.031	MG/L	0.01	0.0014		
8/20/2012	METALS	1208210815Z	SELENIUM	0.0063	MG/L	0.005	0.0032		
8/20/2012	METALS	1208210815Z	CALCIUM	110	MG/L	0.5	0.06		
8/20/2012	METALS	1208210815Z	ARSENIC	0.0035	MG/L	0.005	0.0015		J
8/20/2012	METALS	1208210815Z	LEAD	0.00096	MG/L	0.003	0.0009		J
8/20/2012	METALS	1208210815Z	SODIUM	42	MG/L	0.5	0.09		
8/20/2012	METALS	1208210815Z	NICKEL	0.11	MG/L	0.02	0.0006		
8/20/2012	METALS	1208210815Z	MOLYBDENUM	0.0085	MG/L	0.01	0.0015		J
8/20/2012	METALS	1208210815Z	STRONTIUM	2.4	MG/L	0.01	0.0009		
8/20/2012	METALS	1208210815Z	VANADIUM	0.0045	MG/L	0.01	0.0015		J
8/20/2012	METALS	1208210815Z	MAGNESIUM	46	MG/L	0.5	0.06		
8/20/2012	METALS	1208210815Z	BORON	0.12	MG/L	0.1	0.012		
8/20/2012	METALS	1208210815Z	ZINC	0.0089	MG/L	0.02	0.0015		J RB
8/20/2012	METALS	1208210815Z	POTASSIUM	5.5	MG/L	1	0.09		

Analytical Results for RFI Sampling Events at BLM-38-620

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/16/2012	8260	1208161350Z	2-Propanol	42	ug/L	40	8.6		
8/16/2012	8260	1208161350Z	2-Propanol	42	ug/L	40	8.6		
8/16/2012	8260	1208161350Z	Acetone	12	ug/L	5.0	1.3		
8/16/2012	8260	1208161350Z	Styrene	0.28	ug/L	0.50	0.20		J
8/16/2012	8260	1208161350Z	Acetone	12	ug/L	5.0	1.3		
8/16/2012	8260	1208161350Z	Styrene	0.28	ug/L	0.50	0.20		J
8/16/2012	ANIONS	1208161420Z	TOTAL ALKALINITY AS CaCO3	240	MG/L	20	NA		
8/16/2012	ANIONS	1208161420Z	FLUORIDE	0.41	MG/L	0.1	0.03		
8/16/2012	ANIONS	1208161420Z	BICARBONATE AS CaCO3	240	MG/L	20	NA		
8/16/2012	ANIONS	1208161420Z	TOTAL DISSOLVED SOLIDS	910	MG/L	40	NA		
8/16/2012	ANIONS	1208161420Z	SULFATE	310	MG/L	10	3		
8/16/2012	ANIONS	1208161420Z	CHLORIDE	43	MG/L	2	0.6		
8/16/2012	METALS	1208161421Z	ZINC	0.012	MG/L	0.02	0.0015		J
8/16/2012	METALS	1208161421Z	MOLYBDENUM	0.0076	MG/L	0.01	0.0015		J
8/16/2012	METALS	1208161421Z	MANGANESE	1.1	MG/L	0.01	0.0003		
8/16/2012	METALS	1208161421Z	BORON	0.075	MG/L	0.1	0.012		J
8/16/2012	METALS	1208161421Z	STRONTIUM	2.5	MG/L	0.01	0.0009		
8/16/2012	METALS	1208161421Z	IRON	0.022	MG/L	0.1	0.015		J
8/16/2012	METALS	1208161421Z	POTASSIUM	5.2	MG/L	1	0.09		
8/16/2012	METALS	1208161421Z	NICKEL	0.013	MG/L	0.02	0.0006		J
8/16/2012	METALS	1208161421Z	SODIUM	49	MG/L	0.5	0.09		
8/16/2012	METALS	1208161421Z	CALCIUM	110	MG/L	0.5	0.06		
8/16/2012	METALS	1208161421Z	SELENIUM	0.018	MG/L	0.005	0.0032		FB
8/16/2012	METALS	1208161421Z	BERYLLIUM	0.00032	MG/L	0.004	0.00018		J FB
8/16/2012	METALS	1208161421Z	MAGNESIUM	53	MG/L	0.5	0.06		
8/16/2012	METALS	1208161421Z	BARIUM	0.1	MG/L	0.01	0.0014		
8/16/2012	METALS	1208161421Z	TIN	0.0053	MG/L	0.05	0.003		J
9/6/2012	8260	1209060920	1,1,2-Trichloro-1,2,2-Trifluoroethane	3.8	ug/L	1.0	0.31		
9/6/2012	8260	1209060920	Trichlorofluoromethane (CFC 11)	11	ug/L	1.0	0.20		
9/6/2012	8260	1209060920	Trichloroethene (TCE)	15	ug/L	1.0	0.22		
9/6/2012	8260	1209060920	Chloromethane	0.27	ug/L	2.0	0.21		J FB
9/6/2012	607	1209060922	N-Nitrodimethylamine	0.01	ug/L	0.0091	0.0045	110	
9/6/2012	607	1209060922	N-Nitrodimethylamine	0.01	ug/L	0.0091	0.0045	110	
9/6/2012	607	1209060922	N-Nitrodimethylamine	0.01	ug/L	0.0091	0.0045	110	

Analytical Results for RFI Sampling Events at BLM-6-488

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/1/2012	8260	1208011430	Trichloroethene (TCE)	2.2	ug/L	1.0	0.23		
8/1/2012	8260	1208011430	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.4	ug/L	1.0	0.31		
8/1/2012	607	1208011432	Bromacil	0.64	ug/L	0.0097	0.0049	109	
8/1/2012	607	1208011432	Bromacil	0.64	ug/L	0.0097	0.0049	109	
8/1/2012	METALS	1208011435	ZINC	0.0032	MG/L	0.02	0.0015		J
8/1/2012	METALS	1208011435	BERYLLIUM	0.00072	MG/L	0.004	0.00018		J RB
8/1/2012	METALS	1208011435	CALCIUM	150	MG/L	0.5	0.06		
8/1/2012	METALS	1208011435	SODIUM	74	MG/L	0.5	0.09		
8/1/2012	METALS	1208011435	NICKEL	0.14	MG/L	0.02	0.0006		
8/1/2012	METALS	1208011435	BORON	0.11	MG/L	0.1	0.012		
8/1/2012	METALS	1208011435	POTASSIUM	5.7	MG/L	1	0.09		
8/1/2012	METALS	1208011435	STRONTIUM	6.1	MG/L	0.01	0.0009		
8/1/2012	METALS	1208011435	MAGNESIUM	75	MG/L	0.5	0.06		
8/1/2012	METALS	1208011435	ANTIMONY	0.00019	MG/L	0.0003	0.00009		J
8/1/2012	METALS	1208011435	CHROMIUM	0.0065	MG/L	0.01	0.0006		J
8/1/2012	METALS	1208011435	SELENIUM	0.0089	MG/L	0.005	0.0032		
8/1/2012	METALS	1208011435	VANADIUM	0.0026	MG/L	0.01	0.0015		J
8/1/2012	METALS	1208011435	BARIUM	0.04	MG/L	0.01	0.0014		
8/1/2012	METALS	1208011435	MOLYBDENUM	0.014	MG/L	0.01	0.0015		
8/1/2012	METALS	1208011436	MAGNESIUM	75	MG/L	0.5	0.06		
8/1/2012	METALS	1208011436	CALCIUM	150	MG/L	0.5	0.06		
8/1/2012	METALS	1208011436	MOLYBDENUM	0.013	MG/L	0.01	0.0015		
8/1/2012	METALS	1208011436	BARIUM	0.04	MG/L	0.01	0.0014		
8/1/2012	METALS	1208011436	BORON	0.11	MG/L	0.1	0.012		
8/1/2012	METALS	1208011436	POTASSIUM	5.6	MG/L	1	0.09		
8/1/2012	METALS	1208011436	SODIUM	73	MG/L	0.5	0.09		
8/1/2012	METALS	1208011436	SELENIUM	0.0057	MG/L	0.005	0.0032		
8/1/2012	METALS	1208011436	ZINC	0.0031	MG/L	0.02	0.0015		J
8/1/2012	METALS	1208011436	STRONTIUM	6.1	MG/L	0.01	0.0009		
8/1/2012	METALS	1208011436	ANTIMONY	0.0002	MG/L	0.0003	0.00009		J
8/1/2012	METALS	1208011436	VANADIUM	0.0022	MG/L	0.01	0.0015		J
8/1/2012	METALS	1208011436	BERYLLIUM	0.00068	MG/L	0.004	0.00018		J RB
8/1/2012	METALS	1208011436	NICKEL	0.14	MG/L	0.02	0.0006		
8/1/2012	METALS	1208011436	CHROMIUM	0.0062	MG/L	0.01	0.0006		J
8/1/2012	ANIONS	1208011437	TOTAL DISSOLVED SOLIDS	1200	MG/L	40	NA		T
8/1/2012	ANIONS	1208011437	FLUORIDE	0.72	MG/L	0.2	0.06		

Analytical Results for RFI Sampling Events at BLM-6-488

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/1/2012	ANIONS	1208011437	CHLORIDE	130	MG/L	4	1.2		
8/1/2012	ANIONS	1208011437	SULFATE	460	MG/L	20	6		
8/1/2012	ANIONS	1208011437	TOTAL ALKALINITY AS CaCO3	120	MG/L	20	NA		
8/1/2012	ANIONS	1208011437	BICARBONATE AS CaCO3	120	MG/L	20	NA		
8/1/2012	353.2	1208011438	NITRATE/NITRITE AS N	5.9	MG/L	0.05	0.015		
9/13/2012	8260	1209131309	1,1,2-Trichloro-1,2,2-Trifluoroethane	90	ug/L	1.0	0.31		
9/13/2012	8260	1209131309	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.6	ug/L	1.0	0.21		J
9/13/2012	8260	1209131309	Trichloroethene (TCE)	31	ug/L	1.0	0.22		
9/13/2012	8260	1209131309	Bromomethane	0.3	ug/L	2.0	0.29		J RB
9/13/2012	8260	1209131309	Chloromethane	0.46	ug/L	2.0	0.21		J RB FB
9/13/2012	8260	1209131309	Dichlorofluoromethane (CFC 21)	0.52	ug/L	1.0	0.24		J
9/13/2012	8260	1209131309	Tetrachloroethene (PCE)	1.6	ug/L	1.0	0.30		
9/13/2012	8260	1209131309	Trichlorofluoromethane (CFC 11)	42	ug/L	1.0	0.20		
9/13/2012	607	1209131311	N-Nitrosodimethylamine	0.51	ug/L	0.0089	0.0044	75	
9/13/2012	607	1209131311	N-Nitrodimethylamine	0.38	ug/L	0.0089	0.0044	112	
9/13/2012	607	1209131311	Bromacil	0.21	ug/L	0.0089	0.0044	107	

Analytical Results for RFI Sampling Events at BW-1-268

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/7/2012	8260	1208071445	Dichlorofluoromethane (CFC 21)	6.5	ug/L	1.0	0.24		
8/7/2012	8260	1208071445	1,1,2-Trichloro-1,2,2-Trifluoroethane	120	ug/L	1.0	0.31		
8/7/2012	8260	1208071445	Chloroform	0.25	ug/L	1.0	0.22		J
8/7/2012	8260	1208071445	Trichlorofluoromethane (CFC 11)	290	ug/L	2.5	0.50		
8/7/2012	8260	1208071445	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	4.5	ug/L	1.0	0.35		
8/7/2012	8260	1208071445	Trichloroethene (TCE)	1.5	ug/L	1.0	0.23		
8/7/2012	8260	1208071446	Chloroform	0.25	ug/L	1.0	0.22		J
8/7/2012	8260	1208071446	Dichlorofluoromethane (CFC 21)	6.4	ug/L	1.0	0.24		
8/7/2012	8260	1208071446	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	4.6	ug/L	1.0	0.35		
8/7/2012	8260	1208071446	Trichloroethene (TCE)	1.5	ug/L	1.0	0.23		
8/7/2012	8260	1208071446	Trichlorofluoromethane (CFC 11)	280	ug/L	2.5	0.50		
8/7/2012	8260	1208071446	1,1,2-Trichloro-1,2,2-Trifluoroethane	120	ug/L	1.0	0.31		
8/7/2012	8260	1208071446	Acetone	1.2	ug/L	10	0.98		J FB
8/7/2012	607	1208071448	Bromacil	2.2	ug/L	0.01	0.005	100	
8/7/2012	607	1208071448	N-Nitrodimethylamine	4.1	ug/L	0.01	0.005	85	
8/7/2012	607	1208071448	N-Nitrosodimethylamine	5.6	ug/L	0.01	0.005	40	
8/7/2012	607	1208071449	Bromacil	2.1	ug/L	0.01	0.005	100	
8/7/2012	607	1208071449	N-Nitrodimethylamine	4	ug/L	0.01	0.005	85	
8/7/2012	607	1208071449	N-Nitrosodimethylamine	5.6	ug/L	0.01	0.005	40	
8/7/2012	METALS	1208071450	BORON	0.23	MG/L	0.1	0.012		
8/7/2012	METALS	1208071450	STRONTIUM	2.6	MG/L	0.01	0.0009		
8/7/2012	METALS	1208071450	MOLYBDENUM	0.0045	MG/L	0.01	0.0015		J
8/7/2012	METALS	1208071450	POTASSIUM	3	MG/L	1	0.09		
8/7/2012	METALS	1208071450	NICKEL	0.0019	MG/L	0.02	0.0006		J
8/7/2012	METALS	1208071450	ZINC	0.0046	MG/L	0.02	0.0015		J
8/7/2012	METALS	1208071450	BARIUM	0.032	MG/L	0.01	0.0014		
8/7/2012	METALS	1208071450	SODIUM	100	MG/L	0.5	0.09		
8/7/2012	METALS	1208071450	IRON	0.039	MG/L	0.1	0.015		J
8/7/2012	METALS	1208071450	ARSENIC	0.0016	MG/L	0.005	0.0015		J
8/7/2012	METALS	1208071450	VANADIUM	0.0017	MG/L	0.01	0.0015		J
8/7/2012	METALS	1208071450	CHROMIUM	0.0046	MG/L	0.01	0.0006		J
8/7/2012	METALS	1208071450	CALCIUM	95	MG/L	0.5	0.06		
8/7/2012	METALS	1208071450	MAGNESIUM	62	MG/L	0.5	0.06		

Analytical Results for RFI Sampling Events at BW-3-180

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/15/2012	8260	1209150915	Trichlorofluoromethane (CFC 11)	0.59	ug/L	1.0	0.20		J
9/15/2012	8260	1209150915	Acetone	1.9	ug/L	10	1.3		J
9/15/2012	8260	1209150915	1,1,2-Trichloro-1,2,2-Trifluoroethane	9	ug/L	1.0	0.31		
9/15/2012	607	1209150916	Bromacil	0.37	ug/L	0.0089	0.0044	107	
9/15/2012	METALS	1209150917	VANADIUM	0.0029	MG/L	0.01	0.0015		J
9/15/2012	METALS	1209150917	MAGNESIUM	75	MG/L	0.5	0.06		
9/15/2012	METALS	1209150917	SODIUM	110	MG/L	0.5	0.09		
9/15/2012	METALS	1209150917	NICKEL	1	MG/L	0.02	0.0006		
9/15/2012	METALS	1209150917	CALCIUM	260	MG/L	0.5	0.06		
9/15/2012	METALS	1209150917	CHROMIUM	1.5	MG/L	0.01	0.0006		
9/15/2012	METALS	1209150917	IRON	11	MG/L	0.1	0.015		
9/15/2012	METALS	1209150917	SELENIUM	0.0064	MG/L	0.005	0.0032		
9/15/2012	METALS	1209150917	COPPER	0.019	MG/L	0.01	0.0006		
9/15/2012	METALS	1209150917	MOLYBDENUM	0.037	MG/L	0.01	0.0015		
9/15/2012	METALS	1209150917	BARIUM	0.025	MG/L	0.01	0.0014		
9/15/2012	METALS	1209150917	COBALT	0.0013	MG/L	0.01	0.0006		J
9/15/2012	METALS	1209150917	BORON	0.076	MG/L	0.1	0.012		J
9/15/2012	METALS	1209150917	ANTIMONY	0.00023	MG/L	0.0003	0.00009		J
9/15/2012	METALS	1209150917	ZINC	0.013	MG/L	0.02	0.0015		J
9/15/2012	METALS	1209150917	MANGANESE	0.023	MG/L	0.01	0.0003		
9/15/2012	METALS	1209150917	POTASSIUM	2.2	MG/L	1	0.09		
9/15/2012	METALS	1209150917	STRONTIUM	6.6	MG/L	0.01	0.0009		

Analytical Results for RFI Sampling Events at BW-6-355

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/15/2012	METALS	1209151109	CALCIUM	79	MG/L	0.5	0.06		
9/15/2012	METALS	1209151109	STRONTIUM	2.6	MG/L	0.01	0.0009		
9/15/2012	METALS	1209151109	BORON	0.24	MG/L	0.1	0.012		
9/15/2012	METALS	1209151109	BARIUM	0.028	MG/L	0.01	0.0014		
9/15/2012	METALS	1209151109	NICKEL	0.0077	MG/L	0.02	0.0006		J
9/15/2012	METALS	1209151109	SODIUM	90	MG/L	0.5	0.09		
9/15/2012	METALS	1209151109	ZINC	0.055	MG/L	0.02	0.0015		
9/15/2012	METALS	1209151109	POTASSIUM	1.9	MG/L	1	0.09		
9/15/2012	METALS	1209151109	MAGNESIUM	20	MG/L	0.5	0.06		
9/15/2012	METALS	1209151109	MOLYBDENUM	0.0099	MG/L	0.01	0.0015		J
9/15/2012	METALS	1209151109	IRON	0.017	MG/L	0.1	0.015		J
9/15/2012	METALS	1209151109	CHROMIUM	0.0063	MG/L	0.01	0.0006		J
9/15/2012	ANIONS	1209151110	TOTAL DISSOLVED SOLIDS	590	MG/L	20	NA		
9/15/2012	ANIONS	1209151110	FLUORIDE	0.83	MG/L	0.1	0.03		
9/15/2012	ANIONS	1209151110	BICARBONATE AS CaCO3	230	MG/L	20	NA		
9/15/2012	ANIONS	1209151110	CHLORIDE	50	MG/L	2	0.6		
9/15/2012	ANIONS	1209151110	TOTAL ALKALINITY AS CaCO3	230	MG/L	20	NA		
9/15/2012	ANIONS	1209151110	SULFATE	190	MG/L	10	3		
9/15/2012	331.0	1209151111	Perchlorate	0.07	ug/L	0.20	0.026		J
9/15/2012	353.2	1209151112	NITRATE/NITRITE AS N	0.21	MG/L	0.01	0.003		
10/10/2012	8260_LL	1210101010	Chloromethane	0.21	ug/L	0.50	0.20		J FB
10/10/2012	8260_LL	1210101010	Chloromethane	0.21	ug/L	0.50	0.20		J FB
10/10/2012	8260_LL	1210101010	Acetone	1.8	ug/L	5.0	1.3		J RB FB
10/10/2012	8260_LL	1210101010	Acetone	1.8	ug/L	5.0	1.3		J RB FB
10/18/2012	8260_LL	1210181420	Acetone	2.8	ug/L	5.0	1.3		J RB TB
10/18/2012	8260_LL	1210181420	Acetone	2.8	ug/L	5.0	1.3		J RB TB

Analytical Results for RFI Sampling Events at JP-3-515

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/9/2012	8260_LL	1210100930Z	1,1-Dichloroethane (1,1-DCA)	0.36	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210100930Z	Benzene	0.28	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210100930Z	Acetone	2.4	ug/L	5.0	1.3		J RB EB
10/9/2012	8260_LL	1210100930Z	Acetone	2.4	ug/L	5.0	1.3		J RB EB
10/9/2012	8260_LL	1210100930Z	Chloromethane	0.32	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210100930Z	Styrene	0.23	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210100930Z	1,1-Dichloroethane (1,1-DCA)	0.36	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210100930Z	Chloromethane	0.32	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210100930Z	Benzene	0.28	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210100930Z	Styrene	0.23	ug/L	0.50	0.20		J
10/9/2012	8260_LL	1210091400Z	Acetone	2.2	ug/L	5.0	1.3		J RB EB
10/9/2012	8260_LL	1210091400Z	Acetone	2.2	ug/L	5.0	1.3		J RB EB
10/5/2012	8260_LL	1210051015Z	Bromomethane	0.32	ug/L	0.50	0.24		J RB EB
10/5/2012	8260_LL	1210051015Z	Chloromethane	0.24	ug/L	0.50	0.20		J EB
10/5/2012	8260_LL	1210051015Z	Acetone	1.6	ug/L	5.0	1.3		J EB
10/5/2012	8260_LL	1210051015Z	Acetone	1.6	ug/L	5.0	1.3		J EB
10/5/2012	8260_LL	1210051015Z	Chloromethane	0.24	ug/L	0.50	0.20		J EB
10/5/2012	8260_LL	1210051015Z	Bromomethane	0.32	ug/L	0.50	0.24		J RB EB

Analytical Results for RFI Sampling Events at NASA 10

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/5/2012	8260	1209051404B	Chloromethane	0.33	ug/L	2.0	0.21		J FB
9/5/2012	8260	1209051404B	Trichlorofluoromethane (CFC 11)	22	ug/L	1.0	0.20		
9/5/2012	8260	1209051404B	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.5	ug/L	1.0	0.31		
9/5/2012	607	1209051406B	N-Nitrosodimethylamine	0.26	ug/L	0.0091	0.0045	65	
9/5/2012	607	1209051406B	N-Nitrodimethylamine	1.4	ug/L	0.0091	0.0045	110	
9/5/2012	607	1209051406B	Bromacil	2.9	ug/L	0.0091	0.0045	107	
9/5/2012	METALS	1209051407B	MOLYBDENUM	0.012	MG/L	0.01	0.0015		
9/5/2012	METALS	1209051407B	ALUMINUM	0.034	MG/L	0.1	0.026		J
9/5/2012	METALS	1209051407B	MANGANESE	0.0045	MG/L	0.01	0.0003		J
9/5/2012	METALS	1209051407B	IRON	0.17	MG/L	0.1	0.015		
9/5/2012	METALS	1209051407B	THALLIUM	0.00024	MG/L	0.0002	0.00006		
9/5/2012	METALS	1209051407B	VANADIUM	0.0026	MG/L	0.01	0.0015		J
9/5/2012	METALS	1209051407B	SODIUM	80	MG/L	0.5	0.09		
9/5/2012	METALS	1209051407B	CALCIUM	51	MG/L	0.5	0.06		
9/5/2012	METALS	1209051407B	BORON	0.15	MG/L	0.1	0.012		
9/5/2012	METALS	1209051407B	MAGNESIUM	33	MG/L	0.5	0.06		
9/5/2012	METALS	1209051407B	CHROMIUM	0.00084	MG/L	0.01	0.0006		J
9/5/2012	METALS	1209051407B	STRONTIUM	0.83	MG/L	0.01	0.0009		
9/5/2012	METALS	1209051407B	BARIUM	0.043	MG/L	0.01	0.0014		
9/5/2012	METALS	1209051407B	POTASSIUM	4.4	MG/L	1	0.09		

Analytical Results for RFI Sampling Events at NASA 5

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/5/2012	8260	1209051002B	Chloromethane	0.24	ug/L	2.0	0.21		J
9/5/2012	8260	1209051002B	Trichlorofluoromethane (CFC 11)	39	ug/L	1.0	0.20		
9/5/2012	8260	1209051002B	1,1,2-Trichloro-1,2,2-Trifluoroethane	5.3	ug/L	1.0	0.31		
9/5/2012	607	1209051003B	N-Nitrodimethylamine	4.1	ug/L	0.0092	0.0046	110	
9/5/2012	607	1209051003B	Bromacil	0.67	ug/L	0.0092	0.0046	107	
9/5/2012	607	1209051003B	N-Nitrosodimethylamine	1.2	ug/L	0.0092	0.0046	65	
9/5/2012	METALS	1209051004B	MAGNESIUM	68	MG/L	0.5	0.06		
9/5/2012	METALS	1209051004B	MANGANESE	0.0097	MG/L	0.01	0.0003		J
9/5/2012	METALS	1209051004B	NICKEL	0.15	MG/L	0.02	0.0006		
9/5/2012	METALS	1209051004B	POTASSIUM	3	MG/L	1	0.09		
9/5/2012	METALS	1209051004B	BORON	0.18	MG/L	0.1	0.012		
9/5/2012	METALS	1209051004B	STRONTIUM	1.8	MG/L	0.01	0.0009		
9/5/2012	METALS	1209051004B	MOLYBDENUM	0.0064	MG/L	0.01	0.0015		J
9/5/2012	METALS	1209051004B	IRON	1.2	MG/L	0.1	0.015		
9/5/2012	METALS	1209051004B	CHROMIUM	0.17	MG/L	0.01	0.0006		
9/5/2012	METALS	1209051004B	COPPER	0.0035	MG/L	0.01	0.0006		J
9/5/2012	METALS	1209051004B	VANADIUM	0.0028	MG/L	0.01	0.0015		J
9/5/2012	METALS	1209051004B	ANTIMONY	0.00009	MG/L	0.0003	0.00009		J
9/5/2012	METALS	1209051004B	THALLIUM	0.00013	MG/L	0.0002	0.00006		J
9/5/2012	METALS	1209051004B	CALCIUM	110	MG/L	0.5	0.06		
9/5/2012	METALS	1209051004B	BARIUM	0.038	MG/L	0.01	0.0014		
9/5/2012	METALS	1209051004B	SODIUM	99	MG/L	0.5	0.09		
9/5/2012	ANIONS	1209051005B	CHLORIDE	140	MG/L	4	1.2		
9/5/2012	ANIONS	1209051005B	TOTAL DISSOLVED SOLIDS	1000	MG/L	40	NA		
9/5/2012	ANIONS	1209051005B	BICARBONATE AS CaCO3	210	MG/L	20	NA		
9/5/2012	ANIONS	1209051005B	FLUORIDE	0.57	MG/L	0.1	0.03		
9/5/2012	ANIONS	1209051005B	TOTAL ALKALINITY AS CaCO3	210	MG/L	20	NA		
9/5/2012	ANIONS	1209051005B	SULFATE	280	MG/L	20	6		
9/5/2012	331.0	1209051006B	Perchlorate	1.5	ug/L	0.20	0.026		
9/5/2012	353.2	1209051007B	NITRATE/NITRITE AS N	10	MG/L	0.1	0.03		

Analytical Results for RFI Sampling Events at NASA 6

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/3/2012	8260	1210031000	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.67	ug/L	1.0	0.21		J
10/3/2012	8260	1210031000	1,1,2-Trichloro-1,2,2-Trifluoroethane	21	ug/L	1.0	0.31		
10/3/2012	8260	1210031000	Acetone	2.5	ug/L	10	1.3		J FB
10/3/2012	8260	1210031000	Chloromethane	0.35	ug/L	2.0	0.21		J RB FB
10/3/2012	8260	1210031000	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1.0	0.24		
10/3/2012	8260	1210031000	Trichlorofluoromethane (CFC 11)	71	ug/L	1.0	0.20		
10/3/2012	8260	1210031000	Trichloroethene (TCE)	1.6	ug/L	1.0	0.22		
10/3/2012	607	1210031002	Bromacil	5.1	ug/L	0.0089	0.0044	109	
10/3/2012	607	1210031002	N-Nitrosodimethylamine	4.3	ug/L	0.0089	0.0044	43	
10/3/2012	607	1210031002	N-Nitrodimethylamine	7.1	ug/L	0.0089	0.0044	92	
10/3/2012	METALS	1210031003	Iron, Total	0.03	mg/L	0.10	0.006		J
10/3/2012	METALS	1210031003	Calcium, Total	105	mg/L	1.0	0.2		
10/3/2012	METALS	1210031003	Boron, Total	0.46	mg/L	0.20	0.05		
10/3/2012	METALS	1210031003	Sodium, Total	101	mg/L	5.0	0.5		
10/3/2012	METALS	1210031003	Strontium, Total	3.04	mg/L	0.10	0.001		
10/3/2012	METALS	1210031003	Thallium, Total	0.0001	mg/L	0.0010	0.00007		J
10/3/2012	METALS	1210031003	Vanadium, Total	0.0028	mg/L	0.0020	0.0010		
10/3/2012	METALS	1210031003	Barium, Total	0.053	mg/L	0.020	0.0004		
10/3/2012	METALS	1210031003	Cobalt, Total	0.0004	mg/L	0.0010	0.000008		J
10/3/2012	METALS	1210031003	Arsenic, Total	0.0009	mg/L	0.0010	0.0004		J
10/3/2012	METALS	1210031003	Magnesium, Total	79.7	mg/L	1.0	0.005		
10/3/2012	METALS	1210031003	Manganese, Total	0.011	mg/L	0.010	0.0007		
10/3/2012	METALS	1210031003	Molybdenum, Total	0.01	mg/L	0.025	0.002		J
10/3/2012	METALS	1210031003	Potassium, Total	3.9	mg/L	2.0	0.07		
10/3/2012	METALS	1210031003	Selenium, Total	0.009	mg/L	0.010	0.004		J
10/3/2012	METALS	1210031003	Chromium, Total	0.007	mg/L	0.010	0.0009		J

Analytical Results for RFI Sampling Events at NASA 7

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/21/2012	8260	1208220831	Trichloroethene (TCE)	25	ug/L	1.0	0.22		
8/21/2012	8260	1208220831	Trichlorofluoromethane (CFC 11)	0.43	ug/L	1.0	0.20		J
8/21/2012	8260	1208220831	1,1,2-Trichloro-1,2,2-Trifluoroethane	270	ug/L	2.0	0.62		
8/21/2012	8260	1208220831	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	4	ug/L	1.0	0.21		
8/21/2012	607	1208220832	Bromacil	11	ug/L	0.0099	0.005	102	
8/21/2012	METALS	1208220833	NICKEL	0.17	MG/L	0.02	0.0006		
8/21/2012	METALS	1208220833	POTASSIUM	5.4	MG/L	1	0.09		*
8/21/2012	METALS	1208220833	ALUMINUM	0.052	MG/L	0.1	0.026		J
8/21/2012	METALS	1208220833	IRON	0.35	MG/L	0.1	0.015		
8/21/2012	METALS	1208220833	ZINC	0.0017	MG/L	0.02	0.0015		J RB
8/21/2012	METALS	1208220833	BORON	0.1	MG/L	0.1	0.012		
8/21/2012	METALS	1208220833	BARIUM	0.081	MG/L	0.01	0.0014		
8/21/2012	METALS	1208220833	COBALT	0.0015	MG/L	0.01	0.0006		J
8/21/2012	METALS	1208220833	COPPER	0.0011	MG/L	0.01	0.0006		J
8/21/2012	METALS	1208220833	CHROMIUM	0.05	MG/L	0.01	0.0006		
8/21/2012	METALS	1208220833	SELENIUM	0.0074	MG/L	0.005	0.0032		
8/21/2012	METALS	1208220833	VANADIUM	0.0038	MG/L	0.01	0.0015		J
8/21/2012	METALS	1208220833	SODIUM	93	MG/L	0.5	0.09		
8/21/2012	METALS	1208220833	MANGANESE	0.065	MG/L	0.01	0.0003		
8/21/2012	METALS	1208220833	MAGNESIUM	110	MG/L	0.5	0.06		
8/21/2012	METALS	1208220833	STRONTIUM	7.7	MG/L	0.01	0.0009		
8/21/2012	METALS	1208220833	MOLYBDENUM	0.0075	MG/L	0.01	0.0015		J
8/21/2012	METALS	1208220833	CALCIUM	210	MG/L	0.5	0.06		

Analytical Results for RFI Sampling Events at NASA 8

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/21/2012	8260	1208210801	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1.0	0.21		
8/21/2012	8260	1208210801	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	ug/L	1.0	0.31		
8/21/2012	8260	1208210801	Trichloroethene (TCE)	2.8	ug/L	1.0	0.22		
8/21/2012	8260	1208210801	Acetone	1.4	ug/L	10	1.3		J
8/21/2012	607	1208210802	Bromacil	4.7	ug/L	0.01	0.0052	102	
8/21/2012	METALS	1208210803	NICKEL	0.033	MG/L	0.02	0.0006		
8/21/2012	METALS	1208210803	MAGNESIUM	54	MG/L	0.5	0.06		
8/21/2012	METALS	1208210803	IRON	0.38	MG/L	0.1	0.015		
8/21/2012	METALS	1208210803	BORON	0.13	MG/L	0.1	0.012		
8/21/2012	METALS	1208210803	BARIUM	0.03	MG/L	0.01	0.0014		
8/21/2012	METALS	1208210803	SODIUM	58	MG/L	0.5	0.09		
8/21/2012	METALS	1208210803	ANTIMONY	0.0001	MG/L	0.0003	0.00009		J
8/21/2012	METALS	1208210803	SELENIUM	0.0065	MG/L	0.005	0.0032		
8/21/2012	METALS	1208210803	MANGANESE	0.00061	MG/L	0.01	0.0003		J
8/21/2012	METALS	1208210803	POTASSIUM	3.3	MG/L	1	0.09		
8/21/2012	METALS	1208210803	MOLYBDENUM	0.028	MG/L	0.01	0.0015		
8/21/2012	METALS	1208210803	CALCIUM	90	MG/L	0.5	0.06		
8/21/2012	METALS	1208210803	CHROMIUM	0.016	MG/L	0.01	0.0006		
8/21/2012	METALS	1208210803	COPPER	0.0023	MG/L	0.01	0.0006		J
8/21/2012	METALS	1208210803	STRONTIUM	3.1	MG/L	0.01	0.0009		
8/21/2012	METALS	1208210804	SELENIUM	0.0086	MG/L	0.005	0.0032		
8/21/2012	METALS	1208210804	COPPER	0.0012	MG/L	0.01	0.0006		J
8/21/2012	METALS	1208210804	STRONTIUM	3.1	MG/L	0.01	0.0009		
8/21/2012	METALS	1208210804	ANTIMONY	0.00011	MG/L	0.0003	0.00009		J
8/21/2012	METALS	1208210804	CALCIUM	88	MG/L	0.5	0.06		
8/21/2012	METALS	1208210804	SODIUM	58	MG/L	0.5	0.09		
8/21/2012	METALS	1208210804	NICKEL	0.033	MG/L	0.02	0.0006		
8/21/2012	METALS	1208210804	CHROMIUM	0.016	MG/L	0.01	0.0006		
8/21/2012	METALS	1208210804	IRON	0.37	MG/L	0.1	0.015		
8/21/2012	METALS	1208210804	POTASSIUM	3.2	MG/L	1	0.09		
8/21/2012	METALS	1208210804	BORON	0.13	MG/L	0.1	0.012		
8/21/2012	METALS	1208210804	MAGNESIUM	53	MG/L	0.5	0.06		
8/21/2012	METALS	1208210804	MOLYBDENUM	0.029	MG/L	0.01	0.0015		
8/21/2012	METALS	1208210804	MANGANESE	0.00037	MG/L	0.01	0.0003		J
8/21/2012	METALS	1208210804	BARIUM	0.03	MG/L	0.01	0.0014		

Analytical Results for RFI Sampling Events at NASA 9

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/8/2012	8260	1209080921B	Dichlorofluoromethane (CFC 21)	0.28	ug/L	1.0	0.24		J
9/8/2012	8260	1209080921B	Chloroform	0.27	ug/L	1.0	0.25		J
9/8/2012	8260	1209080921B	Trichlorofluoromethane (CFC 11)	300	ug/L	2.5	0.50		
9/8/2012	8260	1209080921B	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1.0	0.31		
9/8/2012	8260	1209080921B	Trichloroethene (TCE)	2	ug/L	1.0	0.22		
9/8/2012	8260	1209080921B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.21	ug/L	1.0	0.21		J
9/8/2012	607	1209080922B	N-Nitrosodimethylamine	1.2	ug/L	0.0094	0.0047	65	
9/8/2012	607	1209080922B	N-Nitrodimethylamine	2.6	ug/L	0.0094	0.0047	110	
9/8/2012	607	1209080922B	Bromacil	4.7	ug/L	0.0094	0.0047	107	
9/8/2012	METALS	1209080923B	THALLIUM	0.00021	MG/L	0.0002	0.00006		
9/8/2012	METALS	1209080923B	CALCIUM	110	MG/L	0.5	0.06		
9/8/2012	METALS	1209080923B	BARIUM	0.034	MG/L	0.01	0.0014		
9/8/2012	METALS	1209080923B	CHROMIUM	0.0065	MG/L	0.01	0.0006		J
9/8/2012	METALS	1209080923B	MOLYBDENUM	0.0063	MG/L	0.01	0.0015		J
9/8/2012	METALS	1209080923B	BORON	0.36	MG/L	0.1	0.012		
9/8/2012	METALS	1209080923B	NICKEL	0.021	MG/L	0.02	0.0006		
9/8/2012	METALS	1209080923B	VANADIUM	0.0015	MG/L	0.01	0.0015		J
9/8/2012	METALS	1209080923B	IRON	0.14	MG/L	0.1	0.015		
9/8/2012	METALS	1209080923B	MAGNESIUM	78	MG/L	0.5	0.06		
9/8/2012	METALS	1209080923B	MANGANESE	0.0034	MG/L	0.01	0.0003		J
9/8/2012	METALS	1209080923B	POTASSIUM	4.8	MG/L	1	0.09		
9/8/2012	METALS	1209080923B	STRONTIUM	3.4	MG/L	0.01	0.0009		
9/8/2012	METALS	1209080923B	SELENIUM	0.007	MG/L	0.005	0.0032		
9/8/2012	METALS	1209080923B	SODIUM	92	MG/L	0.5	0.09		
9/11/2012	8260	1209111340	Trichloroethene (TCE)	6.4	ug/L	1.0	0.22		
9/11/2012	8260	1209111340	Trichlorofluoromethane (CFC 11)	4.6	ug/L	1.0	0.20		
9/11/2012	8260	1209111340	1,1,2-Trichloro-1,2,2-Trifluoroethane	4	ug/L	1.0	0.31		
9/11/2012	8260	1209111341	Trichlorofluoromethane (CFC 11)	4.6	ug/L	1.0	0.20		
9/11/2012	8260	1209111341	1,1,2-Trichloro-1,2,2-Trifluoroethane	3.5	ug/L	1.0	0.31		
9/11/2012	8260	1209111341	Trichlorofluoromethane (CFC 11)	4.6	ug/L	1.0	0.20		
9/11/2012	8260	1209111341	Trichloroethene (TCE)	6.2	ug/L	1.0	0.22		
9/11/2012	8260	1209111341	1,1,2-Trichloro-1,2,2-Trifluoroethane	3.5	ug/L	1.0	0.31		
9/11/2012	8260	1209111341	Trichloroethene (TCE)	6.2	ug/L	1.0	0.22		

Analytical Results for RFI Sampling Events at PL-2-504

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/7/2012	8260	1209071325	Dichlorofluoromethane (CFC 21)	0.44	ug/L	1.0	0.24		J
9/7/2012	8260	1209071325	1,1,2-Trichloro-1,2,2-Trifluoroethane	15	ug/L	1.0	0.31		
9/7/2012	8260	1209071325	Chloromethane	0.57	ug/L	2.0	0.21		J RB
9/7/2012	8260	1209071325	Dichlorofluoromethane (CFC 21)	0.44	ug/L	1.0	0.24		J
9/7/2012	8260	1209071325	1,1,2-Trichloro-1,2,2-Trifluoroethane	15	ug/L	1.0	0.31		
9/7/2012	8260	1209071325	Tetrachloroethene (PCE)	0.36	ug/L	1.0	0.30		J
9/7/2012	8260	1209071325	Tetrachloroethene (PCE)	0.36	ug/L	1.0	0.30		J
9/7/2012	8260	1209071325	Trichloroethene (TCE)	41	ug/L	1.0	0.22		
9/7/2012	8260	1209071325	Trichlorofluoromethane (CFC 11)	28	ug/L	1.0	0.20		
9/7/2012	8260	1209071325	Trichlorofluoromethane (CFC 11)	28	ug/L	1.0	0.20		
9/7/2012	8260	1209071325	Dichlorofluoromethane (CFC 21)	0.44	ug/L	1.0	0.24		J
9/7/2012	8260	1209071325	1,1,2-Trichloro-1,2,2-Trifluoroethane	15	ug/L	1.0	0.31		
9/7/2012	8260	1209071325	Trichloroethene (TCE)	41	ug/L	1.0	0.22		
9/7/2012	8260	1209071325	Tetrachloroethene (PCE)	0.36	ug/L	1.0	0.30		J
9/7/2012	8260	1209071325	Chloromethane	0.57	ug/L	2.0	0.21		J RB
9/7/2012	8260	1209071325	Trichlorofluoromethane (CFC 11)	28	ug/L	1.0	0.20		
9/7/2012	8260	1209071325	Trichloroethene (TCE)	41	ug/L	1.0	0.22		
9/7/2012	8260	1209071325	Chloromethane	0.57	ug/L	2.0	0.21		J RB
9/12/2012	8260_LL	1209120845	Iodomethane	0.67	ug/L	5.0	0.27		J RB
9/12/2012	8260_LL	1209120845	Bromomethane	0.39	ug/L	0.50	0.24		J RB FB
9/12/2012	8260_LL	1209120845	Iodomethane	0.67	ug/L	5.0	0.27		J RB
9/12/2012	8260_LL	1209120845	Bromomethane	0.39	ug/L	0.50	0.24		J RB FB
9/14/2012	8260	1209141035	Trichlorofluoromethane (CFC 11)	1.6	ug/L	1.0	0.20		
9/14/2012	8260	1209141035	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52	ug/L	1.0	0.31		J
9/14/2012	8260	1209141035	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52	ug/L	1.0	0.31		J
9/14/2012	8260	1209141035	Trichlorofluoromethane (CFC 11)	1.6	ug/L	1.0	0.20		
9/14/2012	8260	1209141035	Trichlorofluoromethane (CFC 11)	1.6	ug/L	1.0	0.20		
9/14/2012	8260	1209141035	Trichloroethene (TCE)	1.3	ug/L	1.0	0.22		
9/14/2012	8260	1209141035	Trichloroethene (TCE)	1.3	ug/L	1.0	0.22		
9/14/2012	8260	1209141035	Trichloroethene (TCE)	1.3	ug/L	1.0	0.22		
9/14/2012	8260	1209141035	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52	ug/L	1.0	0.31		J
8/22/2012	331.0	1208221430Z	Perchlorate	0.48	ug/L	0.20	0.026		

Analytical Results for RFI Sampling Events at ST-1-541

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/7/2012	8260	1208070945	1,1-Dichloroethene	3.7	ug/L	1.0	0.29		
8/7/2012	8260	1208070945	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	1.0	0.35		
8/7/2012	8260	1208070945	Trichlorofluoromethane (CFC 11)	340	ug/L	10	2.0		
8/7/2012	8260	1208070945	1,1,2-Trichloro-1,2,2-Trifluoroethane	840	ug/L	10	3.1		
8/7/2012	8260	1208070945	Tetrachloroethene (PCE)	16	ug/L	1.0	0.20		
8/7/2012	8260	1208070945	Chloroform	0.36	ug/L	1.0	0.22		J
8/7/2012	8260	1208070945	Trichloroethene (TCE)	310	ug/L	10	2.4		
8/7/2012	8260	1208070945	Dichlorofluoromethane (CFC 21)	1.1	ug/L	1.0	0.24		
8/7/2012	8260	1208070946	1,1,2-Trichloro-1,2,2-Trifluoroethane	740	ug/L	10	3.1		
8/7/2012	8260	1208070946	Trichlorofluoromethane (CFC 11)	300	ug/L	10	2.0		
8/7/2012	8260	1208070946	Trichloroethene (TCE)	280	ug/L	10	2.4		
8/7/2012	8260	1208070946	Tetrachloroethene (PCE)	16	ug/L	1.0	0.20		
8/7/2012	8260	1208070946	Dichlorofluoromethane (CFC 21)	1.4	ug/L	1.0	0.24		
8/7/2012	8260	1208070946	Chloroform	0.37	ug/L	1.0	0.22		J
8/7/2012	8260	1208070946	1,1-Dichloroethene	3.7	ug/L	1.0	0.29		
8/7/2012	8260	1208070946	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2	ug/L	1.0	0.35		
8/7/2012	607	1208070948	N-Nitrodimethylamine	0.92	ug/L	0.01	0.005	85	
8/7/2012	607	1208070948	Bromacil	0.08	ug/L	0.01	0.005	100	
8/7/2012	607	1208070948	N-Nitrosodimethylamine	1.3	ug/L	0.01	0.005	40	
8/7/2012	607	1208070949	Bromacil	0.076	ug/L	0.01	0.005	100	
8/7/2012	607	1208070949	N-Nitrodimethylamine	0.84	ug/L	0.01	0.005	85	
8/7/2012	607	1208070949	N-Nitrosodimethylamine	1.2	ug/L	0.01	0.005	40	
9/10/2012	8260_LL	1209101315	Acetone	1.7	ug/L	5.0	1.3		J FB
9/10/2012	8260_LL	1209101315	Acetone	1.7	ug/L	5.0	1.3		J FB
9/8/2012	8260_LL	1209081010	Acetone	1.6	ug/L	5.0	1.3		J
9/8/2012	8260_LL	1209081010	Acetone	1.6	ug/L	5.0	1.3		J
9/8/2012	8260_LL	1209081010	Chloromethane	0.32	ug/L	0.50	0.20		J RB TB
9/8/2012	8260_LL	1209081010	Chloromethane	0.32	ug/L	0.50	0.20		J RB TB

Analytical Results for RFI Sampling Events at ST-5-1175

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/25/2012	METALS	1208251031Y	MANGANESE	0.084	MG/L	0.01	0.0003		
8/25/2012	METALS	1208251031Y	VANADIUM	0.005	MG/L	0.01	0.0015		J
8/25/2012	METALS	1208251031Y	ZINC	0.0026	MG/L	0.02	0.0015		J
8/25/2012	METALS	1208251031Y	BORON	0.31	MG/L	0.1	0.012		
8/25/2012	METALS	1208251031Y	BARIUM	0.031	MG/L	0.01	0.0014		
8/25/2012	METALS	1208251031Y	CALCIUM	100	MG/L	0.5	0.06		
8/25/2012	METALS	1208251031Y	POTASSIUM	11	MG/L	1	0.09		
8/25/2012	METALS	1208251031Y	STRONTIUM	2.1	MG/L	0.01	0.0009		
8/25/2012	METALS	1208251031Y	MOLYBDENUM	0.014	MG/L	0.01	0.0015		
8/25/2012	METALS	1208251031Y	ANTIMONY	0.0002	MG/L	0.0003	0.00009		J A
8/25/2012	METALS	1208251031Y	MAGNESIUM	32	MG/L	0.5	0.06		
8/25/2012	METALS	1208251031Y	SODIUM	190	MG/L	2.5	0.45		

Analytical Results for RFI Sampling Events at ST-5-481

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/24/2012	8260_LL	1210240945B	Acetone	1.6	ug/L	5.0	1.3		J FB
10/24/2012	8260_LL	1210240945B	Chloromethane	0.22	ug/L	0.50	0.20		J
10/24/2012	METALS	1210240949B	Boron, Total	0.06	mg/L	0.20	0.05		J
10/24/2012	METALS	1210240949B	Sodium, Total	37.7	mg/L	1.0	0.10		
10/24/2012	METALS	1210240949B	Barium, Total	0.019	mg/L	0.020	0.0004		J RB
10/24/2012	METALS	1210240949B	Calcium, Total	91.9	mg/L	1.0	0.2		
10/24/2012	METALS	1210240949B	Magnesium, Total	64.6	mg/L	1.0	0.005		
10/24/2012	METALS	1210240949B	Selenium, Total	0.007	mg/L	0.010	0.004		J
10/24/2012	METALS	1210240949B	Strontium, Total	2.28	mg/L	0.10	0.001		
10/24/2012	METALS	1210240949B	Vanadium, Total	0.0025	mg/L	0.0020	0.0010		
10/24/2012	METALS	1210240949B	Zinc, Total	0.015	mg/L	0.020	0.002		J FB
10/24/2012	METALS	1210240949B	Potassium, Total	3.1	mg/L	2.0	0.07		
10/24/2012	METALS	1210240949B	Molybdenum, Total	0.005	mg/L	0.025	0.002		J
10/24/2012	METALS	1210240949B	Cobalt, Total	0.0001	mg/L	0.0010	0.000008		J RB
10/24/2012	331.0	1210240951B	Perchlorate	0.3	ug/L	0.20	0.026		
10/24/2012	353.2	1210240952B	Nitrate+Nitrite as Nitrogen	1.78	mg/L	0.10	0.006		
10/24/2012	ANIONS	1210240953B	Chloride	36.4	mg/L	2.0	0.5		
10/24/2012	ANIONS	1210240953B	Solids, Total Dissolved	768	mg/L	10	5		
10/24/2012	ANIONS	1210240953B	Sulfate	305	mg/L	8.0	2.1		
10/24/2012	ANIONS	1210240953B	Sulfate	305	mg/L	8.0	2.1		
10/24/2012	ANIONS	1210240953B	Chloride	36.4	mg/L	2.0	0.5		
10/24/2012	ANIONS	1210240953B	Fluoride	0.35	mg/L	0.10	0.04		
10/24/2012	ANIONS	1210240953B	Fluoride	0.35	mg/L	0.10	0.04		
10/24/2012	ANIONS	1210240953B	Solids, Total Dissolved	768	mg/L	10	5		
10/24/2012	ANIONS	1210240953B	Alkalinity, Total as CaCO3	221	mg/L	2.0	0.3		
10/24/2012	ANIONS	1210240953B	Fluoride	0.35	mg/L	0.10	0.04		
10/24/2012	ANIONS	1210240953B	Alkalinity, Total as CaCO3	221	mg/L	2.0	0.3		
10/24/2012	ANIONS	1210240953B	Solids, Total Dissolved	768	mg/L	10	5		
10/24/2012	ANIONS	1210240953B	Alkalinity, Total as CaCO3	221	mg/L	2.0	0.3		
10/24/2012	ANIONS	1210240953B	Chloride	36.4	mg/L	2.0	0.5		
10/24/2012	ANIONS	1210240953B	Sulfate	305	mg/L	8.0	2.1		
8/24/2012	8260_LL	1208241340Y	Chloromethane	0.78	ug/L	0.50	0.20		EB
8/24/2012	8260_LL	1208241340Y	Chloromethane	0.78	ug/L	0.50	0.20		EB

Analytical Results for RFI Sampling Events at ST-5-655

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/21/2012	8260_LL	1208211340Y	Chloromethane	0.39	ug/L	0.50	0.20		J EB
8/21/2012	8260_LL	1208211340Y	Chloromethane	0.39	ug/L	0.50	0.20		J EB
8/23/2012	8260_LL	1208240800Y	Carbon Disulfide	0.21	ug/L	0.50	0.20		J
8/23/2012	8260_LL	1208240800Y	Iodomethane	0.57	ug/L	5.0	0.27		J
8/23/2012	8260_LL	1208240800Y	Bromomethane	0.51	ug/L	0.50	0.24		
8/23/2012	8260_LL	1208240800Y	Chloromethane	3	ug/L	0.50	0.20		EB
8/23/2012	8260_LL	1208240800Y	Acetone	2.1	ug/L	5.0	1.3		J EB
8/23/2012	METALS	1208240831Y	POTASSIUM	4	MG/L	1	0.09		
8/23/2012	METALS	1208240831Y	SELENIUM	0.0045	MG/L	0.005	0.0032		J
8/23/2012	METALS	1208240831Y	MOLYBDENUM	0.013	MG/L	0.01	0.0015		
8/23/2012	METALS	1208240831Y	MAGNESIUM	31	MG/L	0.5	0.06		
8/23/2012	METALS	1208240831Y	ZINC	0.026	MG/L	0.02	0.0015		
8/23/2012	METALS	1208240831Y	BORON	0.16	MG/L	0.1	0.012		
8/23/2012	METALS	1208240831Y	BARIUM	0.025	MG/L	0.01	0.0014		
8/23/2012	METALS	1208240831Y	STRONTIUM	2	MG/L	0.01	0.0009		
8/23/2012	METALS	1208240831Y	CALCIUM	49	MG/L	0.5	0.06		
8/23/2012	METALS	1208240831Y	SODIUM	78	MG/L	0.5	0.09		
8/23/2012	METALS	1208240831Y	VANADIUM	0.013	MG/L	0.01	0.0015		
8/23/2012	METALS	1208240831Y	NICKEL	0.0015	MG/L	0.02	0.0006		J

Analytical Results for RFI Sampling Events at ST-5-985

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/22/2012	8260_LL	1208221315Y	Chloromethane	0.56	ug/L	0.50	0.20		EB
8/22/2012	METALS	1208221356Y	SELENIUM	0.0068	MG/L	0.005	0.0032		
8/22/2012	METALS	1208221356Y	VANADIUM	0.013	MG/L	0.01	0.0015		
8/22/2012	METALS	1208221356Y	MANGANESE	0.0017	MG/L	0.01	0.0003		J
8/22/2012	METALS	1208221356Y	MAGNESIUM	47	MG/L	0.5	0.06		
8/22/2012	METALS	1208221356Y	ARSENIC	0.0035	MG/L	0.005	0.0015		J
8/22/2012	METALS	1208221356Y	THALLIUM	0.00014	MG/L	0.0002	0.00006		J
8/22/2012	METALS	1208221356Y	POTASSIUM	5.5	MG/L	1	0.09		
8/22/2012	METALS	1208221356Y	MOLYBDENUM	0.011	MG/L	0.01	0.0015		
8/22/2012	METALS	1208221356Y	CHROMIUM	0.0033	MG/L	0.01	0.0006		J
8/22/2012	METALS	1208221356Y	STRONTIUM	3.3	MG/L	0.01	0.0009		
8/22/2012	METALS	1208221356Y	SODIUM	140	MG/L	0.5	0.09		
8/22/2012	METALS	1208221356Y	NICKEL	0.0028	MG/L	0.02	0.0006		J
8/22/2012	METALS	1208221356Y	BORON	0.2	MG/L	0.1	0.012		
8/22/2012	METALS	1208221356Y	ANTIMONY	0.00009	MG/L	0.0003	0.00009		J
8/22/2012	METALS	1208221356Y	BARIUM	0.021	MG/L	0.01	0.0014		
8/22/2012	METALS	1208221356Y	CALCIUM	80	MG/L	0.5	0.06		
8/22/2012	METALS	1208221356Y	ZINC	0.06	MG/L	0.02	0.0015		
8/22/2012	METALS	1208221356Y	COPPER	0.0015	MG/L	0.01	0.0006		J
8/22/2012	ANIONS	1208221435Y	CHLORIDE	68	MG/L	2	0.6		
8/22/2012	ANIONS	1208221435Y	BICARBONATE AS CaCO3	140	MG/L	20	NA		
8/22/2012	ANIONS	1208221435Y	SULFATE	510	MG/L	10	3		
8/22/2012	ANIONS	1208221435Y	FLUORIDE	0.46	MG/L	0.1	0.03		
8/22/2012	ANIONS	1208221435Y	TOTAL DISSOLVED SOLIDS	1000	MG/L	20	NA		
8/22/2012	ANIONS	1208221435Y	TOTAL ALKALINITY AS CaCO3	140	MG/L	20	NA		
8/22/2012	331.0	1208221436Y	Perchlorate	1.2	ug/L	0.20	0.026		
8/22/2012	353.2	1208221437Y	NITRATE/NITRITE AS N	5.2	MG/L	0.05	0.015		

Analytical Results for RFI Sampling Events at ST-6-535

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/16/2012	8260_LL	1210170857Z	Trichloroethene (TCE)	0.22	ug/L	0.50	0.20		J
10/16/2012	8260_LL	1210170857Z	Trichloroethene (TCE)	0.22	ug/L	0.50	0.20		J
10/16/2012	8260_LL	1210170857Z	Bromomethane	0.34	ug/L	0.50	0.24		J RB EB
10/16/2012	8260_LL	1210170857Z	Bromomethane	0.34	ug/L	0.50	0.24		J RB EB
9/21/2012	8260_LL	1209211345Z	Acetone	2.4	ug/L	5.0	1.3		J EB
9/21/2012	8260_LL	1209211345Z	Acetone	2.4	ug/L	5.0	1.3		J EB
9/21/2012	8260_LL	1209211345Z	Trichloroethene (TCE)	0.27	ug/L	0.50	0.20		J
9/21/2012	8260_LL	1209211345Z	Chloromethane	0.24	ug/L	0.50	0.20		J EB
9/21/2012	8260_LL	1209211345Z	Trichloroethene (TCE)	0.27	ug/L	0.50	0.20		J
9/21/2012	8260_LL	1209211345Z	Chloromethane	0.24	ug/L	0.50	0.20		J EB
9/4/2012	8260_LL	1209040950Z	Trichloroethene (TCE)	0.23	ug/L	0.50	0.20		J
9/4/2012	8260_LL	1209040950Z	Chloromethane	0.36	ug/L	0.50	0.20		J EB
9/4/2012	8260_LL	1209040950Z	Chloromethane	0.36	ug/L	0.50	0.20		J EB
9/4/2012	8260_LL	1209040950Z	Trichloroethene (TCE)	0.23	ug/L	0.50	0.20		J

Analytical Results for RFI Sampling Events at ST-6-575

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/17/2012	8260_LL	1210171400Z	Bromomethane	0.25	ug/L	0.50	0.24		J RB EB
10/17/2012	8260_LL	1210171400Z	Trichloroethene (TCE)	3.3	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171400Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.41	ug/L	0.50	0.31		J
10/17/2012	8260_LL	1210171400Z	Trichlorofluoromethane (CFC 11)	1.6	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171400Z	Acetone	1.5	ug/L	5.0	1.3		J EB
10/17/2012	8260_LL	1210171401Z	Trichloroethene (TCE)	3.8	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171401Z	Trichloroethene (TCE)	3.8	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171401Z	Trichlorofluoromethane (CFC 11)	2	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171401Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.56	ug/L	0.50	0.31		
10/17/2012	8260_LL	1210171401Z	Acetone	1.4	ug/L	5.0	1.3		J EB
10/17/2012	8260_LL	1210171401Z	Bromomethane	0.27	ug/L	0.50	0.24		J RB EB
10/17/2012	8260_LL	1210171401Z	Dichlorofluoromethane (CFC 21)	0.23	ug/L	0.50	0.20		J
10/17/2012	8260_LL	1210171401Z	Trichloroethene (TCE)	3.8	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171401Z	Trichlorofluoromethane (CFC 11)	2	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171401Z	Dichlorofluoromethane (CFC 21)	0.23	ug/L	0.50	0.20		J
10/17/2012	8260_LL	1210171401Z	Trichlorofluoromethane (CFC 11)	2	ug/L	0.50	0.20		
10/17/2012	8260_LL	1210171401Z	Acetone	1.4	ug/L	5.0	1.3		J EB
10/17/2012	8260_LL	1210171401Z	Dichlorofluoromethane (CFC 21)	0.23	ug/L	0.50	0.20		J
10/17/2012	8260_LL	1210171401Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.56	ug/L	0.50	0.31		
10/17/2012	8260_LL	1210171401Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.56	ug/L	0.50	0.31		
10/17/2012	8260_LL	1210171401Z	Acetone	1.4	ug/L	5.0	1.3		J EB
10/17/2012	8260_LL	1210171401Z	Bromomethane	0.27	ug/L	0.50	0.24		J RB EB
10/17/2012	8260_LL	1210171401Z	Bromomethane	0.27	ug/L	0.50	0.24		J RB EB
9/24/2012	8260_LL	1209240950Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.86	ug/L	0.50	0.31		
9/24/2012	8260_LL	1209240950Z	Dichlorofluoromethane (CFC 21)	0.28	ug/L	0.50	0.20		J
9/24/2012	8260_LL	1209240950Z	Trichloroethene (TCE)	7.9	ug/L	0.50	0.20		
9/24/2012	8260_LL	1209240950Z	Trichlorofluoromethane (CFC 11)	3.5	ug/L	0.50	0.20		
9/24/2012	8260_LL	1209240951Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59	ug/L	0.50	0.31		
9/24/2012	8260_LL	1209240951Z	Dichlorofluoromethane (CFC 21)	0.25	ug/L	0.50	0.20		J
9/24/2012	8260_LL	1209240951Z	Trichlorofluoromethane (CFC 11)	2.8	ug/L	0.50	0.20		
9/24/2012	8260_LL	1209240951Z	Trichloroethene (TCE)	6.8	ug/L	0.50	0.20		
9/24/2012	8260_LL	1209240951Z	Dichlorofluoromethane (CFC 21)	0.25	ug/L	0.50	0.20		J
9/24/2012	8260_LL	1209240951Z	Chloromethane	0.68	ug/L	0.50	0.20		EB
9/24/2012	8260_LL	1209240951Z	Trichloroethene (TCE)	6.8	ug/L	0.50	0.20		
9/24/2012	8260_LL	1209240951Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59	ug/L	0.50	0.31		
9/24/2012	8260_LL	1209240951Z	Acetone	2.9	ug/L	5.0	1.3		J EB

Analytical Results for RFI Sampling Events at ST-6-575

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/24/2012	8260_LL	1209240951Z	Trichlorofluoromethane (CFC 11)	2.8	ug/L	0.50	0.20		
9/24/2012	8260_LL	1209240951Z	Chloromethane	0.68	ug/L	0.50	0.20		EB
9/24/2012	8260_LL	1209240951Z	Acetone	2.9	ug/L	5.0	1.3		J EB
9/4/2012	8260_LL	1209041400Z	Trichlorofluoromethane (CFC 11)	4.8	ug/L	0.50	0.20		
9/4/2012	8260_LL	1209041400Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.1	ug/L	0.50	0.31		
9/4/2012	8260_LL	1209041400Z	Bromomethane	0.3	ug/L	0.50	0.24		J RB EB
9/4/2012	8260_LL	1209041400Z	Trichloroethene (TCE)	9.7	ug/L	0.50	0.20		
9/4/2012	8260_LL	1209041400Z	Dichlorofluoromethane (CFC 21)	0.39	ug/L	0.50	0.20		J
9/4/2012	8260_LL	1209041401Z	Trichlorofluoromethane (CFC 11)	4.7	ug/L	0.50	0.20		
9/4/2012	8260_LL	1209041401Z	Trichloroethene (TCE)	9.2	ug/L	0.50	0.20		
9/4/2012	8260_LL	1209041401Z	Dichlorofluoromethane (CFC 21)	0.39	ug/L	0.50	0.20		J
9/4/2012	8260_LL	1209041401Z	Bromomethane	0.24	ug/L	0.50	0.24		J RB EB
9/4/2012	8260_LL	1209041401Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.99	ug/L	0.50	0.31		
9/4/2012	8260_LL	1209041401Z	Trichloroethene (TCE)	9.2	ug/L	0.50	0.20		
9/4/2012	8260_LL	1209041401Z	Trichlorofluoromethane (CFC 11)	4.7	ug/L	0.50	0.20		
9/4/2012	8260_LL	1209041401Z	Bromomethane	0.24	ug/L	0.50	0.24		J RB EB
9/4/2012	8260_LL	1209041401Z	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.99	ug/L	0.50	0.31		
9/4/2012	8260_LL	1209041401Z	Dichlorofluoromethane (CFC 21)	0.39	ug/L	0.50	0.20		J
10/16/2012	8260_LL	1210161050Z	Bromomethane	0.35	ug/L	0.50	0.24		J RB EB
10/16/2012	8260_LL	1210161050Z	Bromomethane	0.35	ug/L	0.50	0.24		J RB EB
9/21/2012	8260_LL	1209211025Z	Acetone	2.5	ug/L	5.0	1.3		J EB
9/21/2012	8260_LL	1209211025Z	Chloromethane	0.4	ug/L	0.50	0.20		J EB
9/21/2012	8260_LL	1209211025Z	Chloromethane	0.4	ug/L	0.50	0.20		J EB
9/21/2012	8260_LL	1209211025Z	Acetone	2.5	ug/L	5.0	1.3		J EB
8/30/2012	8260_LL	1208301035Z	Chloromethane	0.53	ug/L	0.50	0.20		EB
8/30/2012	8260_LL	1208301035Z	Chloromethane	0.53	ug/L	0.50	0.20		EB

Analytical Results for RFI Sampling Events at WB-14-520

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/2/2012	8260_LL	1208060800Z	Trichloroethene (TCE)	0.33	ug/L	0.50	0.20		J
8/2/2012	8260_LL	1208060800Z	Tetrahydrofuran (THF)	14	ug/L	5.0	0.66		
8/2/2012	8260_LL	1208060800Z	Acetone	1.5	ug/L	5.0	0.98		J EB
8/2/2012	METALS	1208060835Z	SODIUM	93	MG/L	0.5	0.09		
8/2/2012	METALS	1208060835Z	BARIUM	0.0034	MG/L	0.01	0.0014		J
8/2/2012	METALS	1208060835Z	CALCIUM	37	MG/L	0.5	0.06		
8/2/2012	METALS	1208060835Z	VANADIUM	0.012	MG/L	0.01	0.0015		
8/2/2012	METALS	1208060835Z	MAGNESIUM	13	MG/L	0.5	0.06		
8/2/2012	METALS	1208060835Z	ZINC	0.0046	MG/L	0.02	0.0015		J EB
8/2/2012	METALS	1208060835Z	POTASSIUM	2	MG/L	1	0.09		
8/2/2012	METALS	1208060835Z	MOLYBDENUM	0.02	MG/L	0.01	0.0015		
8/2/2012	METALS	1208060835Z	MANGANESE	0.00061	MG/L	0.01	0.0003		J
8/2/2012	METALS	1208060835Z	BORON	0.17	MG/L	0.1	0.012		
8/2/2012	METALS	1208060835Z	STRONTIUM	0.53	MG/L	0.01	0.0009		
8/2/2012	METALS	1208060835Z	IRON	0.038	MG/L	0.1	0.015		J
8/2/2012	ANIONS	1208060836Z	TOTAL DISSOLVED SOLIDS	510	MG/L	20	NA		
8/2/2012	ANIONS	1208060836Z	FLUORIDE	0.32	MG/L	0.1	0.03		
8/2/2012	ANIONS	1208060836Z	SULFATE	200	MG/L	5	1.5		
8/2/2012	ANIONS	1208060836Z	CHLORIDE	32	MG/L	1	0.3		
8/2/2012	ANIONS	1208060836Z	BICARBONATE AS CaCO3	130	MG/L	20	NA		
8/2/2012	ANIONS	1208060836Z	TOTAL ALKALINITY AS CaCO3	130	MG/L	20	NA		
8/2/2012	331.0	1208060915Z	Perchlorate	0.84	ug/L	0.20	0.026		
8/2/2012	353.2	1208060916Z	NITRATE/NITRITE AS N	1.3	MG/L	0.01	0.003		
8/2/2012	353.2	1208060916Z	NITRATE/NITRITE AS N	1.3	MG/L	0.01	0.003		

Analytical Results for RFI Sampling Events at WB-5-250

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/20/2012	8260	1208200935Y	Unknown	8.7	ug/L	NA	NA		TIC
8/20/2012	8260	1208200935Y	1-Hexanol, 2-ethyl-	9.7	ug/L	NA	NA		TIC
8/20/2012	8260	1208200935Y	Carbon Disulfide	1.9	ug/L	1.0	0.22		EB
8/20/2012	8260	1208200935Y	Ethylbenzene	0.79	ug/L	1.0	0.20		J
8/20/2012	8260	1208200935Y	Acetone	2.6	ug/L	10	1.3		J EB
8/20/2012	8260	1208200935Y	Methyl Mercaptan	7	ug/L	NA	NA		TIC
8/20/2012	8260	1208200935Y	Chloromethane	0.98	ug/L	2.0	0.21		J EB
8/20/2012	METALS	1208201015Y	MAGNESIUM	72	MG/L	0.5	0.06		
8/20/2012	METALS	1208201015Y	ZINC	0.0084	MG/L	0.02	0.0015		J
8/20/2012	METALS	1208201015Y	IRON	0.89	MG/L	0.1	0.015		
8/20/2012	METALS	1208201015Y	SELENIUM	0.0089	MG/L	0.005	0.0032		SP
8/20/2012	METALS	1208201015Y	TIN	0.0053	MG/L	0.05	0.003		J
8/20/2012	METALS	1208201015Y	SODIUM	45	MG/L	0.5	0.09		*
8/20/2012	METALS	1208201015Y	CALCIUM	130	MG/L	0.5	0.06		
8/20/2012	METALS	1208201015Y	VANADIUM	0.0018	MG/L	0.01	0.0015		J
8/20/2012	METALS	1208201015Y	BERYLLIUM	0.00044	MG/L	0.004	0.00018		J
8/20/2012	METALS	1208201015Y	POTASSIUM	3.3	MG/L	1	0.09		
8/20/2012	METALS	1208201015Y	BARIUM	0.095	MG/L	0.01	0.0014		
8/20/2012	METALS	1208201015Y	CHROMIUM	0.0098	MG/L	0.01	0.0006		J
8/20/2012	METALS	1208201015Y	STRONTIUM	9.8	MG/L	0.01	0.0009		
8/20/2012	METALS	1208201015Y	BORON	0.13	MG/L	0.1	0.012		
8/20/2012	METALS	1208201015Y	MANGANESE	0.082	MG/L	0.01	0.0003		

Analytical Results for RFI Sampling Events at WB-5-280

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/16/2012	8260	1208161415Y	Unknown	25	ug/L	NA	NA		TIC
8/16/2012	8260	1208161415Y	Ethylbenzene	0.33	ug/L	1.0	0.20		J
8/16/2012	8260	1208161415Y	Carbon Disulfide	4.8	ug/L	1.0	0.22		
8/16/2012	8260	1208161415Y	Sulfur Dioxide	8.3	ug/L	NA	NA		TIC
8/16/2012	8260	1208161415Y	Methyl Mercaptan	28	ug/L	NA	NA		TIC
8/16/2012	METALS	1208161440Y	BERYLLIUM	0.0004	MG/L	0.004	0.00018		J
8/16/2012	METALS	1208161440Y	POTASSIUM	3.4	MG/L	1	0.09		
8/16/2012	METALS	1208161440Y	STRONTIUM	13	MG/L	0.05	0.0045		
8/16/2012	METALS	1208161440Y	BARIUM	0.031	MG/L	0.01	0.0014		
8/16/2012	METALS	1208161440Y	IRON	0.12	MG/L	0.1	0.015		
8/16/2012	METALS	1208161440Y	SODIUM	47	MG/L	0.5	0.09		
8/16/2012	METALS	1208161440Y	CALCIUM	130	MG/L	0.5	0.06		
8/16/2012	METALS	1208161440Y	BORON	0.12	MG/L	0.1	0.012		
8/16/2012	METALS	1208161440Y	ZINC	0.045	MG/L	0.02	0.0015		
8/16/2012	METALS	1208161440Y	MAGNESIUM	72	MG/L	0.5	0.06		
8/16/2012	METALS	1208161440Y	SELENIUM	0.018	MG/L	0.005	0.0032		
8/16/2012	METALS	1208161440Y	CHROMIUM	0.022	MG/L	0.01	0.0006		
8/16/2012	METALS	1208161440Y	MANGANESE	0.01	MG/L	0.01	0.0003		
8/16/2012	ANIONS	1208161441Y	FLUORIDE	0.99	MG/L	0.1	0.03		
8/16/2012	ANIONS	1208161441Y	CHLORIDE	35	MG/L	4	1.2		
8/16/2012	ANIONS	1208161441Y	BICARBONATE AS CaCO3	570	MG/L	20	NA		
8/16/2012	ANIONS	1208161441Y	TOTAL ALKALINITY AS CaCO3	570	MG/L	20	NA		
8/16/2012	ANIONS	1208161441Y	TOTAL DISSOLVED SOLIDS	880	MG/L	40	NA		
8/16/2012	ANIONS	1208161441Y	SULFATE	83	MG/L	1	0.3		
8/16/2012	353.2	1208200751Y	NITRATE/NITRITE AS N	0.015	MG/L	0.01	0.003		

Analytical Results for RFI Sampling Events at WB-5-345

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/16/2012	8260	1208160935Y	Ethylbenzene	0.24	ug/L	1.0	0.20		J
8/16/2012	8260	1208160935Y	Carbon Disulfide	6.3	ug/L	1.0	0.22		
8/16/2012	8260	1208160935Y	Methyl Mercaptan	15	ug/L	NA	NA		TIC
8/16/2012	8260	1208160935Y	Unknown	19	ug/L	NA	NA		TIC
8/16/2012	8260	1208160935Y	Chloromethane	0.52	ug/L	2.0	0.21		J EB
8/16/2012	METALS	1208161005Y	BORON	0.14	MG/L	0.1	0.012		
8/16/2012	METALS	1208161005Y	CHROMIUM	0.012	MG/L	0.01	0.0006		
8/16/2012	METALS	1208161005Y	STRONTIUM	14	MG/L	0.05	0.0045		
8/16/2012	METALS	1208161005Y	SELENIUM	0.098	MG/L	0.005	0.0032		
8/16/2012	METALS	1208161005Y	BERYLLIUM	0.00035	MG/L	0.004	0.00018		J EB
8/16/2012	METALS	1208161005Y	CALCIUM	130	MG/L	0.5	0.06		
8/16/2012	METALS	1208161005Y	MAGNESIUM	72	MG/L	0.5	0.06		
8/16/2012	METALS	1208161005Y	MANGANESE	0.019	MG/L	0.01	0.0003		
8/16/2012	METALS	1208161005Y	NICKEL	0.0029	MG/L	0.02	0.0006		J EB
8/16/2012	METALS	1208161005Y	IRON	0.24	MG/L	0.1	0.015		
8/16/2012	METALS	1208161005Y	ZINC	0.2	MG/L	0.02	0.0015		
8/16/2012	METALS	1208161005Y	SODIUM	47	MG/L	0.5	0.09		
8/16/2012	METALS	1208161005Y	BARIUM	0.03	MG/L	0.01	0.0014		
8/16/2012	METALS	1208161005Y	POTASSIUM	3.6	MG/L	1	0.09		
9/7/2012	8260_LL	1209070845	Chloromethane	0.25	ug/L	0.50	0.20		J RB TB
9/7/2012	8260_LL	1209070845	Acetone	1.4	ug/L	5.0	1.3		J TB
9/7/2012	8260_LL	1209070845	Chloromethane	0.25	ug/L	0.50	0.20		J RB TB
9/7/2012	8260_LL	1209070845	Acetone	1.4	ug/L	5.0	1.3		J TB

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Appendix A.3
Indicator Parameters for PFTS Sampling Events for Fourth Quarter 2012

Summary of Water Quality Parameters
for the Plume Front Treatment System Sampling Events in this Reporting Period

Well ID B650-EFF-1 Event Date 8/24/2012

Sample	Parameter	Result	Units
E1208240939	Temperature	24.6	ºC
E1208240939	Conductivity	1030	µS/cm
E1208240939	Turbidity	0.31	NTU
E1208240939	pH	7.9	NA

Well ID B650-EFF-1 Event Date 9/24/2012

Sample	Parameter	Result	Units
E1209241011	pH	7.3	NA
E1209241011	Temperature	24.5	ºC
E1209241011	Conductivity	1020	µS/cm
E1209241011	Turbidity	0.34	NTU

Well ID B650-EFF-1 Event Date 10/15/2012

Sample	Parameter	Result	Units
E1210151401	pH	8.0	NA
E1210151401	Temperature	25.1	ºC
E1210151401	Conductivity	990	µS/cm
E1210151401	Turbidity	0.39	NTU

Well ID B650-EFF-1 Event Date 10/15/2012

Sample	Parameter	Result	Units
E1210171241	Temperature	25.0	ºC
E1210171241	Conductivity	1020	µS/cm
E1210171241	pH	7.4	NA
E1210171241	Turbidity	0.24	NTU

Well ID B650-INF-1 Event Date 8/24/2012

Sample	Parameter	Result	Units
I1208241012	pH	7.2	NA
I1208241012	Temperature	24.7	ºC
I1208241012	Conductivity	1040	µS/cm
I1208241012	Turbidity	0.90	NTU

Well ID B650-INF-1 Event Date 9/24/2012

Sample	Parameter	Result	Units
I1209241030	pH	6.9	NA
I1209241030	Temperature	24.5	ºC
I1209241030	Conductivity	1010	µS/cm
I1209241030	Turbidity	0.39	NTU

Well ID B650-INF-1 Event Date 10/15/2012

Sample	Parameter	Result	Units
I1210151438	Turbidity	0.79	NTU
I1210151438	Conductivity	880	µS/cm
I1210151438	pH	6.8	NA
I1210151438	Temperature	24.6	ºC

Well ID PFE-1 Event Date 10/22/2012

Sample	Parameter	Result	Units
W1210221240	Temperature	23.9	ºC
W1210221240	Conductivity	940	µS/cm
W1210221240	Turbidity	0.31	NTU
W1210221240	pH	7.1	NA

Well ID PFE-2 Event Date 10/22/2012

Sample	Parameter	Result	Units
W1210221312	pH	6.9	NA
W1210221312	Temperature	22.1	ºC
W1210221312	Conductivity	930	µS/cm
W1210221312	Turbidity	0.33	NTU

Well ID PFE-3 Event Date 10/22/2012

Sample	Parameter	Result	Units
W1210221340	pH	6.8	NA
W1210221340	Temperature	21.2	ºC
W1210221340	Conductivity	1070	µS/cm
W1210221340	Turbidity	0.30	NTU

Well ID PFE-4A Event Date 10/22/2012

Sample	Parameter	Result	Units
W1210221420	Temperature	18.2	ºC
W1210221420	Conductivity	990	µS/cm
W1210221420	pH	6.9	NA
W1210221420	Turbidity	0.36	NTU

Well ID PFE-7 Event Date 8/28/2012

Sample	Parameter	Result	Units
W1208281248	pH	6.5	NA
W1208281248	Temperature	24.3	ºC
W1208281248	Conductivity	1020	µS/cm
W1208281248	Turbidity	0.35	NTU

Well ID PFE-7 Event Date 9/24/2012

Sample	Parameter	Result	Units
W1209241326	pH	6.9	NA
W1209241326	Temperature	18.4	ºC
W1209241326	Conductivity	940	µS/cm
W1209241326	Turbidity	0.15	NTU

Well ID PFE-7 Event Date 10/24/2012

Sample	Parameter	Result	Units
W1210241043	Turbidity	0.36	NTU
W1210241043	pH	6.7	NA
W1210241043	Temperature	20.1	ºC
W1210241043	Conductivity	980	µS/cm

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Appendix A.4
Analytical Detections for PFTS Sampling Events for Fourth Quarter 2012
(Detections Only)

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Detections for Plume Front Treatment System Sampling Events in this Reporting Period

Analytical Results for Sampling Events at B650-EFF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/24/2012	8260_LL	E1208240943	Bromomethane	0.24	ug/L	0.50	0.24		J RB
8/24/2012	8260_LL	E1208240943	Chloromethane	0.25	ug/L	0.50	0.20		J
8/24/2012	607	E1208240947	Bromacil	0.0048	ug/L	0.0095	0.0048	107	J
8/24/2012	NDMA_L	E1208240951	N-Nitrosodimethylamine	0.51	ng/L	0.238	0.5		FB
8/24/2012	ANIONS	E1208240957	SULFATE	330	MG/L	10	3		
8/24/2012	ANIONS	E1208240957	CHLORIDE	45	MG/L	2	0.6		
8/24/2012	ANIONS	E1208240957	TOTAL ALKALINITY AS CaCO3	210	MG/L	20	NA		
8/24/2012	ANIONS	E1208240957	BICARBONATE AS CaCO3	200	MG/L	20	NA		
8/24/2012	ANIONS	E1208240957	TOTAL DISSOLVED SOLIDS	880	MG/L	20	NA		
8/24/2012	ANIONS	E1208240957	FLUORIDE	0.66	MG/L	0.1	0.03		
8/24/2012	353.2	E1208240959	NITRATE/NITRITE AS N	1.2	MG/L	0.01	0.003		
9/24/2012	8260_LL	E1209241013	Acetone	1.7	ug/L	5.0	1.3		J
9/24/2012	8260_LL	E1209241013	Iodomethane	0.4	ug/L	5.0	0.27		J RB TB
9/24/2012	607	E1209241017	Bromacil	0.0078	ug/L	0.0094	0.0047	106	J
9/24/2012	NDMA_L	E1209241019	N-Nitrosodimethylamine	0.51	ng/L	0.238	0.5		TB
9/24/2012	ANIONS	E1209241023	FLUORIDE	0.63	MG/L	0.1	0.03		
9/24/2012	ANIONS	E1209241023	TOTAL ALKALINITY AS CaCO3	210	MG/L	20	NA		
9/24/2012	ANIONS	E1209241023	TOTAL DISSOLVED SOLIDS	810	MG/L	20	NA		
9/24/2012	ANIONS	E1209241023	BICARBONATE AS CaCO3	200	MG/L	20	NA		
9/24/2012	ANIONS	E1209241023	SULFATE	330	MG/L	10	3		
9/24/2012	ANIONS	E1209241023	CHLORIDE	46	MG/L	2	0.6		
9/24/2012	353.2	E1209241025	NITRATE/NITRITE AS N	1.2	MG/L	0.01	0.003		
10/15/2012	8260_LL	E1210151405	Bromomethane	0.37	ug/L	0.50	0.24		J RB FB
10/15/2012	8260_LL	E1210151405	Chloromethane	0.34	ug/L	0.50	0.20		J
10/15/2012	607	E1210151409	Bromacil	0.0076	ug/L	0.0091	0.0045	100	J
10/15/2012	NDMA_L	E1210151411	N-Nitrosodimethylamine	1.91	ng/L	0.25	0.5		FB
10/15/2012	ANIONS	E1210151415	Solids, Total Dissolved	763	mg/L	11	5		
10/15/2012	ANIONS	E1210151415	Alkalinity, Total as CaCO3	208	mg/L	2.0	0.3		
10/15/2012	ANIONS	E1210151415	Chloride	37.1	mg/L	2.0	0.5		
10/15/2012	ANIONS	E1210151415	Sulfate	306	mg/L	8.0	2.1		

Analytical Results for Sampling Events at B650-EFF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/15/2012	ANIONS	E1210151415	Fluoride	0.59	mg/L	0.10	0.04		
10/15/2012	353.2	E1210151417	Nitrate+Nitrite as Nitrogen	1.27	mg/L	0.10	0.006		

Analytical Results for Sampling Events at B650-INF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/24/2012	8260	I1208241016	Trichloroethene (TCE)	69	ug/L	1.0	0.22		
8/24/2012	8260	I1208241016	Tetrachloroethene (PCE)	2.8	ug/L	1.0	0.30		
8/24/2012	8260	I1208241016	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.29	ug/L	1.0	0.21		J
8/24/2012	8260	I1208241016	1,1-Dichloroethene	0.75	ug/L	1.0	0.57		J
8/24/2012	8260	I1208241016	1,1,2-Trichloro-1,2,2-Trifluoroethane	140	ug/L	1.0	0.31		
8/24/2012	8260	I1208241016	Trichlorofluoromethane (CFC 11)	62	ug/L	1.0	0.20		
8/24/2012	607	I1208241020	N-Nitrosodimethylamine	0.12	ug/L	0.01	0.005	65	
8/24/2012	607	I1208241020	N-Nitrodimethylamine	0.11	ug/L	0.01	0.005	110	
8/24/2012	607	I1208241020	Bromacil	0.035	ug/L	0.01	0.005	107	
8/24/2012	607	I1208241022	N-Nitrosodimethylamine	0.11	ug/L	0.01	0.005	65	
8/24/2012	607	I1208241022	N-Nitrodimethylamine	0.11	ug/L	0.01	0.005	110	
8/24/2012	607	I1208241022	Bromacil	0.035	ug/L	0.01	0.005	107	
8/24/2012	ANIONS	I1208241024	TOTAL ALKALINITY AS CaCO3	210	MG/L	20	NA		
8/24/2012	ANIONS	I1208241024	SULFATE	330	MG/L	10	3		
8/24/2012	ANIONS	I1208241024	BICARBONATE AS CaCO3	210	MG/L	20	NA		
8/24/2012	ANIONS	I1208241024	FLUORIDE	0.59	MG/L	0.1	0.03		
8/24/2012	ANIONS	I1208241024	CHLORIDE	44	MG/L	2	0.6		
8/24/2012	ANIONS	I1208241024	TOTAL DISSOLVED SOLIDS	870	MG/L	20	NA		
8/24/2012	353.2	I1208241026	NITRATE/NITRITE AS N	1.2	MG/L	0.01	0.003		
9/24/2012	8260	I1209241032	1,1,2-Trichloro-1,2,2-Trifluoroethane	120	ug/L	1.0	0.31		
9/24/2012	8260	I1209241032	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.33	ug/L	1.0	0.21		J
9/24/2012	8260	I1209241032	Trichlorofluoromethane (CFC 11)	55	ug/L	1.0	0.20		
9/24/2012	8260	I1209241032	Trichloroethene (TCE)	68	ug/L	1.0	0.22		
9/24/2012	8260	I1209241032	Acetone	3.4	ug/L	10	1.3		J FB
9/24/2012	8260	I1209241032	Tetrachloroethene (PCE)	2.9	ug/L	1.0	0.30		
9/24/2012	607	I1209241036	Bromacil	0.033	ug/L	0.01	0.005	106	
9/24/2012	607	I1209241036	N-Nitrodimethylamine	0.097	ug/L	0.01	0.005	93	
9/24/2012	607	I1209241036	N-Nitrosodimethylamine	0.14	ug/L	0.01	0.005	43	
9/24/2012	607	I1209241038	N-Nitrodimethylamine	0.094	ug/L	0.0089	0.0044	93	
9/24/2012	607	I1209241038	N-Nitrosodimethylamine	0.13	ug/L	0.0089	0.0044	43	
9/24/2012	607	I1209241038	Bromacil	0.032	ug/L	0.0089	0.0044	106	
9/24/2012	ANIONS	I1209241040	SULFATE	330	MG/L	10	3		
9/24/2012	ANIONS	I1209241040	FLUORIDE	0.56	MG/L	0.1	0.03		
9/24/2012	ANIONS	I1209241040	TOTAL DISSOLVED SOLIDS	830	MG/L	20	NA		

Analytical Results for Sampling Events at B650-INF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/24/2012	ANIONS	I1209241040	TOTAL ALKALINITY AS CaCO3	210	MG/L	20	NA		
9/24/2012	ANIONS	I1209241040	CHLORIDE	45	MG/L	2	0.6		
9/24/2012	ANIONS	I1209241040	BICARBONATE AS CaCO3	210	MG/L	20	NA		
9/24/2012	353.2	I1209241042	NITRATE/NITRITE AS N	1.3	MG/L	0.01	0.003		
10/15/2012	8260	I1210151442	Tetrachloroethene (PCE)	3.2	ug/L	1.0	0.30		
10/15/2012	8260	I1210151442	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.31	ug/L	1.0	0.21		J
10/15/2012	8260	I1210151442	Trichloroethene (TCE)	77	ug/L	1.0	0.22		
10/15/2012	8260	I1210151442	Trichlorofluoromethane (CFC 11)	60	ug/L	1.0	0.20		
10/15/2012	8260	I1210151442	1,1-Dichloroethene	0.59	ug/L	1.0	0.57		J
10/15/2012	8260	I1210151442	1,1,2-Trichloro-1,2,2-Trifluoroethane	130	ug/L	1.0	0.31		
10/15/2012	8260	I1210151442	Acetone	1.7	ug/L	10	1.3		J RB FB
10/15/2012	607	I1210151446	N-Nitrosodimethylamine	0.16	ug/L	0.0094	0.0047	41	
10/15/2012	607	I1210151446	N-Nitrodimethylamine	0.11	ug/L	0.0094	0.0047	85	
10/15/2012	607	I1210151446	Bromacil	0.039	ug/L	0.0094	0.0047	100	
10/15/2012	ANIONS	I1210151448	Sulfate	301	mg/L	8.0	2.1		
10/15/2012	ANIONS	I1210151448	Fluoride	0.45	mg/L	0.10	0.04		
10/15/2012	ANIONS	I1210151448	Chloride	33.4	mg/L	2.0	0.5		
10/15/2012	ANIONS	I1210151448	Alkalinity, Total as CaCO3	208	mg/L	2.0	0.3		
10/15/2012	ANIONS	I1210151448	Solids, Total Dissolved	760	mg/L	11	5		
10/15/2012	353.2	I1210151450	Nitrate+Nitrite as Nitrogen	1.4	mg/L	0.20	0.02		
10/22/2012	8260	W1210221244	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.41	ug/L	1.0	0.21		J
10/22/2012	8260	W1210221244	Trichlorofluoromethane (CFC 11)	43	ug/L	1.0	0.20		
10/22/2012	8260	W1210221244	Trichloroethene (TCE)	60	ug/L	1.0	0.22		
10/22/2012	8260	W1210221244	Tetrachloroethene (PCE)	2.5	ug/L	1.0	0.30		
10/22/2012	8260	W1210221244	1,1,2-Trichloro-1,2,2-Trifluoroethane	61	ug/L	1.0	0.31		
10/22/2012	607	W1210221246	N-Nitrosodimethylamine	0.13	ug/L	0.0089	0.0044	66	
10/22/2012	607	W1210221246	Bromacil	0.015	ug/L	0.0089	0.0044	112	
10/22/2012	607	W1210221246	N-Nitrodimethylamine	0.058	ug/L	0.0089	0.0044	112	

Analytical Results for Sampling Events at PFE-2

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/22/2012	8260	W1210221315	Trichlorofluoromethane (CFC 11)	52	ug/L	1.0	0.20		
10/22/2012	8260	W1210221315	Chloromethane	0.28	ug/L	2.0	0.21		J TB
10/22/2012	8260	W1210221315	Acetone	1.7	ug/L	10	1.3		J RB TB
10/22/2012	8260	W1210221315	1,1,2-Trichloro-1,2,2-Trifluoroethane	86	ug/L	1.0	0.31		
10/22/2012	8260	W1210221315	Trichloroethene (TCE)	58	ug/L	1.0	0.22		
10/22/2012	8260	W1210221315	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.29	ug/L	1.0	0.21		J
10/22/2012	8260	W1210221315	Tetrachloroethene (PCE)	2.1	ug/L	1.0	0.30		
10/22/2012	607	W1210221317	N-Nitrosodimethylamine	0.08	ug/L	0.0089	0.0044	66	
10/22/2012	607	W1210221317	Bromacil	0.0075	ug/L	0.0089	0.0044	112	J
10/22/2012	607	W1210221317	N-Nitrodimethylamine	0.051	ug/L	0.0089	0.0044	112	
10/22/2012	8260	W1210221343	1,1-Dichloroethene	1.4	ug/L	1.0	0.57		
10/22/2012	8260	W1210221343	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.91	ug/L	1.0	0.21		J
10/22/2012	8260	W1210221343	Trichlorofluoromethane (CFC 11)	150	ug/L	1.0	0.20		
10/22/2012	8260	W1210221343	Trichloroethene (TCE)	170	ug/L	1.0	0.22		
10/22/2012	8260	W1210221343	Tetrachloroethene (PCE)	7.2	ug/L	1.0	0.30		
10/22/2012	8260	W1210221343	Chloromethane	0.35	ug/L	2.0	0.21		J FB
10/22/2012	8260	W1210221343	1,1,2-Trichloro-1,2,2-Trifluoroethane	300	ug/L	2.5	0.78		A
10/22/2012	8260	W1210221343	Dichlorofluoromethane (CFC 21)	0.35	ug/L	1.0	0.24		J
10/22/2012	607	W1210221345	Bromacil	0.12	ug/L	0.0089	0.0044	112	
10/22/2012	607	W1210221345	N-Nitrosodimethylamine	0.33	ug/L	0.0089	0.0044	66	
10/22/2012	607	W1210221345	N-Nitrodimethylamine	0.27	ug/L	0.0089	0.0044	112	
10/22/2012	8260	W1210221424	1,1,2-Trichloro-1,2,2-Trifluoroethane	45	ug/L	1.0	0.31		A
10/22/2012	8260	W1210221424	2-Propanol	8.8	ug/L	50	8.6		J
10/22/2012	8260	W1210221424	Chloromethane	0.24	ug/L	2.0	0.21		J
10/22/2012	8260	W1210221424	Tetrachloroethene (PCE)	1	ug/L	1.0	0.30		
10/22/2012	8260	W1210221424	Trichloroethene (TCE)	22	ug/L	1.0	0.22		
10/22/2012	8260	W1210221424	Trichlorofluoromethane (CFC 11)	17	ug/L	1.0	0.20		
10/22/2012	8260	W1210221424	Acetone	2.7	ug/L	10	1.3		J RB FB
10/22/2012	607	W1210221426	Bromacil	0.028	ug/L	0.0089	0.0044	112	
10/22/2012	607	W1210221426	N-Nitrosodimethylamine	0.058	ug/L	0.0089	0.0044	66	
10/22/2012	607	W1210221426	N-Nitrodimethylamine	0.053	ug/L	0.0089	0.0044	112	

Analytical Results for Sampling Events at PFE-7

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/28/2012	8260	W1208281250	Trichloroethene (TCE)	6	ug/L	1.0	0.22		
8/28/2012	8260	W1208281250	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.2	ug/L	1.0	0.31		
8/28/2012	8260	W1208281250	Acetone	1.4	ug/L	10	1.3		J
8/28/2012	8260	W1208281250	Trichlorofluoromethane (CFC 11)	4.2	ug/L	1.0	0.20		
8/28/2012	NDMA_L	W1208281253	N-Nitrosodimethylamine	4.38	ng/L	0.24	0.5		FB
9/24/2012	8260	W1209241329	Trichloroethene (TCE)	6.3	ug/L	1.0	0.22		
9/24/2012	8260	W1209241329	Trichlorofluoromethane (CFC 11)	4.8	ug/L	1.0	0.20		
9/24/2012	8260	W1209241329	1,1,2-Trichloro-1,2,2-Trifluoroethane	3	ug/L	1.0	0.31		
9/24/2012	8260	W1209241329	Chloromethane	0.26	ug/L	2.0	0.21		J FB
9/24/2012	NDMA_L	W1209241332	N-nitrodimethylamine	0.73	ng/L	0.24	0.7		
9/24/2012	NDMA_L	W1209241332	N-Nitrosodimethylamine	2.65	ng/L	0.24	0.5		FB
10/24/2012	8260	W1210241047	Trichlorofluoromethane (CFC 11)	4.5	ug/L	1.0	0.20		
10/24/2012	8260	W1210241047	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.3	ug/L	1.0	0.31		
10/24/2012	8260	W1210241047	Trichloroethene (TCE)	6	ug/L	1.0	0.22		
10/24/2012	8260	W1210241048	Trichlorofluoromethane (CFC 11)	4.5	ug/L	1.0	0.20		
10/24/2012	8260	W1210241048	Trichloroethene (TCE)	5.8	ug/L	1.0	0.22		
10/24/2012	8260	W1210241048	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.4	ug/L	1.0	0.31		

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Appendix A.5
Indicator Parameters for MPITS Sampling Events for Fourth Quarter 2012

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Summary of Water Quality Parameters
for the Mid-Plume Interception and Treatment System
Sampling Events in this Reporting Period

Well ID B655-EFF-2 Event Date 8/28/2012

Sample	Parameter	Result	Units
E1208280945	Temperature	26.5	ºC
E1208280945	Conductivity	910	µS/cm
E1208280945	Turbidity	0.26	NTU
E1208280945	pH	7.9	NA

Well ID B655-EFF-2 Event Date 9/25/2012

Sample	Parameter	Result	Units
E1209250959	pH	8.0	NA
E1209250959	Temperature	24.1	ºC
E1209250959	Conductivity	970	µS/cm
E1209250959	Turbidity	0.25	NTU

Well ID B655-EFF-2 Event Date 10/17/2012

Sample	Parameter	Result	Units
E1210171305	pH	7.7	NA
E1210171305	Temperature	24.6	ºC
E1210171305	Conductivity	950	µS/cm
E1210171305	Turbidity	1.62	NTU

Well ID B655-EFF-2 Event Date 10/17/2012

Sample	Parameter	Result	Units
E1211161231	Conductivity	993	µS/cm
E1211161231	Turbidity	0.40	NTU
E1211161231	Temperature	22.4	ºC
E1211161231	pH	7.3	NA

Well ID B655-INF-1 Event Date 8/28/2012

Sample	Parameter	Result	Units
I1208281012	Temperature	26.5	ºC
I1208281012	Conductivity	840	µS/cm
I1208281012	Turbidity	0.27	NTU
I1208281012	pH	7.20	NA

Well ID B655-INF-1 Event Date 9/25/2012

Sample	Parameter	Result	Units
I1209251024	Temperature	23.7	ºC
I1209251024	Conductivity	1020	µS/cm
I1209251024	pH	6.6	NA
I1209251024	Turbidity	1.60	NTU

Well ID B655-INF-1 Event Date 10/17/2012

Sample	Parameter	Result	Units
I1210171336	pH	6.4	NA
I1210171336	Temperature	24.8	ºC
I1210171336	Conductivity	940	µS/cm
I1210171336	Turbidity	0.23	NTU

Well ID MPE-1 Event Date 8/29/2012

Sample	Parameter	Result	Units
W1208291254	Conductivity	1110	µS/cm
W1208291254	Temperature	18.1	ºC
W1208291254	Turbidity	0.43	NTU
W1208291254	pH	6.6	NA

Well ID MPE-1 Event Date 10/19/2012

Sample	Parameter	Result	Units
W1210191245	pH	6.6	NA
W1210191245	Temperature	10.2	ºC
W1210191245	Conductivity	1090	µS/cm
W1210191245	Turbidity	0.29	NTU

Well ID MPE-10 Event Date 10/19/2012

Sample	Parameter	Result	Units
W1210191331	Temperature	21.0	ºC
W1210191331	Conductivity	1030	µS/cm
W1210191331	pH	6.9	NA
W1210191331	Turbidity	0.25	NTU

Well ID MPE-11 Event Date 8/29/2012

Sample	Parameter	Result	Units
W1208291221	pH	7.4	NA
W1208291221	Temperature	14.2	ºC
W1208291221	Conductivity	880	µS/cm
W1208291221	Turbidity	1.79	NTU

Well ID MPE-11 Event Date 10/19/2012

Sample	Parameter	Result	Units
W1210191012	pH	7.0	NA
W1210191012	Turbidity	0.57	NTU
W1210191012	Temperature	19.5	ºC
W1210191012	Conductivity	830	µS/cm

Well ID MPE-8 Event Date 9/26/2012

Sample	Parameter	Result	Units
W1209260821	pH	6.1	NA
W1209260821	Temperature	22.1	ºC
W1209260821	Conductivity	1300	µS/cm
W1209260821	Turbidity	0.97	NTU

Well ID MPE-8 Event Date 10/23/2012

Sample	Parameter	Result	Units
W1210231339	pH	6.8	NA
W1210231339	Temperature	19.1	ºC
W1210231339	Conductivity	1240	µS/cm
W1210231339	Turbidity	1.13	NTU

Well ID MPE-9 Event Date 10/23/2012

Sample	Parameter	Result	Units
W1210231350	Turbidity	0.43	NTU
W1210231350	pH	6.3	NA
W1210231350	Temperature	20.2	ºC
W1210231350	Conductivity	1150	µS/cm

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Appendix A.6
Analytical Detections for MPITS Sampling Events for Fourth Quarter 2012
(Detections Only)

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Detections for Mid-Plume Interception and Treatment System Sampling Events in this Reporting Period

Analytical Results for Sampling Events at B655-EFF-2

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/17/2012	8260_LL	E1210171309	Acetone	2.9	ug/L	5.0	1.3		J TB
10/17/2012	8260_LL	E1210171309	Bromomethane	0.25	ug/L	0.50	0.24		J RB
10/17/2012	8260_LL	E1210171309	Chloromethane	0.33	ug/L	0.50	0.20		J TB
10/17/2012	607	E1210171313	Bromacil	0.0057	ug/L	0.0089	0.0044	100	J
10/17/2012	ANIONS	E1210171319	Solids, Total Dissolved	768	mg/L	10	5		
10/17/2012	ANIONS	E1210171319	Alkalinity, Total as CaCO3	233	mg/L	2.0	0.3		
10/17/2012	ANIONS	E1210171319	Chloride	44.5	mg/L	2.0	0.5		
10/17/2012	ANIONS	E1210171319	Fluoride	0.27	mg/L	0.10	0.04		
10/17/2012	ANIONS	E1210171319	Sulfate	281	mg/L	8.0	2.1		
10/17/2012	353.2	E1210171321	Nitrate+Nitrite as Nitrogen	1.75	mg/L	0.20	0.02		
9/25/2012	8260_LL	E1209251001	Iodomethane	0.32	ug/L	5.0	0.27		J
9/25/2012	8260_LL	E1209251001	Acetone	2.3	ug/L	5.0	1.3		J FB
9/25/2012	607	E1209251005	Bromacil	0.0047	ug/L	0.0089	0.0044	106	J
9/25/2012	353.2	E1209251011	NITRATE/NITRITE AS N	2.4	MG/L	0.02	0.006		
8/28/2012	8260	E1208280947	Chloromethane	0.28	ug/L	0.50	0.20		J RB FB
8/28/2012	8260	E1208280947	Acetone	3.2	ug/L	5.0	1.3		J FB
8/28/2012	8260	E1208280947	Iodomethane	0.28	ug/L	5.0	0.27		J RB
8/28/2012	NDMA_L	E1208280957	N-Nitrosodimethylamine	0.58	ng/L	0.245	0.5		
8/28/2012	METALS	E1208281001	STRONTIUM	2.4	MG/L	0.01	0.0009		
8/28/2012	METALS	E1208281001	POTASSIUM	5.5	MG/L	1	0.09		
8/28/2012	METALS	E1208281001	MAGNESIUM	48	MG/L	0.5	0.06		
8/28/2012	METALS	E1208281001	VANADIUM	0.005	MG/L	0.01	0.0015		J
8/28/2012	METALS	E1208281001	SELENIUM	0.0032	MG/L	0.005	0.0032		J
8/28/2012	METALS	E1208281001	ARSENIC	0.0021	MG/L	0.005	0.0015		J
8/28/2012	METALS	E1208281001	SODIUM	47	MG/L	0.5	0.09		
8/28/2012	METALS	E1208281001	NICKEL	0.0015	MG/L	0.02	0.0006		J
8/28/2012	METALS	E1208281001	COPPER	0.0072	MG/L	0.01	0.0006		J
8/28/2012	METALS	E1208281001	BARIUM	0.036	MG/L	0.01	0.0014		
8/28/2012	METALS	E1208281001	ZINC	0.027	MG/L	0.02	0.0015		
8/28/2012	METALS	E1208281001	BORON	0.09	MG/L	0.1	0.012		J
8/28/2012	METALS	E1208281001	CALCIUM	100	MG/L	0.5	0.06		
8/28/2012	METALS	E1208281001	MOLYBDENUM	0.0072	MG/L	0.01	0.0015		J

Analytical Results for Sampling Events at B655-INF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/17/2012	8260	I1210171340	Acetone	1.4	ug/L	10	1.3		J RB FB
10/17/2012	8260	I1210171340	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.5	ug/L	1.0	0.21		
10/17/2012	8260	I1210171340	Trichlorofluoromethane (CFC 11)	120	ug/L	1.0	0.20		
10/17/2012	8260	I1210171340	Trichloroethene (TCE)	50	ug/L	1.0	0.22		
10/17/2012	8260	I1210171340	Tetrachloroethene (PCE)	2.3	ug/L	1.0	0.30		
10/17/2012	8260	I1210171340	Chloromethane	0.25	ug/L	2.0	0.21		J FB
10/17/2012	8260	I1210171340	1,1-Dichloroethene	0.7	ug/L	1.0	0.57		J
10/17/2012	8260	I1210171340	1,1,2-Trichloro-1,2,2-Trifluoroethane	210	ug/L	2.5	0.78		
10/17/2012	8260	I1210171340	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1.0	0.24		
10/17/2012	607	I1210171344	N-Nitrodimethylamine	1.2	ug/L	0.0089	0.0044	85	
10/17/2012	607	I1210171344	Bromacil	0.11	ug/L	0.0089	0.0044	100	
10/17/2012	607	I1210171344	N-Nitrosodimethylamine	2.2	ug/L	0.0089	0.0044	41	
10/17/2012	607	I1210171346	Bromacil	0.1	ug/L	0.0089	0.0044	100	
10/17/2012	607	I1210171346	N-Nitrosodimethylamine	2.3	ug/L	0.0089	0.0044	41	
10/17/2012	607	I1210171346	N-Nitrodimethylamine	1.2	ug/L	0.0089	0.0044	85	
10/17/2012	ANIONS	I1210171348	Sulfate	262	mg/L	8.0	2.1		
10/17/2012	ANIONS	I1210171348	Fluoride	0.38	mg/L	0.10	0.04		
10/17/2012	ANIONS	I1210171348	Chloride	37	mg/L	2.0	0.5		
10/17/2012	ANIONS	I1210171348	Alkalinity, Total as CaCO3	247	mg/L	2.0	0.3		
10/17/2012	ANIONS	I1210171348	Solids, Total Dissolved	709	mg/L	10	5		
10/17/2012	353.2	I1210171350	Nitrate+Nitrite as Nitrogen	2.5	mg/L	0.20	0.02		
9/25/2012	8260	I1209251026	Acetone	6.8	ug/L	10	1.3		J
9/25/2012	8260	I1209251026	Chloromethane	0.25	ug/L	2.0	0.21		J TB
9/25/2012	8260	I1209251026	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.4	ug/L	1.0	0.21		
9/25/2012	8260	I1209251026	Trichlorofluoromethane (CFC 11)	100	ug/L	1.0	0.20		
9/25/2012	8260	I1209251026	Trichloroethene (TCE)	46	ug/L	1.0	0.22		
9/25/2012	8260	I1209251026	Tetrachloroethene (PCE)	2	ug/L	1.0	0.30		
9/25/2012	8260	I1209251026	Dichlorofluoromethane (CFC 21)	1.3	ug/L	1.0	0.24		
9/25/2012	8260	I1209251026	1,1,2-Trichloro-1,2,2-Trifluoroethane	180	ug/L	1.0	0.31		
9/25/2012	607	I1209251030	Bromacil	0.023	ug/L	0.0094	0.0047	106	
9/25/2012	607	I1209251030	N-Nitrodimethylamine	0.27	ug/L	0.0094	0.0047	93	
9/25/2012	607	I1209251030	N-Nitrosodimethylamine	0.52	ug/L	0.0094	0.0047	43	
9/25/2012	METALS	I1209251032	MAGNESIUM	40	MG/L	0.5	0.06		
9/25/2012	METALS	I1209251032	COBALT	0.00099	MG/L	0.01	0.0006		J RB
9/25/2012	METALS	I1209251032	IRON	0.043	MG/L	0.1	0.015		J

Analytical Results for Sampling Events at B655-INF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/25/2012	METALS	I1209251032	ZINC	0.0068	MG/L	0.02	0.0015		J
9/25/2012	METALS	I1209251032	MOLYBDENUM	0.0079	MG/L	0.01	0.0015		J
9/25/2012	METALS	I1209251032	STRONTIUM	2.2	MG/L	0.01	0.0009		
9/25/2012	METALS	I1209251032	BORON	0.081	MG/L	0.1	0.012		J
9/25/2012	METALS	I1209251032	POTASSIUM	6	MG/L	1	0.09		
9/25/2012	METALS	I1209251032	VANADIUM	0.0046	MG/L	0.01	0.0015		J
9/25/2012	METALS	I1209251032	BARIUM	0.036	MG/L	0.01	0.0014		
9/25/2012	METALS	I1209251032	COPPER	0.0049	MG/L	0.01	0.0006		J RB
9/25/2012	METALS	I1209251032	SODIUM	47	MG/L	0.5	0.09		
9/25/2012	METALS	I1209251032	CALCIUM	85	MG/L	0.5	0.06		
9/25/2012	353.2	I1209251034	NITRATE/NITRITE AS N	2.9	MG/L	0.02	0.006		
8/28/2012	8260	I1208281016	Dichlorofluoromethane (CFC 21)	0.77	ug/L	1.0	0.24		J
8/28/2012	8260	I1208281016	Chloromethane	0.22	ug/L	2.0	0.21		J RB FB
8/28/2012	8260	I1208281016	Trichloroethene (TCE)	10	ug/L	1.0	0.22		
8/28/2012	8260	I1208281016	Trichlorofluoromethane (CFC 11)	23	ug/L	1.0	0.20		
8/28/2012	8260	I1208281016	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.59	ug/L	1.0	0.21		J
8/28/2012	8260	I1208281016	1,1,2-Trichloro-1,2,2-Trifluoroethane	37	ug/L	1.0	0.31		
8/28/2012	8260	I1208281016	Tetrachloroethene (PCE)	0.58	ug/L	1.0	0.30		J
8/28/2012	607	I1208281020	N-Nitrodimethylamine	0.058	ug/L	0.01	0.005	114	
8/28/2012	607	I1208281020	N-Nitrosodimethylamine	0.09	ug/L	0.01	0.005	76	
8/28/2012	METALS	I1208281022	POTASSIUM	6.3	MG/L	1	0.09		
8/28/2012	METALS	I1208281022	STRONTIUM	2.2	MG/L	0.01	0.0009		
8/28/2012	METALS	I1208281022	BARIUM	0.04	MG/L	0.01	0.0014		
8/28/2012	METALS	I1208281022	COPPER	0.006	MG/L	0.01	0.0006		J
8/28/2012	METALS	I1208281022	MAGNESIUM	40	MG/L	0.5	0.06		
8/28/2012	METALS	I1208281022	SODIUM	48	MG/L	0.5	0.09		
8/28/2012	METALS	I1208281022	ARSENIC	0.0026	MG/L	0.005	0.0015		J
8/28/2012	METALS	I1208281022	BORON	0.082	MG/L	0.1	0.012		J
8/28/2012	METALS	I1208281022	ZINC	0.0026	MG/L	0.02	0.0015		J
8/28/2012	METALS	I1208281022	MOLYBDENUM	0.0077	MG/L	0.01	0.0015		J
8/28/2012	METALS	I1208281022	VANADIUM	0.0058	MG/L	0.01	0.0015		J
8/28/2012	METALS	I1208281022	CALCIUM	85	MG/L	0.5	0.06		
8/28/2012	353.2	I1208281024	NITRATE/NITRITE AS N	0.94	MG/L	0.01	0.003		

Analytical Results for Sampling Events at MPE-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/19/2012	8260	W1210191251	1,1-Dichloroethene	1.9	ug/L	1.0	0.57		
10/19/2012	8260	W1210191251	Toluene	0.29	ug/L	1.0	0.20		J
10/19/2012	8260	W1210191251	Trichloroethene (TCE)	140	ug/L	1.0	0.22		
10/19/2012	8260	W1210191251	Trichlorofluoromethane (CFC 11)	330	ug/L	10	2.0		
10/19/2012	8260	W1210191251	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.4	ug/L	1.0	0.21		
10/19/2012	8260	W1210191251	Dichlorofluoromethane (CFC 21)	2.5	ug/L	1.0	0.24		
10/19/2012	8260	W1210191251	Tetrachloroethene (PCE)	6.7	ug/L	1.0	0.30		
10/19/2012	8260	W1210191251	Chloroform	0.26	ug/L	1.0	0.25		J
10/19/2012	8260	W1210191251	1,1,2-Trichloro-1,2,2-Trifluoroethane	630	ug/L	10	3.1		
10/19/2012	8260	W1210191251	Chloromethane	0.25	ug/L	2.0	0.21		J
10/19/2012	607	W1210191253	N-Nitrosodimethylamine	5.8	ug/L	0.0089	0.0044	66	
10/19/2012	607	W1210191253	N-Nitrodimethylamine	3	ug/L	0.0089	0.0044	112	
10/19/2012	607	W1210191253	Bromacil	0.28	ug/L	0.0089	0.0044	112	
8/29/2012	8260	W1208291258	Tetrachloroethene (PCE)	6.1	ug/L	1.0	0.30		
8/29/2012	8260	W1208291258	1,1,2-Trichloro-1,2,2-Trifluoroethane	580	ug/L	5.0	1.6		
8/29/2012	8260	W1208291258	Chloroform	0.27	ug/L	1.0	0.25		J
8/29/2012	8260	W1208291258	Dichlorofluoromethane (CFC 21)	3.7	ug/L	1.0	0.24		A
8/29/2012	8260	W1208291258	Trichloroethene (TCE)	140	ug/L	1.0	0.22		
8/29/2012	8260	W1208291258	Trichlorofluoromethane (CFC 11)	340	ug/L	5.0	1.0		
8/29/2012	8260	W1208291258	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.3	ug/L	1.0	0.21		
8/29/2012	607	W1208291300	N-Nitrosodimethylamine	6.3	ug/L	0.0098	0.0049	35	
8/29/2012	607	W1208291300	N-Nitrodimethylamine	3.3	ug/L	0.0098	0.0049	35	
8/29/2012	607	W1208291300	Bromacil	0.28	ug/L	0.0098	0.0049	90	
8/29/2012	METALS	W1208291302	BARIUM	0.028	MG/L	0.01	0.0014		
8/29/2012	METALS	W1208291302	MOLYBDENUM	0.0058	MG/L	0.01	0.0015		J
8/29/2012	METALS	W1208291302	STRONTIUM	2.5	MG/L	0.01	0.0009		
8/29/2012	METALS	W1208291302	POTASSIUM	3.5	MG/L	1	0.09		
8/29/2012	METALS	W1208291302	MANGANESE	0.00089	MG/L	0.01	0.0003		J
8/29/2012	METALS	W1208291302	MAGNESIUM	65	MG/L	0.5	0.06		
8/29/2012	METALS	W1208291302	VANADIUM	0.0015	MG/L	0.01	0.0015		J
8/29/2012	METALS	W1208291302	CALCIUM	130	MG/L	0.5	0.06		
8/29/2012	METALS	W1208291302	SODIUM	37	MG/L	0.5	0.09		
8/29/2012	METALS	W1208291302	COPPER	0.0045	MG/L	0.01	0.0006		J
8/29/2012	METALS	W1208291302	BORON	0.09	MG/L	0.1	0.012		J
8/29/2012	METALS	W1208291302	ZINC	0.78	MG/L	0.02	0.0015		
8/29/2012	METALS	W1208291302	LEAD	0.0035	MG/L	0.003	0.0009		

Analytical Results for Sampling Events at MPE-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
8/29/2012	METALS	W1208291302	IRON	1.2	MG/L	0.1	0.015		
8/29/2012	METALS	W1208291302	NICKEL	0.005	MG/L	0.02	0.0006		J
8/29/2012	331.0	W1208291303	Perchlorate	0.53	ug/L	0.20	0.026		
8/29/2012	353.2	W1208291304	NITRATE/NITRITE AS N	4.9	MG/L	0.05	0.015		

Analytical Results for Sampling Events at MPE-10

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/19/2012	8260	W1210191335	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	1.0	0.21		
10/19/2012	8260	W1210191335	Dichlorofluoromethane (CFC 21)	3.7	ug/L	1.0	0.24		
10/19/2012	8260	W1210191335	2-Propanol	29	ug/L	50	8.6		J
10/19/2012	8260	W1210191335	Trichloroethene (TCE)	16	ug/L	1.0	0.22		
10/19/2012	8260	W1210191335	1,1,2-Trichloro-1,2,2-Trifluoroethane	39	ug/L	1.0	0.31		
10/19/2012	8260	W1210191335	Trichlorofluoromethane (CFC 11)	41	ug/L	1.0	0.20		
10/19/2012	8260	W1210191335	Acetone	5.3	ug/L	10	1.3		J RB TB
10/19/2012	8260	W1210191335	Chloromethane	0.24	ug/L	2.0	0.21		J TB
10/19/2012	8260	W1210191335	Tetrachloroethene (PCE)	0.59	ug/L	1.0	0.30		J
10/19/2012	607	W1210191337	Bromacil	0.01	ug/L	0.0089	0.0044	112	
10/19/2012	607	W1210191337	N-Nitrodimethylamine	0.22	ug/L	0.0089	0.0044	112	
10/19/2012	607	W1210191337	N-Nitrosodimethylamine	0.42	ug/L	0.0089	0.0044	66	
10/19/2012	METALS	W1210191338	Copper, Total	0.004	mg/L	0.020	0.002		J RB
10/19/2012	METALS	W1210191338	Boron, Total	0.1	mg/L	0.20	0.05		J
10/19/2012	METALS	W1210191338	Potassium, Total	5.1	mg/L	2.0	0.07		
10/19/2012	METALS	W1210191338	Selenium, Total	0.01	mg/L	0.010	0.004		J
10/19/2012	METALS	W1210191338	Sodium, Total	41.9	mg/L	1.0	0.10		
10/19/2012	METALS	W1210191338	Strontium, Total	2.48	mg/L	0.10	0.001		
10/19/2012	METALS	W1210191338	Zinc, Total	0.058	mg/L	0.020	0.002		
10/19/2012	METALS	W1210191338	Iron, Total	0.01	mg/L	0.10	0.006		J
10/19/2012	METALS	W1210191338	Cobalt, Total	0.0002	mg/L	0.0010	0.000008		J RB
10/19/2012	METALS	W1210191338	Calcium, Total	110	mg/L	1.0	0.2		
10/19/2012	METALS	W1210191338	Molybdenum, Total	0.008	mg/L	0.025	0.002		J
10/19/2012	METALS	W1210191338	Magnesium, Total	61.9	mg/L	1.0	0.005		
10/19/2012	METALS	W1210191338	Barium, Total	0.021	mg/L	0.020	0.0004		J
10/19/2012	ANIONS	W1210191339	Solids, Total Dissolved	853	mg/L	10	5		
10/19/2012	ANIONS	W1210191339	Sulfate	322	mg/L	8.0	2.1		
10/19/2012	ANIONS	W1210191339	Fluoride	0.56	mg/L	0.10	0.04		
10/19/2012	ANIONS	W1210191339	Alkalinity, Total as CaCO3	232	mg/L	2.0	0.3		
10/19/2012	ANIONS	W1210191339	Chloride	46	mg/L	2.0	0.5		
10/19/2012	353.2	W1210191340	Nitrate+Nitrite as Nitrogen	1.63	mg/L	0.050	0.003		

Analytical Results for Sampling Events at MPE-11

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/19/2012	8260	W1210191015	Trichloroethene (TCE)	3.1	ug/L	1.0	0.22		
10/19/2012	8260	W1210191015	Trichlorofluoromethane (CFC 11)	5.8	ug/L	1.0	0.20		
10/19/2012	8260	W1210191015	Dichlorofluoromethane (CFC 21)	0.63	ug/L	1.0	0.24		J
10/19/2012	8260	W1210191015	Chloromethane	0.28	ug/L	2.0	0.21		J FB
10/19/2012	8260	W1210191015	Acetone	3.1	ug/L	10	1.3		J RB FB
10/19/2012	8260	W1210191015	1,1,2-Trichloro-1,2,2-Trifluoroethane	8.8	ug/L	1.0	0.31		
10/19/2012	8260	W1210191015	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.47	ug/L	1.0	0.21		J
10/19/2012	8260	W1210191015	2-Propanol	11	ug/L	50	8.6		J
10/19/2012	607	W1210191017	N-Nitrodimethylamine	0.04	ug/L	0.0089	0.0044	112	
10/19/2012	607	W1210191017	N-Nitrosodimethylamine	0.071	ug/L	0.0089	0.0044	66	
8/29/2012	8260	W1208291224	1,1,2-Trichloro-1,2,2-Trifluoroethane	6	ug/L	1.0	0.31		
8/29/2012	8260	W1208291224	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.35	ug/L	1.0	0.21		J
8/29/2012	8260	W1208291224	Dichlorofluoromethane (CFC 21)	0.66	ug/L	1.0	0.24		J
8/29/2012	8260	W1208291224	Trichloroethene (TCE)	2.1	ug/L	1.0	0.22		
8/29/2012	8260	W1208291224	Trichlorofluoromethane (CFC 11)	4.2	ug/L	1.0	0.20		
8/29/2012	607	W1208291226	N-Nitrodimethylamine	0.039	ug/L	0.0089	0.0044	35	
8/29/2012	607	W1208291226	N-Nitrosodimethylamine	0.058	ug/L	0.0089	0.0044	35	
8/29/2012	METALS	W1208291227	STRONTIUM	2.1	MG/L	0.01	0.0009		
8/29/2012	METALS	W1208291227	POTASSIUM	6.3	MG/L	1	0.09		
8/29/2012	METALS	W1208291227	MAGNESIUM	40	MG/L	0.5	0.06		
8/29/2012	METALS	W1208291227	VANADIUM	0.0054	MG/L	0.01	0.0015		J
8/29/2012	METALS	W1208291227	ZINC	0.03	MG/L	0.02	0.0015		
8/29/2012	METALS	W1208291227	IRON	0.019	MG/L	0.1	0.015		J
8/29/2012	METALS	W1208291227	ARSENIC	0.0016	MG/L	0.005	0.0015		J
8/29/2012	METALS	W1208291227	MOLYBDENUM	0.0079	MG/L	0.01	0.0015		J
8/29/2012	METALS	W1208291227	CALCIUM	84	MG/L	0.5	0.06		
8/29/2012	METALS	W1208291227	BORON	0.08	MG/L	0.1	0.012		J
8/29/2012	METALS	W1208291227	SODIUM	47	MG/L	0.5	0.09		
8/29/2012	METALS	W1208291227	BARIUM	0.041	MG/L	0.01	0.0014		
8/29/2012	METALS	W1208291227	NICKEL	0.0033	MG/L	0.02	0.0006		J
8/29/2012	331.0	W1208291228	Perchlorate	0.27	ug/L	0.20	0.026		
8/29/2012	353.2	W1208291229	NITRATE/NITRITE AS N	0.93	MG/L	0.01	0.003		

Analytical Results for Sampling Events at MPE-8

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/23/2012	8260	W1210231342	1,1,2-Trichloro-1,2,2-Trifluoroethane	26	ug/L	1.0	0.31		
10/23/2012	8260	W1210231342	Trichlorofluoromethane (CFC 11)	9.2	ug/L	1.0	0.20		
10/23/2012	8260	W1210231342	Trichloroethene (TCE)	11	ug/L	1.0	0.22		
10/23/2012	8260	W1210231342	Toluene	15	ug/L	1.0	0.20		
10/23/2012	8260	W1210231342	Tetrachloroethene (PCE)	0.69	ug/L	1.0	0.30		J
10/23/2012	8260	W1210231342	Dichlorofluoromethane (CFC 21)	27	ug/L	1.0	0.24		
10/23/2012	8260	W1210231342	Chloromethane	0.3	ug/L	2.0	0.21		J FB
10/23/2012	8260	W1210231342	Acetone	2.1	ug/L	10	1.3		J
10/23/2012	8260	W1210231342	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	30	ug/L	1.0	0.21		
10/23/2012	607	W1210231344	N-Nitrosodimethylamine	0.27	ug/L	0.0091	0.0045	76	
10/23/2012	607	W1210231344	N-Nitrodimethylamine	0.12	ug/L	0.0091	0.0045	114	
10/23/2012	607	W1210231344	Bromacil	0.01	ug/L	0.0091	0.0045	112	
10/23/2012	METALS	W1210231345	Manganese, Total	4.7	mg/L	0.010	0.0007		
10/23/2012	METALS	W1210231345	Cadmium, Total	0.00008	mg/L	0.0010	0.00003		J
10/23/2012	METALS	W1210231345	Calcium, Total	123	mg/L	1.0	0.2		
10/23/2012	METALS	W1210231345	Chromium, Total	0.002	mg/L	0.010	0.0009		J
10/23/2012	METALS	W1210231345	Cobalt, Total	0.0005	mg/L	0.0010	0.000008		J RB
10/23/2012	METALS	W1210231345	Copper, Total	0.004	mg/L	0.020	0.002		J RB
10/23/2012	METALS	W1210231345	Magnesium, Total	62.9	mg/L	1.0	0.005		
10/23/2012	METALS	W1210231345	Beryllium, Total	0.00006	mg/L	0.0010	0.00002		J
10/23/2012	METALS	W1210231345	Barium, Total	0.069	mg/L	0.020	0.0004		
10/23/2012	METALS	W1210231345	Boron, Total	0.23	mg/L	0.20	0.05		
10/23/2012	METALS	W1210231345	Molybdenum, Total	0.003	mg/L	0.025	0.002		J
10/23/2012	METALS	W1210231345	Zinc, Total	0.027	mg/L	0.020	0.002		
10/23/2012	METALS	W1210231345	Thallium, Total	0.0003	mg/L	0.0010	0.00007		J
10/23/2012	METALS	W1210231345	Strontium, Total	2.78	mg/L	0.10	0.001		
10/23/2012	METALS	W1210231345	Sodium, Total	42.7	mg/L	1.0	0.10		
10/23/2012	METALS	W1210231345	Selenium, Total	0.006	mg/L	0.010	0.004		J
10/23/2012	METALS	W1210231345	Potassium, Total	38.5	mg/L	2.0	0.07		
10/23/2012	METALS	W1210231345	Iron, Total	14.7	mg/L	0.10	0.006		
10/23/2012	ANIONS	W1210231346	Fluoride	0.17	mg/L	0.10	0.04		
10/23/2012	ANIONS	W1210231346	Sulfate	285	mg/L	8.0	2.1		
10/23/2012	ANIONS	W1210231346	Chloride	77.3	mg/L	2.0	0.5		
10/23/2012	ANIONS	W1210231346	Alkalinity, Total as CaCO3	330	mg/L	2.0	0.3		
10/23/2012	ANIONS	W1210231346	Solids, Total Dissolved	909	mg/L	13	6		
10/23/2012	353.2	W1210231347	Nitrate+Nitrite as Nitrogen	0.107	mg/L	0.050	0.003		

Analytical Results for Sampling Events at MPE-8

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
9/26/2012	8260	W1209260823	Tetrachloroethene (PCE)	0.98	ug/L	1.0	0.30		J
9/26/2012	8260	W1209260823	Acetone	2.5	ug/L	10	1.3		J FB
9/26/2012	8260	W1209260823	Dichlorofluoromethane (CFC 21)	21	ug/L	1.0	0.24		
9/26/2012	8260	W1209260823	Chloromethane	0.34	ug/L	2.0	0.21		J FB
9/26/2012	8260	W1209260823	Toluene	2.7	ug/L	1.0	0.20		
9/26/2012	8260	W1209260823	Trichloroethene (TCE)	20	ug/L	1.0	0.22		
9/26/2012	8260	W1209260823	Trichlorofluoromethane (CFC 11)	31	ug/L	1.0	0.20		
9/26/2012	8260	W1209260823	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	18	ug/L	1.0	0.21		
9/26/2012	8260	W1209260823	1,1,2-Trichloro-1,2,2-Trifluoroethane	63	ug/L	1.0	0.31		
9/26/2012	607	W1209260825	N-Nitrosodimethylamine	0.6	ug/L	0.0089	0.0044	43	
9/26/2012	607	W1209260825	N-Nitrodimethylamine	0.29	ug/L	0.0089	0.0044	93	
9/26/2012	607	W1209260825	Bromacil	0.026	ug/L	0.0089	0.0044	106	

Analytical Results for Sampling Events at MPE-9

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
10/23/2012	8260	W1210231354	Dichlorofluoromethane (CFC 21)	9.3	ug/L	1.0	0.24		
10/23/2012	8260	W1210231354	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	7.3	ug/L	1.0	0.21		
10/23/2012	8260	W1210231354	Trichlorofluoromethane (CFC 11)	79	ug/L	1.0	0.20		
10/23/2012	8260	W1210231354	Trichloroethene (TCE)	32	ug/L	1.0	0.22		
10/23/2012	8260	W1210231354	1,1,2-Trichloro-1,2,2-Trifluoroethane	100	ug/L	1.0	0.31		
10/23/2012	8260	W1210231354	Chloromethane	0.31	ug/L	2.0	0.21		J TB
10/23/2012	8260	W1210231354	2-Propanol	10	ug/L	50	8.6		J
10/23/2012	8260	W1210231354	Tetrachloroethene (PCE)	1.1	ug/L	1.0	0.30		
10/23/2012	8260	W1210231354	Toluene	0.78	ug/L	1.0	0.20		J
10/23/2012	607	W1210231356	Bromacil	0.039	ug/L	0.0089	0.0044	112	
10/23/2012	607	W1210231356	N-Nitrosodimethylamine	0.96	ug/L	0.0089	0.0044	76	
10/23/2012	607	W1210231356	N-Nitrodimethylamine	0.49	ug/L	0.0089	0.0044	114	
10/23/2012	METALS	W1210231357	Molybdenum, Total	0.004	mg/L	0.025	0.002		J
10/23/2012	METALS	W1210231357	Potassium, Total	8.5	mg/L	2.0	0.07		
10/23/2012	METALS	W1210231357	Selenium, Total	0.007	mg/L	0.010	0.004		J
10/23/2012	METALS	W1210231357	Sodium, Total	41.1	mg/L	1.0	0.10		
10/23/2012	METALS	W1210231357	Strontium, Total	2.99	mg/L	0.10	0.001		
10/23/2012	METALS	W1210231357	Thallium, Total	0.0001	mg/L	0.0010	0.00007		J
10/23/2012	METALS	W1210231357	Manganese, Total	0.093	mg/L	0.010	0.0007		
10/23/2012	METALS	W1210231357	Zinc, Total	0.051	mg/L	0.020	0.002		
10/23/2012	METALS	W1210231357	Magnesium, Total	66.7	mg/L	1.0	0.005		
10/23/2012	METALS	W1210231357	Iron, Total	0.05	mg/L	0.10	0.006		J
10/23/2012	METALS	W1210231357	Copper, Total	0.003	mg/L	0.020	0.002		J RB
10/23/2012	METALS	W1210231357	Cobalt, Total	0.0006	mg/L	0.0010	0.000008		J RB
10/23/2012	METALS	W1210231357	Calcium, Total	143	mg/L	1.0	0.2		
10/23/2012	METALS	W1210231357	Cadmium, Total	0.00006	mg/L	0.0010	0.00003		J
10/23/2012	METALS	W1210231357	Boron, Total	0.12	mg/L	0.20	0.05		J
10/23/2012	METALS	W1210231357	Barium, Total	0.044	mg/L	0.020	0.0004		J RB
10/23/2012	METALS	W1210231357	Beryllium, Total	0.00008	mg/L	0.0010	0.00002		J
10/23/2012	ANIONS	W1210231358	Solids, Total Dissolved	938	mg/L	11	5		
10/23/2012	ANIONS	W1210231358	Alkalinity, Total as CaCO3	359	mg/L	2.0	0.3		
10/23/2012	ANIONS	W1210231358	Chloride	53.4	mg/L	2.0	0.5		
10/23/2012	ANIONS	W1210231358	Fluoride	0.14	mg/L	0.10	0.04		
10/23/2012	ANIONS	W1210231358	Sulfate	308	mg/L	8.0	2.1		
10/23/2012	353.2	W1210231359	Nitrate+Nitrite as Nitrogen	1.45	mg/L	0.050	0.003		

National Aeronautics and
Space Administration

NASA WSTF Periodic Monitoring Report

Quarter Year

Appendix B
Field Methods

National Aeronautics and
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NASA WSTF Periodic Monitoring Report

Comprehensive Annual 2012

Appendix B.1
Sampling Event Logbook Entries and Internal Chains of Custody

Project 200-D-109 WSI ENV-0013 8-24-12 Notebook No. D32 #93

Continues from Page

M. Dunford & B. Galaz present. This well will be purged using a steam cleaned Bennett pump and sampled using a dedicated teflon bailer. Well purged dry @ approx 12 gals. allow to recover 1 hr. and purge dry again.

Total Depth = 138.48 ft. (42.21 m)
Initial DTW = 131.69 (40.13 m.)
3 Casing volumes = 16 gals.
Purge stop
Purge start = 0730
Gals. purged = 20 gals

Meter ID	Buffers	Exp	Lot#
PH/cond = #55	7	6/13	110747
Turb = #4	10	7/13	113925
" stnd -	6.96		
" Rd -	7.09		
" Exp -	8.30		
" Lot# -	A2060		

Initial Parameters		Secondary	Final Parameters
Time	1208241008	NA	1208241040
PH	7.25		7.18
Temp	24.5		25.0
Cond	1242		1189
Turb	5.43		2.89
PH PreCal	7.02/10.08		7.02/10.05
PH PostCal	7.02/10.05		7.02/10.05

Samples

Sample#	Analysis	Preservative	Lot#	Lab	Cont.
1208241015	VOA by 8260 (FB)	Ice/HCL	2059001	CAS	(3) 40 ml vials
— 1030	" "	"	"	"	(3) "
— 1031	" " (Dup)	"	"	"	(3) "
— 1032	LLNDMA (FB)	Ice	060412-1W	"	(1) 1 Lt Amber
— 1033	" "	"	"	"	(1) "
— 1034	Bromacil by 607	"	071412	SWRI	(1) "
— 1035	Total Metals	Ice/HNO3	0327601W	ALS	(1) 250 ml poly
1208221515	VOA by 8260 (BC)	Ice/HCL	12AD87A	CAS	(3) 40 ml vials
— 1516	Bromacil by 607 (BC)	Ice	12AD87B	SWRI	(1) 1 Lt Amber
— 1517	Total Metals (BC)	Ice/HNO3	12AD87C	ALS	(1) 250 ml poly

Continued on Page

Read and Understood By

B. Galaz — Signed — 8-24-12 — Date

[signature] — Signed — 8-24-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-22-12

Sample Location: 200-D-109

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	907	METALS								
			Analytical Requirement										
120822515	3		X										
120822516	1			X									
120822517	1				X								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Joe Munch	8-22-12	Joe Munch	8-23-12

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-24-12 Page 1 of 1

Sample Location: 200-D-190

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	VOA	NDMA LL	BROMIDE	METALS							
120824.015 (F.B.)	3	A	X										
1030	3		X										
1031 (DUP)	3		X										
1032 (F.B.)	1			X									
1033	1			X									
1034	1				X								
1035	1					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
BRIAN GALAZ	08-24-12	[signature]	8-27-12 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 200-H-225 WJI ENV-0020 Notebook No. D64 #110(z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Ben. in use. Probe # 4755.

30 Min. Equipment Blanks - Carboy 64

Sample	Analysis	Preservative	Container	Lot	Lab
120828 0740Z	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0741Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

INITIAL PARAMETERS

Time - 120828 0810Z
PH - 8.54
Temp - 23.3°C
Cond - 1055us/cm
Turb - 2.56 NTU's
pHpre - 7.09/10.17 (21.4°C)
pHpost - 7.12/10.16
DTW - 36.01ft.
Atmos - 12.32 psia

Final

Time - 120828 0936Z
PH - 8.68
Temp - 24.5°C
Cond - 1078us/cm
Turb - 0.65 NTU's
pHpre - 7.08/10.13 (26.3°C)
pHpost - 7.10/10.13
DTW - 37.14ft.
Atmos - 12.31 psia
IDW - 1 gal.

Meter ID

pH/Cond - 54
Turb - 6
" Std - 6.32 NTU's
" Rdg - 5.80 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120828 0825Z	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0826Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 0850Z	Low Level NDMA	"	"	060412-1W	CAS
——— 0910Z	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
——— 0911Z	Anions / TDS	ice	(1) 500ml poly	0227601W	"
——— 0935Z	Perchlorate by 331.0	"	(1) 125ml poly	001551	CAS

Runs	1)	2)	3)	4)	5)
	97.97	97.91	97.78	97.67	97.60
	43.42	43.44	43.44	43.46	43.44
	43.44	43.44	43.44	43.44	43.47
	98.00	97.89	97.78	97.67	97.65

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/28/12 — Date

Ron Munnick — Signed — 8-28-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/28/12 Page _____ of _____

Sample Location: 200-H-225

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA	Total Metals	Anions / TDS	Perchlorate					
120828 0740Z	3	A	✓										
——— 0741Z	1	A			✓								
——— 0825Z	3	A	✓										
——— 0826Z	1	A		✓									
——— 0850Z	1	A			✓								
——— 0910Z	1	A				✓							
——— 0911 Z	1	A					✓						
——— 0935Z	1	A						✓					

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Deltrue	8/28/12 1000hrs.	Jon Munch	8-28-12 / 1010

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 200-H-331 WJI ENV-0020 Notebook No. D64 #110(z)

Continues from Page

B. Tufts & C. DelFerraro present. Weather is clear & warm. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120827 0800Z	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0801Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters
Time - 120827 0840Z
PH - 8.42
Temp - 23.0°C
Cond - 2.03 ms/cm
Turb - 2.84 NTU's
pH pre - 7.11/10.18 (21.4°C)
pH post - 7.12/10.15
DTW - 31.99 ft.
Atmos - 12.31 psia

Final
Time - 120827 0955Z
PH - 8.57
Temp - 23.5°C
Cond - 2.08 ms/cm
Turb - 4.36 NTU's
pH pre - 7.05/10.11 (28.8°C)
pH post - 7.08/10.12
DTW - 34.02 ft.
Atmos - 12.31 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 54
Turb - 6
" std - 6.32 NTU's
" pdq - 6.08 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120827 0905Z	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0906Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 0930Z	Low Level NDMA	"	"	060412-1W	CAS
——— 0931Z	Total Metals	ice/HNO_3	(1) 250ml poly	032760-1W	ALS

Runs	1)	2)	3)	4)
	145.55	145.43	145.25	145.16
	106.58	106.50	106.47	106.45
	105.98	106.34	106.40	106.38
	145.56	145.48	145.32	145.16

Continued on Page

Read and Understood By

Craig DelFerro — Signed — 8/27/12 — Date

Jon Munnich — Signed — 8-28-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/27/12

Page _____ of _____

Sample Location: 200-H-331

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA	Total Metals							
120827 0800Z	3	A	✓										
——— 0801Z	1	A			✓								
——— 0905Z	3	A	✓										
——— 0906Z	1	A		✓									
——— 0930Z	1	A			✓								
——— 0931Z	1	A				✓							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiume	8/27/12 1110hrs.	Jon Munch	8-28-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 200-H-433 WJI ENV-0020 Notebook No. D64 #110(Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120827 1040Z	VOA by 8260	ice / HCL	(3) 40ml vials	1194002	CAS
——— 1041Z	Low Level NDMA	ice	(1) 1L Amber	0604121W	"

Initial Parameters	Final	Meter ID
Time - 120827 1310Z	Time - 120827 1440Z	pH/Cond - 54
PH - 8.00	PH - 8.13	Turb - 6
Temp - 26.6°C	Temp - 26.5°C	" Std - 6.32 NTU's
Cond - 2.17 ms/cm	Cond - 2.20 ms/cm	" Rdg - 6.08 NTU's
Turb - 1.35 NTU's	Turb - 0.68 NTU's	" Lot - A2060
pH pre - 7.02 / 10.06 (32.0°C)	pH pre - 6.96 / 10.07 (35.3°C)	" Exp - 8/29/12
pH post - 6.99 / 10.07	pH post - 6.98 / 10.04	
DTW - 34.02 ft.	DTW - 36.01 ft.	
Atmos - 12.28 psia	Atmos - 12.31 psia	
	IDW - 1/2 gals.	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120827 1340Z	VOA by 8260	ice / HCL	(3) 40ml vials	1194002	CAS
——— 1341Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 1410Z	Low Level NDMA	"	"	0604121-NW	CAS
——— 1411Z	Total Metals	ice / HNO_3	(1) 250ml poly	0327601W	ALS

Runs	1)	2)	3)	4)
	189.28	189.12	188.91	188.74
	187.84	187.83	187.85	187.83
	187.84	187.86	187.81	187.83
	189.30	189.12	188.88	188.76

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/27/12 — Date

Jon Munnick — Signed — 8-28-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/27/12 Page _____ of _____

Sample Location: 200-H-433

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	LL NDMA									
1208271040Z	3	A	✓										
1041Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Delfeld	8/27/12 1110hrs.	Jon Munch	8-28-12 /0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/27/12 Page _____ of _____

Sample Location: 200-H-433

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA	Total Metals							
1208271340z	3	A	✓										
——— 1341z	1	A		✓									
——— 1410z	1	A			✓								
——— 1411z	1	A				✓							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiero	8/27/12 1500hrs.	John Munch	8-28-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 200-JG-110 ENV-0013 Notebook No. D32 #93

Continues from Page

T. Torrez & D. Halvorsen Present. Weather is Clear and Hot. This Well Will be Purged using a Bennett Pump. When Purging is Complete Samples Will be Collected using a Teflon Bailer.

Initial DTW = 118.12 ft.
Total Depth = 137.10
Purge Start = 0815
Purge Stop =
3 Casing Vol. = 43 gal.
Final Depth =
NOTE: Well pumped Dry

Meter ID: Carboy G2
PH/COND = 53
TurB = 7
STD = 6.01
RDG = 6.04
LOT = A2060
EXP = 8/12

Initial Parameters	Secondary	Final
Time = 120809 1400		120809 1445
PH = = 6.86		6.93
Temp = 26.4°C		26.7
Cond = 1373		1361 µs/cm
TurB = 1.31		1.05 NTU's
PH Pre = 7.09/10.15 (30.1)		7.05/10.15 (32.0)
PH Post = 7.08/10.17		7.08/10.17

Samples

Sample #	Analysis	Preserve	Cont.	Lot	LAB
120809 1405	VOA by 8260	Ice/HCl	(3) 40 ml Vial	1194002	CAS
—— 1406	" " (FB)	"	"	"	"
—— 1407	Bromacil by 607	Ice	(1) 1L Amber		SRL
—— 1408	" " (FB)	"	"		"
—— 1409	NDMA LL	"	"		CAS
—— 1410	" " (FB)	"	"		"
—— 1411	SVOA by 8270	"	(2) "		"
—— 1412	Total Metals	Ice/HNO3	(1) 250 ml Poly		ALS
—— 1413	~~Anions/TDS~~ Metals (DUP)	"	"		"
—— 1414	Anions/TDS	Ice	(1) 500 ml Poly		"
—— 1415	NO2/NO3 by 353.2	Ice/H2SO4	(1) 125 ml Poly		"
—— 1416	Perchlorate by 331.0	Ice	(1) 125 ml Poly		SRL

Continued on Page

Read and Understood By

Signed [signature] Date 8-9-12 Signed [signature] Date 8-10-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Page _____ of _____

Date: 8-9-12

Sample Location: 200-SG-110

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA	607	DOMA LL	SVOA	Metals	Anions/TDS	NO2/NO3	Perchlorate			
120809 1405	3	A	X										
1406	3		X										
1407	1			X									
1408	1			X									
1409	1				X								
1410	1				X								
1411	2				X								
1412	1					X							
1413	1						X						
1414	1							X					
1415	1								X				
1416	1									X			

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature] to cooler	8-9-12 1515	[signature]	8-13-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 300-C-128 ENS-0053 Notebook No. ~~D63~~ D32 #93

Continues from Page

T. Torrez + D. Halvorsen Present Weather is Partly Cloudy and Hot. This Well Will be Purged and SAMPLED using a dedicated Teflon Bladder Pump. SAMPLES Will be Collected from a Teflon discharge hose. Water Quality Parameters Will be monitored using a QED MP-20 flowcell and Water analyzer.

Calibrations:

DO Sensor = In Saturated Air @ 642 mm/Hg

PH Sensor = using a 2 pt (7-10) Buffer Method

Conductivity = using a 1413 us/cm STD. Solution

Turbidity meter = # 7 STD = RDG = LOT # Exp: 8/12

Initial DTW = 141.15

Carboy = G2

IDW = 1 gal.

Parameters (Time)	Temp	Cond.	DO	PH	ORP	Turb.	DTW (ft)
1208061400	25.52	1061	2.11	7.87	99	1.03	142.10
—— 1405	25.56	1058	2.13	7.85	98	1.06	"
—— 1410	25.48	1063	~~2.11~~ 2.11	7.90	98	1.01	"

Trip Blank Samples

Sample #	Analysis	Preserve	Cont.	LOT	LAB
1208061245	Voa by 8260	Ice/HCl	(3) 40 ml Vial	1194002	CAS

Samples

Sample #	Analysis	Preserve	Cont.	LOT	LAB
1208061420	Voa by 8260	Ice/HCl	(3) 40 ml Vial	1194002	CAS
—— 1421	NDMA/DMN Bromacil by 607	Ice	(1) 1L Amber		SRI
—— 1422	" " (Dup)	"	"		"
—— 1423	Total metals	Ice/HNO3	(1) 250 ml Poly	327601	ALS

Continued on Page

Read and Understood By

[signature] Signed 8-6-12 Date

[signature] Signed 8-7-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-6-12 Page _____ of _____

Sample Location: 300-C-128

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	GC7	Metals								
120806 1245	3	A	X										
1420	3		X										
1421	1			X									
1422	1			X									
1423	1				X								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
To Cooler	8-6-12 1510	John Munch	8-7-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 300-D-153 ENV.0055 Notebook No. D32#93

Continues from Page

A. MONTES & T. TORRES PRESENT. This WELL will be purged & sampled using a Dedicated Teflon bladder pump.

TOTAL DEPTH = 181.59 FT (55.35m)
INITIAL DTW = 162.25 (49.45)
3 CASING VOL = 45 gallons
PURGE START = 0800
PURGE STOP = 1359
PURGE RATE = 0.25

METER I.D.'S
pH/cond #55
Turb #4
" STD = 6.96
" Rdg = 7.15
" EXP = 8-30
" LOT# = A20060

INITIAL	SECONDARY	FINAL
120827 1300	120827 ~~1400~~ 1359	1430
pH 7.01	7.15	7.07
TEMP 25.4	23.7	24.7
COND 1194 µs/cm	1202	1191 µs/cm
Turb 0.86 NTU's	0.93	0.73
pH pre 7.01/10.18 (27.0)	7.05/10.15 (25.3)	7.01/10.10 (29.0°)
pH post 7.05/10.15	7.07/10.17	7.03/10.15
DTW 162.25	160.73	160.73

SAMPLES

Sample#	Analysis	Preserv	LOT#	CONT	LAB
120827 1400	8260	ICE/HCl	2059001	(3) 40 ml vials	CAS
— 1401	" (F.B)	"	"	"	"
— 1402	BROMACIL	ICE	071412	(1) 1L amber	SRS
— 1403	LINDANE	"	060412-1W	"	CAS
— 1230	" (TB)	"	"	"	"
— 1404	TOTAL METALS	ICE/HNO3	0327601W	(1) 250 ml poly	ALS

Continued on Page

Read and Understood By

T. [signature] Signed 8-27-12 Date

[signature] Signed 8-28-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8.27.12 Page 1 of 1

Sample Location: 300-D-153

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	VOA 8260	NDMA 607	LLNDMA	TOTAL METAL							
120827 1400 (FB)	3	A	X										
1401	3	A	X										
1402	1	A		X									
1403	1	A			X								
1230 (TB)	1	A			X								
1404	1	A				X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. [illegible]	8-27-12	Jon Munch	8-28-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

B. Tufts & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
120807 ~~1410~~ 1420Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
1421Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters
Time - 120808 0720Z
PH - 8.76
Temp - 22.5°C
Cond - 490 us/cm
Turb - 0.74 NTU's
pH pre - 7.18/10.02 (25.9°C)
pH post - 7.12/10.04
DTW - 205.63 ft.
Atmos - 12.30 psia

Final
Time - 120809 0732Z
PH - 8.55
Temp - 22.3°C
Cond - 479 us/cm
Turb - 0.66 NTU's
pH pre - 7.11/10.08 (21.0°C)
pH post - 7.12/10.06
DTW - 205.86 ft.
Atmos - 12.32 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 54
Turb - 6
" Std - 6.32 NTU's
" Rdg - 5.84 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120808 0920Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
0921Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SCI
120809 0730Z	Low Level NDMA	"	"	060412-1W	CAS
0731Z	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Runs	1)	2)	3)	4)	5)
	~~13.31~~ 12.37	12.39	12.38	12.42	12.38
	~~14.25~~ 31.11	22.51	~~32.97~~	25.16	26.44
	14.00	21.25	25.68	23.31	27.74
	12.39	12.42	17.55	12.45	12.46
			12.42		

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed
8/9/12 — Date
Signed
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/7/12

Page _____ of _____

Sample Location: 400-D-195

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA
120807 1420Z	3	A	✓	
——— 1421Z	1	A		✓

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiero	8/7/12 1450hrs.	Jon Munch	8-8-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/8/12

Page _____ of _____

Sample Location: 400-D-195

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607/Bromacil
1208080920Z	3	A	✓	
—— 0921Z	1	A		✓

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiend	8/8/12 1100hrs.	John Munch	8-9-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/9/12

Page _____ of _____

Sample Location: 400-D-195

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	LL NDMA	Total Metals									
1208090730Z	~~3~~ 1	A	✓										
0731Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Ed Ferrill	8/9/12 0800hrs.	Jon Munch	8-9-12 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 400-D-275 WJI ENV-0020 Notebook No. D64 # 110 (Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe # 4755.

30 Min Equipment Blanks - Carboy 65

Sample	Analysis	Preservative	Container	Lot	Lab
120807 0830Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0831Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters

Time - 120807 0915Z
PH - 8.85
Temp - 25.7°C
Cond - 582 us/cm
Turb - 1.65 NTU's
pH pre - 7.05/10.12 (22.7°C)
pH post - 7.03/10.10
DTW - 205.56 ft.
Atmos - 12.35 psia

Final

Time - 120807 1335Z
PH - 8.74
Temp - 25.9°C
Cond - 560 us/cm
Turb - 1.14 NTU's
pH pre - 6.95/10.03 (33.3°C)
pH post - 6.98/10.03
DTW - 205.63 ft.
Atmos - 12.29 psia
IDW - 1/2 gals

Meter ID

pH/Cond - 54
Turb - 6
" Std - 6.32 NTU's
" Rdg - 5.84 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120807 0955Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0956Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SPI
——— 1025Z	Low Level NDMA	"	"	060412-1W	~~MAX~~ CAS
——— 1055Z	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
——— 1056Z	Anions/TDS	ice	(1) 500ml poly	0227601W	"
——— 1057Z	Perchlorate by 331.0	"	(1) 125ml poly	001563	CAS
——— 1058Z	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS

Runs	1)	2)	3)	4)	5)
	45.06	45.97	46.01	46.00	46.01
	61.63	61.37	61.24	61.10	61.30
	61.60	61.00	60.75	60.54	61.00
	45.07	46.08	46.05	46.02	46.03

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/7/12 — Date

Lori Munch — Signed — 8-7-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/7/12 Page _____ of _____

Sample Location: 400-D-275

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607/Bromacil	LL NDMA	Total Metals	Anions/TDS	Perchlorate	~~AG~~				
			Analytical Requirement										
120807 0830Z	3	A	✓										
——— 0831 Z	1	A			✓								
——— 0955 Z	3	A	✓										
——— 0956 Z	1	A		✓									
——— 1025 Z	1	A			✓								
——— 1055 Z	1	A				✓							
——— 1056 Z	1	A					✓						
——— 1057 Z	1	A						✓					

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/7/12 1110hrs.	[illegible]	8-7-12 / 1300HRS

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/7/12

Page _____ of _____

Sample Location: 400-D-275

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: NO_2/NO_3										
1208071058Z	1	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiero	8/7/12 1450 hrs.	Jon Munch	8-8-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 400-D-355 WJI ENV-0020 Notebook No. D64 # 110(E)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use Probe # 4755.

30 Min. Equipment Blanks - Carboy 65

Sample	Analysis	Preservative	Container	Lot	Lab
120806 1300Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1301Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters

Time - 120806 1330Z
PH - 8.57
Temp - 25.2 °C
Cond - 736 us/cm
Turb - 3.56 NTU's
pH pre - 6.98/10.04 (32.5 °C)
pH post - 6.95/10.05
DTW - 205.04 ft.
Atmos - 12.34 psia

Final

Time - 120806 1440Z
PH - 8.39
Temp - 25.8 °C
Cond - 759 us/cm
Turb - 3.42 NTU's
pH pre - 6.96/10.02 (38.1 °C)
pH post - 6.94/10.03
DTW - 205.56 ft.
Atmos - 12.34 psia
IDW - ½ gals

Meter ID

pH/Cond - 54
Turb - 6
" Std - 6.32 NTU's
" Rdg - 5.63 NTU's
" Lot - A2060
" Exp - 8/28/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120806 1355Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194007	CAS
——— 1356Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 1415Z	Low Level NDMA	"	"	041612-1P	CAS
——— 1416Z	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Runs	1)	2)	3)	4)
	81.32	81.13	81.01	80.93
	96.43	96.19	95.95	95.81
	96.02	95.73	95.50	95.25
	81.26	81.12	81.04	80.92

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 8/6/12 — Date

Jon Munch — Signed — 8-7-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/6/12 Page _____ of _____

Sample Location: 400-D-355

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607/Bromacil	LL NDMA	Total Metals							
1208061300Z	3	A	✓										
——1301Z	1	A			✓								
——1355Z	3	A	✓										
——1356Z	1	A		✓									
——1415Z	1	A			✓								
——1416Z	1	A				✓							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig [illegible]	8/6/12 1500hrs.	[illegible]	8-7-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 700-A-253 ENV.0053 Notebook No. D32 #93

Continues from Page

M. Dunford & T. Torrez present. The weather is partly cloudy & warm. This well will be purged & sampled using a Dedicated Teflon bladder pump. Param's will be collected using a QED MP. 20 flow cell. FB's will be collected with water from Nano Pure in 200 wet lab. Well was stopped to allow water to recover due to exceeding draw down. Well didn't recover so allowed to recover overnight. Sampled 8-16-12

Calibrations

Do Cal'd in sat air @ 636 mm/Hg

Cond - 1413 standard used.

ph - 2pt cal w/ 7 & 10 Buffers.

Turb #7 std. 601 NTU's Rdg = Lot # A2060 Exp 8/12

Param's	Temp	Cond	Do	ph	ORP	Turb	DTW
1) 120816 0815	20.88	1.055	3.25	7.57	152	1.47	187.65
2 — 0820	20.89	1.053	3.10	7.56	156	1.52	187.78
3 — 0825	20.88	1.055	3.10	7.57	154	2.17	187.89

Samples

Sample #	Analysis	Preserv.	Lot #	Cont	Lab
120816 0830	8260	Ice/Hcl	1194002	(3) 40ml vials	CAS
— 0831	" (Dup)	"	"	"	"
— 0832	" (FB)	"	"	"	"
— 0833	NDMA/DMN/Bro by 607	Ice	051612	(1) 1Lt Amber	SRJ
— 0834	Perchlorate	"	NA	(1) 100ml poly	"
— 0835	8260		Ice/Hcl	(3) 40ml vial's	Heal
— 0836	EDB/DBCP		"	(1) "	
— 0837	" (Dup)		"	(1) "	
— 0838	8270		Ice	(2) 1Lt Amber	
— 0839	" (Dup)		"	"	
— 0840	PCB's		"	(1) "	
— 0841	Phenols		Ice/H_2SO_4	(1) "	
— 0842	Anions		Ice	(1) 500ml poly	
— 0843	ph		"	"	
— 0844	TDS		"	"	
— 0845	Cond		"	"	
— 0846	Alk		"	"	
— 0847	NO_3/NO_2	Ice/H_2SO_4		(1) 125ml poly	
— 0848	TKN	"		(1) 500ml poly	

Continued on Page 87

Read and Understood By

T. [signature] 8-16-12 [signature] 8-16-12

Signed Date Signed Date

Project 700.A.253 Notebook No. D32#93

Continues from Page

Samples Cont

Sample#	Analysis	Preserv.	Cont	Lab
1208160849	Total N_2	Ice/H_2SO_4	(2) 500ml/poly	Heal
— 0850	NH_3	"	(1) "	
— 0851	TOC	Ice/HCl	(2) 40 ml/vial	
— 0852	Cyanide	Ice/NaOH	Brown 500ml/poly	
— 0853	Metals	Ice/HNO_3	(1) 500ml/poly	
— 0854	" (Dup)	"	"	
— 0855	Mercury ~~Cyanide~~	"	"	
— 0856	" (Dup)	"	"	
— 0857	RA 226	"	(1) 1Lt Poly ~~Amber~~	
— 0858	RA 228	"	"	

Continued on Page

Read and Understood By

T. [signature] Signed 8.16.12 Date

[signature] Signed 8-16-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-16-12

Sample Location: 700-A-253

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Perchlorate	EDB/DBCP	8270	PCBs	Phenols	Anions	pH	TDS	SVOD
120816 0830	3	A	X										
— 0831	3		X										
— 0832	3		X										
— 0835	3		X										
— 0833	1			X									
— 0834	1				X								
— 0836	1					X							
— 0837	1					X							
— 0838	2						X						
— 0839	2						X						
— 0840	1							X					
— 0841	1								X				
— 0842	1									X			
— 0843	1										X		
— 0844	1											X	
— 0845	1												X

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. [illegible]	8-16-12	[illegible]	8-20-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-16-12

Sample Location: 200A-253

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	ALK	NO3/NO2	TKN	TOTAL N2	NH3	TOC	CYANIDE	METALS	MERCURY	R4226	R4228
120816 0846	1	A	X										
0847	1			X									
0848	1				X								
0849	2					X							
0850	1						X						
0851	2							X					
0852	1								X				
0853	1									X			
0854	1									X			
0855	1										X		
0856	1										X		
0857	1											X	
0858	1												X

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T-[illegible]	8-16-12	Jon Munch	8-20-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project 700-D-186 Notebook No. D32 #93

Continues from Page

M. Dunford & J. Torrez present. The weather is clear & warm. This well will be purged & sampled using a Dedicated Teflon bladder pump. Samples to be collected from a Teflon discharge hose. Param's will be collected with a MP-20 QED flow cell.

* EDB TB was collected from Nanopure in 200 Area.

Calibrations

DO sensor - in saturated air @ 636 mm/Hg

Cond sensor - in 1413 µs/cm standard

Turb meter #7 std = 6.01 Rdg = 5.75 Lot# A2060 Exp - 8/12

pH sensor - 2pt cal in 7 & 10 buffers.

Parameters.

Time	Temp	Cond	DO	pH	ORP	Turb	DTW
1) 120814 0950	21.52	1.281	2.75	7.10	174	1.42	176.52
2) — 0955	21.60	1.271	2.75	7.12	170	0.68	176.52
3) — 0959	21.70	1.278	2.76	7.13	167	0.53	176.52

Samples

Sample#	Analysis	Preserv ~~Analysis~~	Cont	Lot#	Lab
120814 1000	8260	ICE/HCl	(3) 40ml vials	119002	CAS
— 1001	" (Dup)	"	"	"	"
— 0630	" (TB)	"	"	"	"
— 1002	NDMA/DMN by 607	ICE	(1) 1LT amber	051612	SNJ
— 1003	Perchlorate by 331.0	"	(1) 100ml poly	N/A	"
— 1004	8260	ICE/HCl	(3) 40ml vials	N/A	HCl
— 1005	" (TB)	"	"		
— 1006	EDB/DBCP	"	(1) 40ml vial		
* — 1007	" (TB)	"	"		
— 1008	8270	ICE	(2) 1LT amber		
— 1009	PCB 8082	"	(1) 1LT amber		
— 1010	Phenols 9067	ICE/H_2SO_4	"		
— 1011	~~NO_3/NO_2 300.0~~ Anions	ICE	(1) 500ml poly		
— 1012	~~" (Dup)~~ pH	"	"		
— 1013	~~" TB~~ TDS	"	"		
— 1014	~~" (Dup)~~ Cond	"	"		
— 1015	~~Total Alk~~ Alk	"	"		
— 1016	~~" (Dup)~~ NO_2/NO_3	ICE/H_2SO_4	(1) 125ml poly		
— 1017	" (Dup)	"	"		

Continued on Page 85

Read and Understood By

T. [signature] 8-14-12 [signature] 8-16-12

Signed Date Signed Date

Project 700·D·186 Notebook No. D32 #93

Continues from Page 84

SAMPLES CONT

SAMPLE #	ANALYSIS	PRESERV.	LOT #	CONT	LAB
120814/1018	TKN	ICE/H_2SO_4	N/A	(1) 500 ml poly	Heal
— 1019	" (Dup)	"		"	"
— 1020	~~NH_3~~ TOTAL N_2	"		(2) "	"
— 1021	" (Dup)	"		(2) "	"
— 1022	NH_3	ICE/~~NaOH~~		"	"
— 1023	" (Dup)	"		"	"
— 1024	TOC	ICE/HCl		(2) 40 ml vial	"
— 1025	Cyanide	ICE/NaOH		(1) Brown 500 ml poly	"
— 1026	METALS	ICE/HNO_3		(1) 500 ml poly	"
— 1027	Mercury	"		"	"
— 1028	Ra-226	"		(1) 1 LT Poly	"
— 1029	Ra-228	"		"	"

Continued on Page

Read and Understood By

T. J. [signature] Signed 8.14.12 Date

[signature] Signed 8-16-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-14-12

Sample Location: 700-D-186

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	PERCHLORATE	EDB/DBCP	8270	8082	9067	ANIONS	PH	TDS	COND
120814/1000			X										
1001			X										
0630			X										
1004			X										
1005			X										
~~1006~~ 1002				X									
~~1007~~ 1003					X								
1006						X							
1007						X							
1008							X						
1009							~~X~~	X					
1010									X				
1011										X			
1012											X		
1013												X	
1014													X

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. [illegible]	8.14-12	John Munch	8-15-12 / 1050

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-14-12

Sample Location: 700. D-186

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	ALK	NO3/NO2	TKN	TOTAL N2	NH3	TOC	CYANIDE	METALS	MERCURY	RA 226	RA 228
120814 1015			X										
1016				X									
1017				X									
1018					X								
1019					X								
1020						X							
1021						X							
1022							X						
1023							X						
1024								X					
1025									X				
1026										X			
1027											X		
1028												X	
1029													X

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. [illegible]	8-14-12	Ron Munch	8-15-12 /1050

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

F. Gallegos & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Ren. in use. Probe #2213.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120814 0940y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS

Initial Parameters
Time - 120814 1025y
PH - 8.45
Temp - 24.9°C
Cond - 920 us/cm
Turb - 1.63 NTU's
pH pre - 7.04/10.08 (29.7°C)
pH post - 7.01/10.09
DTW - 238.75 ft.
Atmos - 12.26 psia

Final
Time - 120815 1425y
PH - 8.38
Temp - 25.2°C
Cond - 940 us/cm
Turb - 1.06 NTU's
pH pre - 6.96/10.01 (34.8°C)
pH post - 6.96/10.04
DTW - 240.13 ft.
Atmos - 12.28 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 53
Turb - 3
" Std - 4.44 NTU's
" Rdg - 4.22 NTU's
" Lot - A2060
" Exp - 8/22/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120814 1350y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1351y	NDMA/DMN by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 1415y	Perchlorate by 331.0	"	(1) 125ml poly	001571	CAS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120814 1416y	VOA by 8260	ice/HCL	(3) 40ml vials	51122	HEAL
——— 1417y	EDB/DBCP (504.1)	"	(1) 40ml vial	"	"
120815 ~~1330y~~ 0700y	" (TB)	"	"	J12604	"
120814 1418y	SVOA by 8270	ice	(2) 1L Ambers	n/a	"
120815 0740y	PCB's by 8082	"	(1) 1L Amber	"	"
——— 0810y	Phenols by 9067	ice/H_2SO_4	"	6074001	"
——— 0835y	Anions by 300.0	ice	(1) 500ml poly	n/a	"
——— 0836y	" (Dupl)	"	"	"	"
——— 0905y	PH by SM4500H+B	"	"	"	"

Continued on Page 4

Read and Understood By

Craig Del Ferraro — Signed — 8/15/12 — Date

John Munnich — Signed — 8-16-12 — Date

Project 700-H-350 WJI ENV-0020 Notebook No. D64 #112(4)

Continues from Page 3

Lanfill Samples (cont.)

Sample	Analysis	Preservative	Container	Lot	Lab
120815 0906y	TDS by SM2540C	ice	(1) 500ml poly	n/a	HEAL
0930y	Conductivity by 120.1	"	"	"	"
0931y	Alkalinity by SM2320B	"	"	"	"
0932y	NO_3/NO_2 by 300.0	ice/H_2SO_4	(1) 125ml poly	"	"
0955y	TKN by SM4500 Norg C	"	(1) 500ml poly	"	"
0956y	Total N_2	"	(1) 500ml poly	"	"
"	"	ice	"	"	"
1020y	NH_3 by SM4500 NH_3	ice/H_2SO_4	"	"	"
1310y	TOC by 9060	ice/HCl	(2) 40ml vials	"	"
1311y	Cyanide by 335.2	ice/NaOH	(1) br. 500ml poly	"	"
1312y	Metals by 200.7/200.8	ice/HNO_3	(1) 500ml poly	"	"
1340y	Mercury by 245.1	"	"	"	"
1341y	Ra-226 by 903.1	"	(1) 1L Poly	"	"
1400y	Ra-228 by 904.0	"	"	"	"

Runs

1)	2)	3)	4)	5)	6)
64.77	64.77	64.77	64.73	64.74	64.72
65.00	65.03	65.08	65.02	65.11	65.10
65.09	64.97	65.00	64.99	64.98	65.00
64.80	64.83	64.80	64.71	64.75	64.75

7)	8)	9)	10)	11)	12)
64.74	64.66	64.67	64.62	64.66	64.62
65.08	65.05	65.05	65.00	65.02	65.01
64.99	65.02	65.01	64.98	65.01	65.00
64.75	64.68	64.67	64.65	64.65	64.60

13)	14)	15)
64.56	64.55	64.51
65.06	65.01	65.02
65.01	64.98	65.02
64.59	64.57	64.56

Continued on Page

Read and Understood By

Craig [illegible] — Signed — 8/15/12 — Date

Jon Munnich — Signed — 8-16-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/14/12

Page _____ of _____

Sample Location: 700-H-350

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Perchlorate	EDB	8270						
1208140940y	3	A	✓										
—— 1350y	3	A	✓										
—— 1351y	1	A		✓									
—— 1415y	1	A			✓								
—— 1416y	3	A	✓										
—— 1417y	1	A				✓							
—— 1418y	2	A					✓						

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fermo	8/14/12 1500hrs.	Jon Munch	8-15-12 / 1050

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/15/12 Page _____ of _____

Sample Location: 700-H-350

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	EDB	PCB's	Phenols	Anions	PH	TDS	Conductivity	Alkalinity	NO_2/NO_3	TKN	Total N_2
1208150700y	1	A	✓										
—— 0740y	1	A		✓									
—— 0810y	1	A			✓								
—— 0835y	1	A				✓							
—— 0836y	1	A				✓							
—— 0905y	1	A					✓						
—— 0906y	1	A						✓					
—— 0930y	1	A							✓				
—— 0931y	1	A								✓			
—— 0932y	1	A									✓		
—— 0955y	1	A										✓	
—— 0956y	2	A											✓

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/15/12 1100hrs.	Jon Munich	8-16-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/15/12

Page _____ of _____

Sample Location: 700-H-350

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	NH_3	TOC's	Cyanide	Metals	Mercury	Ra-226	Ra-228				
120815 1020y	1	A	✓										
—— 1310y	2	A		✓									
—— 1311y	1	A			✓								
—— 1312y	1	A				✓							
—— 1340y	1	A					✓						
—— 1341y	1	A						✓					
—— 1400y	1	A							✓				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Zeno	8/15/12 1500hrs	Jon Munch	8-16-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 700-H-535 WJI ENV-0020 Notebook No. D64 #112(4)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213.

30 Min. Equipment Blanks - Carboy A2

Sample	Analysis	Preservative	Container	Lot	Lab
120813 1410y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1411y	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Initial Parameters

Time - 1208131435y
pH - 8.57
Temp - 25.0°c
Cond - 614us/cm
Turb - 3.63 NTU's
pH pre - 6.96/10.01 (35.7°c)
pH post - 6.99/9.98
DTW - 236.99ft.
Atmos - 12.30psia

Final

Time - 1208140845y
pH - 8.70
Temp - 24.3°c
Cond - 629us/cm
Turb - 1.62 NTU's
pH pre - 7.05/10.12 (25.7°c)
pH post - 7.03/10.14
DTW - 238.75ft.
Atmos - 12.35psia
IDW - 1/2 gals

Meter ID

pH/cond - 53
Turb - 3
" Std - 4.44 NTU's
" Rdg - 4.12 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120814 0720y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0721y	NDMA/DNN/Bromacil by 607	ice	(1) 1L Amber	7/14/2012	SRI
——— 0800y	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120814 0801y	VOA by 8260	ice/HCL	(3) 40ml vials	51122	HEAL
——— 0802y	SVOA by 8270	ice	(2) 1L Ambers	n/a	"

Runs	1)	2)	3)	4)	5)
	145.85	145.68	145.55	145.43	145.36
	144.95	144.99	144.97	144.95	144.97
	144.89	144.96	144.94	144.90	144.87
	145.80	145.62	145.48	145.37	145.35

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/14/12 — Date

Jon Munch — Signed — 8-14-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/13/12 Page _____ of _____

Sample Location: 700-H-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	Total Metals									
120813 1410y	3	A	✓										
1411y	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fernando	8/13/12 1500hrs.	Jon Munch	8-14-12 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/14/12 Page _____ of _____

Sample Location: 700-H-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	8270							
1208140720y	3	A	✓										
——— 0721y	1	A		✓									
——— 0800y	1	A			✓								
——— 0801y	3	A	✓										
——— 0802y	2	A				✓							

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig DelFerro	8/14/12 1100hrs.	Jon Munch	8-14-12 /1330

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

F. Gallegos & C. Del Ferraro present. Weather is cloudy & warm. This zone will be samp
using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #22

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120813 0830y	VOA by 8260	ice/HCL	(3)40ml vials	1194002	CAS

Initial Parameters
Time - 120813 0910y
PH - 8.74
Temp - 22.7°c
Cond - 938 us/cm
Turb - 1.58 NTU's
pH pre - 7.08/10.12 (18.5°c)
pH post - 7.10/10.15
DTW - 234.68 ft.
Atmos - 12.27 psia

Final
Time - 120813 1325y
PH - 8.60
Temp - 23.9°c
Cond - 918 us/cm
Turb - 1.14 NTU's
pH pre - 7.01/10.04 (31.1°c)
pH post - 6.99/10.04
DTW - 236.99 ft.
Atmos - 12.41 psia
IDW - ½ gals.

Meter ID
pH/Cond - 53
Turb - 3
" std - 4.44 NTU
" Rdg - 4.12 NTU
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120813 0935y	VOA by 8260	ice/HCL	(3)40ml vials	1194002	CAS
—— 0936y	NDMA/DMN by 607	ice	(1) 1L Amber	7-14-2012	SRI
—— 1010y	Total Metals	ice/HNO_3	(1)250ml poly	0327601W	ALS
—— 1011y	Anions/TDS	ice	(1)500ml poly	022760 NW	"
—— 1012y	Perchlorate by 331.0	"	(1)125ml poly	001553	CAS
—— 1013y	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120813 1040y	VOA by 8260	ice/HCL	(3)40ml vials	51122	HEAL
—— 0730y	" (T.B.)	"	"	"	"
—— 1041y	SVOA by 8270	ice	(2) 1L Ambers	n/a	"

Runs	1)	2)	3)	4)	5)
	205.12	204.99	204.79	204.77	204.72
	203.19	203.18	203.16	203.12	203.19
	202.94	202.93	202.90	202.90	202.94
	205.09	204.89	204.75	204.11	204.73

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/13/12 — Date

Jon Munch — Signed — 8-13-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/13/12

Page _____ of _____

Sample Location: 700-H-670

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions / TDS	Perchlorate	NO_2/NO_3	8270				
120813 0730y	3	A	✓										
—— 0830y	3	A	✓										
—— 0935y	3	A	✓										
—— 0936y	1	A		✓									
—— 1010y	1	A			✓								
—— 1011y	1	A				✓							
—— 1012y	1	A					✓						
—— 1013y	1	A						✓					
—— 1040y	3	A	✓										
—— 1041y	1	A							✓				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/13/12 1105hrs.	Jon Munch	8-14-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/13/12 Page _____ of _____

Sample Location: 700-H-670

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8270										
1208131041y	1	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Dolfuno	8/13/12 1500hrs.	Jon Munch	8-14-12 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 700-J-200 ENV.0053 Notebook No. D32 #93

Continues from Page

M. Dunford & J. Torrez present. The weather is overcast & windy. This well will be purged & sampled using a Dedicated Teflon bladder pump. Samples will be collected from Teflon Discharge Tube. Parameters to be collected using a MP-20 QED Flowcell & Water Analyzer.

Calibrations

Do Sensor = in Sat. Air @ 6036 mm/Hg

pH Sensor = using 2pt cal (7-10) Buffers

Cond Sensor = 1413 µs/cm standard

Turb meter #7 std = 6.01 Rdg = 5.75 Lot# = 420660 Exp = 8/2012

Param's

Time	Temp	Cond	DO	pH	ORP	Turb	DTW (ft)
120813 1300	22.01	1.180	0.53	7.50	145	0.66	120.70
— 1301	22.05	1.180	0.52	7.50	145	0.78	120.70
— 1302	22.06	1.183	0.51	7.51	145	0.80	120.70

Sample

Sample#	Analysis	Preserv	Lot#	Cont	Lab
120813 1305	8260	Ice/HCl	119/002	(3) 40ml vials	Cas
— 1306	" (FB)	"	"	"	"
— 1307	NDMA/DMN by 607	Ice	051612	(1) 1LT amber	SNL
— 1308	" (FB)	"	"	"	"
— 1309	Perchlorate	"	N/A	(1) 125 ml poly	"
— 1310	8260	Ice/HCl	"	(3) 40ml vials	HEAL
— 1311	" (Dup)	"	"	"	
— 1312	EDB/DBCP	"	"	(1) 40ml vials	
— 1313	SVOA by 8270	Ice	"	(2) 1LT amber	
— 1314	PCB's	"	"	(1) 1LT amber	
— 1315	Phenols	Ice/H_2SO_4	"	"	
— 1316	Anions, Cl, Fl, SO4, O-PO4	Ice	"	(1) 500ml poly	
— 1317	pH	"	"	"	
— 1318	TDS	"	"	"	
— 1319	Conductivity	"	"	"	
— 1320	Alk	"	"	"	
— 1321	NO_3/NO_2	Ice/H_2SO_4	"	(1) 125 ml poly	
— 1322	TKN	"	"	(1) 500ml poly	
— 1323	Total N_2	"	"	(2) 500ml poly	

Continued on Page 83

Read and Understood By

T. D. — Signed — 8-13-12 — Date

Jon Munck — Signed — 8-13-12 — Date

Project 700-J-200 ENW0053 Notebook No. D32 #93

Continues from Page 82

Samples Cont.

Sample #	Analysis	Preserv.	Lot #	Cont	Lab
120813 1324	NH_3	ICE/~~HCl~~ H_2SO_4	N/A	(1) 500ml poly	HEAL
— 1325	TOC	ICE/HCl	"	(2) 40ml vials	"
— 1326	Cyanide	ICE/NaOH	"	(1) 500ml poly	"
— 1327	Metals	ICE/HNO_3	"	"	"
— 1328	Mercury	"	"	"	"
— 1329	Ra-226	"	"	(1) 1LT poly	"
— 1330	Ra-228	"	"	"	"

Field Blanks

Sample #	Analysis	Preserv.	Lot #	Cont	Lab
120813 0930	8260	ICE/HCl	N/A	(3) 40ml vials	HEAL
— 0931	EDB/DBCP	"	"	(1) 40ml vials	
— 0932	SVOA by 8270	ICE	"	(2) 1LT amber	
— 0933	PCB's	"	"	(1) 1LT amber	
— 0934	Phenols	ICE H_2SO_4	"	"	
— 0935	Anions	ICE	"	(1) 500ml poly	
— 0936	pH	"	"	"	
— 0937	TDS	"	"	"	
— 0938	Cond	"	"	"	
— 0939	Alk	"	"	"	
— 0940	NO_3/NO_2	ICE/H_2SO_4	"	(1) 125ml poly	
— 0941	TKN	"	"	(1) 500ml poly	
— 0942	Total N_2	"	"	"	
— 0943	NH_3	ICE/~~HNO3~~ H_2SO_4	"	~~(1) 40~~ "	
— 0944	~~TKN~~ TOC	ICE/HCl	"	(1) 40ml vials	
— 0945	~~Total N_2~~ Cyanide	ICE/NaOH	"	(1) Brown 500ml poly	
— 0946	~~NH_3~~ Metals	ICE/HNO_3	"	"	
— 0947	Mercury	"	"	"	
— 0948	Ra-226	"	"	(1) 1L Poly	
— 0949	Ra-228	"	"	"	

Continued on Page

Read and Understood By

T. [signature] Signed — 8-13-12 Date

Jon Munck Signed — 8-13-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-13-12

Sample Location: 700-J-200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	PERCHLORATE	EDB / DBCP	8270	PCBs	PHENOLS	ANIONS	pH		
120813 0930	3	A	X										
1305	3		X										
1306	3		X										
1310	3		X										
1311	3		X										
1307	1			X									
1308	1			X									
1309	1				X								
0931	1					X							
1312	1					X							
0932	2						X						
1313	2						X						
0933	1							X					
1314	1							X					
0934	1								X				
1315	1								X				
0935										X			
1316										X			
0936											X		
1317											X		

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. [illegible]	8-13-12	Jon Munch	8-14-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-13-12

Sample Location: 700-J-200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	TDS	COND	ALK	NO3/NO2	TKN	TOTAL N2	NH3	TOC	CYANIDE	TOTAL METALS
1208130937	1	A	X									
— 1318	1		X									
— 0938	1			X								
— 1319	1			X								
— 0939	1				X							
— 1320	1				X							
— 0940	1					X						
— 1321	1					X						
— 0941	1						X					
— 1322	1						X					
— 0942	2							X				
— 1323	2							X				
— 0943	1								X			
— 1324	1								X			
— 0944	2									X		
— 1325	2									X		
— 0945	1										X	
— 1326	1										X	
— 0946	1											X
— 1327	1											X

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. [illegible]	8-13-12	[illegible]	8-14-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-13-12

Sample Location: 700-J-200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	MERCURY	RA 226	RA 228								
120813094 7	1	A	X										
1328	1		X										
0948				X									
1329				X									
0949					X								
1330					X								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. [illegible]	8-13-12	[illegible]	8-14-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project Bldg 650 - EFF-1 Notebook No. Misc #21

Continues from Page

T. Moore, K. Amis & R. Williams present. Samples will be collected from a stainless steel sample port located on the Effluent side of the system. Sample port will be purged for one minute prior to parameters and sample collection. Carboy "63" used for field blanks.

Parameters	Meter ID	Buffer	Lot	Exp
E 12080939	pH/cond #	7	110747	2/13
pH 7.9	Turb # 8	10	113925	7/13
Temp 24.6°C	" STD 6.12 NTU			
Cond 1030 us/cm	" Rdg 6.08 NTU			
Turb 0.31 NTU	" Lot A2060			
pH/Pre 7.00 - 10.06 (20.0°C)	" Exp 8/30/12			
pH/Post 7.00 - 10.06				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
E 12080240943	VOA by 8260 LL	Ice/HCL	(3) 40 mL Vials	2059001	CAS
—— 0945	" FB	"	"	"	"
—— 0947	NDMA/DMN by 607	Ice	(1) 1 LT Amb		SWRI
—— 0949	" MS	"	"		"
—— 0951	Low Level NDMA	"	"	060412-W	CAS
—— 0953	" Dup	"	"	"	"
—— 0955	" FB	"	"	"	"
—— 0957	Anions/TDS	"	(1) 500 mL Poly	0227601W	ALS
—— 0959	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL Poly	0427601W	"

Continued on Page

Read and Understood By

[signature] 24 Aug 2012 [signature] 8-24-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 24 Aug 2012

Page 1 of 1

Sample Location: Bldg 650-EFF-1

Pertinent Notes (if any)

Sample Number		# of Containers	Sample Matrix*	HVOA by 8021	VOA by 8260	NDMA/DMN/Bromacil by 607	Low Level NDMA	Total metals	NO3/NO3 by 353.2	Anions/TDS	Perchlorate by 331	Formaldehyde by 8315A	NDMA/DMN by 607
E1208240943		3	A		X								
0945	FB	3			X								
0947		1											X
0949	MS	1											X
0951		1					X						
0953	Dup	1					X						
0955	FB	1					X						
0957		1								X			
0959		1							X				

Relinquished by:	Date Time:	Accepted by:	Date Time:
[signature]	24 Aug 2012 1050	[signature]	8-27-12 1015

* Sample Matrix Types: G - Gaseous; A - Aqueous; S - Solid; O - Other: _____

WSTF 318C (03 09)

Project Bldg 650 - Inf-1 Notebook No. Misc #21

Continues from Page

T. Moore And K. Amis present. Samples will be collected from a Stainless Steel Sample port located on the Influent Side of the System. Sample port will be purged for one minute prior to parameters and Sample Collection. Trip Blank was made at bldg 637 directly from the NANOpure.

Parameters	Meter ID	Buffer	Lot	Exp
I1208~~1012~~ 241012	PH/cond #	7	110747	2/13
PH 7.2	Turb #8	10	113925	7/13
Temp 24.7°C	" STD 6.12 NTU			
Cond 1040 us/cm	" Rdg 6.08 NTU			
Turb 0.90 NTU	" Lot A2060			
PH/Pre 7.0 - ~~10.0~~ 10.1 (22.4°C)	" Exp 8/30/12			
PH/Post 7.0 - 10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
I1208241016	VOA by 8260	Ice/HCL	(3) 40 mL Vial	2059001	CH
——— 1018	" TB	"	"	"	"
——— 1020	NDMA/DMN by 607	Ice	(1) 1 LT Amb		Swi
——— 1022	" Dup	"	"		"
——— 1024	Anions/TDS	"	(1) 500 mL Poly	0227601W	AL
——— 1026	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL Poly	0427601W	"

Continued on Page

Read and Understood By

Signed: [signature] Date: 24 Aug 2012 Signed: [signature] Date: 8-24-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 24 Aug 2012

Page 1 of 1

Sample Location: Bldg 650-Inf-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	HVOA by 8021	VOA by 8260	NDMA/DMN/Beomac-1 by 607	Low Level NDMA	Total METALS	NO2/NO3 by 353.2	Anions/TDS	Perchlorate by 331	Formaldehyde by 8315A	NDMA/DMN by 607
I 1208241016	3	A		X								
1018 TB	3			X								
1020	1											X
1022 Drp	1											X
1024	1								X			
1026	1							X				

Relinquished by:	Date Time:	Accepted by:	Date Time:
[signature]	24 Aug 2012 1050	[signature]	8-27-12 / 1015

* Sample Matrix Types: G - Gaseous; A - Aqueous; S - Solid; O - Other: _____

WSTF 318C (03 09)

Project Bldg 655 - EFF-2 Notebook No. Misc #21

Continues from Page

T. Moore & K. Amis present. Samples will be collected from Sample Port SP-12 located on the Effluent side of the System. Sample Port will be purged for One minute prior to parameters and Sample Collection. Carboy "G3" used for Field Blanks

Parameters	Meter ID	Buffer	Lot	Exp
E1208280945	PH/cond #	7	122492	4/14
PH 7.9	Turb # 8	10	113925	7/13
Temp 26.5°C	" STD 6.12 NTU			
Cond 910 us/cm	" Rdg 5.99 NTU			
Turb 0.26 NTU	" Lot A2060			
PH/Pre 7.0 - 10.1 (24.7°C)	" Exp 8/30/12			
PH/Post 7.0 - 10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
E1208280947	VOA by 8260	Ice/HCL	(3) 40 ML Vials	2059001	CAS
—— 0949	" FB	"	"		"
—— 0951	NDMA/DMN by 607	Ice	(1) 1 LT Amb		SWL
—— 0953	" (MS)	"	"		"
—— 0955	Low Level NDMA	"	"	060412-W	CA
—— 0957	" Dup	"	"	"	"
—— 0959	" FB	"	"	"	"
—— 1001	Total Metals	Ice/HNO3	(1) 250 ML Poly	0327601 W	ALS

Continued on Page

Read and Understood By

Signed [signature] Date 28 Aug 2012 Signed [signature] Date 8-28-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 28 Aug 2012 Page 1 of 1

Sample Location: Bldg 655-EFF-2

Pertinent Notes (if any)

Sample Number		# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	Low Level NDMA	Total Metals							
E1208280947		3	A	X										
0949	FB	3		X										
0951		1			X									
0953	MS	1			X									
0955		1				X								
0957	DUP	1				X								
0959	FB	1				X								
1001		1					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tim Moon	28 Aug 2012 1040	Jan Munich	8-29-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 655-Inf-1 Notebook No. Misc #21

Continues from Page

T. Moore & K. Amis present. Sample will be Collected From Sample port Bldg 655-Inf-2 Located on The Influent side of The System. Sample port will be purged For One minute prior To parameters and Sample Collection. Carboy "G3" used For Field Blanks.

Parameters	Meter ID	Buffer	Lot	Exp
I1208281012	PH/cond	7	122492	4/14
PH 7.2	Turb #8	10	113925	7/13
Temp 26.5°C	" STD 6.12 NTU			
Cond 840 uS/cm	" Lot ~~5.99 NTU~~ A2060			
Turb 0.27 NTU	" Rdg 5.99 NTU			
PH/Pre 7.0-10.1 (24.0°C)	" Exp 8/30/12			
PH/Post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	La
I1208281016	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	C
—— 1018	" FB	"	"	"	
—— 1020	Bromacil by 607	Ice	(1) 1 LT Amb		S
—— 1022	Total Metals	Ice/HNO_3	(1) 250 mL Poly	0327601W	
—— 1024	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL Poly	0427601W	

Continued on Page

Read and Understood By

[signature] Signed 28 Aug 2012 Date

[signature] Signed 8-28-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 28 Aug 2012

Sample Location: Bldg 655 - Inf - 1

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOH by 8260	Bromide by 607	Total Metals	NO2/NO3 by 353.2							
I-120828 1016	3	A	X										
1018 FB	3		X										
1020	1			X									
1022	1				X								
1024	1					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	28 Aug 2012 1040	[signature]	8-29-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-10-517 ENV-0053 Notebook No. D32 #93

Continues from Page

T. Torrez + D. Halvorsen Present. Weather is Clear and Hot. This Well will be Purged and Sampled using a dedicated Teflon bladder Pump. Samples will be Collected from a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP20 Flowcell and Water Analyzer.

Calibrations:

Initial DTW = 478.09 ft

IDW = 2 gal.

DO Sensor = In Saturated @ 644 mm/Hg

PH Sensor = using a 2pt. (7-10) Buffer method

Conductivity = using a 1413 us/cm STD. Solution

Turbidity meter = #7 STD = 6.01 RDG = LOT # = A2060 EXP = 8/12

Parameters (Time)	Temp	Cond	DO	PH	ORP	Turb	DTW (ft)
120810 1005	23.13	1050	4.34	7.28	111	5.14	479.11
—— 1010	23.21	10.46	4.31	7.21	112	5.09	"
—— 1015	23.19	10.53	4.34	7.26	112	5.16	"

TRIP BLANKS

Sample #	Analysis	Preserve	Cont.	LOT	LAB
1208100715	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	1194002	CAS
—— 0716	NOMA LL	Ice	(1) 1L Amber	60412	"

SAMPLES

Sample #	Analysis	Preserve	Cont.	LOT	LAB
120810 1020	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	1194002	CAS
—— 1021	NOMA LL	Ice	(1) 1L Amber	60412	"

Continued on Page

Read and Understood By

Signed 8-10-12 Date

John Munch Signed 8-10-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-10-12 Page _____ of _____

Sample Location: BLM-10-517

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	NDMA LL									
1208100715	3	A	Y										
0716	1			Y									
1020	3		Y										
1021	1			Y									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	8-10-12 1100	[signature]	8-13-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-14-327 ENV.0053 Notebook No. D32 #93

Continues from Page

D. HALVORSEN + T. TOLLEZ PRESENT. THE WEATHER IS OVERCAST + WARM. THIS WELL WILL BE SAMPLED + PURGED USING A DEDICATED TEFLON BLADDER PUMP. SAMPLES COLLECTED FROM TEFLON DISCHARGE TUBE. PARAMETERS WILL BE COLLECTED USING A MP-20 QED FLOWCELL.

CALIBRATIONS

DO SENSOR = CAL'd @ BLd 638 IN 643 mm/Hg SATURATED AIR.
PH SENSOR = 2PT CAL WITH 7 & 10 BUFFERS.
COND SENSOR = CAL'd WITH 1413 µs/cm STANDARD
TURBMETER #7 STD = 6.01 Rdg = 5.91 LOT# A2060 EX 8/12

PARAMS

TIME	TEMP	COND	DO	PH	ORP	TURB	DTW
120808 1035	21.15	1.208	4.46	7.07	223	0.49	274.30
— 1036	21.17	1.210	4.39	7.09	219	0.51	274.30
— 1037	21.16	1.207	4.47	7.08	220	0.53	274.30

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	CONT	LOT#	LAB
120808 1040	8260	ICE/HCl	(3) 40 ml VIALS	1194002	CAS
— 1041	" (FB)	"	"	"	"
— 1042	NDMA/DMN by 607	ICE	(1) 1LT AMBER		SRF
— 1043	" (DUP)	"	"		"
— 1044	ANIONS/TDS	ICE	(1) 500 ml poly	0227601	ALS
— 1045	NO_2/NO_3	ICE/H_2SO_4	(1) 125 ml poly	0427601W	"

Continued on Page

Read and Understood By

T. [signature] 8-8-12 [signature] 8-8-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-8-12 Page _____ of _____

Sample Location: BCM-14-327

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	607	Anions	NO2/NO3							
120808 1040	3	A	X										
1041	3		X										
1042	1			X									
1043	1			X									
1044	1				X								
1045	1					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature] To Cooler	8-8-12 1105	[signature]	8-9-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-22-570 ENV-0053 Notebook No. D32 #93

Continues from Page

I. Torrez & D. Halvorsen Present. Weather is Partly Cloudy and Warm. This Well will be Purged and Sampled using a dedicated Teflon bladder Pump. Samples will be Collected from a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 flowcell and Water Analyzer.

Calibrations:

Initial DTW = 515.15 ft.

DO Sensor = In Saturated Air @ 642 mm Hg

Carbog G2

PH Sensor = Using a 2pt. (7-10) Buffer method

IDW = 2 gal.

Conductivity = Using a 1413 uS/cm STD. Solution

Turbidity Meter = #7 STD: ROG = LOT #: Exp: 8/12

Parameters (Time)	Temp	Cond	DO	PH	ORP	Turb	DTW (ft.)
120806 0900	22.53	1113	4.62	7.32	125	0.75	515.18
—— 0905	22.47	1115	4.62	7.40	125	0.83	"
—— 0910	22.51	1113	4.61	7.36	126	0.73	"

SAMPLES

Sample #	Analysis	Preserve	Cont.	LOT	LAB
120806 0915	VOCs by 8260 LL	Ice/HCl	(3) 40 ml Vial	1194002	CAS
—— 0916	" " (FB)	"	"	"	"
—— 0917	NOMA LL	Ice	(1) 1L Amber		"
—— 0918	" " (FB)	"	"		"

Continued on Page

Read and Understood By

Signed 8-6-12 Date

Signed 8-7-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-6-12

Page _____ of _____

Sample Location: BLM-22-570

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	NDMA LL									
1208060915	3	A	X										
0916	3		X										
0917	1			X									
0918	1			X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	8-6-12 1055	[signature]	8-6-12 1100

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-25-455 ENV-0053 Notebook No. D32 #93

Continues from Page

M. Dunford + D. Halvorsen Present. Weather is Clear and Hot. This Well will be Purged and Sampled using a dedicated Teflon Bladder Pump. Samples will be collected from a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 Flowcell and Water Analyzer.

Calibrations:

Initial DTW = 334.50 ft.
Carboy G2
IDW = 2 gal.

DO Sensor = In Saturated Air @ 644 mm/Hg
PH Sensor = using a 2 pt (7-10) Buffer method
Conductivity = using a 1413 us/cm STD. Solution
Turbidity meter # = 7 STD = 6.01 RDG = 6.06 Lot # = A2060 Exp. = 8/12

Parameters (Time)	Temp	Cond.	DO	PH	ORP	Turb.	DTW (ft.)
120801 0930	20.89	829	2.53	8.00	171	0.55	334.50
0935	20.80	831	2.47	8.02	169	0.51	"
0940	20.83	833	2.50	7.98	170	0.56	"

SAMPLES

Sample #	Analysis	Preserve	Cont.	Lot	Lab
120801 0750	VOC by 8260 (TB)	Ice/HCl	(3) 40 ml Vial	1194002	CAS
0945	" "	"	"	"	"
0946	NDMA LL	Ice	(1) 1L Amber		"
0947	" " (FB)	"	"		"
0948	Total metals	Ice/HNO3	(1) 250 ml Poly		ALS

Continued on Page

Signed 8-1-12 Date

Read and Understood By

Signed 8-2-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-1-12

Page _____ of _____

Sample Location: Bldm 25-455

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	Semi VOC	Metals								
1208010750	3	A	X										
0945	3		X										
0946	1			X									
0947	1			X									
0948	1				X								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
To Cooler	8-1-12 1105	Jon Munch	8-2-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-30-585 WJI ENV-0020 Notebook No. D64 #110(Z)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using 5 steam cleaned and triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
1208011405Z	VOA by 8260	ice/HCL	(3)40ml vials	1194007	CAS

Initial Parameters

Time - 1208011435Z
PH - 8.21
Temp - 26.0°c
Cond - 920 us/cm
Turb - 2.61 NTU's
pH pre - 6.97/10.02 (33.0°c)
pH post - 6.95/10.03
DTW - 532.60 ft.
Atmos - 12.48 psia

Final

Time - 1208020831Z
PH - 8.15
Temp - 23.5°c
Cond - 943 us/cm
Turb - 1.16 NTU's
pH pre - 7.04/10.09 (24.6°c)
pH post - 7.05/10.07
DTW - 532.92 ft.
Atmos - 12.29 psia
IDW - 1/2 gals

Meter ID

pH/Cond - 53
Turb - 3
" Std - 4.44 NTU's
" Rdg - 4.32 NTU's
" Lot - A2060
" Exp - 8/30/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1208020800Z	VOA by 8260	ice/HCL	(3)40ml vials	1194002	CAS
—— 0801Z	" (Dup.)	"	"	"	"
—— 0802Z	NDMA/DMN by 607	ice	(1) 1L Amber	7-14-2012	SRI
—— 0830Z	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Runs	1)	2)	3)
	40.22	40.20	40.19
	38.81	38.77	38.78
	38.80	38.81	38.80
	40.26	40.19	40.18

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 8/2/12 — Date

Jim Munch — Signed — 8-2-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/1/12 Page _____ of _____

Sample Location: BLM-30-585

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260										
1208011405Z	3	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/1/12 1500hrs.	Pam Munch	8-2-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/2/12 Page _____ of _____

Sample Location: BLM-30-585

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals								
			Analytical Requirement										
120802 0800Z	3	A	✓										
——— 0801Z	3	A	✓										
——— 0802Z	1	A		✓									
——— 0830Z	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/2/12 1900hrs.	Jon Munch	8-2-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-36-350 WS1-ENV-0020 Notebook No. DC4#110Z

Continues from Page

A. MONTES & B. GALAZ PRESENT. WEATHER IS HOT & BREEZY. THIS ZONE WILL BE SAMPLED USING 5 TRIPLE RINSED SAMPLE TUBES. D.I. WATER IS FROM 200 AREA LABS. CARBOY G3 GEN IN USE. PROBE # 4755.

30MIN EQ BLANKS

SAMPLE#	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
120814143 4Z	UOA 8260	ICE·HCL	3·40ML VIALS	1194002	CAS
—— 1435Z	NOMA/DMN/607	ICE	1LT AMBER	060412-1W	"

INITIAL PARAMETERS	FINAL	METER ID	BUFFERS	EXP
TIME - 120815081 5Z	120815095 0Z	PH/COND - 54	7 - 1107247	2/13
PH - 7.62	7.58	TURB MTR - 6	10 - 1139225	7/13
TEMP - 23.1 °C	24.2 °C	" STD - 6.32 NTU		
COND - 1130 US/cm	1110 US/cm	" RDG - 6.43 NTU		
TURB - 0.39 NTU	0.46 NTU	" LOT # - A2060		
PH PRE - 7.14/10.09 (23)	7.14/10.11	" EXP - 8·30		
PH POST - 7.08/10.09	7.14/10.12			
ATMOS - 12.33 PSIA	12.34 PSIA			
DTW - 466.03 FT	466.22 FT			

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
120815085 8Z	UOA 8260	ICE·HCL	3·40ML VIALS	1194002	CA
—— 0859Z	NOMA/DMN/607	ICE	1LT AMBER	060412-1W	"

RUN	1)	2)	3)
	12.44	12.45	12.43
	33.32	33.37	33.25
	33.21	33.22	33.20
	12.47	12.50	12.46

Continued on Page

Read and Understood By

Signed 8-15-12 Date Signed 8-16-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8.14.12

Page 1 of 1

Sample Location: BLM.36.350

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA	20MA.DMN									
120814 1434z	3	A	x										
1435z	1	A		x									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	8.14.12	John Munch	8-15-12 /1050

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8·15·12

Sample Location: BLM· 36-350

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA	NDMA-DMN									
120815085 8z	3	A	X										
0859z	1	A		X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	8·15·12	Jon Munch	8-15-12 /1050

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project BLM-36-610 WJI ENV-0020 Notebook No. D64 # 110 (Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe # 4755.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
120809 0930Z	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0931Z	Low Level NDMA	ice	(1) 1L Amber	060412-IW	"

Initial Parameters

Time - 1208091035Z
PH - 8.46
Temp - 27.2°C
Cond - 927 us/cm
Turb - 4.54 NTU's
pH pre - 7.01/10.05 (31.1°C)
pH post - 6.98/10.04
DTW - 463.45'
Atmos - 12.43 psia

Final

Time - 1208100753Z
PH - 8.06
Temp - 25.8°C
Cond - 960 us/cm
Turb - 0.75 NTU's
pH pre - 7.10/10.08 (19.6°C)
pH post - 7.12/10.07
DTW - 464.06 ft.
Atmos - 12.41 psia
IDW - 1/2 gals.

Meter ID

pH/cond - 54
Turb - 6
" Std - 6.32 NTU's
" Rdg - 6.58 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120809 1335Z	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1336Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SPI
——— 1410Z	Low Level NDMA	"	"	060412-IW	CAS
——— 1440Z	" (Dupl)	"	"	"	"
120810 0750Z	Anions / TDS	"	(1) 500ml poly	022760IW	ALS
——— 0751Z	Perchlorate by 331.0	"	(1) 125ml poly	001555	CAS
——— 0752Z	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	042760IW	ALS

Runs	1)	2)	3)	4)	5)
	80.62	80.51	80.44	80.33	80.38
	74.78	74.68	74.68	74.69	74.70
	74.54	74.55	74.65	74.62	74.56
	80.63	80.52	80.44	80.38	80.37

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 8/10/12 — Date

Jon Munch — Signed — 8-10-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/9/12 Page _____ of _____

Sample Location: BLM-36-610

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA								
1208090930Z	3	A	✓										
——— 0931Z	1	A			✓								
——— 1335Z	3	A	✓										
——— 1336Z	1	A		✓									
——— 1410Z	1	A			✓								
——— 1440Z	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fuerd	8/9/12 1500hrs.	[signature]	8-13-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/10/12 Page _____ of _____

Sample Location: BLM-36-610

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Anions/TDS	Perchlorate	NO_2/NO_3								
1208100750Z	1	A	✓										
——— 0751Z	1	A		✓									
——— 0752Z	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Frando	8/10/12 1100hrs.	Jon Munch	8-13-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM·36·800 WJ·ENV·0020 Notebook No. D64#110Z

Continues from Page

A. MONTES & B. GALAZ PRESENT. WEATHER IS HUMID & WARM. THIS ZONE WILL BE SAMPLED USING STRIPLE RINSED STAINLESS STEEL TUBE GEN IN USE. PROBE #4755. FILLED CARBOY IN A.M.

30MIN EQ.BLANKS (G-3) CARBOY

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
120814 0755Z	VOA 8260	ICE·HCL	3·40ML VIALS	1194002	CAS
——— 0756Z	LL NDMA	ICE	1LT AMBER	060412·IW	"

INITIAL PARAMETERS	FINAL	METER ID	BUFFERS	EXP
TIME - 120814 0856Z	120814 0952Z	PH/COND - 54	7 - 110747	2/13
PH - 7.54	7.52	TURB MTR - 6	10 - 139 25	7/13
TEMP - 25.8 °C	26.8 °C	" STD - 6.32 NTU		
COND - 1006 USCM	1021 USCM	" RDG - 6.49 "		
TURB - 0.70 NTU	0.68 NTU	" LOT# - A2060		
PH PRE - 7.10 - 10.12 (24.5°C)	7.10 - 10.15 (24.8°C)	" EXP - 8.30		
PH POST - 7.12 - 10.13	7.11 - 10.14			
ATMOS - 12.39 psia	12.38 psia			
DTW - 465.10 FT.	466.03 FT			

*CASING & FORMATION PRESSURES OFF FROM TASK MEMO. CHECKED & CONFIRMED CORRECT BEEP.

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
120814 0945Z	VOA 8260	ICE·HCL	3·40ML VIALS	1194002	CAS
——— 0946Z	LL NDMA	ICE	1LT AMBER	060412-IW	CAS

*HAND HELD SHUTS OFF WITH ANY MOVEMENT.

RUN	1)	2)
	188.42	188.34
	155.28	155.36
	155.34	155.37
	188.38	188.38

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
	8·14·12		8-14-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8.14.12 Page _____ of _____

Sample Location: BLM.36.800

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA	LL NDMA									
1208140755z	3	A	X										
0756z	1			X									
0945z	3		X										
0946z	1			X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	8.14.12	John Munch	8-14-12 / 1330

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
120810 0900Z	VOA by 8260	ice/HCL	(3) 40ml vials	119400Z	CAS
——— 0901Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters	Final	Meter ID
Time - 120810 0940Z	Time - 120810 1335Z	pH/Cond - 54
PH - 7.85	PH - 7.95	Turb - 6
Temp - 26.7°C	Temp - 27.1°C	" Std - 6.32 NTU's
Cond - 818 us/cm	Cond - 833 us/cm	" Rdg -
Turb - 2.12 NTU's	Turb - 1.60 NTU's	" Lot - A2060
pH pre - 7.04/10.07 (25.2°C)	pH pre - 6.99/10.04 (30.2°C)	" Exp - 8/29/12
pH post - 7.02/10.05	pH post - 6.97/10.07	
DTW - 464.06 ft.	DTW - 465.10 ft.	
Atmos - 12.42 psia	Atmos - 12.36 psia	
	IDW - 1/2 gals.	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120810 1020Z	VOA by 8260	ice/HCL	(3) 40ml vials	119400Z	CAS
——— 1021Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"
——— 1300Z	" (Dupl.)	"	"	"	"
——— 1301Z	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 125ml poly	0427601W	ALS

Runs	1)	2)	3)	4)
	189.17	189.03	188.91	188.72
	155.63	155.63	155.59	155.61
	155.59	155.63	155.62	155.43
	189.14	189.03	188.88	188.77

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/10/12 — Date

[signature] — Signed — 8-10-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/10/12

Page _____ of _____

Sample Location: BLM-36-860

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	LL NDMA	NO_2/NO_3								
1208100900Z	3	A	✓										
——— 0901Z	1	A		✓	ce ~~cc~~								
——— 1020Z	3	A	✓										
——— 1021Z	1	A		✓									
——— 1300Z	1	A		✓									
——— 1301Z	1	A			✓								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fenso	8/9/12 1400hrs.	Ron Munch	8-13-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project B/m-38-480 ENV.0020 Notebook No. D64 # 110 Z

Continues from Page

B. Tufts & T. Torrez present. The weather is clear & warm. This zone will be sampled with 5 triple rinsed sample tubes. D.I water used to rinse & DO E.B's was from 200 area system. Probe # 4755 in use. Gen in use.

30 min E.B's

Sample #	Analysis	Preserv.	Cont	Lot #	Lab
1208200800Z	8260LL	ICE/HCl	(3) 40ml vials	1194002	CAS
—— 0801Z	LLNDMA	ICE	(1) 1L amber	060412-10	"

Initial		Final
1208200944Z		1208210816Z
ph	8.45	8.61
Temp	23.9°c	22.8°c
Cond	873 us/cm	855 us/cm
Turb	0.84 NTU's	0.64 NTU's
ph pre	7.10/10.16 (21.6)	7.09/10.17 (20.0°c)
ph post	7.17/10.19	7.11/10.16
DTW	373.92 ft.	374.38 ft.
Atmos.	12.36 psia	12.41 psia

Meter ID's
ph/cond = 54
Turb # 6
" std = 6.32
" rdg = 6.41
" Lot # A2060
" Exp 8/12

Buffers	Lot	Ex
7	110747	2/
10	113925	7/

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
1208210740Z	8260 LL	ICE/HCl	1194002	(3) 40ml vials	CAS
—— 0741Z	" (M.S)	ICE/HCl	"	"	"
—— 0742Z	LLNDMA	ICE	06412-10	(1) 1L amber	SRI
—— 0815Z	Total metals	ICE/HNO3	0327601W	(1) 500ml poly	ALS

Run	1)	2)	3)	4)
	62.78	~~62.75~~	62.56	62.59
	43.05	~~42.~~ CQ	42.85	42.91
	42.77		42.58	42.60
	62.79		62.60	62.55

* D. Halvorsen & C. Del Ferraro continued sampling event on 8/21. *

Continued on Page

Craig Del Ferraro 8/21/12 Read and Understood By Jori Munnick 8-21-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/20/12

Page _____ of _____

Sample Location: BLM - 38 - 480

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
120820 0800Z	3	A	✓										
—— 0801Z	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiend	8/20/12 1500hrs.	Jon Munch	8-21-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/21/12

Page _____ of _____

Sample Location: BLM-38-480

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals								
120821 0740Z	3	A	✓										
——— 0741Z	3	A	✓										
——— 0742Z	1	A		✓									
——— 0815Z	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fermo	8/21/12 0840hrs.	Jon Munch	8-21-12 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-28-620 WJE ENV-0020 Notebook No. D64 # 102

Continues from Page

B. GAIAZ & D. HALVORSEN PRESENT. WEATHER IS CLOUDY & COOL. THIS ZONE WILL BE SAMPLED USING 6 STAINLESS STEEL SAMPLE BOTTLES WHICH WERE STEAM CLEANED & TRIPLE RINSED USING D.I. WATER FROM THE 200 AREA CHEM. LAB. CARBOY G-4 GEN IN USE PROBE # 4755

EQUIPMENT BLANKS

SAMPLE	ANALYSIS	PRESERVATIVE	CONTAINER	LOT#	LAB
120816093OZ	VOA 8260	ICE/HCL	(3) 40ml VIALS	1194002	CAS
—— 0931Z	NDMA LL	ICE	(1) 1L AMBER	060412-1W	CAS

INTIAL PARAMETERS		FINAL	METER ID
TIME	120816104 5Z	120816143 0Z	PH/COND - # 54
PH	8.22	8.49	TURB - #6
TEMP	24.6°C	22.4°C	RD6 - 6.40
COND	952	1011	STD - 6.32
TURB	1.23 NTU's	0.78 NTUS	LOT# - A2060
PHPRE	7.10/10.02 (28.2°C)	7.02/10.02	EXP - 8-30
PHPOST	7.08/10.02	7.02/10.02	
ATMOS	12.32	12.33	
DTW	373.35	373.92	

BUFFERS	LOT#	EXP
7	110747	2/13
10	113925	7/13

* LATE START - FILLED CARBOY @ 200 AREA CHEM LAB - FIXED FLAT TIRE - TOOK CHEVY TO 65A TO GET FIXED - PROBLEMS WITH HAND HELD

SAMPLES

SAMPLE #	ANALYSIS	PRESERVATIVE	CONTAINER	LOT#	LAB
120816135 0Z	VOA 8260	ICE/HCL	(3) 40ml VIALS	1194002	CAS
—— 1351Z	NDMA LL	ICE	(1) 1L AMBER	060412-1W	"
—— 1420Z	ANIONS/MDS	"	(1) 500ml POLY	022760 1W	"
—— 1421Z	TOTAL METALS	ICE/HNO3	(1) 250ml POLY	032760 1W	"
—— 1422Z	TOTAL METALS (F.B.)	"	(1) "	032760 1W	"
—— 1423Z	NO2/NO3	ICE/H2SO4	(1) 125ml POLY	042760 1W	"

RUNS	1)	2)	3)
	124.07	124.09	123.87
	90.40	90.46	90.29
	89.14	89.32	89.65
	124.12	123.99	123.82

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
[signature]	8-16-12	Jon Munch	8-16-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-16-12

Page 1 of 1

Sample Location: BLM. 28. 620

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA	NDMA LL	ANIONS/TDS	METALS	NO_2/NO_3					
1208160930Z	3		X									
0931Z	1			X								
1350Z	3		X									
1351Z	1			X								
1420Z	1				X							
1421Z	1					X						
* F.B. 1422Z	1					X						
1423Z	1						X					

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
BRIAN GALLAS	8-16-12	Jon Munch	8-20-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-6-488 ENV-0053 Notebook No. D32 #93

Continues from Page

M. Dunford & D. Halvorsen Present. Weather is cloudy and Hot. This well will be Purged and SAMPLED using a dedicated Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 Flowcell and Water Analyzer.

Calibrations:

Initial DTW = 359.60 ft.
Carboy G2
IDW = 3 gal.

DO Sensor = In Saturated Air at 644 mm/Hg
PH Sensor = Using 2 pt. (7-10) Buffer method
Conductivity = Using a 1413 STD. Solution
Turbidity meter = #7 STD = 6.01 RDG = 6.06 LOT # = A2060 Exp = 8/12

Parameters (Time)	Temp	Cond	DO	pH	ORP	Turb.	DTW (ft.)
120801 1415	21.38	1390	1.70	7.95	1.73	2.17	359.80
1420	21.36	1404	1.68	7.96	1.73	1.22	"
1425	21.10	1404	1.64	7.96	1.72	0.60	"

SAMPLES

SAMPLE #	Analysis	Preserve	Cont.	LOT	LAB
120801 1430	VOA by 8260	Ice/HCl	(3) 40 ml Vial	1194002	CAS
1431	" " (FB)	"	"	"	"
1432	Bromacil by 607	Ice	(1) 1L Amber		SRI
1433	NDMA LL	"	"	060412	CAS
1434	" " (FB)	"	"	"	"
1435	Total metals	Ice/HNO3	(1) 250 ml Poly	0327601	ALS
1436	" " (Dup)	"	"	"	"
1437	Anions/TDS	Ice	(1) 500 ml Poly	0227601	"
1438	NO2/NO3 by 353.2	Ice/H2SO4	(1) 125 ml Poly		"

Continued on Page

Read and Understood By

Signed 8-1-12 Date

Signed 8-2-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-1-12

Page _____ of _____

Sample Location: BLM-6 488

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	607	NDMA CL	Metals	Anions	NO2/NO3					
1208011430	3	A	X										
1431	3		X										
1432	1			X									
1433	1				X								
1434	1				X								
1435	1					X							
1436	1					X							
1437	1						X						
1438	1							X					

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature] TO cooler	8-1-12 1513	[signature]	8-2-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

M. Dunford & D. Halvorsen Present. Weather is Partly Cloudy and HOT. This Well will be Purged and Sampled using a dedicated Teflon bladder Pump. Samples will be Collected from a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 flowcell and Water Analyzer.

Calibrations:

Initial DTW = 477.66 ft.
DW = 2.5 gal.

DO Sensor: In Saturated Air @ 643 mm/Hg
PH Sensor: Using a 2 pt. (7-10) Buffer method
Conductivity: Using a 1413 us/cm STD Solution
Turbidity, meter # 7 STD: 6.01 RDG: 5.91 LOT # = A2060 EXP = 8/12

Parameters (Time)	Temp	Cond	DO	PH	ORP	Turb	DTW (ft.)
120808 1430	22.19	1062	3.60	7.53	168	1.30	477.66
1435	22.22	1065	3.62	7.46	168	0.90	"
1440	22.18	1069	3.66	7.54	167	0.74	"

Trip Blank Samples

Sample #	Analysis	Preserve	Cont.	LOT	LAB
120808 1300	VOC by 8260 LL	Ice/HCl	(3) 40 ml Vial	1194002	CAS
1301	NDMA LL	Ice	(1) 1L Amber	60412	"

Samples

Sample #	Analysis	Preserve	Cont.	LOT	LAB
120808 1445	VOC by 8260 LL	Ice/HCl	(3) 40 ml Vial	1194002	CAS
1446	NDMA LL	Ice	(1) 1L amber	60412	"
1447	" " (MS)	"	"	"	"
1448	" " (MSD)	"	"	"	"

Continued on Page

Read and Understood By

Signed 8-8-12 Date

Signed 8-8-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-8-12

Page _____ of _____

Sample Location: BLM-7-509

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	NOMALL									
208081300	3	A	X										
1301	1			X									
1445	3		X										
1446	1			X									
1447	1			X									
1448	1			X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature] To Coolus	8-8-12 1510	[signature]	8-9-12 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

T. Torres & D. Halvorsen Present. Weather is Partly Cloudy and HOT. This well will be Purged and Sampled using a dedicated Teflon Bladder Pump. Samples will be collected from a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 flowcell and water Analyzers

Calibrations:

Initial DTW = 167.63 ft.
Carboy = G2
IDW = 1/2 gal.

DO Sensor = In Saturated Air @ 643 mmHg
PH Sensor = using a 2pt. (7-10) Buffer Method
Conductivity = using a 1413 us/cm STD. Solution
Turbidity meter = #7 STD = 6.01 RDG = 6.05 LOT# = A2060 EXP = 8/12

Parameters (Time)	Temp	Cond	DO	PH	ORP	Turb	DTW (ft)
120807 1430	24.45	1218	4.39	7.45	117	0.52	167.81
1435	24.51	1223	4.38	7.60	116	0.63	"
1440	24.47	1219	4.38	7.71	117	0.56	"

SAMPLES

Sample #	Analysis	Preserve	Cont.	LOT	LAB
120807 1445	VOA by 8260	Ice/HCl	(3) 40 ml Vial	1194032	CAS
1446	" " (Dup)	"	"	"	"
1447	" " (FB)	"	"	"	"
1448	NDMA/DMN Bromacil by 607	Ice	(1) 1L Amber		SRI
1449	" " (Dup)	"	"		"
1450	Total Metals	Ice/HNO3	(1) 250 ml Poly	327601	ALS

Continued on Page

Read and Understood By

Signed 8-7-12 Date Signed Jon Munck 8-7-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-7-12 Page _____ of _____

Sample Location: BW-1-268

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA	607	Metals								
120807 1445	3	A	X										
1446	3		X										
1447	3		X										
1448	1			X									
1449	1			X									
1450	1				X								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
To cooler	8-7-12 1505	Jon Munch	8-8-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project MPE-1 Notebook No. PFTS Wells #2

Continues from Page

T. Moore & K. Amis present. Samples will be collected from A Sample port near the well Head. Sample port will be purged for One minute prior to parameters and Sample Collection. Carboy "G3" used for Field Blanks. Weather is ~~Cloudy~~ Clear and Warm with a breeze out of the East.

Parameters	Meter ID	Buffer	Lot	Exp
W1208291254	PH/cond #	7	122492	4/14
PH 6.6	Turb # 8	10	113925	7/13
Temp 18.1 °C	" STD 6.12 NTU			
Cond 1110 us/cm	" Rdg 6.06 NTU			
Turb 0.43 NTU	" Lot A2060			
PH/Pre 7.0-10.1 (28.4')	" Exp 8/30/12			
PH/Post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W1208291258	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	CAS
—— 1259	" FB	"	"	"	"
—— 1300	NDMA/DMN/Bromacil by 607	Ice	(1) 1LT Amb	7-14-2012	SWLI
—— 1301	" FB	"	"	"	"
—— 1302	Total Metals	Ice/HNO_3	(1) 250 mL Poly	0327601W	ALS
—— 1303	Perchlorate by 331.0	Ice	(1) 125mL Sterile Poly	001551	CAS
—— 1304	NO_2/NO_3 by H_2SO_4	Ice/H_2SO_4	(1) 125mL Poly	0427601W	ALS

Continued on Page

Read and Understood By

[signature] Signed 29 Aug 2012 Date [signature] Signed 8-29-12 Date

WSTF CHAIN OF CUSTODY RECORD

Date 29 Aug 2012

Laboratory / PO #

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	NDMA/Bromacil by 607	Perchlorate by 331.0	NO_2/NO_3 by 353.2	Comments
W1208291258	MPE-1	3	A		X							
1259 FB		3			X							
1300		1							X			
1301 FB		1							X			
1302		1						X				
1303		1								X		
1304		1									X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	29 Aug 2012 1500	[signature]	8-30-12 / 0950

WSTF – 381B (02/00)

Project MPE - 11 Notebook No. BFTS wells #2

Continues from Page

T. Moore and K. Amis present. Samples will be collected ~~from~~ from A Sample port located near the well Head. Sample port will be purged for One minute prior to parameters and Sample Collection Carboy " " used for Field Blanks. Weather is ~~cloudy~~ clear & warm with a breeze out of the

Parameters	Meter ID	Buffer	Lot	Exp
W1208291221	PH/cond #	7	122492	4/14
PH 7.4	Turb #8	10	113925	7/13
Temp ~~880~~ 14.2°c	"STD 6.12 NTU			
Cond 880 US/cm	"Rdg 6.06 NTU			
Turb 1.79 NTU	"Lot A2060			
PH/Inc 7.0 - 10.1 (21.9°c)	"Exp 8/30/14			
PH/post 7.0 - 10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W1208291224	VOA by 8260	Ice/HCL	(3) 40 ml Vials	2059001	CA
—— 1225	" FB	"	"	"	"
—— 1226	NDMA/DMN/Bromacil by 607	Ice	(1) 1 LT Amb	7-14-2012	SW
—— 1227	Total Metals	Ice/HNO_3	(1) 250 ml Poly	0327601W	AL
—— 1228	Perchlorate by 331.0	Ice	(1) 125 ml Sterile Poly	001551	CA
—— 1229	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 ml poly	0427601W	AL

Continued on Page

Read and Understood By

Signed [signature] Date 29 Aug 2012 Signed [signature] Date 8-29-12

WSTF CHAIN OF CUSTODY RECORD

Date 29 Aug 2012

Page 1 of 1

Laboratory / PO #

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	NDMA/Bromacil by 607	TOTAL METALS	Perchlorate by 331.0	NO2/NO3 by 353.2	Comments
W120829124	MPE-11	3	A		X							
1225 FB		3			X							
1226		1						X				
1227		1							X			
1228		1								X		
1229		1									X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Tim Moe	29 Aug 2012 1500	Lori Minnick	8-30-12 / 0950

WSTF – 381B (02/00)

Project NASA 7 WSI ENV-0013 8-21-12 Notebook No. D32#93

Continues from Page

M. Dunford & B. Galaz present. Completed NASA 8 prior to starting NASA 7. Had to wait on a nitrogen K-bottle due to having only one truck with a K bottle rack to transport bottles. This well will be purged using a dedicated teflon bladder pump and sampled using a teflon discharge tube.

Total Depth = 200.17 ft. (61.62 m)
Initial DTW = 168.44 ft. (51.33 m)
3 casing volumes = 18 gals.
Purge start = 0925
Purge stop =
Gals. purged =

Meter ID	Buffers	Exp	Lot#
PH/Cond - 56	7	2/13	110747
Turb - 7	10	7/13	113925
" Stnd - 6.01			
" Rd - 5.78			
" Exp - 8/30			
" Lot# - A2060			

Initial Parameters	Secondary Parameters	Final Parameters
Time - 120821 1255	120821 1410	120822 0835
PH - 7.64	7.24	8.58
Temp - 24.7°c	25.6°c	21.3°c
Cond - 2170 us/cm	2670 us/cm	2520 us/cm
Turb - 5.60 NTU's	8.10 NTU's	6.97
PH Pre Cal - 6.83/9.83 (38.2°c)	6.80/9.82 (40.7°c)	6.84/9.88 (24.3°c)
PH Post Cal - 6.97/9.96	6.82/9.77	6.90/9.94

Samples

Sample#	Analysis	Preservative	Lot#	Lab	Cont.
120822 0830	VOA by 8260 (FB)	Ice/HCL	2059001	CAS	(3) 40 ml vials
—— 0831	" "	"	"	"	(3) "
—— 0832	Bromacil by 607	Ice	NA	SWRI	(1) 1 Lt Amber
—— 0833	Total Metals	Ice/HNO_3	0327601W	ALS	(1) 250 ml poly
* —— 0834	" " (MS)	" "	"	"	(1) " "

* 8-21-12 Well went dry @ 1420 hrs @ about the same time as completing the number of gals. we needed for 3 casing volumes.

Continued on Page

Read and Understood By

Signed: [signature] Date: 8-22-12

Signed: [signature] Date: 8-23-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-22-12

Page 1 of 1

Sample Location: NASA 7

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA 8260	Bromacil by 607	Total Metals								
1208220830 (FB)	3	A	X										
0831	3		X										
0832	1			X									
0833	1				X								
0834 (M.S.)	1				X								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	8-22-12 / 0900	Jon Munch	8-22-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project NASA 8 WSI ENV-0013 8-21-12 Notebook No. D32#93

Continues from Page NA

M. Dunford & B. Galaz present on 8-20-12. Purged well dry and allowed to recover overnight. Well was purged using a dedicated teflon bladder pump and sampled using a teflon discharge tube.

Total Depth = 196.98 ft. (60.04 m)
Initial DTW = 190.55 ft.
3 casing volumes - 15 gals.
purge start - 0900 hrs.
purge stop - 1110 hrs.
Gals purged - 4 gals.
DTW 8-21-12 = 192.30 ft.

Meter ID	Buffers	Exp	Lot#
pH/cond - 56	7	2/13	110747
Turb - 7	10	7/13	113925
" std - 6.01			
" Rd - 5.67			
" Exp - 8/30			
" Lot# - A2060			

Initial Parameters	Final Parameters
Time - 120821 0800	120821
pH - 8.66	8.73
Temp - 25.6°c	22.1°c
Cond - 1179 us/cm	1200 us/cm
Turb - 7.17 NTU's	7.09
pH PreCal - 6.89/9.85 (23.3°c)	6.92/9.76 (23.7°c)
pH PostCal - 6.98/9.75	6.90/9.84

Samples

Sample#	Analysis	Preservative	Lot#	Lab	Containers
120820 0800	VOA by 8260 (TB)	Ice/HCL	2059001	CAS	(3) 40 ml vials
120821 0801	VOA by 8260	"	"	"	(3) "
—— 0802	Bromacil by 607	Ice	NA	SWRI	(1) 1 Lt Amber
—— 0803	Total Metals	Ice/HNO_3	0327601W	ALS	(1) 250 ml poly
—— 0804	" " (Dup)	" "	"	"	(1) " "

Final DTW = 192.65 ft.

Continued on Page

Read and Understood By

M. Dunford — Signed — 8-21-12 Date

Jon Munch — Signed — 8-23-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-21-12

Page 1 of 1

Sample Location: NASA 8

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Bromacil by 607	Total Metals								
1208200800	3	A	X										
1208210801	3	A	X										
0802	1	A		X									
0803	1	A			X								
0804	1	A			X								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	8-21-12 / 0845	[illegible]	8-21-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PFE-7 Notebook No. PFTS wells # 2

Continues from Page

T. Moore & K. Ami's present. Samples will be collected ~~and~~ from the sample port next to the well head. Sample port will be purged for one minute prior to parameters and sample collection. Can be "G3" used for field blanks. Weather is ~~cloudy~~ clear and warm with a little breeze out of the

Parameters	Meter ID	Buffer	Lot	Exp
W1208201248	pH/cond #	7	110747	2/13
pH 6.5	Turb # 8	10	113925	7/13
Temp 24.3°C	" STD 6.12 NTU			
Cond 1020 uS/cm	" Rdg 6.02 NTU			
Turb ~~[illegible]~~ 0.35 NTU	" Lot A2060			
pH/Pre 6.9 - 10.2 (29.9°C)	" Exp 8/30			
pH/Post 7.0 - 10.3				

Samples

Sample #	Analysis	Preservative	Container	Lot	Lo
W1208281250	VOA by 8260	Ice/HCL	(3) 40 ml vials	205001	C
1251	" (FB)	"	"	"	"
1252	NAMA/Sandy 607	Ice	(1) 1 LT Amb		Su
1253	Low Level NAMA	"	"	060912-1W	C
1254	" (FB)	"	"	"	"

Continued on Page

Read and Understood By

Tim Moore — Signed — 28 Aug 2012 — Date

Jim Munch — Signed — 8-29-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 28 Aug 2012

Sample Location: PFE-7

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NMA/DMN by 607	Low Level NDMA								
W1208281250	3		X										
1251 FB	3		X										
1252	1			X									
1253	1				X								
1254 FB	1				X								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	28 Aug 2012 1339	[signature]	8-29-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project PFE-7 Notebook No. PFTS wells # 2

Continues from Page

T. Moore & K. Ami's present. Samples will be collected ~~and~~ From The Sample port next To The well Head. Sample port will be purged for one minute prior To parameters and Sample collection. Can be "G3" used For Field Blanks. Weather is ~~Cloudy~~ Clear and warm with a Little Breeze out of The

Parameters	Meter ID	Buffer	Lot	Exp
W1208201248	pH/cond #	7	110747	2/13
pH 6.5	Turb # 8	10	113925	7/13
Temp 24.3°C	" STD 6.12 NTU			
Cond 1020 uS/cm	" Rdg 6.02 NTU			
Turb ~~[illegible]~~ 0.35 NTU	" Lot A2060			
pH/Pre 6.9 - 10.2 (29.9°C)	" Exp 8/30			
pH/Post 7.0 - 10.3				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lo
W1208281250	VOA by 8260	Ice/HCL	(3) 40 ml vials	205001	C
1251	" (FB)	"	"	"	"
1252	NAMA/Sandy 607	Ice	(1) 1 LT Amb		Su
1253	Low Level NAMA	"	"	060912-1W	C
1254	" (FB)	"	"	"	"

Continued on Page

Read and Understood By

Tim Moore — Signed — 28 Aug 2012 — Date

Jim Munch — Signed — 8-29-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 28 Aug 2012

Sample Location: PFE-7

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NMA/DMN by 607	Low Level NDMA								
W1208281250	3		X										
1251 FB	3		X										
1252	1			X									
1253	1				X								
1254 FB	1				X								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	28 Aug 2012 1339	[signature]	8-29-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project PL-7-480 Notebook No. D64#110(2)

Continues from Page N/A

F. Gallegos & D. Tufts present. Weather is clear & humid. This well will be sampled using 5-triple rinsed stainless steel tubes. Carboy "G-4", Probe #2213, system checks were done prior to sampling.

30 min equip blnks

Sample#	Analysis	Preserv	Lot#	Lab	Cont
1208240800Z	VOA by 8260(11)	ICE & HCl	1194002	CAS	(3) 40ml vial
——— 0801Z	1L NDMA	ICE	06412-10	..	(1) Lt amber

Initial Params	Final Params	Meter ID	Buffers
Time - 1208240840Z	Time - 1208241005Z	PH/COND - #54	7 - 110747 7/13
PH - 8.67	PH - 7.85	TURB - #6	10 - 113925 7/13
Temp - 22.3°C	Temp - 24.4°C	..STD - 6.32	
Cond - 889 us/cm	COND - 961 us/cm	..RDG - 6.54	
TURB - 0.74 NTU	TURB - 0.91 NTU	LOT# A-2060	
PHPre - 7.34 - 18.0°C - 10.20	PHPre - 6.98 - 24.7°C - 10.07	Exp - 8/30/12	
PH POST - 7.32 - 18.4°C - 10.27	PHPOST - 7.05 - 10.11		
ATMOS - 12.47 psia	ATMOS - 12.49 psia	IDW - 1 gallon on the 24th	
DTW - 465.00'	DTW - 465.10'		

Samples

Sample#	Analysis	Preserv	Lot#	Lab	Cont
1208240917Z	VOA by 8260(11)	ICE & HCl	1194002	CAS	(3) 40ml vial
1208240918Z	1L NDMA	ICE	06412-10	..	(1) Lt amber

Runs	1)	2)	3)
	20.44	20.45	20.44
	20.81	20.82	20.83
	20.81	20.87	20.84
	20.45	20.43	20.45

Continued on Page N/A

Read and Understood By

Bob [signature] 8-24-12 [signature] 8-24-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-24-12 Page 1 of 1

Sample Location: PL-7-480

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	VOA by 8260LL	LL NDMA									
1208240800Z	3	A	+										
0801Z	1	A		+									
0917Z	3	A	+										
0918Z	1	A		+									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Bob Zft	8-24-12 / 10:40	Jon Munch	8-27-12 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PC-7-560 Notebook No. D64F110(2)

Continues from Page N/A

F. Gallegos & B. Tufts present. Weather is clear and windy. System checks were done prior to sampling, carboy "G-4", probe #, this well will be sampled using 5-triple rinsed stainless steel tubes.

SOM, NEQUIP BLNKS

SAMPLE#	ANALYSIS	Preserve	LOT#	LAB	CONT
120822 1040Z	VOA by 8260(C)	ICE & HCL	1194002	CAS	(3) 40ml vial
—— 1041Z	LL NDMA	ICE	06412-10	"	(1) Lt amber

INITIAL PARAMS	FINAL PARAMS	METER ID	BUFFERS
TIME: 120822 1334Z	TIME - 120822 1435Z	PH/COND #54	7 - 110747 7/13
PH - 8.28	PH - 7.38	TURB - #6	10 - 113925 7/13
TEMP - 25.1°C	TEMP 26.7°C	STD - 6.32	
COND - 933 us/cm	COND - 958	RDG - 6.34	
TURB - 1.84 NTU	TURB - 1.72 NTU	LOT# - A-2060	
PH PRE - 7.09 - 31.1°C - 9.99	PH PRE - 6.97 - 33.8°C - 9.92	EXP - 8-30-12	
PH POST - 7.11 - 30.8°C - 10.07	PH POST - 7.11 - 33.2°C - 10.05	IDW - 2 gallons on the 22nd	
ATMOS - 12.42 psia	ATMOS - 12.41 psia		
DTW - 464.50'	DTW - 465.00'		

SAMPLES

SAMPLE#	ANALYSIS	Preserve	LOT#	LAB	CONT
120822 1405Z	VOA by 8260(C)	ICE & HCL	1194002	CAS	(3) 40ml vial
—— 1406Z	LL NDMA	ICE	06412-10	"	(1) Lt amber
—— 1430Z	Perchlorate by 331.0	"		"	(1) 125ml poly

Runs	1)	2)	3)
	54.98	55.00	55.01
	55.06	55.05	55.04
	55.18	55.11	54.99
	54.97	54.99	55.02

Continued on Page N/A

Read and Understood By

Signed: [illegible] Date: 8-22-12 Signed: Jon Munck Date: 8-22-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-22-12 Page 1 of 1

Sample Location: PL-7-560

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA by 8260 (11)	LC NDMA	Perchlorate								
120822 1040Z	3	A	X										
—— 1041Z	1	A		X									
—— 1405Z	3		X										
—— 1406Z	1			X									
—— 1430Z	1				X								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	8-22-12 / 3:05	[signature]	8-23-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-1-541 ENV-0053 Notebook No. D32 #93

Continues from Page

T. Torrez + D. Halvorsen Present. Weather is Clear and Hot. This Well will be Purged and SAMPLED using a dedicated Teflon bladder Pump. SAMPLES will be Collected from a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 flowcell and Water Analyzer.

Calibrations:

Initial DTW: 455.40 ft.
Carboy: G2
IDW: 2 gal.

DO Sensor: In Saturated Air @ 643 mm/Hg
PH Sensor: using a 2pt (7-10) Buffer method
Conductivity: using a 1413 us/cm STD. Solution
Turbidity Meter: #7 STD: 6.01 RDG: 6.05 Lot #: A2060 Exp: 8/12

Parameters (Time)	Temp	Cond	DO	PH	ORP	Turb	DTW (ft)
1208070930	22.29	1104	4.34	7.32	122	0.81	455.47
—— 0935	22.33	1107	4.35	7.34	123	0.76	"
—— 0940	22.31	1103	4.34	7.37	124	0.84	"

SAMPLES

Sample #	Analysis	Preserve	Cont.	Lot	LAB
1208070945	VOC by 82600	Ice/HCl	(3) 40 ml Vial	1194002	CAS
—— 0946	" " (Dup)	"	"	"	"
—— 0947	" " (FB)	"	"	"	"
—— 0948	NDMA/DMN Bromacil by 607	Ice	(1) 1L Amber		SRI
—— 0949	" " (Dup)	"	"		"

Continued on Page

Read and Understood By

Signed 8-7-12 Date

Jon Munch Signed 8-7-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-7-12

Page _____ of _____

Sample Location: ST-1-541

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 607
120807 0945	3	A	X	
0946	3		X	
0947	3		X	
0948	1			X
0949	1			X

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
To Cooler	8-7-12 1100	Jon Munch	8-7-12 / 1300

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST 2-466 ENV-0053 Notebook No. D32 #93

Continues from Page

M. Dunford & D. Halvorsen Presente Weather is Clear and warm. This Well will be Purged and SAMPLED using a dedicated Teflon ~~discharge hose~~ Bladder. Purge SAMPLES will be Collected from a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 Flowcell and Water Analyzers.

Calibrations:

Initial DTW = 420.60 ft

DO Sensor: In Saturated Air @ 643 mm/Hg

Carboy Gal

pH Sensor: Using a 2 pt. (7-10) Pfeffer method.

IDW = 1.5 gal.

Conductivity: Using a 1413 us/cm STD. Solution

Turbidity meter = #7 STD = 6.0 RDG = LOT = #A2060 Exp: 8/12

Parameters (Time)	Temp	Cond	DO	pH	ORP	Turb	DTW
120802 1000	23.20	1043	4.05	7.48	166	1.06	420.60
1005	22.41	1046	3.98	7.46	168	1.32	"
1010	22.26	1043	3.96	7.49	171	1.01	"

SAMPLES

Sample #	Analysis	Preserve	Cont.	LOT	LAB
120802 1015	VOC by 8260 LL	Ice/HCl	(3) 40 ml Vial	1194002	CAS
1016	" " (FB)	"	"	"	"
1017	NDMA LL	Ice	(1) 1L Amber	060412	"
1018	" " (FB)	"	"	"	"

Continued on Page

Read and Understood By

Signed 8-2-12 Date

Signed 8-2-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-2-12 Page _____ of _____

Sample Location: ST-2-466

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: JOG	NDMA LL									
1208021015	3	A	Y										
1016	3		Y										
1017	1			Y									
1018	1			Y									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature] To Cooler	8-2-12 1105	[signature]	8-6-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-5-1175 WJI ENV-0020 Notebook No. DG4 #112(y)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min. Equipment Blanks – Carboy G4

Sample	Analysis	Preservative	Container	Lot	Lab
1208250815y	VOA by 8260 LL	ice/HCL	(3) 40 ml vials	1194002	CAS
—— 0816y	Low Level NDMA	ice	(1) 1L Amber	~~7-14-2012~~ 060412-1W	"

Initial Parameters
Time – 1208250905y
pH – 8.84
Temp – 23.2 °C
Cond – 1564 us/cm
Turb – 1.84 NTU's
pH pre – 7.03/10.08 (27.3°)
pH post – 7.06/10.11
DTW – 420.98 ft.
Atmos – 12.38 psia

Final
Time – 1208251032y
pH – 8.92
Temp – 24.5 °C
Cond – 1529 us/cm
Turb – 1.64 NTU's
pH pre – 7.00/10.09 (30.1 °C)
pH post – 7.02/10.09
DTW – 422.33 ft.
Atmos – 12.39 psia
IDW – 1/2 gals.

Meter ID
pH/Cond – 53
Turb – 3
" std – 4.44 NTU's
" Rdg – 4.51 NTU's
" Lot – A2060
" Exp – 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1208250945y	VOA by 8260 LL	ice/HCL	(3) 40 ml vials	1194002	CAS
—— 0946y	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
—— 1030y	Low Level NDMA	"	"	060412-1W	CAS
—— 1031y	Total Metals	ice/HNO_3	(1) 250 ml poly	0327601W	ALS

Runs	1)	2)	3)
	347.39	347.37	347.42
	344.81	344.81	344.84
	344.80	344.81	344.80
	347.37	347.38	347.36

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 8/25/12 — Date

Jon Munck — Signed — 8-27-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/25/12 Page _____ of _____

Sample Location: ST-5-1175

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607/Bromacil	LL NDMA	Total Metals							
1208250815y	3	A	✓										
—— 0816y	1	A			✓								
—— 0945y	3	A	✓										
—— 0946y	1	A		✓									
—— 1030y	1	A			✓								
—— 1031y	1	A				✓							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/25/12 1115hrs.	[signature]	8-27-12 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-5-485 WJI ENV-0020 Notebook No. D64 #112(y)

Continues from Page

D. Halvorsen & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe # 4755.

30 Min. Equipment Blanks - Carboy G4

Sample	Analysis	Preservative	Container	Lot	Lab
120824 10254	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1026y	Low Level NDMA	ice	(1) 1L Amber	060412-IW	"

Initial Parameters
Time - 120824 1315y
PH - 8.64
Temp - 24.1°C
Cond - 984us/cm
Turb - 1.87 NTU's
pHpre - 7.03/10.10 (28.5°C)
pHpost - 7.01/10.12
DTW - 420.17 ft.
Atmos - 12.43 psia

Final
Time - 120825 0726y
PH - 8.51
Temp - 23.2°C
Cond - 970 us/cm
Turb - 1.11 NTU's
pHpre - 7.10/10.19 (17.2°C)
pHpost - 7.12/10.16
DTW - 420.98 ft.
Atmos - 12.41 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 53
Turb - 3
" Std - 4.44 NTU's
" Rdg - 4.51 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120824 1340y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
120825 0725y	Low Level NDMA	ice	(1) 1L Amber	060412-IW	"

Runs	1)	2)	3)
	46.70	46.70	46.74
	46.37	46.38	46.35
	46.36	46.37	46.39
	46.73	46.70	46.75

F. Gallegos replaced D. Halvorsen on 8/25.

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 8/25/12 — Date

Jon Munck — Signed — 8-27-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/24/12

Page _____ of _____

Sample Location: ST-5-485

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
			Analytical Requirement										
1208241025y	3	A	✓										
——— 1026y	1	A		✓									
——— 1340y	3	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Frenne	8/24/12 1400hrs.	Jon Munch	8-27-12 /1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/25/12 Page _____ of _____

Sample Location: ST-5-485

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL NDMA										
1208250725y	1	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Zeno	8/25/12 1115 hrs.	Jon Munch	8-27-12 /1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-5-655 ENV-0020 Notebook No. D64 #112y

Continues from Page

T. Torrez & D. Halvorsen Present. Weather is Partly Cloudy and HoT. This Zone will be Sampled using 5 triple rinsed Stainless Steel Sampling tubes. Surface Checks Performed on Probe #2213. Generator in use.

30 minute Equipment blanks (Carboy G2)

Sample #	Analysis	Preserve	Cont.	Lot	LAB
1208210945y	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	1194002	CAS
—— 0946y	NDMA LL	Ice	(1) 1L Amber	7142012	"

Initial Parameters	Final Parameters	Meter ID
Time = 120821 ~~130~~ 1310y	1208211342y	PH/COND = 53
PH = 8.43	8.27	TURB = 3
TEMP = 25.7°C	26.0°C	" STD = 4.44 NTU's
COND = 850 us/cm	844 us/cm	" RDG = 4.14 NTU's
TURB = 1.71 NTU's	1.09 NTU's	" LOT = A2060
PHPre = 6.98/10.04 (29.5°C)	6.95/10.05 (31.7°C)	" EXP =
PHPost = 6.95/10.05	6.96/10.02	
Atmos = 12.35 psia	12.39 psia	
DTW = 417.00 ft	417.68 ft.	

Buffer	Lot	Exp
7	110747	2/13
10	113925	7/13

SAMPLES

Sample #	Analysis	Preserve	Cont	Lot	LAB
120821 1340y	VOA by 8260 LL	Ice/HCl	(3) 40ml Vial	1194002	CAS
—— 1341y	NDMA LL	Ice	(1) 1L Amber	7142012	"

Runs: 1) 120.73 2) 120.57
119.92 119.78
119.91 119.81
120.72 120.63

Continued on Page

Read and Understood By

Craig Del Fuerd 8/21/12 Jon Munnick 8-21-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/21/12 Page _____ of _____

Sample Location: ST-5-655

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
1208210945y	3	A	✓										
—— 0946y	1	A		✓									
—— 1340y	3	A	✓										
—— 1341y	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Zeno	8/21/12 1500hrs.	Jon Munch	8-22-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-5-815 WJI ENV-0020 Notebook No. D64 #112(y)

Continues from Page

D. Halvorsen & C. DelFerraro present. Weather is cloudy & warm. this zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe # 4755.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120823 1400y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1401y	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters	Final	Meter ID
Time - 1208231440y	Time - 1208240915y	pH/cond - 53
PH - 8.61	PH - 8.53	Turb - 3
Temp - 26.2°C	Temp - 23.9°C	" Std - 4.44 NTU's
Cond - 826 us/cm	Cond - 859 us/cm	" Rdg - 4.49 NTU's
Turb - 2.29 NTU's	Turb - ~~7.08/10.17 (18.5°C)~~ 1.40 NTU's	" Lot - A2060
pH pre - 6.97/10.08 (29.5°C)	pH pre - 7.08/10.17 (18.5°C)	" Exp - 8/29/12
pH post - 6.94/10.05	pH post - 7.10/10.18	
DTW - 418.76 ft.	DTW - 420.17 ft.	
Atmos - 12.39 psia	Atmos - 12.43 psia	
	IDW - 1/2 gals.	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120824 0800y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0801y	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 0830y	Low Level NDMA	"	"	060412-1W	CAS
——— 0831y	Total Metals	ice/HNO_3	(1) 250ml poly	032760IW	ALS

Runs	1)	2)	3)	4)
	190.48	190.54	190.60	190.60
	189.06	189.14	189.17	189.15
	189.03	189.15	189.14	189.14
	190.49	190.57	190.57	190.58

Continued on Page

Read and Understood By

Craig Del Ferraro 8/24/12 Jeri Munnick 8-24-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/23/12 Page _____ of _____

Sample Location: ST-5-815

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
120823 1400y	3	A	✓										
——— 1401y	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Zenno	8/23/12 1500hrs.	Jon Munch	8-24-12 /1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/24/12 Page _____ of _____

Sample Location: ST-5-815

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607/Bromacil	LL NDMA	Total Metals							
1208240800y	3	A	✓										
—— 0801y	1	A		✓									
—— 0830y	1	A			✓								
—— 0831y	1	A				✓							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Zeno	8/24/12 1100hrs.	Jon Munch	8-27-12 /1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-5-985 WJI ENV-0020 Notebook No. D64 #112(4)

Continues from Page

D. Halvorsen & C. Del Ferraro present. Weather is cloudy & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes, Gen. in use. Probe #475. Sampling crew had to fill a carboy & perform minor maintenance on equipment prior to sampling. Crew arrived at well site @ 0845 hrs.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120822 0930y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
—— 0931y	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Perameters	Final	Meter ID
Time - 120822 1020y	Time - 120822 1438y	pH/Cond - 53
PH - 9.45	PH - 9.33	Turb - 3
Temp - 24.5°c	Temp - 25.3°c	" Std - 4.44 NTU's
Cond - 1339 us/cm	Cond - 1321 us/cm	" Rdg - 4.05 NTU's
Turb - 1.55 NTU's	Turb - 0.88 NTU's	" Lot - A2060
pH pre - 7.12/10.17 (24.8°c)	pH pre - 6.99/10.07 (32.5°c)	" Exp - 8/29/12
pH post - 7.13/10.14	pH post - 6.96/10.04	
DTW - 417.68 ft.	DTW - 418.76 ft.	
Atmos - 12.45 psia	Atmos - 12.41 psia	
	IDW - 1/2 gals	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120822 1315y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	1194002	CAS
—— 1316y	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
—— 1355y	Low Level NDMA	"	"	060412-1W	CAS
—— 1356y	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
—— 1435y	Anions/TDS	ice	(1) 500ml poly	0227601W	"
—— 1436y	Perchlorate by 331.0	"	(1) 125ml poly	001569	CAS
—— 1437y	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS

CD

~~Runs 1)~~

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
120822 1500y	Low Level NDMA	ice	(1) 1L Amber	12AD86A	CAS

Runs 1) 264.54 262.58 262.58 264.50 2) 264.47 262.56 262.58 264.47 3) 264.43 262.55 262.56 264.45 4) 264.44 262.54 262.56 264.46 N/a

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 8/22/12 — Date

Jon Munch — Signed — 8-22-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/22/12 Page _____ of _____

Sample Location: ST-5-985

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	Bromacil/607	LL NDMA	Total Metals	Anions/TDS	Perchlorate	NO_2/NO_3				
12082209304	3	A	✓										
—— 0931y	1	A			✓								
—— 1315y	3	A	✓										
—— 1316y	1	A		✓									
—— 1355y	1	A			✓								
—— 1356y	1	A				✓							
—— 1435y	1	A					✓						
—— 1436y	1	A						✓					
—— 1437y	1	A							✓				
—— 1500y	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fermo	8/22/12 1500hrs.	Don Munch	8-23-12 /0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-685 WJI ENV-0020 Notebook No. D64 #110(Z)

Continues from Page

D. Halvorsen & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755. Sampling crew finished Top Zone profiles prior to starting this event. Crew arrived @ well site @ 0830hrs.

30 Min. Equipment Blanks – Carboy G4

Sample	Analysis	Preservative	Container	Lot	Lab
120830 0915 Z	VOA by 8260 LL	ice / HCl	(3) 40ml vials	1194002	CAS
——— 0916 Z	Low Level NDMA	ice	(1) 1L Amber	060412-NW	"

Initial Parameters

Time – 120830 1000 Z
PH – 8.03
Temp – 23.5 °C
Cond – 1130 us/cm
Turb – 5.61 NTU's
pH pre – 7.08 / 10.13 (27.4 °C)
pH post – 7.10 / 10.12
DTW – 437.90 ft.
Atmos – 12.48 psia

Final

Time – 120830 1037 Z
PH – 7.92
Temp – 23.8 °C
Cond – 1117 us/cm
Turb – 1.48 NTU's
pH pre – 7.05 / 10.15 (28.8 °C)
pH post – 7.06 / 10.12
DTW – 438.55 ft.
Atmos – 12.51 psia
IDW – ½ gals.

Meter ID

pH / Cond – 56
Turb – 7
" Std – 5.64 NTU's
" Rdg – 5.58 NTU's
" Lot – A2060
" Exp – 9/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120830 1035 Z	VOA by 8260 LL	ice / HCl	(3) 40ml vials	1194002	CAS
——— 1036 Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs 1) 124.82 2) 124.60
128.44 128.42
128.44 128.44
124.80 124.55

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/30/12 — Date

Jon Munch — Signed — 8-30-12 — Date

WSTF CHAIN OF CUSTODY RECORD

Date 8/30/12

Page ____ of ____

Laboratory / PO #

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LL NDMA				Comments
120830 0915Z	ST-6-685	3	A		✓							
—— 0916Z	"	1	A					✓				
—— 1035Z	"	3	A		✓							
—— 1036Z	"	1	A					✓				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Craig Del Fuco	8/30/12 1100 hrs.	Lori Minnick	8-30-12 / 1100 HRS -

WSTF – 381B (02/00)

Project WB-14-520 WJI ENV-0020 Notebook No. D64 #110(Z)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is clear & hot. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213.

30 Min. Equipment Blanks - Carboy G#5

Sample	Analysis	Preservative	Container	Lot	Lab
120802 1020Z	VOA by 8260 LL	ice/HCL	(3)40ml vials	1194002	CAS
——— 1021Z	Total Metals	ice/HNO_3	(1)250ml poly	0327601W	ALS

Initial Parameters	Final	Meter ID
Time - 120802 1050Z	Time - 1208060917Z	pH/Cond - 53
pH - 8.68	pH - 8.60	Turb - 3
Temp - 24.8°C	Temp - 24.3°C	" Std - 4.44 NTU's
Cond - 726 us/cm	Cond - 710 us/cm	" Rdg - 4.22 NTU's
Turb - 1.77 NTU's	Turb - 0.98 NTU's	" Lot - A2060
pH pre - 7.03/10.04 (29.7°C)	pH pre - 7.08/10.05 (19.8°C)	" Exp - 8/29/12
pH post - 6.99/10.05	pH post - 7.05/10.04	
DTW - 300.84 ft.	DTW - 301.71 ft	
Atmos - 12.38 psia	Atmos - 12.38 psia	
	IDW - 1/2 gals	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120806 0800Z	VOA by 8260 LL	ice/HCL	(3)40ml vials	1194002	CAS
——— 0801Z	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 0835Z	Total Metals	ice/HNO_3	(1)250ml poly	0327601W	ALS
——— 0836Z	Anions/TDS	ice	(1)500ml poly	0227601W	" CAS
——— 0915Z	Perchlorate by 331.0	"	(1)125ml poly	000959	~~SRI~~
——— 0916Z	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS

Runs	1)	2)	3)	4)
	111.70	111.78	111.68	111.69
	108.52	108.57	108.40	108.18
	108.49	108.59	107.83	107.83
	111.67	111.73	111.72	111.70

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/6/12 — Date

Jon Munch — Signed — 8-7-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8-2-2012 Page 1 of 1

Sample Location: WB-14-5200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260(C)	TOTAL METALS									
120802/8202(EB)	3	A	X										
——— /0212(EB)	1	A		X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	8-2-12(1110)	[illegible]	8-6-12/0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/6/12

Page _____ of _____

Sample Location: WB-14-520

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	Bromacil/607	Total Metals	Anions/TDS	Perchlorate	NO_2/NO_3					
120806 0800Z	3	A	✓										
——— 0801Z	1	A		✓									
——— 0835Z	1	A			✓								
——— 0836Z	1	A				✓							
——— 0915Z	1	A					✓						
——— 0916Z	1	A						✓					

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/6/12 1015hrs.		

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

D. Halvorsen & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120820083 0y	VOA by 8260	ice/HCL	(3)40ml vials	1194002	CAS

Initial Parameters	Final	Meter ID
Time - 120820091 0y	Time - 120820101 7y	pH/Cond - 53
PH - 8.11	PH - 8.19	Turb - 3
Temp - 23.2°C	Temp - 24.0°C	" Std - 4.44 NTU's
Cond - 1116 us/cm	Cond - 1131 us/cm	" Rdg - 3.99 NTU's
Turb - 46.4 NTU's	Turb - 42.6 NTU's	" Lot - A2060
pH pre - 7.05/10.10 (22.6°C)	pH pre - 7.03/10.04 (27.0°C)	" Exp - 8/29/12
pH post - 7.06/10.13	pH post - 7.05/10.03	
DTW - 212.15 ft.	DTW - 212.22 ft.	
Atmos - 12.28 psia	Atmos - 12.26 psia	
	DIW - 1/2 gals.	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Containes	Lot	Lab
120820 0935y	VOA by 8260	ice/HCL	(3)40ml vials	1194002	CAS
——— 0936y	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRL
——— 1015y	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
* ——— 1016y	* " (M.S.) *	"	"	"	"

Runs	1)	2)	3)
	32.89	32.91	32.87
	32.76	32.67	32.49
	32.68	32.54	32.36
	32.92	32.91	32.87

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 8/20/12 — Date

Jon Munch — Signed — 8-20-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/20/12

Page _____ of _____

Sample Location: WB-5-250

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	Total Metals									
12082008304	3	A	✓											
——— 0935y	3	A	✓											
——— 0936y	1	A		✓										
——— 1015y	1	A			✓									
——— 1016y	1	A			✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Relferno	8/20/12 1045hrs.		

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project WB-5-280 WJI ENV-0020 Notebook No. D64 # 112 (y)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is cloudy & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120816 1050y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1051y	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI

Initial Parameters
Time - 120816 1345y
PH - 8.02
Temp - 26.5°C
Cond - 1176 us/cm
Turb - 40.5 NTU's
pHpre - 7.00/10.05 (29.7°c)
pHpost - 6.98/10.06
DTW - 212.03 ft.
Atmos - 12.23 psia

Final
Time - 120820 0752y
PH - 7.91
Temp - 23.5°c
Cond - 1160 us/cm
Turb - 32.8 NTU's
pHpre - 7.09/10.09 (18.6°c)
pHpost - 7.11/10.08
DTW - 212.15 ft.
Atmos - 12.24 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 53
Turb - 3
" std - 4.44 NTU's
" Rdg - 4.02 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120816 1415y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1416y	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 1440y	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
——— 1441y	Anions/TDS	ice	(1) 500ml poly	0227601W	"
120820 0750y	Perchlorate by 331.0	"	(1) 125ml poly	001570	CAS
——— 0751y	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS

Runs	1)	2)	3)	4)
	45.89	45.91	45.90	45.97
	45.34	45.25	45.10	45.88
	45.27	45.13	44.90	45.83
	45.94	45.93	45.91	45.99

* D. Halvorsen replaced B. Tufts on 8/20. *

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/20/12 — Date

Jon Munck — Signed — 8-20-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/16/12 Page _____ of _____

Sample Location: WB-5-280

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	Total Metals	Anions/TDS							
120816 1050y	3	A	✓										
——— 1051y	1	A		✓									
——— 1415y	3	A	✓										
——— 1416y	1	A		✓									
——— 1440y	1	A			✓								
——— 1441y	1	A				✓							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fermo	8/16/12 1500hrs	Jon Munch	8-20-12 /0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/20/12

Page _____ of _____

Sample Location: WB-5-280

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Perchlorate	NO_2 / NO_3									
120820 0750y	1	A	✓										
—— 0751y	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	8/20/12 1045hrs.		

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project WB-5-345 WJI ENV-0020 Notebook No. D64 #112(y)
Continues from Page

B. Tufts & C. Del Ferraro present. Weather is cloudy & warm. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120816 0820y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0821y	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Initial Parameters
Time - 120816 0905y
PH - 8.34
Temp - 23.6°C
Cond - 1212 us/cm
Turb - 31.4 NTU's
pHpre - 7.07/10.10 (19.8°c)
pHpost - 7.09/10.13
DTW - 211.30ft.
Atmos - 12.25psia

Final
Time - 120816 1006y
PH - 8.46
Temp - 23.5°c
Cond - 1227 us/cm
Turb - 51.4 NTU's
pHpre - 7.02/10.10 (24.2°c)
pHpost - 7.03/10.08
DTW - 212.03ft.
Atmos - 12.29psia
IDW - ½ gals.

Meter ID
pH/Cond - 53
Turb - 3
" Std - 4.44 NTU's
" Rdg - 4.02 NTU's
" Lot - A2060
" Exp - 8/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120816 0935y	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 0936y	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SR
——— 1005y	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	AL

Runs	1)	2)	3)
	74.55	74.46	74.36
	74.14	74.02	73.77
	74.01	73.80	73.55
	74.56	74.47	74.37

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 8/16/12 — Date

Jon Munch — Signed — 8-16-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 8/16/12 Page _____ of _____

Sample Location: WB-5-345

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	Total Metals								
120816 0820y	3	A	✓										
——— 0821y	1	A			✓								
——— 0935y	3	A	✓										
——— 0936y	1	A		✓									
——— 1005y	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig DelFerro	8/16/12 1110 hrs.	[signature]	8-20-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

B. Tufts & C. Del Ferraro present. Weather is clear & hot. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tub Water quality parameters will be monitored using a QED MP-20 flow cell and a water analyzer. Carboy G4 in use.

Calibrations
DO - calibrated in saturated air @ 642 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #7 std - 5.64 NTU's rdg - 5.56 NTU's lot - A2060 Exp - 9/29/12

Parameters (time)	temp (°C)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 120905 1345	22.41	1.296	1.58	7.03	107	0.74	312.12
2) ——— 1350	22.49	1.299	1.55	7.03	106	0.56	312.12
3) ——— 1355	22.57	1.295	1.41	7.03	103	0.70	312.12

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120905 1400	VOA by 8260 LL	ice / HCL	(3) 40ml vials	1194002	CAS
——— 1401	" (F.B.)	"	"	"	"
——— 1402	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"
——— 1403	" (F.B.)	"	"	"	"

Initial DTW - 312.07 ft. Total gallons purged - 2.5 gals.

Continued on Page

Read and Understood By

Craig Del Ferraro 9/5/12 Tom Munch 9-5-12
Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/5/12 Page _____ of _____

Sample Location: 100-F-358

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
120905 1400	3	A	✓										
—— 1401	3	A	✓										
—— 1402	1	A		✓									
—— 1403	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig DelFerro	9/5/12 1455 hrs.	Jon Munch	9-6-12 / 0845

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

F. Gallegos & C. Del Ferraro present. Weather is ~~clouds~~ clear & cool. This well will be purged dry - allowed to recover - and purged dry again. Samples will be collected using a teflon bailer. Samples will be collected after well has recharged for the second time. Carboy G in use.

Initial Parameters		Final		Meter ID	
Time	- 1209140920B	Time	- 1209140945B	pH/Cond	- 54
PH	- 8.19	PH	- 7.95	Turb	- 6
Temp	- 18.9°c	Temp	- 19.4°c	"	Std - 5.41 NTU's
Cond	- 984 us/cm	Cond	- 970 us/cm	"	Rdg - 5.72 NTU's
Turb	- 13.8 NTU's	Turb	- 18.8 NTU's	"	Lot - A2060
pH pre	- 7.12/10.16 (17.7°c)	pH pre	- 7.09/10.16 (18.8°c)	"	Exp - 9/29/12
pH post	- 7.13/10.18	pH post	- 7.11/10.15		
DTW	- 125.67 ft.	DTW	- 151.75 ft.		

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1209140925B	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
0926B	" (F.B.)	"	"	"	"
0927B	Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRI
~~0928B~~	~~" (F.B.)~~	~~"~~	~~"~~	~~"~~	~~"~~
0928B	Low Level NDMA	ice	(1) 1L Amber	062512-13	CA
0929B	" (F.B.)	"	"	"	"
0930B	SVOA by 8270	"	(2) 1L Ambers	006546	"
0931B	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	AL
0932B	Anions / TDS	ice	(1) 500ml poly	0227601W	"
0933B	Perchlorate by 331.0	"	(1) 125ml poly	004437	CA
0934B	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0417601W	AL

Total gallons purged - 34 gals.

Continued on Page

Read and Understood By

Craig Del Ferraro 9/14/12 Jon Munch 9-17-12
Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/14/12 Page _____ of _____

Sample Location: 100-HG-139

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA	8270	Total Metals	Anions/TDS	Perchlorate	NO_2/NO_3			
120914 0925B	3	A	✓										
——— 0926B	3	A	✓										
——— 0927B	1	A		✓									
——— 0928B	1	A			✓								
——— 0929B	1	A			✓								
——— 0930B	2	A				✓							
——— 0931B	1	A					✓						
——— 0932B	1	A						✓					
——— 0933B	1	A							✓				
——— 0934B	1	A								✓			

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	9/14/12 1000hrs.	Jon Munch	9-17-12/0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 200-D-240 WJI ENV-0013 Notebook No. D32 #95

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube.

Total DTW - 259.15 ft.
Packer Depth - 235.99 ft.
Initial DTW - 123.32 ft.
3 casing vols. - 52 gals.
purge rate - 0.167 gpms
Total gals. purged - 55 gals.
Final DTW - 124.55 ft.

Meter ID	
pH/Cond	- 54
Turb	- 6
" Std	- 5.41 NTU's
" Rdg	- 5.52 NTU's
" Lot	- A2060
" Exp	- 9/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

*start purge - 0900 hrs.
*stop purge - 1430 hrs.

Initial Parameters	Secondary	Final
Time - 120920 1345	Time - 120920 1410	Time - 120920 1430
pH - 7.48	pH - 7.41	pH - 7.34
Temp - 24.4°C	Temp - 23.8°C	Temp - 24.1°C
Cond - 1154 us/cm	Cond - 1141 us/cm	Cond - 1151 us/cm
Turb - 0.99 NTU's	Turb - 0.37 NTU's	Turb - 0.57 NTU's
pH pre - 7.09/10.01 (35.6°C)	pH pre - 7.05/10.06 (34.5°C)	pH pre - 7.04/10.05 (35.0
pH post - 7.04/10.03	pH post - 7.09/10.06	pH post - 7.07/
DTW - 124.55 ft.	DTW - 124.55 ft.	

~~Samples~~ CO Trip Blanks - Nanopure

Sample	Analysis	Preservative	Container	Lot	Lab
120920 1330	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1331	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120920 1415	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1416	Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRI
——— 1417	Low Level NDMA	"	"	060412-1W	CAS
——— 1418	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
——— 1419	" (Dupl.)	"	"	"	"
——— 1420	Anions/TDS	ice	(1) 500ml poly	0227601W	"
——— 1421	Perchlorate by 331.0	"	(1) 125ml poly	004431	CAS
——— 1422	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0417601W	ALS

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 9/20/12 — Date

Jon Munck — Signed — 9-21-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/20/12 Page _____ of _____

Sample Location: 200-D-240

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA	Total metals	Anions/TDS	Perchlorate	NO_2/NO_3				
120920 1330	3	A	✓										
——— 1331	1	A			✓								
——— 1415	3	A	✓										
——— 1416	1	A		✓									
——— 1417	1	A			✓								
——— 1418	1	A				✓							
——— 1419	1	A				✓							
——— 1420	1	A					✓						
——— 1421	1	A						✓					
——— 1422	1	A							✓				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiano	9/20/12 1510 hrs.	Jon Munch	9-24-12 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 200-SG-1 WJI ENV-0013 9-8-12 Notebook No. D32#94B

Continues from Page NA

M. Dunford + R. Mirabal present @ 1030 hrs. Weather is cloudy and raining. Breeze from the north east. This well will be purged using a dedicated teflon bladder pump and sampled from a dedicated teflon discharge tube directly from the well head.

Total Depth = 138.29 ft. (42.15 m.)
Initial DTW = 131.00 ft. (39.93 m.)
3 casing volumes = 4 gals.
purge start = 1030 hrs.
purge stop?
Final DTW =

Meter ID	Buffers	Exp	Lot#
PH/Cond = 54	7	110747	2/13
Turb = 6	10	113925	7/13
" stnd = 5.41 NTU's			
" Rd = 5.34 NTU's			
" Exp = 9/30			
" Lot# = A2060			

Initial Parameters	Secondary Parameters	Final Parameters
Time - 1209081055	1209081105	120908
Pit - 7.35	7.59	7.49
Temp - 19.9°c	19.0°c	19.6°c
Cond - 1094 us/cm	1119 us/cm	1092 us/cm
Turb - 0.85 NTU's	0.97 NTU's	0.72 NTU's
PH Pre Cal - 7.18/10.05 (16.2°c)	7.35/10.24 (16.3°c)	
PH Post Cal - 7.15/10.01	7.16/10.08	

Samples

Sample#	Analysis	Preservative	Lot#	Lab	Cont.
1209081106B	VOA by 8260 (FB)	Ice/HCL	2059001	CAS	(3) 40 ml vials
—— 1107B	Low Level NDMA (FB)	Ice	062512-1Z	"	(1) 1 Lt Amber
—— 1108B	VOA by 8260	Ice/HCL	2059001	"	(3) 40 ml vials
—— 1109B	Bromacil by 607	Ice	071312	SWRI	(1) 1 Lt Amber
—— 1110B	Low Level NDMA	"	062512-1Z	CAS	(1) " "
—— 1111B	SVOA by 8270	"	"	"	(2) " "
—— 1112B	Anions/TDS	"	0227601W	ALS	(1) 500 ml poly
—— 1113B	Pesticides by 8081	"	062512-1Z	CAS	(1) 1 Lt Amber
—— 1114B	Dioxins/Furans	"	"	"	(1) " "
—— 1115B	Herbicides	"	"	"	(1) " "
—— 1116B	PCB's	"	062512-1Z	"	(1) " "
—— 1117B	Phenolics	Ice/H_2SO_4	0319601V	ALS	(1) 250 ml Amber
—— 1118B	Total Metals	Ice/HNO_3	0327601W	"	(1) 250 ml poly
* —— 1119B	Total Metals (M.S.)	" "	"	"	(1)

Continued on Page 42

Read and Understood By

M. Dunford — Signed — 9-8-12 — Date

Jon Munch — Signed — 9-10-12 — Date

Project 200-SG-1 UJIENV-0013 9-8-12 Notebook No. 032#94B

Continues from Page 41

Samples Continued

Sample #	Analysis	Preservative	Lot #	Lab	Cont.
120908 1120B	NO_2/NO_3	Ice/H_2SO_4	04276014	ALS	(1) 125 ml poly
1121B	Cyanide	Ice/NaOH	03179014	"	(1) 250 ml poly
1122B	Sulfide	Ice/NaOH/Zinc Acetate	03179014	"	(1) " "

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
Mark Dold	9-8-12	Jon Munch	9-10-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-8-12

Sample Location: 200-SG-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Low Level NDMA	Bromacil by 607	SVOA	Anions/TDS	Pesticides	Dioxins/Furans	Herbicides	PCB's	Phenolics	Total Metals
1209081106 B (FB)	3	A	X										
1107 B (FB)	1			X									
1108 B	3		X										
1109 B	1				X								
1110 B	1			X									
1111 B	2					X							
1112 B	1						X						
1113 B	1							X					
1114 B	1								X				
1115 B	1									X			
1116 B	1										X		
1117 B	1											X	
1118 B	1												X
* 1119 B (M.S.)	1												X

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	9-8-12	Jon Munch	9-10-12 /0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-8-12

Sample Location: 200-SG-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: NO_2 / NO_3	Cyanide	Sulfide								
1209081120B	1	A	X										
1121B	1	A		X									
1122B	1	A			X								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	9-8-12	[illegible]	9-10-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This well will be purged to dryness using a Bennett pump. Samples will be ~~rec~~ collected ~~after~~ @ ~~recovery~~ using a teflon bailer. Carboy G2 in use. Well will be purged dry "twice" prior to sampling per T. Wiebe.

Initial DTW - 145.21 ft.
Final DTW - 145.25 ft.
Total gals. purged - 8 gals.

Meter ID	
pH/cond	- 54
Turb	- 6
" Std	- 5.41 NTU's
" Rdg	- 5.52 NTU's
" Lot	- A2060
" Exp	- 9/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Initial Parameters
Time - 120919 1350
pH - 7.80
Temp - 23.2°c
Cond - 1896 us/cm
Turb - 675 NTU's
pH pre - 7.11/9.98 (30.0°c)
pH post - 7.08/10.04

Final
Time - 120919 1415
pH - 7.89
Temp - 23.9°c
Cond - 1912 us/cm
Turb - 720 NTU's
pH pre - 7.08/10.10 (32.1°c)
pH post - 7.04/10.11

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120919 1400	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1401	" (F.B.)	"	"	"	"
——— 1402	Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRL
——— 1403	Low Level NDMA	"	"	060412-1W	CAS
——— 1404	" (F.B.)	"	"	"	"
——— 1405	SVOA by 8270	"	(2) 1L Ambers	n/a	"
——— 1406	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
——— 1407	" (F.B.)	"	"	"	"
——— 1408	Anions/TDS	ice	(1) 500ml poly	0227601W	"
——— 1409	Perchlorate by 331.0	"	(1) 125ml poly	004438	CAS
——— 1410	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 9/19/12 — Date

Jon Munch — Signed — 9-21-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/19/12 Page _____ of _____

Sample Location: 600-G-138

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA	8270	Total Metals	Anions/TDS	Perchlorate	NO_2/NO_3			
120919 1400	3	A	✓										
—— 1401	3	A	✓										
—— 1402	1	A		✓									
—— 1403	1	A			✓								
—— 1404	1	A			✓								
—— 1405	2	A				✓							
—— 1406	1	A					✓						
—— 1407	1	A					✓						
—— 1408	1	A						✓					
—— 1409	1	A							✓				
—— 1410	1	A								✓			

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig DeFreeo	9/19/12 1440 hrs.	Jon Munch	9-20-12 /0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 650 - EFF-1 Notebook No. Misc #21

Continues from Page

T. Moore & K. Amis present. Samples will be collected from a stainless steel sample port located on the EFFluent side of the system. Sample port will be purged for one minute prior to parameters and sample collection. Trip blanks made at Bldg 637 directly from the NANOpure.

Parameters	Meter ID	Buffer	LOT	Exp
E120924/1011	pH/cond #	7	110747	2/13
pH 7.3	Turb # 8	10	113925	7/18
Temp 24.5°C	"STD 5.83 NTU			
Cond 1020	" Rdg 5.98 NTU			
Turb 0.34 NTU	" LOT A2060			
pH/Pre 7.0 - ~~10.1~~ 10.1 (22.7°C)	" Exp 9/30/12			
pH/Post 7.0 - 10.1				

Samples

Sample #	Analysis	Preserve	Container	LOT	Lab
E120924/1013	VOA by 8260LL	Ice/HCl	(3) 40 mL Vials	2059001	CA
1015	" (FB)	"	"	"	"
1017	NDMA/DMN by 607	Ice	(1) 1LT Amb		SWR
1019	Low Level NDMA	"	"	062572-12	CA
1021	" (FB)	"	"	"	"
1023	Anions/TDS	"	(1) 500 mL Poly	022760 1W	ALS
1025	NO2/NO3 by 353.2	Ice/H2SO4	(1) 125 mL Poly	042760 1W	"

Continued on Page

Read and Understood By

Signed: [signature] Date: 24 Sept 2012

Signed: [signature] Date: 9-26-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 24 Sept 2012 Page 1 of ____

Sample Location: Bldg 650-EFF-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA By 8260	NDMA / DMA by 1607	Low Level NDMA	Anions / TDS	NO2 / NO3 by 353.2						
E1209241013	3	A	X										
1015 TB	3		X										
1017	1			X									
1019	1				X								
1021 TB	1				X								
1023	1					X							
1025	1						X						

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	24 Sept 2012 1055	[signature]	9-25-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 650 - Inf - 1 Notebook No. Misc #21

Continues from Page

T. Moore & K. Amis present. Samples will be collected from a stainless steel sample port located on the Influent side of the System. Sample port will be purged for one minute prior to parameters and sample collection. Carboy "G" used for ~~Sam~~ Field Blanks.

Parameters	Meter ID	Buffer	Lot	Exp
I 1209241030	PH/cond	7	110747	2/13
PH ~~24.5°C~~ 6.9	Turb #8	10	113925	7/13
Temp 24.5°C	" STD 5.83 NTU			
Cond 1010 US/cm	" Rdg 5.96 NTU			
Turb 0.39 NTU	" Lot A 2060			
PH/Pre 7.0-10.1 (22.4°C)	" Exp 9/30/12			
PH/post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	La
I1209241032	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	C
——— 1034	" FB	"	"	"	
——— 1036	NDMA/DMN by 607	Ice	(1) 1 LT Amb		Su
——— 1040 ~~1038~~	Anions/TDS	"	(1) 500 mL Poly	0227601W	A
——— 1042	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL poly	0427601W	
——— 1038	NDMA/DMN by 607 (Dup)	Ice	(1) 1 LT Amb		Su

Continued on Page

Read and Understood By

[signature] 24 Sept 2012 [signature] 9-26-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 24 Sept 2012

Sample Location: Bldg 650 - Inf-1

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/Bromate by 607	Anions/TDS	NO2/NO3 by 353.2							
I 120924 1032	3	A	X										
1034 FB	3		X										
1036	1			X									
1038 DUP	1			X									
1040	1				X								
1042	1					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tom Moss	24 Sept 2012 1055	John Munch	9-25-12 /1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 655-EFF-2 Notebook No. Misc #21

Continues from Page

T. Moore & R. Davis present. Samples will be collected from Sampling Port SP-12 located on the Effluent Side of the System. Sample port SP-12 will be purged for one minute prior to parameters and sample collection. Carboy "G2" used for Field Blanks.

Parameters	Meter ID	Buffer	Lot	Exp
E120925 0959	pH/cond "	7	110747	2/13
pH 8.0	Turb #8	10	113925	7/13
Temp 24.1°C	" STD 5.83 NTU			
Cond 970 uS/cm	" Std 5.93 NTU			
Turb 0.25 NTU	" Lot A2060			
pH/pre 7.0 - 10.1 (20.2°C)	" Exp 9/30/12			
pH/post 7.0 - 10.1				

Samples

Sample #	Analysis	Preservative	Container	Lot	Lab
E120925 1001	VOA by 8260 CC	Ice/HCL	(3) 40mL vials	2059001	CAS
1003	" (EB)	"	"	"	"
1005	NDMA/DMN/Bromate by 607	Ice	(1) 1LT Amb		SAKI
1007	Low Level NDMA	"	"	062512-12	CAS
1009	" (FB)	"	"		"
1011	NO_2/NO_3 by 353.2	Ice/H2SO4	(1) 125mL Poly	0427601W	ALS

Continued on Page

Read and Understood By

Signed 25 Sept 2012 Date

Signed 9-26-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 25 Sept 2012

Sample Location: Bldg 655-EFF-2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260 LL	NDMA/DMN by 607	NDMA/DMN/Bromide/ by 607	Low Level NDMA	Total METALS	ANIONS/TDS	NO2/NO3 by 353.2	Perchlorate by 331.0			
E120925 1001	3	A	X										
1003 FB	3		X										
1005	1				X								
1007	1					X							
1009 FB	1					X							
1011	1								X				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	25 Sept 2012 1055	[signature]	9-26-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 655-Inf-1 Notebook No. MISC #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from Sample port Bldg 655-Inf-2 located on the Influent Side of the System. The Sample port will be purged for one minute prior to parameters and Sample Collection. Trip blanks made at Bldg 637 directly from the NANOpure.

Parameters	Meter ID	Buffer	Lot	Lad
I120925T024	PH/cond #	7	110747	2/13
PH 6.6	Turb #8	10	113925	7/13
Temp 23.7°C	" STD 5.83 NTU			
Cond 1020 US/CM	" Rdg 5.94 NTU			
Turb 1.60 NTU	" Lot A2060			
PH/pre 7.0-10.1 (20.6°C)	" Exp 9/3/12			
PH/post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	La
I120925T026	VOA by 8260	Ice/HCL	(3) 40 ml Vials	2059001	C
——— 1028	" (TB)	"	"	"	
——— 1030	Bromacil by 607	Ice	(1) 1 LT Amb		Su
——— 1032	Total Metals	Ice/HNO_3	(1) 250 ml Poly	0327601W	A
——— 1034	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 ml Poly	0427601W	

Continued on Page

Read and Understood By

[signature] 25 Sept 2012 [signature] 9-26-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 25 Sept 2012

Sample Location: Bldg 655 - Inf-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	NDMA/DMN/Bromide by 607	Low Level NDMA	Total Metals	Anions/TDS	NO3/NO2 by 353.2	Perchlorate by 331.0	Bromide by 607		
I120925102C	3	A	X										
1028 TB	3		X										
1030	1										X		
1032	1						X						
1034	1								X				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Jim Mon	25 Sept 2012 1055	Jon Munch	9-26-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM. 10.517 ENV.0053 Notebook No. D-32 #95

Continues from Page

B. Tufts & D. Halvorson present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be taken using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell & water analyzer

Calibrations

DO - calibrated in saturated air @ 638 mm/hg

Conductivity - calibrated using 1413 STD Solution

PH - calibrated using 7 & 10 buffers

Turbidimeter #7 STD - 5.64 NTU RDG - 5.57 LOT A2060 EXP - 9-29-12

Initial DTW - 480.45

Total Gallons purged - 3 gallons IDW

Parameters

Time	Temp °C	Cond-mS/cm ~~Preservation~~	DO ~~Container~~	PH	ORP	TURB NTU	DTW
1209110905	20.62	1.091	3.98	712	208	0.93	480.46
—— 0907	20.66	1.058	4.04	711	196	0.66	480.46
—— 0909	20.65	1.087	4.01	712	206	0.73	480.46

Samples

Sample #	Analysis	Preservation	Container	LOT	LAB
1209110915	VOA by 8260LL	ICE-HCL	(3) 40 ml vials	2059001	CAS
—— 0916	VOA by 8260LL (FB)	"	(3) "	"	"
—— 0917	LL NDMA	ICE	(1) 1 L amber	062512-12	"
—— 0918	LL NDMA (FB)	"	(1) 1 L amber	"	"

Continued on Page

Read and Understood By

[signature] 9-11-12 [signature] 9-11-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-11-12

Sample Location: BLM-10-517

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260LL	LLNDMA									
1209110915	3	A	+										
0916 (FB)	3	A	+										
0917	1	A		+									
0918 (FB)	1	A		+									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	9-11-12 / 11:20	Jon Munch	9-12-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project BLM-13-300 WJI ENV-0053 Notebook No. D32 #93

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This ~~zone~~ well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy G4 in use.

Calibrations

DO - calibrated in saturated air @ 642 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using fisher buffers (7-10).
Turbidity meter # 7 std - 5.64 NTU's rdg - 5.56 NTU's lot - A2060 Exp - 9/29/12

Trip Blanks - Nanopure

Sample	Analysis	Preservative	Container	Lot	Lab
120905 0900	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	CAS

Parameters (time)	temp (°c)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft)
1) 120905 1030	21.68	1.251	3.56	7.41	83	0.77	246.34
2) ——— 1035	21.79	1.252	3.30	7.40	85	0.80	246.20
3) ——— 1040	21.93	1.249	3.26	7.40	86	0.52	246.10

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120905 1050	VOA by 8260	ice/HCL	(3) 40ml vials	1194002	CAS
——— 1051	" (F.B.)	"	"	"	"
——— 1052	Bromacil by 607	ice	(1) 1L Amber	7-14-2012	SRI
——— 1053	Low Level NDMA	"	"	062512-1Z	CAS

Initial DTW - 245.50ft Total gallons purged - 2 gals.

Continued on Page

Read and Understood By

Craig Del Ferraro 9/5/12 Jim Munnich 9-5-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/5/12

Page _____ of _____

Sample Location: BLM-13-300

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	LL NDMA								
1209050900	1	A			✓								
——— 1050	3	A	✓										
——— 1051	3	A	✓										
——— 1052	1	A		✓									
——— 1053	1	A			✓								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Alf Ferrel	9/5/12 1100hrs.	Jon Munch	9-5-12 / 1110

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-1-435 WJI ENV-0013 Notebook No. D32 #95

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. This well will be purged to dryness, allowed to recover, and then sampled.

Total DTW - 137.94(m) (452.56ft.)
Initial DTW - 408.70ft.
Packer depth - 433.99ft.
Final DTW - 408.90ft.
Total gals. purged - 1/4 gal.

Meter ID		Buffers	Lot	Exp
pH/cond	- 56	7	110747	2/13
Turb	- 7	10	113925	7/13
" std	- 5.64 NTU's			
" Rdg	- 5.76 NTU's			
" Lot	- A2060			
" Exp	- 9/29/12			

Trip Blanks - Nanopure

Sample	Analysis	Preservative	Container	Lot	Lab
1209181300	VOA by 8260	ice/HCL	(3)40ml vials	2059001	CAS

Initial Parameters
Time - 1209181430
PH - 7.86
Temp - 28.0°C
Cond - 1156 us/cm
Turb - 1.01 NTU's
pH pre - 7.08/10.12 (28.4°C)
pH post - 7.03/10.13

Final
Time - 1209190740
PH - 7.94
Temp - 23.8°C
Cond - 1140 us/cm
Turb - 0.75 NTU's
pH pre - 7.10/10.15 (18.3°C)
pH post - 7.12/10.13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1209181440	VOA by 8260	ice/HCL	(3)40ml vials	2059001	CAS
1441	" (Dupl.)	"	"	"	"
1209190730	NDMA/DMN by 607	ice	(1)1L Amber	7-13-2012	SRI
1209181442	Total Metals	ice/HNO_3	(1)250ml poly	032760-NN	ALS

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 9/19/12 — Date

Jon Munch — Signed — 9-21-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/18/12 Page _____ of _____

Sample Location: BLM-1-435

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	Total Metals ~~60~~ CD									
120918 1300	3	A	✓										
—— 1440	3	A	✓										
—— 1441	3	A	✓										
—— 1442	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fuso	9/18/12 1500hrs.	Jon Munch	9-20-12 /0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/19/12

Page _____ of _____

Sample Location: BLM-1-435

Pertinent Notes (if any)

•

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 607										
1209190730	1	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	9/19/12 0830hrs	Jon Munch	9-20-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-15-305 WJ1-ENV-0053 Notebook No. D32#95

Continues from Page

A. MONTES & R. MIRABAL PRESENT. WEATHER IS COOL & CLEAR. THIS WELL WILL BE PURGED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE COLLECTED USING A TEFLON DISCHARGE TUBE. WATER QUALITY PARAMETERS WILL BE TAKEN USING A QED MP-20 FLOW CELL AND WATER ANALYZER.

CALIBRATION

DO - CALIBRATED IN SATURATED AIR @ 637mm/Hg INITIAL DTW - 277.74 FT.

CONDUCTIVITY - CALIBRATED USING 14/13 uS/cm STD SOLUTION IDW - 5 gal

PH - CALIBRATED USING FISHER BUFFERS 7-10.

TURBMETER #7 STD - 5.64 RDG - 5.74 LOT - A2060 EXP 9.29.12

PARAMETERS	TEMP °C	COND mS/cm	DO	PH	ORP	TURB	DTW
120914 0900	20.17	1.052	1.45	7.74	89	0.71 NTU	278.94
—— 0905	20.22	1.034	1.40	7.74	88	0.66 NTU	278.94
—— 0910	20.19	1.045	1.44	7.74	88	0.58 NTU	278.94

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT #	LAB
120914 0915	VOA 8260	ICE. HCL	3-40ml VIALS	2059001	CAS
—— 0916	VOA 8260 (FB)	ICE. HCL	3-40ml VIALS	2059001	CAS
—— 0917	NDMA/DMN 607	ICE	1 LT AMBER	NA	CAL
—— 0918	NDMA/DMN 607 (DUP)	ICE	1 LT AMBER	NA	CAL

Continued on Page

Read and Understood By

Signed 9.14.12 Date Signed 9-17-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 14 SEPT 12

Page 1 of 1

Sample Location: RCM-15-305

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 FB	8260	607	607 (DW?)							
120914 0915	3	A		X									
" 0916	3	A	X										
" 0917					X								
" 0918						X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
R Miranda	14 SEPT 12 / 0715	Jon Munch	9-17-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

B. Tufts & D. Halvorsen present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be taken using a new teflon disposable. Water quality parameters will be monitored using a QED MP-20 Flow Cell & wat. analyz

Calibration

DO - Calibrated in saturated air @ 638 mm/hg
Conductivity - calibrated using 1413 STD. Solution
PH - calibrated using 7 & 10 buffers
Turbidimeter #7 STD - 5.64 RDG - 5.78 LOT - A2060 Exp. 9-29-12

Initial DTW - 381.83'
Total gallons purged - 2.5 gallons I2

Parameters

Time	TEMP (°C)	COND ms/cm	DO	PH	ORP	TURB	DTW
120912 1350	22.37	1.065	5.25	7.21	128	0.54	382.09
1352	22.46	1.064	5.33	7.22	129	0.87	382.09
1354	22.44	1.073	5.10	7.22	128	0.81	382.09

Samples

Sample #	Analysis	Preservative	Container	LOT	LAB
120912 1400	VOA by 8260	ICE-HCL	(3) 40ml vials	2059001	EMS
1401	VOA by 8260 (FB)	"	(3) 40ml vials	"	"
1402	NDMA/DMN by 607	ICE	(1) 1 liter amber	062512-12	"

Continued on Page

Read and Understood By

Signed 9-12-12 Date Signed 9-12-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-12-12

Page 1 of 1

Sample Location: BLM-18-430

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607									
1209121400	3	A	+										
1401	3	A	+										
1402	1	A		+									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	9-12-12 / 2:47	[signature]	9-13-12 / 1125

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM.23.431 ENV.0053 Notebook No. D-32 #95

Continues from Page

B. Tufts & D. Halvorsen present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be taken from a new teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 Flowcell & water Analyzer.

Calibrations

DO - calibrated in saturated air @ 638 mm/hg

Conductivity - calibrated using 1413 STD Solution

PH - Calibrated using 7+10 buffers

Turbidimeter #7 STD - 5.64 RDG - 5.81 LOT - A2060 EXP - 9-29-12

Initial DTW - 327.50'

Total gallons purged - 3.5 gallons IDW

Parameters

Time	TEMP °C	Cond ms/cm	DO	PH	ORP	TURB	DTW
1209130905	20.56	1.387	1.73	7.49	131	1.33	327.75'
—0907	20.48	1.387	1.69	7.50	133	1.05	327.75'
—0910	20.56	1.386	1.62	7.50	139	0.98	327.75'

Samples

Sample #	Analysis	Preservative	Container	LOT	LAB
1209130715	VOA by 8260 (TB)	ICE-HCL	(3) 40ml vials	2059001	CAS
—0915	VOA by 8260	"	(3) "	"	"
—~~0916~~ 916	NDMA/DMN by 607	ICE	(1) 1 Hamber	~~062512-12~~ N/A	SWRI

Continued on Page

Read and Understood By

Signed: [signature] Date: 9-13-12

Signed: [signature] Date: 9-13-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-13-12 Page 1 of 1

Sample Location: BLM. 23. 431

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607									
1209130715 (TB)	3	A	+										
—0915	3	A	+										
—0916	1	A		+									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	9-13-12 / 10:58	[signature]	9-13-12 / 1125

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-5-527 WJI ENV-0053 Notebook No. D32 #93

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is cloudy & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy G4 in use.

Calibrations

DO - calibrated in saturated air @ 640 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #7 std - 5.64 NTU's rdg - 5.57 NTU's lot - A2060 Exp - 9/29/12

Parameters (time)	temp (°C)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft)
1) 1209060900	22.26	1.073	4.24	7.08	124	0.67	496.59
2) ——— 0905	22.43	1.067	3.77	7.08	125	0.60	496.59
3) ——— 0910	22.57	1.064	3.68	7.06	126	0.48	496.59

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1209060920	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0921	" (F.B.)	"	"	"	"
——— 0922	NDMA/DMN by 607	ice	(1) 1L Amber	7-13-2012	SRI
——— 0923	Low Level NDMA	"	"	062512-1Z	CAS
——— 0924	" (Dupl.)	"	"	"	"
——— 0925	" (F.B.)	"	"	"	"

Initial DTW - 496.59 ft. Total gallons purged - 3 gals.

Continued on Page

Read and Understood By

Craig Del Ferraro 9/6/12 Jeri Munnick 9-6-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/6/12 Page _____ of _____

Sample Location: BLM-5-527

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	LL NDMA								
			Analytical Requirement										
1209060920	3	A	✓										
——— 0921	3	A	✓										
——— 0922	1	A		✓									
——— 0923	1	A			✓								
——— 0924	1	A			✓								
——— 0925	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiume	9/6/12 1105hrs.		

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

B. Tufts & D. Halvorsen present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be taken from a new teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 FLOWCELL & water analyzer.

Calibrations

DO - calibrated in saturated air @ 638 mm/hg Initial DTW - 374.10'
Conductivity - calibrated using 1413 STD Solution Total gallons purged - 3 gallons IDW
PH - calibrated using 7 & 10 buffers
Turbidimeter #7 STD - 5.64 RDG - 5.81 LOT - A2060 EXP - 9-29-12

Parameters

Time	TEMP °C	COND ms/cm	DO	PH	ORP	TURB	DTW
1209131300	21.88	1.076	4.74	7.55	112	1.38	374.52
—— 1302	21.92	1.077	4.73	7.55	111	1.28	374.52
—— 1305	21.91	1.076	4.71	7.56	110	1.22	374.52

Samples

Sample #	Analysis	Preservative	Container	LOT	LAB
1209131309	VOA by 8260	ICE · HCL	(3) 40 mi vials	2059061	LAS
—— 1310	VOA by 8260 (FB)	ICE · HCL	(3) "	"	"
—— 1311	NDMA/DMN by 607	ICE	(1) 1 l tamber	~~062512-12~~ N/A	JWR2

Continued on Page

Read and Understood By

[signature] 9-13-12 [signature] 9-13-12
Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/13/12

Page _____ of _____

Sample Location: BLM-9-419

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607									
120913 1309	3	A	✓										
— 1310	3	A	✓										
— 1311	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fuse	9/13/12 1445hrs.	Jon Munch	9-17-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BW-3-180 WJI ENV-0053 Notebook No. D32 #95

Continues from Page

R. Mirabal & C. Del Ferraro present. Weather is clear & cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer.

Calibrations

DO- calibrated in saturated air @ 642 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH- calibrated using fisher buffers (7-10).
Turbidity meter #7 std- 5.64 NTU's rdg- 5.61 NTU's lot- A2060 Exp- 9/29/12

Trip Blanks- Nanopure

Sample	Analysis	Preservative	Container	Lot	Lab
120915 0630	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS

Parameters (time)	temp (°C)	Cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 120915 0900	19.39	2.04	0.98	7.61	146	145	170.65
2) ——— 0905	19.21	2.18	0.99	7.63	149	138	170.65
3) ——— 0910	19.14	2.10	0.97	7.64	150	148	170.65

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120915 0915	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0916	Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRI
——— 0917	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Initial DTW - 169.10 ft. Total gallons purged - 1 gal.

Cancelled

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
	VOA by 8260	ice/HCL	(3) 40ml vials		CAS
	Total Metals	ice/HNO_3	(1) 250ml poly		ALS

Cancelled

Blind Controls cancelled

Continued on Page

Read and Understood By

Craig Del Ferro 9/15/12 — Signed, Date

Jon Munch 9-17-12 — Signed, Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/15/12 Page _____ of _____

Sample Location: BW-3-180

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	Total Metals								
120915 0630	3	A	✓										
—— 0915	3	A	✓										
—— 0916	1	A		✓									
—— 0917	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fuso	9/15/12 1130hrs.	[signature]	9-17-12 /0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BW-6-355 WJI ENV-0053 Notebook No. D32 #95

Continues from Page

R. Mirabal & C. DelFerraro present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy G3 in use.

Calibrations

DO - calibrated in saturated air @ 642 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using fisher buffers (7-10).
Turbidity #7 std - 5.64 NTU's rdg - 5.61 NTU's lot - A2060 Exp - 9/29/12

Parameters (time)	temp (°C)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 120915 1050	21.37	0.920	2.29	7.49	122	0.97	244.30
2) ——— 1055	21.49	0.913	1.77	7.48	123	0.83	244.35
3) ——— 1100	21.58	0.911	1.55	7.48	128	0.60	244.35

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120915 1105	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1106	" (F.B.)	"	"	"	"
——— 1107	NDMA/DMN by 607	ice	(1) 1L Amber	7-13-2012	SRT
* ——— 1108	*" (M.S.)*	"	"	"	"
——— 1109	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS
——— 1110	Anions/TDS	ice	(1) 500ml poly	0227601W	"
——— 1111	Perchlorate by 331.0	"	(1) 125ml poly	001558	CAS
——— 1112	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS

Initial DTW - 242.87ft. Total gallons purged - 2 gals.

Continued on Page

Read and Understood By

Craig Del Ferro Signed 9/15/12 Date

Jon Munch Signed 9-17-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/15/12 Page _____ of _____

Sample Location: BW-6-355

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions / TDS	Perchlorate	NO_2/NO_3					
120915 1105	3	A	✓										
—— 1106	3	A	✓										
—— 1107	1	A		✓									
—— 1108	1	A		✓									
—— 1109	1	A			✓								
—— 1110	1	A				✓							
—— 1111	1	A					✓						
—— 1112	1	A						✓					

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiero	9/15/12 1130hrs.	Jon Munch	9-17-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project MPE-8 Notebook No. PFTS wells #2

Continues from Page

T. Moore & K. Amis present. Samples will be collected from a stainless steel sample port located near the well head. Sample port will be purged for on minute prior to parameters and sample collection. Carboy "G2" used for field blanks. Weather is mostly clear and hot. Lite breeze out of the

Parameters	Meter ID	Buffer	Lot	Exp
W120926 ~~1225~~ 0821	PH/cond #	7	110747	2/13
PH 6.1	Turb #8	10	113925	7/13
Temp 22.1°C	" Std 5.83 NTU			
Cond 1300 us/cm	" Rdg 5.82 NTU			
Turb 0.97 NTU	" Lot A2060			
PH/Pre 7.0-10.1 (19.3°C)	" Exp 9/30/12			
PH/Post				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W120926 ~~1229~~ 0823	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	CAS
~~1230~~ 0824	" FB	"	"	"	"
~~1231~~ 0825	NDMA/DMN by 607	Ice	(1) 1 LT Amb		Swri

Continued on Page

Read and Understood By

Signed: [signature] Date: 26 Sept 2012 Signed: [signature] Date: 9-26-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 26 Sept 2012 Page _____ of _____

Sample Location: MPE-8

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	NDMA/DMN/Benzidine by 607	Low Level NDMA	Total METALS	Anions/TDS	NO_2/NO_3 by 353.2	Perchlorate by 331.0			
W120926083	3	A	X										
W120926084 FB	3		X										
W120926085	1			X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tim Moore	26 Sept 2012 1029		

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project NASA 10 Notebook No. D32 #94B
Continues from Page N/A

F. Gallegos & T. Torrez present. Weather is clear and hot. This well will be purged and sampled using a dedicated bladder pump. Samples will be taken w/ Teflon tube.

Initial Depth/water - 123.13 ft
Total Depth - 133.56 ft
Final DTW - 123.24 ft
Purge start - 1345 (9-5-12)
Purge stop - 1415 (9-5-12)
3 casing vol - 5.5 gallons
# of gallons purged - 6 gallons
Carboy 6-5

Meter ID
pH/cond - 54
Turb - 6
STD - 5.41
RDG - 5.44
Lot # - A2060
Exp - 9/30

Initial Params	2nd Params	Final Params
Time 1209051400B	Time 1209051403B	Time 1209051408B
pH - 7.78	pH - 7.64	pH - 7.52
Temp - 27.2°C	Temp - 26.4°C	Temp - 25.6°C
cond - 766 uS/cm	cond - 762 uS/cm	cond - 742 uS/cm
Turb - 2.89 NTUs	Turb 2.42 NTU	Turb - 1.68
pH pre - 7.10/9.98 (32.2°)	pH pre - 7.08/10.02 (34.2°)	pH pre - 7.08/10.04 (32.6)
pH post - 7.08/10.02	pH post - 7.06/10.00	pH post - 7.06/10.00

Samples

Sample #	Analysis	Preserve	Lot #	Lab Cont
1209051404B	VOA by 8260	1 cc HCl	205900	GAS (3) 40 ml vial
— 1405B	(FB)			
— 1406B	NDMA/DMN/BDM by 607	1 cc	N/A	SWRI (1) 1L amber
— 1407B	Total metals	1 cc/HNO3	032760	WALS (1) 250 ml poly

Continued on Page N/A

Read and Understood By

Signed: [illegible] Date: 9-5-12
Signed: [illegible] Date: 9-6-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-5-12 Page 1 of 1

Sample Location: NASA 10

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA 1 and/ Brom by 607	TOTAL metals								
1209051404B	3	A	x										
—— 1405B (FB)	3	A	x										
—— 1406B	1	A		x									
—— 1407B	1	A			x								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	9-5-12 (1500)	[signature]	9-6-12 / 0845

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project NASA 5 Notebook No. D 32 #94B

Continues from Page N/A

F. Gallegos & T. Torrez present. Weather is clear and hot. This well will be purged and sampled using a dedicated bladder pump. Samples w/ taken w/ teflon tube.

Total Depth - 135.24 ft	**Meter ID**
Initial DTW - 117.12 ft	PH/Cond - 5/1
Final DTW - 135.52 ft	Turb - 6
3 Casing Vol - 9.5 gallons	" STD - 5.41
Purge Rate - N/A	" RDG - 5.44
# of Gallons purged - 10 gallons	Lot # A2060
Purge Start - 0920 (9-5-12)	" Exp - 9/50
Purge Stop - 1010 (9-5-12)	

Initial Params	2nd Params	Final Params
Time 1209050945	Time 1209051000	Time 1209051008
PH - 8.05	PH - 8.02	PH - 7.92
Temp - 23.3	Temp - 24.2°C	Temp - 24.2°C
Cond - 12.84	Cond - 1264	Cond - 1254
Turb - 6.25	Turb - 4.98	Turb - 5.02
PH pre - 7.10/9.96 (29.2°C)	PH pre - 7.08/10.04 (30.2°C)	PH pre - 7.06/10.05 (30.6°C)
PH post - 7.12/10.04	PH post - 7.06/10.02	PH post - 7.04/10.06

Samples

Sample #	Analysis	Preserve	Lot #	Lab	Cont
1209051002	VOA by 8260	ICE & HCL	2059001 ~~1940020~~	CAS	(3) 40 ml vial
— ~~0003~~ 0845	" (TB)		"	"	"
— 1003	NDMA/DMN/Bromacil by 607	ICE	N/A	SWRI	(1) 1 tumber
— 1004	Total metals	ICE/HCL	0327601W	ALS	(1) 250 ml poly
— 1005	Anions ITDS	ICE	0317201W	"	(1) 500 ml poly
— 1006	Perchlorate	"	004432	~~SWRI~~ CAS	(1) 125 ml poly
— 1007	NO2/NO3	ICE/H2SO4	0427601W	ALS	"

Continued on Page N/A

Read and Understood By

[signature] 9-5-12 [signature] 9-5-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-5-12

Sample Location: NASA 5

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN/ Bromacil by 607	TOTAL Metals	Anions/ TDS	Perchlorate	NO2/NO3					
120905 1002B	3	A	X										
—— 0845B (TB)	3	A	X										
—— 1003B	1	A		X									
—— 1004B	1	A			X								
—— 1005B	1	A				X							
—— 1006B	1	A					X						
—— 1007B	1	A						X					

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	9-5-12 (1130)	Jon Munch	9-5-12 / 1110

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project NASA 9 WJI ENV-0013 9-8-12 Notebook No. D32 #94B

Continues from Page NA

M. Dunford + R. Mirabal present @ 0745 hrs. Weather is cloudy and raining. Slight breeze from the East. This well will be purged using a dedicated bladder pump and samples taken directly from the wellhead using a teflon discharge tube.

Total Depth = 47.08 m (154.46 ft.)
Initial DTW = 39.62 m. (130.02 ft.)
3 casing volumes = 13 gals.
Start purge = 0820 hrs.
Stop purge = 0925 hrs.

Final DTW = 130.03 ft.

Meter ID	Buffers	Exp	Lot #
PH/Cond = 54	7	110747	2/13
Turb = 6	10	113925	7/13
" Stnd = 5.41 NTU's			
" Rd = 5.34 NTU's			
" Exp = 9/30			
" Lot # = A2060			

Initial Parameters	Secondary Parameters	Final Parameters
Time - 1209080910	1209080915	1209080925B
PH - 7.72	7.60	7.67
Temp - 19.9°c	20.0°c	21.2°c
Cond - 1292 µs/cm	1285 µs/cm	1287 µs/cm
Turb - 4.59 NTU's	4.05 NTU's	2.53 NTU's
PH Pre Cal - 6.99/10.01 (18.6°c)	7.19/10.08 (16.1°c)	7.16/10.05 (20.0°c)
PH Post Cal - 7.01/10.05	6.99/10.01	7.05/10.02

Samples (Carboy G-3)

Sample #	Analysis	Preservative	Lot #	Lab	Cont.
1209080920B	VOA by 8260 (FB)	Ice/HCL	2059001	CAS	(3) 40 ml vials
—— 0921B	VOA by 8260	"	"	"	(3) "
—— 0922B	NDMA/DMN/Bromacil by 607	Ice	~~NA~~ 071312	SWRI	(1) 1 Lt Amber
—— 0923B	Total Metals	Ice/HNO_3	0327601W	ALS	(1) 250 ml poly

Continued on Page

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Signed: [signature] Date: 9-8-12

Signed: [signature] Date: 9-10-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-8-12

Page 1 of 1

Sample Location: NASA 9

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOAs by 8260	NDMA/DMNT Bromacil by 607	Total Metals								
120908 0920B (FB)	3	A	X										
0921B	3	A	X										
0922B	1	A		X									
0923B	1	A			X								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	9-8-12 /	[illegible]	9-10-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PFE-7 Notebook No. PFTS Wells #2

Continues from Page

T. Moore & K. Amis present. Weather is mostly clear, warm with a lite breeze out of the North. Samples will be collected from a stainless steel sample port located next to the well head. Sample port will be purged for one minute prior to parameters & sample collection. Carboy used for field blanks.

Parameters	Meter ID	Buffer	Lot	Exp
W1209241326	PH/cond #	7	110747	2/13
PH 6.9	Turb # 8	10	113925	7/13
Temp 18.4°C	" STD 5.83 NTU			
Cond 940 US/CM	" Rdg 5.97 NTU			
Turb 0.15 NTU	" Lot A2060			
PH/Pre 7.0-10.1 (21.3°C)	" Exp 9/30/12			
PH/Post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W1209241329	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	CAS
—— 1330	" FB	"	"	"	"
—— 1331	NDMA/DMN by 607	Ice	(1) 1 LT Amb		SWRI
—— 1332	Low Level NDMA	"	"	062512-12	CAS
—— 1333	" FB	"	"	"	"

Continued on Page

Read and Understood By

[signature] Signed 24 Sept 2012 Date [signature] Signed 9-26-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 24 Sept 2012 Page 1 of 1

Sample Location: PFE-7

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	NDMA/DMN/Bromacil by 607	Low Level NDMA	Total Metals	Anions/TDS	NO_2/NO_3 by 353.2	Perchlorate by 331.0			
W1209241329	3	A	X										
1330 FB	3		X										
1331	1			X									
1332	1					X							
1333 FB	1					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	24 Sept 2012 1512	[signature]	9-25-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PL.1.486 ENV.0053 Notebook No. D-32 #95

Continues from Page

B. Tubbs & D. Malvarson present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be taken using a new teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 Flowcell unit analyzer

Calibration

DO - calibrated in saturated air @ 638 mm/hg — Initial DTW - 469.09'

Conductivity - calibrated using 1413 STD. Solution — Total gallons purged - 5.5 gallons

PH - calibrated using 7 & 10 buffers

Turbidimeter #7 STD-5.64 DOC-5.57 LOT-A2016 Exp. 9-29-12

Parameters

Time	TEMP °C	COND mS/cm	DO	PH	ORP	TURB	DTW
120911 1330	21.80	1.088	3.65	7.13	165	0.80	469.10
— 1332	21.33	1.090	3.69	7.15	166	0.70	469.10
— 1334	21.83	1.087	3.62	7.14	167	0.52	469.10

Trip Blanks

Sample #	Analysis	Preservative	Container	LOT	LAB
1209110725	VOA by 8260	ICE-HCL	(3) 40ml vials	2059001	CAS
— 0726	LL NDMA	ICE	(1) 1L amber	062512-12	"

Samples

Sample #	Analysis	Preservative	Container	LOT	LAB
120911 1340	VOA by 8260	ICE-HCL	(3) 40ml vials	2059001	CAS
— 1341	VOA by 8260 (D)	"	(3) "	"	"
— 1342	LL NDMA	ICE	(1) 1L amber	062512-12	"
— 1423	LL NDMA (BC)	"	(1) "	"	"

Continued on Page

Read and Understood By

Signed 9-11-12 Date Signed 9-11-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-11-12

Sample Location: PL-1-486

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	LL NDMA									
1209110725 (TB)	3	A	x										
0726 (TB)	1	A		x									
1340	3	A	x										
1341 (D)	3	A	x										
1342	1	A		x									
1423 (BC)	1	A		x									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	9-11-12 / 2140	[signature]	9-12-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PL-2-504 WJI ENV-0053 Notebook No. D 32 #93

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & hot. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy G4 in use.

Calibrations

DO - calibrated in saturated air @ 639 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #7 std - 5.64 NTU's rdg - 5.49 NTU's lot - A2060 Exp - 9/29/12

Parameters (time)	temp (°c)	Cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 120907 1310	21.83	1.014	4.13	7.56	77	2.27	462.50
2) ——— 1315	21.94	1.008	3.50	7.56	81	2.42	462.50
3) ——— 1320	22.07	~~1.10~~ cd 1.010	3.34	7.56	88	1.78	462.50

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120907 1325	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1326	" (F.B.)	"	"	"	"
——— 1327	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"
——— 1328	" (Dupl.)	"	"	"	"
——— 1329	" (F.B.)	"	"	"	"

Initial DTW - 462.50 ft. Total gallons purged - 3 gals

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 9/7/12 — Date

Jon Munch — Signed — 9-7-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/7/12

Page _____ of _____

Sample Location: PL-2-504

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	LL NDMA									
1209071325	3	A	✓										
——— 1326	3	A	✓										
——— 1327	1	A		✓									
——— 1328	1	A		✓									
——— 1329	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiume	9/7/12 1400hrs.	Jon Munch	9-10-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PL-3-453 ENV.0053 Notebook No. D-32 #95

Continues from Page

B. Tubbs & D. Halvorsen present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be taken using a new tetlon discharge tube. Water quality parameters will be monitored using a QED MP-20 flowcell & water analyzer.

Calibration:
DO - calibrated in saturated air @ 638 mm/hg
Conductivity - calibrated using 1413 STD. Solution
PH - Calibrated using 7 & 10 buffers
Turbidimeter #7 STD - 5.64 RDG - 5.78 LOT - A2060 EXP - 9-29-12

Initial DTW - 444.78'
Total gallons purged - 2.5 gal

Parameters

Time	Temp C	Cond ms/cm	DO	PH	ORP	Turb NTU	DTW
209120828	21.38	1.101	5.09	7.05	162	0.88	444.86'
—— 0830	21.40	1.102	4.89	7.06	171	0.74	444.86'
—— 0833	21.38	1.105	4.83	7.06	177	0.91	444.86'

Samples

Sample #	Analysis	Preservative	Container	LOT	LAB
209120845	VOA by 8260LL	HCL-HCL	(3) 40ml vial	2059001	CAS
—— 0846	VOA by 8260LL (FB)	"	(3) "	"	"
—— 0847	LL NDMA	HCL	(1) 1L Amber	0625 12-12	"
—— 0848	LL NDMA (FB)	"	(1) "	"	"

Continued on Page

Read and Understood By

Signed 9-12-12 Date Signed 9-12-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-12-12

Page 1 of 1

Sample Location: PL-3-453

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260C	LL NDMA									
1209120845	3	A	X										
0846	3	A	X										
0847	1	A		X									
0848	1	A		X									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	9-12-12 / 11:08	[illegible]	9-12-12 / 1:45

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PL.4.464 WJ1.ENU.0053 Notebook No. D32#95

Continues from Page

A. MONTES & R. MIRABAL PRESENT. WEATHER IS WARM & CALM. THIS WELL WI BE PURGED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE COLLECTED USING A TEFLON DISCHARGE TUBE. WATER QUALITY PARAMETERS WILL BE TAKEN USING A QED MP-70 FLOWCELL AND WATER ANALYZER.

CALIBRATIONS

DO-CALIBRATED IN SATURATED AIR @ 637 mm/Hg INITIAL DTW - 433.9

CONDUCTIVITY - CALIBRATED USING 1413 us/cm IDW - 2 gal

PH - CALIBRATED USING FISHER BUFFERS (7-10)

TURB MTR-#7 STD. 5.64 RDG-5.74 LOT-A2040 EXP-9.29.1

PARAMETERS	TEMP °C	COND mS/cm	DO	PH	ORP	TURB	DTW
120914 1020	21.89	1.076	3.80	7.25	65	2.77	434.12
—— 1025	21.64	1.068	3.76	7.26	65	3.12	434.12
—— 1030	21.60	1.074	3.77	7.26	65	2.39	434.12

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT #	LAB
120914 0940	VOA 8260 (TB)	ICE. HCL	3-40ml VIALS	2059001	CAS
—— 0941	LL NDMA (TB)	ICE	1LT AMBER	062512-12	CAS
—— 1035	VOA 8260	ICE. HCL	3-40ml VIALS	2059001	CAS
—— 1036	LL-NDMA	ICE	1LT. AMBER	062512-12	CAS
—— 1037	LL-NDMA (DUP)	ICE	1LT AMBER	062512-12	CAS

Continued on Page

Read and Understood By

Signed 9.14.12 Date Signed 9-17-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9.14.12 Page 1 of 1

Sample Location: PL.4.464

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA	LLNDMA									
120914 0940 TB	3	A	X										
0941 TB	1	A		X									
1035	3	A	X										
1036	1	A		X									
1037 DUP	1	A		X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	9.14.12	[signature]	9-17-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-4-481 WJ# ENV-0053 Notebook No. D32 #95

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is cool & rainy. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy G4 in use.

Calibrations

DO - calibrated in saturated air @ 638 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #7 std - 5.64 NTU's rdg - 5.50 NTU's lot - A2060 Exp - 9/29/12

Parameters (time)	temp (°c)	cond (ms/cm)	PH	DO	ORP	Turb (NTU's)	DTW (ft.)
1) 120908 0820	19.47	1.063	6.92	4.93	261	1.01	444.74
2) ——— 0825	19.18	1.048	6.76	5.30	285	0.79	444.74
3) ——— 0830	19.11	1.053	6.82	5.44	292	0.62	444.74

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120908 0840	VOA by 8260 LL	ice / HCl	(3) 40ml vials	2059001	CAS
——— 0841	" (F.B.)	"	"	"	"
——— 0842	Low Level NDMA	ice	(1) 1L Amber	062512-12	"
* ——— 0843	"*(M.S.)*	"	"	"	"
* ——— 0844	"*(M.S.D.)*	"	"	"	"
——— 0845	" (F.B.)	"	"	"	"

Initial DTW - 444.74 ft.

Total gallons purged - 2 gals

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 9/8/12 — Date

Jon Munch — Signed — 9-10-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/8/12 Page _____ of _____

Sample Location: ST-4-481

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
1209080840	3	A	✓										
——— 0841	3	A	✓										
——— 0842	1	A		✓									
——— 0843	1	A		✓									
——— 0844	1	A		✓									
——— 0845	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Frisco	9/8/12 1130 hrs.	Jon Munch	9-10-12 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST4.589 ENV.0053 Notebook No. D-32 #95

Continues from Page

B. Tufts & D. Halvorsen present. Weather is clear & cool. This well will be purged using a dedicated bladder pump. Samples will be taken using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flowcell and water analyzed.

Calibration

Initial Depth - 443.73'

DO - calibrated in saturated air @ 638 mm/hg

Total gallons purged - 3 gallons IDW

Conductivity - calibrated using 1413 us/cm std. Solution

PH - calibrated using 7 & 10 buffers.

Turbidimeter #7 STD. 5.64 rdg - lot - A2060 E&T 9-29-12

SAMPLES

Sample #	Analysis	Preservative	Container	LOT	LAB
1209101315	VOA by 8260LL	ICE - HCL	(3) 40ml vials	2059001	CAS
—— 1316	VOA by 8260LL (F.B.)	"	(3) "	"	"
—— 1317	LL NDMA	ICE	(1) 1L tanks	062512.12	"
—— 1318	LL NDMA (F.B.)	"	(1) "	"	"

Parameters

Time	TEMP °C	COND ms/cm	DO	PH	ORP	TURB (NTU)	DTW
1209101300	22.17	782	2.68	7.83	71	2.11	443.73
—— 1305	22.20	779	2.67	7.76	71	1.95	"
—— 1310	22.17	781	2.67	7.79	70	1.83	"

Continued on Page

Read and Understood By

[signature] 9-10-12 [signature] 9-10-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9-10-12 Page 1 of 1

Sample Location: ST-4-589

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260 LL	LL NDMA									
1209101315	3	A	+										
—— 1316 (FB)	3	A	+										
—— 1317	1	A		+									
—— 1318 (FB)	1	A		+									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	9-10-12 / 2:10	[signature]	9-11-12 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-4-690 WJI ENV-0053 Notebook No. D32 # 95

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is cloudy, cool, & rainy. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon ~~bladder p~~ co discharge tube, Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer.

Calibrations

DO - calibrated ~~us~~ co in saturated air @ 638 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
pH - calibrated using Fisher buffers (7-10).
Turbidity meter # 7 std - 5.64 NTU's rdg - 5.50 NTU's lot - A2060 Exp - 9/29/12

Trip Blanks - Nanopure

Sample	Analysis	Preservative	Container	Lot	Lab
120908 0630	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2059001	CAS
——— 0631	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"

Parameters (time)	temp (°C)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 120908 0950	20.24	0.782	1.74	7.88	96	3.31	443.88
2) ——— 0955	20.30	0.776	1.68	7.89	96	2.79	443.88
3) ——— 1000	20.34	0.777	1.80	7.89	100	1.88	443.88

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120908 1010	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2059001	CAS
——— 1011	*" (M.S.)*	"	"	"	"
——— 1012	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"

Initial DTW - 443.48ft.

Total gallons purged - 3gals

Continued on Page

Read and Understood By

Craig Del Ferraro 9/8/12
Signed Date

Jon Munck 9-10-12
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/8/12

Page _____ of _____

Sample Location: ST-4-690

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
1209080630	3	A	✓										
—— 0631	1	A		✓									
—— 1010	3	A	✓										
—— 1011	3	A	✓										
—— 1012	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	9/8/12 1130hrs.	[illegible]	9-10-12 /0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-535 WJI ENV-0020 Notebook No. D64 #110(Z)
Continues from Page

B. Tufts & C. DelFerraro present. Weather is cloudy & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe # 4755.

30 Min Equipment Blanks - Carboy G4

Sample	Analysis	Preservative	Container	Lot	Lab
1209040830Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0831Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters
Time - 1209040915Z
PH - 8.45
Temp - 23.1°C
Cond - 1039 us/cm
Turb - 2.67 NTU's
pH pre - 7.07/10.14 (22.3°C)
pH post - 7.10/10.12
DTW - 438.55 ft.
Atmos - 12.46 psia

Final
Time - 1209041025Z
PH - 8.38
Temp - 23.6°C
Cond - 1053 us/cm
Turb - 3.01 NTU's
pH pre - 7.04/10.03 (28.9°C)
pH post - 7.05/10.06
DTW - 438.91 ft.
Atmos - 12.47 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 56
Turb - 7
" Std - 5.64 NTU's
" Rdg - 5.47 NTU's
" Lot - A2060
" Exp - 9/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1209040950Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0951Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs

1)	2)	3)
59.06	59.03	59.00
64.20	64.19	64.15
64.21	64.22	64.16
59.08	59.05	59.03

Continued on Page

Craig Del Ferraro 9/4/12
Signed Date

Read and Understood By
[signature] 9-4-12
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/4/12

Page _____ of _____

Sample Location: ST-6-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
1209040830Z	3	A	✓										
——— 0831Z	1	A		✓									
——— 0950Z	3	A	✓										
——— 0951Z	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fuso	9/4/12 1110hrs.	Jon Munch	9-5-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-535 WJI ENV-0020 Notebook No. D64#110(Z)

Continues from Page

3. Tufts & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120921 1250Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1251Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters
Time - 120921 1320Z
PH - 8.06
Temp - 26.8°C
Cond - 1019us/cm
Turb - 0.81 NTU's
pH pre - 7.01 / 10.04 (29.5°C)
pH post - 6.98 / 10.06
DTW - 438.70ft.
Atmos - 12.51psia

Final
Time - 120921 1347Z
PH - 8.19
Temp - 26.8°C
Cond - 1027us/cm
Turb - 0.61 NTU's
pH pre - 6.98 / 10.03 (32.7°C)
pH post - 6.97 / 10.05
DTW - 439.28ft.
Atmos - 12.49 psia
IDW - 1/2 gals.

Meter ID
pH/cond - 55
Turb - 4
" Std - 5.34 NTU's
" Rdg - 5.33 NTU's
" Lot - A2060
" Exp - 9/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120921 1345Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1346Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs 1) 58.73 2) 58.72
64.32 64.37
64.30 64.37
58.78 58.70

Continued on Page

Read and Understood By

Craig Del Ferraro 9/21/12 [signature] 9-24-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/21/12 Page _____ of _____

Sample Location: ST-6-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
120921 1250Z	3	A	✓										
—— 1251Z	1	A		✓									
—— 1345Z	3	A	✓										
—— 1346Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	9/21/12 ~~15~~ CQ 1405hrs	[signature]	9-24-12 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-575 WJI ENV-0020 Notebook No. D64 #110(Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is cloudy & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min Equipment Blanks – Carboy G4

Sample	Analysis	Preservative	Container	Lot	Lab
120904 1250Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1251Z	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"

Initial Parameters
Time – 120904 1325Z
PH – 8.13
Temp – 24.9°C
Cond – 1089 us/cm
Turb – 9.71 NTU's
pH pre – 7.01 / 10.04 (32.1°C)
pH post – 6.97 / 10.06
DTW – 438.91 ft.
Atmos – 12.49 psia

Final
Time – 120904 1430Z
PH – 8.11
Temp – 25.3°C
Cond – 1067 us/cm
Turb – 2.92 NTU's
pH pre – 6.96 / 10.04 (36.0°C)
pH post – 6.98 / 10.05
DTW – 439.46 ft.
Atmos – 12.45 psia
IDW – 1/2 gals.

Meter ID
pH/Cond – 56
Turb – 7
" std – 5.64 NTU's
" Rdg – 5.49 NTU's
" Lot – A7060
" Exp – 9/29/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120904 1400Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1401Z	" (Dupl.)	"	"	"	"
——— 1402Z	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"

Runs	1)	2)	3)
	76.37	76.30	76.16
	81.54	81.55	81.50
	81.54	81.53	81.48
	76.39	76.26	76.17

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 9/4/12 — Date

Jon Munch — Signed — 9-4-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/4/12

Page _____ of _____

Sample Location: ST-6-575

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
1209041250Z	3	A	✓										
——— 1251Z	1	A		✓									
——— 1400Z	3	A	✓										
——— 1401Z	3	A	✓										
——— 1402Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fenn	9/4/12 1500hrs.	[signature]	9-5-12 /0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-575 WJI ENV-0020 Notebook No. D64 # 110 (Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is cloudy & cool. This zone will be sample using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4755.

30 Min. Equipment Blanks - Carboy G4

Sample	Analysis	Preservative	Container	Lot	Lab
120924 0840 Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0841 Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters

Time — 120924 0925 Z
PH — 8.37
Temp — 22.5 °C
Cond — 1042 us/cm
Turb — 0.85 NTU's
pH pre — 7.09 / 10.15 (19.2 °C)
pH post — 7.10 / 10.13
DTW — 439.28 ft.
Atmos — 12.48 psia

Final

Time — 120924 1025 Z
PH — 8.42
Temp — 22.8 °C
Cond — 1068 us/cm
Turb — 0.58 NTU's
pH pre — 7.04 / 10.10 (23.6 °C)
pH post — 7.03 / 10.13
DTW — 440.10 ft.
Atmos — 12.51 psia
IDW — ½ gals.

Meter ID

pH/cond — 55
Turb — 4
" Std — 5.34 NTU
" Rdg — 5.28 NTU
" Lot — A2060
" Exp — 9/29/12

Buffers	Lot	Exp
7	110747	[illegible]
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120924 0950 Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0951 Z	" (Dupl.)	"	"	"	"
——— 0952 Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs

1)	2)	3)
76.33	76.28	76.22
81.59	81.56	81.56
81.56	81.58	81.56
76.33	76.29	76.27

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 9/24/12 — Date

John Munnich — Signed — 9-24-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/24/12

Page _____ of _____

Sample Location: ST-6-575

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
120924 0840Z	3	A	✓										
——— 0841Z	1	A		✓									
——— 0950Z	3	A	✓										
——— 0951Z	3	A	✓										
——— 0952Z	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fermo	9/24/12 1050hrs.	Jon Munch	9-24-12/1050

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-685 WJI ENV-0020 Notebook No. D64 #110 (Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple ~~rinsed~~ CO rinsed, stainless steel sample tubes. Gen. in use. Probe # 4755. Sampling crew had to clean up remaining equipment at 200-D prior to starting this event. Crew arrived at well site @ 0815 hrs.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
120921 0900Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0901Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters	Final	Meter ID
Time - 1209210950Z	Time - 1209211027Z	pH/Cond - 55
PH - 8.15	PH - 8.09	Turb - 4
Temp - 23.4°C	Temp - 23.3°C	" Std - 5.34 NTU's
Cond - 1018 us/cm	Cond - 1028 us/cm	" Rdg - 5.33 NTU's
Turb - 1.12 NTU's	Turb - 0.80 NTU's	" Lot - A2060
pH pre - 7.03/10.06 (24.4°C)	pH pre - 7.04/10.08 (26.0°C)	" Exp - 9/29/12
pH post - 7.05/10.05	pH post - 7.02/10.09	
DTW - 438.11 ft.	DTW - 438.70 ft.	
Atmos - 12.54 psia	Atmos - 12.50 psia	
	IDW - 1/2 gals.	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120921 1025Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1026Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs

1)	2)
124.32	124.27
129.65	129.67
129.66	129.69
124.31	124.29

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 9/21/12 — Date

Jori Munuck — Signed — 9-24-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/21/12 Page _____ of _____

Sample Location: ST-6-685

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
120921 0900 Z	3	A	✓										
—— 0901 Z	1	A		✓									
—— 1025 Z	3	A	✓										
—— 1026 Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig [illegible]	9/21/12 1110 hrs.	John Munch	9-24-12 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project WW-1-452 WJI ENV-0053 Notebook No. D32 #93
Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer.

Calibrations
DO - calibrated in saturated air @ 639 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10.)
Turbidity meter #7 std - 5.64 NTU's rdg - 5.49 NTU's lot - A2060 Exp - 9/29/12

Trip Blanks - Nanopure

Sample	Analysis	Preservative	Container	Lot	Lab
120907 0700	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0701	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"

Parameters (time)	temp (°C)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 120907 0830	21.70	1.080	5.16	7.03	172	0.60	406.77
2) ——— 0835	22.01	1.069	4.12	7.03	171	0.89	406.77
3) ——— 0840	22.13	1.062	4.17	7.04	171	0.52	406.77

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
120907 0845	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0846	Low Level NDMA	ice	(1) 1L Amber	062512-1Z	"

Initial DTW - 406.77ft. Total gallons purged - 3 gals.

Continued on Page

Read and Understood By

Craig Del Ferraro 9/7/12 [signature] 9-7-12
Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 9/7/12

Page _____ of _____

Sample Location: WW-1-452

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
1209070700	3	A	✓										
——— 0701	1	A		✓									
——— 0845	3	A	✓										
——— 0846	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fierro	9/7/12 1100hrs.	Jon Munch	9-10-12 / 0940

• * Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project 200-B-240 WJI ENV-0013 Notebook No. D32 #95

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This well will be purge using a dedicated bladder pump. Samples will be collected using a teflon discharg tube. Carboy G 2in use.

Total DTW - 78.6m (257.87ft.)
Packer DTW - 73.15m (239.99ft.)
Initial DTW - 58.21m (191.00ft.)
3 casing vols. - 41 gals.
start purge - 0730 hrs. / ~~1130 hrs.~~
stop purge - 1340 hrs.
purge rate - 0.167 gpm
Total gals. purged - 50 gals.
Final DTW - 191.12ft.

Meter ID		Buffers	Lot	Exp
pH/cond	- 54	7	110747	2/13
Turb	- 7	10	113925	7/13
" Std	- 5.53 NTU's			
" Rdg	- 5.62 NTU's			
" Lot	- A2060			
" Exp	- 10/27/12			

* purge time stopped @ 1130 hrs. & resumed @ 1300 hrs.

Initial Parameters	Secondary	Final
Time - 1210041030	Time - 1210041320	Time - 1210041339
PH - 7.72	PH - 7.64	PH - 7.77
Temp - 22.9°c	Temp - 23.5°c	Temp - 23.9°c
Cond - 1033 us/cm	Cond - 1018 us/cm	Cond - 1009 us/cm
Turb - 1.16 NTU's	Turb - 0.84 NTU's	Turb - 1.06 NTU's
pH pre - 7.06/10.11 (27.3°c)	pH pre - 7.03/10.05 (32.7°c)	pH pre - 7.02/10.04 (3
pH post - 7.08/10.14	pH post - 7.01/10.06	pH post - 6.99/10.04
DTW - 191.12ft.	DTW - 191.12ft.	

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1210041325	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
—— 1326	" (F.B.)	"	"	"	"
—— 1327	NDMA/DMN/Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRI
—— 1328	" (Dupl.)	"	"	"	"
—— 1329	SVOA by 8270	"	(2) 1L Ambers	062512-1Z	CAS
—— 1330	Herbicides by 8151	"	(1) 1L Amber	"	"
—— 1331	Dioxins/Furans by 8290	"	"	"	"
—— 1332	Pesticides by 8081	"	"	"	"
—— 1333	PCB's by 8082	"	"	"	"
—— 1334	Phenolics by 9066	ice/H_2SO_4	(1) 500ml amber	03196011V	

Continued on Page 22

Read and Understood By

Craig Del Ferraro — Signed — 10/4/12 — Date

Jon Munch — Signed — 10-4-12 — Date

Project 200-B-240 WJT ENV-0013 Notebook No. D32 #95

Continues from Page 21

Samples (continued)

Sample	Analysis	Preservative	Container	Lot	Lab
121004 1335	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	~~CAS~~ ~~ALS~~ CAS
1336	" (Dupl.)	"	"	"	"
1337	Cyanide by ~~9014~~ 9014	ice/NaOH	(1) 500ml poly	0317901U	"
1338	Sulfide by 376.1	ice/~~ZA~~/NaOH	"	"	"

Continued on Page

Read and Understood By

Craig Del Fenno 10/4/12 Date

Signed 10-4-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-4-12

Sample Location: 200-J-240

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	SVOA by 8270	Herbicides by 8151	Dioxins/Furans by 8290	Pesticides by 8081	PCBs by 8082	Phenolics by 9066	Total Metals	Cyanide by 9014	Sulfide by 9014
121004 1325	3	A	✓										
1326	3	A	✓										
1327	1	A		✓									
1328	1	A		✓									
1329	2	A			✓								
1330	1	A				✓							
1331	1	A					✓						
1332	1	A						✓					
1333	1	A							✓				
1334	1	A								✓			
1335	1	A									✓		
1336	1	A									✓		
1337	1	A										✓	
1338	1	A											✓

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	10-4-12 / 1400hrs.	[illegible]	10-9-12 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project 200-B-240 ENV-0013 Notebook No. D-32 #95

Continues from Page

E. Gallegos & C. Del Ferraro Present. Weather is clear & cool. This well will be purged using a dedicated bladder pump. Samples will be taken using a new teflon discharge tube. *This is a Resample event.*

Total DEPTH - 257.87ft. (78.6m)
Initial - DTW - 190.90ft. (58.18m)
3 casing volumes - 40 gallons
Start purge - 0830 hrs. / 1230 hrs
Stop purge - 1130 hrs. / 1345 hrs.
Purge rate - 0.167 gpm's
Total gallons purged - 43 gals.
Final DTW - 190.98ft.

Meter ID
PH/COND - 54
TURB - #7
" STD - 5.53 NTU's
" RDG - 5.62 NTU's
" LOT - A2060
" EXP - 10/27/12

Buffers	LOT	EXP
7	110747	7/13
10	113925	7/13

Initial Parameters	Secondary	Final
Time - 1210221130	Time - 1210221330	Time - 1210221340
PH - 7.69	PH - 7.57	PH - 7.76
TEMP - 22.5°C	TEMP - 22.9°C	TEMP - 23.1°C
COND - 1087 us/cm	COND - 1095 us/cm	COND - 1079 us/cm
TURB - 1.09 NTU's	TURB - 0.85 NTU's	TURB - 0.74 NTU's
PH Pre - 7.11/10.14 (24.7°C)	PH Pre - 7.03/10.08 (29.7°C)	PH Pre - 6.99/10.07 (31.
PH Post - 7.06/10.15	PH Post 7.01/10.09	PH Post - 7.02/10.10
DTW - 190.98ft.	DTW - 190.98ft.	DTW - 190.98ft.

RE Sample

Sample #	Analysis	Preservative	Container	LOT	LAB
1210221335	Sulfide	Zn/NaOH/ice	(1) 250ml poly	0317901U	CAS

Continued on Page

Read and Understood By

Craig Del Ferraro 10/22/12 Jim Munnick 10-22-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/22/12 Page _____ of _____

Sample Location: 200-B-240

Pertinent Notes (if any)

Resample

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Sulfide										
1210221335	1	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/22/12 1500hrs.	Jon Munch	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Carboy G2 in use.

Total DTW - 46.02m
Initial DTW - 41.99m (137.80ft.)
3 casing vols. - 30 gallons
start purge - 0900 hrs.
stop purge - 1330 hrs.
purge rate - 0.167 gpm
Total gals. purged - 45 gals.
Final DTW - 138.16ft.

Meter ID		Buffers	Lot	Exp
pH/Cond	- 54	7	110747	2/13
Turb	- 7	10	113925	7/13
" Std	- 5.53 NTU's			
" Rdg	- 5.69 NTU's			
" Lot	- A2060			
" Exp	- 10/27/12			

Initial Parameters	Secondary	Final
Time - 1210011100	Time - 1210011250	Time - 1210011320
PH - 7.14	PH - 7.22	PH - 7.12
Temp - 22.5°C	Temp - 22.9°C	Temp - 23.4°C
Cond - 1186 us/cm	Cond - 1180 us/cm	Cond - 1195 us/cm
Turb - 0.70 NTU's	Turb - 1.40 NTU's	Turb - 0.90
pH pre - 7.11/10.12 (27.4°C)	pH pre - 7.06/10.09 (31.5°C)	pH pre - 7.10/10.07 (3
pH post - 7.09/10.13	pH post - 7.09/10.08	pH post - 7.11/10.08
DTW - 138.31ft.	DTW - 138.44ft.	

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121001 1300	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
1301	" (Dupl.)	"	"	"	"
1302	" (F.B.)	"	"	"	"
1303	NDMA/DMN/Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRI
1304	SVOA by 8270	"	(2) 1L Ambers	062512-1Z	CAS
1305	Herbicides by 8151	"	(1) 1L Amber	"	"
1306	Dioxins/Furans by 8290	"	"	"	"
1307	Pesticides by 8081	"	"	"	"
1308	PCB's by 8082	"	"	"	"
1309	Phenolics by 9066	ice/H_2SO_4	(1) ~~250~~ 500ml amber	0319601V	ALS
1310	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	"

Continued on Page 18

Read and Understood By

Craig Del Ferraro — Signed — 10/1/12 — Date

Jim Minnick — Signed — 10-2-12 — Date

Project 400-C-118 WJI ENV-0013 Notebook No. D32 #95

Continues from Page 17

Samples (cont.)

Sample	Analysis	Preservative	Container	Lot	Lab
1210011311	Anions/TDS	ice	(1) 500ml poly	0227601W	ALS
——1312	Perchlorate by 331.0	"	(1) 125ml poly	004443	CAS
——1313	NO_2/NO_3 by 353.2	ice/H_2SO_4	"	0427601W	ALS
——1314	Cyanide by 9014	ice/NaOH	(1) 250ml poly	0317901U	"
——1315	Sulfide by 376.1	ice/ZA/NaOH	"	"	"

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
1210021415	VOA by 8260	ice/HCL	(3) 40ml vials	12AD89A	CAS
——1416	NDMA/DMN/Bromacil by 607	ice	(1) 1L Amber	12AD89B	SRI
——1417	Total Metals	ice/HNO_3	(1) 250ml poly	12AD89C	ALS

Continued on Page

Read and Understood By

Craig Del Ferro — Signed — 10/2/12 — Date

Jon Munck — Signed — 10-2-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/1/12

Sample Location: 400-C-118

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	8270	Herbicides	Dioxins/Furans	Pesticides	PCB's	Phenolics	Total Metals	Anions/TDS	Perchlorate
121001 1300	3	A	✓										
—— 1301	3	A	✓										
—— 1302	3	A	✓										
—— 1303	1	A		✓									
—— 1304	2	A			✓								
—— 1305	1	A				✓							
—— 1306	1	A					✓						
—— 1307	1	A						✓					
—— 1308	1	A							✓				
—— 1309	1	A								✓			
—— 1310	1	A									✓		
—— 1311	1	A										✓	
—— 1312	1	A											✓

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiero	10/1/12 1430hrs.	Jon Munch	10-2-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/1/12

Sample Location: 400-C-118

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	NO_2/NO_3	Cyanide	Sulfide								
121001 1313	1	A	✓										
—— 1314	1	A		✓									
—— 1315	1	A			✓								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/1/12 1430hrs.	John Munich	10-2-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/2/12 Page _____ of _____

Sample Location: 400-C-118

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	Total Metals								
1210021415	3	A	✓										
—— 1416	1	A		✓									
—— 1417	1	A			✓								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fermo	10/2/12 1420hrs.	Don Munch	10-3-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

B. Tufts & C. Del Ferraro present. Weather is clear & cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discha tube.

Total DTW - 49.28m (161.68ft.)
Initial DTW - 139.50ft.
3 casing vols. - 51 gals.
start purge - 0730 hrs.
stop purge - 1315 hrs.
purge rate - 0.167gpm
Final DTW - 140.14ft.

Meter ID		Buffers	Lot	Exp
pH/Cond	- 54	7	110747	2/13
Turb	- 7	10	113925	7/13
" std	- 5.53 NTU's			
" Rdg	- 5.71 NTU's			
" Lot	- A2060			
" Exp	- 10/27/12			

Trip Blanks - Nanopure

Sample	Analysis	Preservative	Container	Lot	Lab
121002 0700	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS

Initial Parameters	Secondary	Final
Time - 121002 1100	Time - 121002 1255	Time - 121002 1303
PH - 7.63	PH - 7.57	PH - 7.67
Temp - 22.9°c	Temp - 23.0°c	Temp - 23.2°c
Cond - 1200 us/cm	Cond - 1218 us/cm	Cond - 1229 us/cm
Turb - 1.39 NTU's	Turb - 1.26 NTU's	Turb - 1.14 NTU's
pH pre - 7.08/10.05 (27.0°c)	pH pre - 7.03/10.04 (30.7°c)	pH pre - 7.01/10.05 (3
pH post - 7.04/10.10	pH post - 7.04/10.02	pH post - 6.99/10.06
DTW - 140.28ft.	DTW - 140.23ft.	

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121002 1300	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1301	NDMA/DMN/Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRI
——— 1302	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Total gallons purged - 57 gals.

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/2/12 — Date

Jon Munck — Signed — 10-2-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/2/12

Page _____ of _____

Sample Location: 400-C-143

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/Bromacil	Total Metals								
1210020700	3	A	✓										
——— 1300	3	A	✓										
——— 1301	1	A		✓									
——— 1302	1	A			✓								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fenio	10/2/12 1415hrs.	Jon Munch	10-3-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 650 - EFF - 1 Notebook No. Misc #21

Continues from Page

T. Moore and R. Williams present. Samples will be collected from a stainless steel sample port located on the effluent side of the system. The sample port will be purged for one minute prior to parameters and sample collection. Carboy 63 used for field blanks.

Parameters	Meter ID	Buffer	Lot	Exp
E121015T401	pH/cond	7	107 47	2/13
pH 8.0	Tub # 8	10	113925	7/13
Temp 25.1 c	" Standard 6.09 NTU			
Cond 990 uS/cm	" Reading 5.99 NTU			
Turb 0.39 NTU	" Lot A 2086			
pH/Temp 7.0 - 10.1 (23.3 c)	" Exp 1/29/12			
Cond 7.0 - 10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
E121015T405	VOA by 8260 LL	Ice/HCL	(3) 40 ml vials	205T001	CAS
1407	" FB	"	"	"	"
1409	607	Ice	(1) 1 LT Amb		SWG
1411	Low Level NH3 MA	"	"	062512-12	CAS
1415	Anions/TDS	"	(1) 500 ml Poly	022761W	"
1417	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 ml Poly	042761W	"
1413	low level NH3 MA (FB)	Ice	(1) 1 LT Amb	062512-12	"

Continued on Page

Read and Understood By

Signed: [signature] Date: 15 Oct 2012 Signed: [signature] Date: 10-15-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 15 OCT 2012

Page 1 of 1

Sample Location: Bldg 650 - EFF-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260LL	NDMA/DMN by 607	NDMA/DMN/Bromacil by 607	Low Level NDMA	Total Metals	Anions/TDS	NO_2/NO_3 by 353.2	Perchlorate by 331.0	607		
E1210151405	3	A	X										
— 1407 FB	3		X										
— 1409	1										X		
— 1411	1					X							
— 1415	1							X					
— 1417	1								X				
— 1413 FB	1					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	15 OCT 2012 1521	[signature]	10-16-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 650-EFF-1 Notebook No. Misc #21

Continues from Page

T. Moore / K. Amis present. Sample will be collected from a stainless steel sample port located on the effluent side of the system. Sample port will be purged for one minute prior to parameters and sample collection. This is a re-sample

Parameters	Meter ID	Buffer	Lot	Exp
E12017241	pH/cond	7	110747	2/13
pH 7.4	Turb #8	10	113925	7/13
Temp 25.0°C	" std 6.09 NTU			
Cond 1020 uS/cm	" 2d 6.05 NTU			
Turb 0.24 NTU	" Lot A2086			
DO/pre 7.0-10.1 (23.3°C)	" Exp 10/27/12			
DO/post 7.0-10.1				

Sample #	Analysis	Samples Preserved	Container	Lot	Lab
E12017243	Low Level NDMA	Ice	(1) 1LT Amb	070212-1AA	CAS

Continued on Page

Read and Understood By

Signed 17 OCT 2012 Date Signed 10-17-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 17 Oct 2012

Sample Location: Blk 650 - EFF-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	NDMA/DMN/Benzidi by 607	Low Level NDMA	Total METALS	Anions/TDS	NO2/NO3 by 353.2	Perchlorate by 331.0			
E121017 1243	1	A				X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	17 Oct 2012 1429	[signature]	10-18-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 650 - Inf - 1 Notebook No. Misc #2 2

Continues from Page

T. Moore / R. Williams present. Samples will be collected from a stainless steel sample port located on the influent side of the system. Sample port will be purged for one minute prior to parameters and sample collection. Carboy "63" used for field blank

Parameters	Meter ID	Buffer	Lot	Exp
I121015T438	PH/Cond #	7	110747	2/13
PH 6.8	Turb # 8	10	113925	7/13
Temp 24.6°C	" STD 6.09 NTU			
Cond 880 us/cm	" Adj 6.01 NTU			
Turb 0.79 NTU	" Lot A2086			
pH/Inc 7.0-10.0 (23.5°C)	" Exp 10/27/12			
pH/Post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	La
I121015T442	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	C
1444	" FB	"	"	"	
1446	607	Ice	(1) 1LT Amb		S
1448	Anions/TDS	"	(1) 500 mL Poly	0227601W	C
1450	NO2/NO3 by 353.2	Ice/H2SO4	(1) 125 mL Poly	0427601W	"

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
[illegible]	15 OCT 2012	[illegible]	10-15-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 15 OCT 2012

Page 1 of 1

Sample Location: Bldg 650 - Inf 1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	NDMA/DMN/Bromacil by 607	Low Level NDMA	Total Metals	Anions/TDS	NO_2/NO_3 by 353.2	Perchlorate by 331.0	607		
I121015T442	3	A	X										
1444 FB	3		X										
1446	1										X		
1448	1							X					
1450	1								X				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	15 OCT 2012 1521	[signature]	10-16-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

T. Moore, K. Amis and R. Baker present. Samples will be collected from sample port #12 located on the effluent side of the system. Sample port will be purged for one minute prior to parameters and sample collection. Trip blanks made at Bldg 63 directly from the NANOpure. Carboy "G4" used for field blank.

Parameters	Meter ID	Buffer	Lot	Exp
E121017 1305	pH/cond #	7	110747	2/13
pH 7.7	Turb # 8	10	113925	7/13
Temp 24.6°C	"STD 6.09 NTU			
Cond ~~96~~ 950 us/cm	"Rdg 5.99 NTU			
Turb 1.62 NTU	"Lot A2056			
pH/pre 7.0 - 10.1 (23.6c)	"Exp 10/27/12			
pH/post				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
E121017 1309	VOA by 8260LC	Ice/HCL	(3) 40 mL vials	2059-001	CM
1311	" TB	"	"	"	"
1313	NDMA/DMW/Bromacil/by 607	Ice	(1) 1 LT Amb		SW
1315	Low Level NDMA	"	"	062ST2-12	C
1317	" FB	"	"	"	"
1319	Anions/TDS	"	(1) 500 mL Poly	0227601W	"
1321	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL Poly	0427601W	"

Continued on Page

Read and Understood By

Signed 17 OCT 2012 Date

Signed 10-17-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 17 OCT 2012

Sample Location: Bldg 655 - EFF - 2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260LL	NDMA/DMN by 607	NDMA/DMN/Benzidi by 607	Low Level NDMA	Total METALS	Anions/TDS	NO_2/NO_3 by 353.2	Perchlorate by 331.0			
E1210171309	3	A	X										
1311 TB	3		X										
1313	1				X								
1315	1					X							
1317 FB	1					X							
1319	1							X					
1321	1								X				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tim Mon	17 OCT 2012 1429	John Munch	10-18-12 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project Bldg 655-Inf. 1 Notebook No. Misc #21

Continues from Page

T. Moore, K. Amis & R. Baker present. Samples will be collected from sample port # Bldg 655-Inf 2. The sample port will be purged for one minute prior to parameters and sample collection. Carboy "G4" used for field blanks.

Parameters	Meter ID	Buffer	Lot	Exp
I 1210171336	PH/cond #	7	110747	2/13
PH 6.4	Turb #8	10	113925	7/13
Temp 24.8°C	" STD 6.09 NTU			
Cond 940 US/cm	" Rdg 6.01 NTU			
Turb 0.23 NTU	" Lot A2086			
4/Pge 7.0-10.1 (24.0°C)	" Exp 10/27/12			
11/port				

Sample #	Analysis	Samples Preserve	Container	Lot	Lab
I 1210171340	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059-001	CAS
——— 1342	" FB	"	"	"	"
——— 1344	607	Ice	(1) 1 LT Amb		SWRI
——— 1346	" (Dup)	"	"		"
——— 1348	Anions/TDS	"	(1) 1 ~~LT~~ 500 mL Poly	0227601W	CAS
——— 1350	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL Poly	0427601W	"

Continued on Page

Read and Understood By

Tim Moore — Signed — 17 Oct 2012 — Date

Lori Murnick — Signed — 10-17-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 17 OCT 2012

Sample Location: Bldg 655 - Inf. 1

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	NDMA/DMN/Bromide by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2	Perchlorate by 331.0	607		
I1210171340	3	A	X										
1342 FB	3		X										
1344	1										X		
1346 Dup	1										X		
1348	1							X					
1350	1								X				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	17 OCT 2012 1429	[signature]	10-18-12 / 1100

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-10-517 ENV-0053 Notebook No. D-32-#95

Continues from Page

B. Tufts & B. Galaz present. Weather is clear & cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Water quality parameters will be monitored using a QED MP-1 Flow cell and water analyzer.

Calibrations

Initial DTW = 478.65'

DO Calibrated in saturated air @ 640 mm/hg

Total gallons purged - 3 gallons (I

Conductivity - calibrated using 1413 µS/cm Standard solution

PH Calibrated using 7 & 10 buffers

Turbidimeter - #7 STD - 553 RDG - 5.62 lot - A2086 EXP - 10-27-12

Carboy G-2

Trip Blanks

Sample #	Analysis	Preservation	Container	LOT	LAB
1210190710	LLNDMA	ICE	(1) 1 ltamber	070212-1AA	CAS

Parameters

Time	Temp (°C)	COND (mS/cm)	DO	PH	ORP	TURB	DTW
1210190920	20.07	1183	5.32	7.09	211	1.02	478.70
—— 0922	20.08	1182	5.30	7.09	211	1.44	478.70
—— 0924	20.03	1184	5.34	7.08	211	0.77	478.70

Samples

Sample #	Analysis	Preservation	Container	LOT	LAB
1210190930	VOA by 8260LL	ICE-HCL	(3) 40 ml vials	2-059-001	CAS
—— 0931	VOA by 8260LL (FB)	"	(3) "	"	"
—— 0932	LLNDMA	ICE	(1) 1 ltamber	070212-1AA	"

Continued on Page

Read and Understood By

Bob [signature] 10-19-12 [signature] 10-19-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-19-12

Page 1 of 1

Sample Location: Bldg. 10.517

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOAs by 8260LL	LC NDMA									
1210190710 (TB)	1	A		+									
0930	3	A	+										
0931 (FB)	3	A	+										
0932	1	A		+									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Bob [illegible]	10-19-12 / 11:14	John Munch	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-21-400 ENV.0053 Notebook No. D32 # 94B

Continues from Page

T. Kondy + A. Montes present. Weather is clear and cool. This well will be purged and sampled using a dedicated teflon bladder pump. Modified sampling will be done. Water Quality Parameters will be collected using a QED MP. 20 Flow cell and water analyzer.

Calib.

DO - in saturated air 642 mm/Hg

pH - using 7-10 Buffers

cond - using 1413 ms/cm standard

Turb meter #7 std - 5.53 NTUs Rds - 5.53 Lot# - A2086 Exp. - 10-27-12

Initial Depth - 337.90 FT

Parameters	Temp °C	Cond	DO.	PH	ORP	TURB	DTW
Time	20.77	1.241	6.95	6.72	219	1.14	338.01
1210230930	20.84	1.257	6.96	6.95	218	0.99	338.45
— 0935	20.79	1.304	6.95	7.01	224	0.93	339.01
— 0940							

Samples

Sample #	Analysis	Preserv	Lot #	Cont.	Lab
1210230730B	VOA by 8260 (TB)	Ice, HCL	2059001	(3) 40 ml Vial	CAS
— 0941 B	"	"	"	"	"
— 0942 B	" (Dupl)	"	"	"	"
— 0943 B	607	Ice	NA	(1) 1 Liter Amber	SRI
— 0944 B	Total Metals	Ice, HNO_3	0327601W	(1) 250 ml poly	CAS

Continued on Page

Read and Understood By

T. Kondy 10-23-2012 Jon Munnick 10-24-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-23-12 Page 1 of 1

Sample Location: BLM-21-400

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: S260	607	Total Metals								
1210230730 B	3	A	X										
— 0941 B	3		X										
— 0942 B	3		X										
— 0943 B	1			X									
— 0944 B	1				X								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tim Kondy	10-23-12	Jon Munch	10-24-12 / 1030

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-37-640 WJI ENV-0020 Notebook No. D64 #110(E)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is cloudy & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
121011 1340Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1341Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	"

Initial Parameters

Time - 121011 1420Z
PH - 8.35
Temp - 24.3°C
Cond - 742 us/cm
Turb - 29.8°C
pH pre - 7.04/10.04 (28.8°C)
pH post - 7.05/10.07
DTW - 493.02 ft.
Atmos - 12.63 psia

Final

Time - 121015 0836Z
PH - 8.28
Temp - 22.7°C
Cond - 758 us/cm
Turb - 7.54 NTU's
pH pre - 7.10/10.12 (16.8°C)
pH post - 7.11/10.15
DTW - 493.02 ft.
Atmos - 12.65 psia
FDW - 1/2 gals

Meter ID

PH/Cond - 56
Turb - 3
" Std - 5.29 NTU's
" Rdg - 5.31 NTU's
" Lot - A2060
" Exp - 10/27/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121011 1500Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1501Z	NDMA/607	ice	(1) 1L Amber	021040 1X	SRI
121015 0835Z	Low Level NDMA	"	"	070212-1AA	CAS

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
121011 1520Z	Low Level NDMA	ice	(1) 1L Amber	12AD90A	CAS

Runs

1)	2)	3)
77.63	77.56	77.64
77.59	77.62	77.62
77.61	77.65	77.60
77.63	77.62	77.64

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/15/12 — Date

Don Munnich — Signed — 10-16-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/11/12

Page _____ of _____

Sample Location: BLM-37-640

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA								
1210111340Z	3	A	✓										
——— 1341Z	1	A			✓								
——— 1500Z	3	A	✓										
——— 1501Z	1	A		✓									
——— 1520Z	1	A			✓								

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Zenero	10/11/12 1525hrs.	Jon Munch	10-15-12 / 0945

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/15/12

Page _____ of _____

Sample Location: BLM-37-640

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL NDMA
1210150835Z	1	A	✓

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/15/12 1100hrs.	John Munch	10-16-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-37-750 WJI ENV-0020 Notebook No. D64 # 110 (Z)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe # 1539.

30 Min. Equipment Blanks - Carbay G3

Sample	Analysis	Preservative	Container	Lot	Lab
121011 0830Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0831Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	"

Initial Parameters
Time - 1210110915Z
PH - 8.44
Temp - 23.2°C
Cond - ~~5.0~~ 590us/cm
Turb - 3.42 NTU's
pH pre - 7.11/10.17 (19.5°C)
pH post - 7.13/10.16
DTW - 493.02ft
Atmos - 12.60 psia

Final
Time - 1210111022Z
PH - 8.36
Temp - 23.7°C
Cond - 612 us/cm
Turb - 1.87 NTU's
pH pre - 7.08/10.13 (22.4°C)
pH post - 7.06/10.15
DTW - 493.02ft.
Atmos - 12.58 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 56
Turb - 3
" Std - 5.29 NTU's
" Rdg - 5.31 NTU's
" Lot - A2060
" Exp - 10/27/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121011 0950Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0951Z	NDMA by 607	ice	(1) 1L Amber	0210401X	SRI
——— 1020Z	Low Level NDMA	"	"	070212-1AA	CAS
——— 1021Z	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	"

Runs	1)	2)	3)
	125.24	125.19	125.18
	130.34	130.26	130.24
	130.33	130.24	130.19
	125.20	125.16	125.20

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/11/12 — Date

Jon Munck — Signed — 10-15-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/11/12 Page _____ of _____

Sample Location: BLM-37-750

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals						
1210110830Z	3	A	✓									
——0831Z	1	A			✓							
——0950Z	3	A	✓									
——0951Z	1	A		✓								
——1020Z	1	A			✓							
——1021Z	1	A				✓						

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fermo	10/11/12 1110hrs.	Jon Munch	10-11-12 1115

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-37-885 WJI ENV-0020 Notebook No. D64 #110(z)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, and alconox cleaned, stainless steel sample tubes. Steam Cleaner is still unavailable. Probe # 1539. Gen. in use.

30 Min. Equipment Blanks – Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
121010 1040Z	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2059001	CAS
——— 1041Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	"

Initial Parameters	Final	Meter ID
Time – 121010 1320Z	Time – 121010 1503Z	pH/cond – 56
PH – 8.12	PH – 8.18	Turb – 3
Temp – 26.6°c	Temp – 26.4°c	" std – 5.29 NTU's
Cond – 846 us/cm	Cond – 861 us/cm	" Rdg – 5.19 NTU's
Turb – 3.03 NTU's	Turb – 1.46 NTU's	" Lot – A2060
pH pre – 7.02 / 10.06 (28.9°c)	pH pre – 7.03 / 10.08 (30.4°c)	" Exp – 10/27/12
pH post – 7.00 / 10.04	pH post – 6.99 / 10.09	
DTW – 493.02 ft	DTW – 493.02 ft.	
Atmos – 12.59 psia	Atmos – 12.61 psia	
	IDW – 1/2 gals.	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121010 1400Z	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2059001	CAS
——— 1401Z	NDMA by 607	ice	(1) 1L Amber	0210401X	SRI
——— 1430Z	Low Level NDMA	"	"	070212-1AA	CAS
——— 1431Z	Total Metals	ice / HNO_3	(1) 250ml poly	0327601W	~~AL~~ CAS
——— 1500Z	Anions / TDS	ice	(1) 500ml poly	0227601W	"
——— 1501Z	Perchlorate by 331.0	"	(1) 125ml poly	001567	"
——— 1502Z	NO_2/NO_3 by 353.2	ice / H_2SO_4	"	0427601W	"

Runs	1)	2)	3)	4)
	183.54	183.55	183.54	183.56
	192.00	191.98	191.99	191.99
	191.98	191.97	191.99	192.00
	183.55	183.54	183.53	183.53

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/10/12 — Date

Jon Munch — Signed — 10-10-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/10/12 Page _____ of _____

Sample Location: BLM-37-885

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals	Anions / TDS	Perchlorate	NO_2 / NO_3				
121010 1040 Z	3	A	✓										
——— 1041 Z	1	A			✓								
——— 1400 Z	3	A	✓										
——— 1401 Z	1	A		✓									
——— 1430 Z	1	A			✓								
——— 1431 Z	1	A				✓							
——— 1500 Z	1	A					✓						
——— 1501 Z	1	A						✓					
——— 1502 Z	1	A							✓				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/10/12 1530hrs.	[signature]	10-11-12 / 0945

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project BLM-38-620 WJI ENV-0020 Notebook No. DG4 # 110(z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is cloudy & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Steam cleaner is still unavailable. Gen. in use. Probe #1539. * This is a Resample event. *

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
121015 1415Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	CAS

Initial Parameters
Time - 121015 1450Z
PH - 8.15
Temp - 24.6°C
Cond - 1113us/cm
Turb - 1.75 NTU's
pH pre - 7.04/10.05 (27.3°C)
pH post - 7.00/10.09
DTW - 373.95ft.
Atmos - 12.66psia

Final
Time - 121016 0811Z
PH - 8.03
Temp - 18.9°C
Cond - 1091us/cm
Turb - 2.37 NTU's
pH pre - 7.15/10.19 (14.7°C)
pH post - 7.15/10.17
DTW - 374.48ft.
Atmos - 12.62psia
~~DTW~~ CO
IDW - ½ gals.

Meter ID
PH/Cond - 56
Turb - 3
" std - 5.29 NTU's
" Rdg - 5.19 NTU's
" Lot - A2060
" Exp - 10/27/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121016 0810Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	CAS

Runs
1) 123.69
90.49
90.46
123.62

2) 123.49
90.51
90.34
123.44

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/16/12 — Date

Jon Munch — Signed — 10-16-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/15/12 Page _____ of _____

Sample Location: BLM-38-620

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	LL NDMA										
121015 1415Z	1	A	✓										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig DelFerro	10/15/12 1515hrs.	[signature]	10-16-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/16/12

Page _____ of _____

Sample Location: BLM-38-620

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL NDMA
1210160810Z	1	A	✓

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/16/12 1120hrs.	Ron Munch	10-17-12 /0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project JP-1-424 ENV-0053 Notebook No. D32 #95

Continues from Page

B. Galaz & D. Halvorsen Present. Weather is Clear and Cool. This well will be Purged and Sampled using a dedicated Teflon bladder Pump. Samples will be Collected using a Teflon discharge hose. Water Quality Parameters will be monitored using a QED MP-20 flowcell and Water Analyzer.

Calibrations:

Initial DTW = 467.68 ft.
IDW = 2 gal.

DO Sensor = In Saturated Air @ 643 mm/Hg
Conductivity: using a 1413 us/cm STD. Solution
PH Sensor = using a 2 pt. (7.10) Buffer Method
Turbidity Meter # T STD = 5.53 RDG = 5.61 LOT # CA2060 EXP = 10/12

Parameters (Time)	Temp	Cond	DO	PH	ORP	Turb.	DTW (ft.)
121010955	21.10	1051	3.24	7.32	129	1.94	468.10
1000	21.18	1047	3.24	7.28	128	1.87	"
1005	21.20	1053	3.23	7.34	128	1.89	"

SAMPLES

Sample #	Analysis	Preserve	Cont.	LOT	LAB
121010 1010	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	2059001	CAS
1011	" " (FB)	"	"	"	"
1013	NDMA LL	Ice	(1) 1L Amber	070212-1AA	"
~~1014~~ ~~1013~~	" " (FB)	"	"	"	"
1012	VOA by 8260 LL (MS)	Ice/HCl	(3) 40 ml Vial	2059001	"

Continued on Page

Read and Understood By

Signed 10-10-12 Date

Signed 10-10-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-10-12 Page _____ of _____

Sample Location: JP-1-5/24

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	Analytical Requirement: NDMA									
121010 1010	3	A	X										
1011	3		X										
1012	3		X										
1013	1			X									
1014	1			X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	10-10-12 1100	[signature]	10-11-12 / 0945

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project JP-2.447 ENV.0053 Notebook No. D-32 #95

Continues from Page

B. Tufts & B. Galaz present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a new Teflon discharge tube. Water quality parameters will be monitored using a QED MD-20 Flow cell and water analyzer.

Calibration:

Initial DTW - 398.0'

DO - calibrated in saturated air @ 640 mm/hg

Total gallons purged - 3 gallons IDL

Conductivity - calibrated using 1413 us/cm standard solution

PH - calibrated using 7 & 10 buffers

Turbidimeter - #7 STD - 5.53 RDG - 5.57 LOT - A2086 EXP - 10-27-12

Trip Blanks

Sample #	Analysis	Preservative	Container	LOT	LAB
1210181100	VOA by 8260LL	ICE-HCL	(3) 40ml vials	2-059-001	CAS
—1101	LL NDMA	ICE	(1) 1ltambar	070212-1AA	"

Parameters

Time	TEMP (°C)	COND (ms/cm)	DO	PH	ORP	TURB	DTW
1210181410	22.23	1.188	5.52	7.31	176	0.59	398.03
—1412	22.27	1.190	5.59	7.38	173	0.99	398.03
—1414	22.25	1.188	5.63	7.42	176	0.77	398.03

Samples

Sample #	Analysis	Preservative	Container	LOT	LAB
1210181420	VOA by 8260LL	ICE-HCL	(3) 40ml vials	2-059-001	CAS
—1421	LL NDMA	ICE	(1) 1ltambar	070212-1AA	"

Continued on Page

Read and Understood By

Signed: [signature] Date: 10-18-12

Signed: [signature] Date: 10-18-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-18-12

Page 1 of 1

Sample Location: JP-2-447

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260L	LL NDMA									
121018 1100 (TB)	3	A	+										
1101 (TB)	1	A		+									
1420	3	A	+										
1421	1	A		+									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Bob [illegible]	10-18-12 / 3:22	Jon Munch	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project JP-3-515 WJI ENV-0020 Notebook No. D64 #110 (Z)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
121009 1440Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1441Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters

Time - 1210100900Z
PH - 8.53
Temp - 21.0
Cond - 1070 us/cm
Turb - 4.21 NTU's
pH pre - 7.05/10.13 (22.0°C)
pH post - 7.07/10.14
DTW - 383.91 ft.
Atmos - 12.70 psia

Final

Time - 1210100932Z
PH - 8.46
Temp - 21.5°C
Cond - 1058 us/cm
Turb - 1.91 NTU's
pH pre - 7.06/10.06 (25.2°C)
pH post - 7.03/10.09
DTW - 383.91 ft.
Atmos - 12.69 psia
IDW - 1/2 gals.

Meter ID

pH/cond - 56
Turb - 3
" Std - 5.29 NTU's
" Rdg - 5.19 NTU's
" Lot - A2060
" Exp - 10/27/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
1210100930Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0931Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs 1) 70.68 2) 70.67
70.70 70.70
70.68 70.69
70.68 70.69

Continued on Page

Read and Understood By

Craig Del Ferraro 10/10/12 Jon Munck 10-10-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/9/12

Page _____ of _____

Sample Location: JP-3-515

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
1210091440Z	3	A	✓										
1441Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Delfuno	10/9/12 1510hrs.	Jon Munch	10-10-12 /0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/10/12

Page _____ of _____

Sample Location: JP-3-515

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
121010 0930Z	3	A	✓										
—— 0931Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/10/12 1100hrs.	Jon Munch	10-11-12 / 0945

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project JP-3-695 WJI ENV-0020 Notebook No. D64 #110(E)

Continues from Page

F. Gallegos & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Ren. in use. Probe #1539. Sampling crew did not arrive at well site til 0930 hrs. due to a chlorine leak at the nearby chlorinating bldg. The Fire dept. had the road shut down until all was clear & safe.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
121009 1015Z	VOA by 8260 LL	ice/HCL	(3)40ml vials	2059001	CAS
——— 1016Z	Low Level NDMA	ice	(1)1L Amber	060412-1W	"

Initial Parameters

Time - 121009 1055Z
pH - 8.42
Temp - 23.6°c
Cond - 1035 us/cm
Turb - 3.97 NTU's
pH pre - 7.04/10.08 (26.9°c)
pH post - 7.01/10.05
DTW - 383.86 ft.
Atmos - 12.69 psia

Final

Time - 121009 1402Z
pH - 8.33
Temp - 24.2°c
Cond - 1018 us/cm
Turb - 1.89 NTU's
pH pre - 6.97/10.02 (33.3°c)
pH post - 6.95/10.03
DTW - 383.91 ft.
Atmos - 12.68 psia
IDW - 1/2 gals.

Meter ID

pH/Cond - 56
Turb - 3
" Std - 5.29 NTU's
" Rdg - 5.27 NTU's
" Lot - A2060
" Exp - 10/27/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121009 1400Z	VOA by 8260 LL	ice/HCL	(3)40ml vials	2059001	CAS
——— 1401Z	Low Level NDMA	ice	(1)1L Amber	060412-1W	"

Runs	1)	2)
	148.66	148.61
	148.66	148.66
	148.65	148.62
	148.68	148.62

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/9/12 — Date

Jon Munck — Signed — 10-9-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/9/12 Page _____ of _____

Sample Location: JP-3-695

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
121009 1015Z	3	A	✓										
——— 1016Z	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fuco	10/9/12 1100hrs.	[signature]	10-10-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/9/12 Page _____ of _____

Sample Location: JP-3-695

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
1210091400Z	3	A	✓										
——— 1401Z	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/9/12 1510hrs.	[signature]	10-10-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project JP-3-825 WJI ENV-0020 Notebook No. D64 # 110 (Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Geo. in use. Probe # 1539.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
121005 1300Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1301Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters	Final	Meter ID
Time - 121005 1325Z	Time - 121005 1402Z	pH/Cond - 56
PH - 7.98	PH - 8.08	Turb - 3
Temp - 26.3°C	Temp - 26.1°C	" std - 5.29 NTU's
Cond - 961 us/cm	Cond - 976 us/cm	" rdg - 5.48 NTU's
Turb - 3.75 NTU's	Turb - 1.14 NTU's	" lot - AZ060
pH pre - 7.03/10.06 (28.5°C)	pH pre - 6.98/10.04 (31.0°C)	" Exp - 10/27/12
pH post - 7.01/10.07	pH post - 6.99/10.03	
DTW - 383.83 ft.	DTW - 383.86 ft.	
Atmos - 12.65 psia	Atmos - 12.68 psia	
	IDW - 1/2 gals.	

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121005 1400Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1401Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs	1)	2)
	204.83	204.83
	204.86	204.86
	204.83	204.90
	204.86	204.85

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/5/12 — Date

Jon Munck — Signed — 10-9-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/5/12 Page _____ of _____

Sample Location: JP-3-825

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
121005 1300 Z	3	A	✓										
——— 1301 Z	1	A		✓									
——— 1400 Z	3	A	✓										
——— 1401 Z	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/5/12 1430hrs.	[signature]	10-9-12 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project JP-3-970 WJI ENV-0020 Notebook No. D64 # 110(z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Steam cleaner not available. Gen in use. Probe # 1539.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
121005 0840Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0841Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Initial Parameters	Final	Meter ID
Time - 1210050930Z	Time - 1210051017Z	pH/Cond - 56
PH - 8.37	PH - 8.34	Turb - 3
Temp - 23.7°C	Temp - 23.6°C	" Std - 5.29 NTU's
Cond - 767 us/cm	Cond - 780 us/cm	" Rdg - 5.48 NTU's
Turb - 4.40 NTU's	Turb - 1.96 NTU's	" Lot - A2060
pH pre - 7.10/10.13 (22.6°C)	pH pre - 7.05/10.04 (28.4°C)	" Exp - 10/27/12
pH post - 7.06/10.14	pH post - 7.03/10.07	
DTW - 383.83 ft.	DTW - 383.83 ft.	Buffers / Lot / Exp
Atmos - 12.60 psia	Atmos - 12.73 psia	7 / 110747 / 2/13
	IDW - 1/2 gals.	10 / 113925 / 7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121005 1015Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1016Z	Low Level NDMA	ice	(1) 1L Amber	060412-1W	"

Runs 1) 267.59, 267.64, 267.62, 267.56

2) 267.59, 267.67, 267.66, 267.54

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/5/12 — Date

Jon Munch — Signed — 10-9-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/5/12 Page _____ of _____

Sample Location: JP-3-970

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA									
121005 0840Z	3	A	✓										
——— 0841Z	1	A		✓									
——— 1015Z	3	A	✓										
——— 1016Z	1	A		✓									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Zenno	10/5/12 1110hrs.	Jon Munch	10-9-12 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project MPE-1 Notebook No. PFTS wells #2

Continues from Page

T. Moore / Kittmis present. Samples will be collected from a sam port located near the well head. Sample port will be purged for one minute prior to parameters and sample collection. Carb "B4" used for field parameters. Weather is mostly clear and warm.

Parameters	Meter ID	Buffer	Lot	E
W121019	Meter ID	7	110747	2/
pH 6.6	Turb #8	10	113925	7/
Temp 10.2°C	" STD 6.09 NTU			
Cond 1090 uS/cm	" Rdg 5.98 NTU			
Turb 0.29	" Lot A2086			
pH/Pre 7.0-10.1 (21.4°C)	" Exp 10/27/12			
pH/Post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	La
W121019 1251	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	C
—— 1252	" FB	"	"	"	
—— 1253	NDMA/DMN/Bromacil by 607	Ice	(1) 1 LT Amb		S

Continued on Page

Read and Understood By

Signed: [signature] Date: 19 Oct 2012 Signed: [signature] Date: 10-19-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 19 OCT 2012

Sample Location: MPE-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN/Dioxane/ by 607									
W121019/1251	3	A	X										
1252 FB	3		X										
1253	1			X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	19 OCT 2012 1421	[signature]	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project MPE-10 Notebook No. PFTS Wells #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from a sample port located near the well head. Sample port will be purged for one minute prior to parameters and sample collection. Trip blanks made at Bldg 637 directly from the NANO pure. Weather is mostly clear and warm.

Parameters	Meter ID	Buffer	Lot	Exp
W1210191331	PH/cond #	7	110747	2/13
PH 6.9	Turb #8	10	113925	7/13
Temp 21.0°C	" STD 6.09 NTU			
Cond 1030 us/cm	" Rdg 6.01 NTU			
Turb 0.25 NTU	" Lot A2086			
PH/Pre 7.0-10.1 (22.1°C)	" Exp 10/27/12			
PH/Pot 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W1210191335	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	CAS
——— 1336	" TB	"	"	"	"
——— 1337	NDMA/DMN/Bromacil by 607	Ice	(1) 1 LT Amb		Sw/Ex
——— 1338	Total Metals	Ice/HNO_3	(1) 250 mL Poly	0327601W	CAS
——— 1339	Anions/TDS	"	(1) 500 mL Poly	0227601W	"
——— 1340	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL Poly	0427601W	"

Continued on Page

Read and Understood By

[signature] 19 OCT 2012 [signature] 10-19-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 19 OCT 2012

Sample Location: MPE-10

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607	NDMA/DMN/Isomeri by 607	Low Level NDMA	Total METALS	ANIONS/TDS	NO2/NO3 by 353.2	Perchlorate by 331.0			
W121019 1335	3	A	X										
1336 TM	3		X										
1337	1				X								
1338	1						X						
1339	1							X					
1340	1								X				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tim Mor	19OCT2012 1421	Ron Munch	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

Project MPE-11 Notebook No. PFTS Wells #2

Continues from Page

T. Moore & K. Amis present. Samples will be collected from a sample port near the well head. Sample port will be purged for one minute prior to parameters and sample collection. Carboy "64" used for field blanks. Weather is clear and cool.

Parameters	Meter ID	Buffer	Lot	Exp
W121019/012	PH/Cond	7	110747	2/13
PH 7.0	Turb #8	10	113925	7/13
Temp 19.5°C	Turb STD 6.09 NTU			
Cond 830 us/cm	" Rdg			
Turb 0.57 NTU	" Lot A2086			
PH/Pre 7.0-10.1 (23.3°C)	" Exp 10/27/12			
PH/Post				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W121019/015	VOA by 8260	Ice/HCL	(3) 40 ML vials	2059001	CAS
—— 1016	" FB	"	"	"	"
—— 1017	NDMA/DMN/Bromacil by 607	Ice	(1) 1 LT Amb		SWE

Continued on Page

Read and Understood By

[signature] 19 OCT 2012 [signature] 10-19-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 19 Oct ~~2010~~ 2012

Page 1 of 1

Sample Location: MPE-11

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	HVOA by 8021	VOA by 8260	NDMA/DMN/Bromacil by 607	Low Level NDMA	Total METALS	NO2/NO3 by 353.2	Anions/TDS	Perchlorate By 331	Formaldehyde By 8315A		
W1210191015	3	A		X									
1016	3			X									
1017	1				X								

Relinquished by:	Date Time:	Accepted by:	Date Time:
[signature]	19 OCT 2012 1049	[signature]	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 318C (03 09)

Project MPE-8 Notebook No. PFTS Wells #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from a sample port located near the Well Head. Sample port will be purged for one minute prior to parameters and Sample Collection. Carboy "64" used for Field blanks. Well will purge for a minimum of 15 minutes prior to parameters and Sample Collection. Pump START 1321

Pump Stop

Parameters	Meter ID	Buffer	Lot	Exp
W1210231339	PH/cond #	7	110747	2/13
PH 6.8	Turb # 8	10	113925	7/13
Temp 19.1°C	" STD 6.09 NTU			
Cond 1240 US/CM	" Rdg			
Turb 1.13 NTU	" Lot A2086			
PH/Pre 7.0-10.1 (21.2°C)	" Exp 10/27/12			
PH/Post				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W1210231342	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	CAS
—— 1343	" FB	"	"	"	"
—— 1344	NDMA/DMN/Bromacil by 607	Ice	(1) 1 LT Amb		SWRI
—— 1345	Total Metals	Ice/HNO_3	(1) 250 mL Poly	0327601W	CAS
—— 1346	Anions/TDS	Ice	(1) 500 mL Poly	0227601W	"
—— 1347	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL Poly	0427601W	"

Continued on Page

Read and Understood By

Signed: [signature] Date: 23 Oct 2019 Signed: [signature] Date: 10-23-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 23 OCT 2012

Sample Location: MPE-8

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Method 607	NDMA/DMN by 4607	NDMA/DMN/Bromide by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2			
W121023342	3	A	X										
1343 FD	3		X										
1344	1					X							
1345	1							X					
1346	1								X				
1347	1									X			

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	23 OCT 2012 1518	[signature]	10-24-12 / 1030

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project MPE-9 Notebook No. PFTS wells #2

Continues from Page

T. Moor / K. Amis present. Samples will be collected from a sample port located near the well head. The sample port will be purged f[illegible] one minute prior to parameters and sample collection. Trip blanks made at Bldg 637 directly from the NANOpure. Pump will be started and will run for a minimum of 15 mins. prior to parameters and sample collection. Pump START: 1320

STOP:

Parameters	Meter ID	Buffer	Lot	Exp
W1210231350	pH/cond	7	110747	2/13
pH 6.3	Turb #8	10	113925	7/13
Temp 20.2°C	" STD 6.09 NTU			
Cond 1150 us/cm	" Rdg			
Turb 0.43 NTU	" Lot A2086			
pH/Pre 7.0-10.1 (22.3°C)	" Exp 10/27/12			
pH/Post				

Sample #	Analysis	Samples preserve	Container	Lot	L[illegible]
W1210231354	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	C
—— 1355	" TB	"	"	"	[illegible]
—— 1356	NDMA/DMN/Bromacil by 607	Ice	(1) 1LT Amb		S[illegible]
—— 1357	Total Metals	Ice/HNO_3	(1) 250 mL Poly	0327601W	C
—— 1358	Anions / TDS	Ice	(1) 500 mL Poly	0227601W	
—— 1359	NO_2/NO_3 by 353.2	Ice/H_2SO_4	(1) 125 mL poly	0427601W	

Continued on Page

Read and Understood By

Tim Moor — Signed — 23 Oct 2012 — Date

[illegible] — Signed — 10-23-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 23 OCT 2012

Sample Location: ~~MPE-8~~ MPE-9

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOA by 8260	Method 607	NDMA/DMN by 607	NDMA/DMN/Bromide by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2			
W1210231354		3	A	X										
1355	TB	3		X										
1356		1					X							
1357		1							X					
1358		1								X				
1359		1									X			

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	23 OCT 2012 1518	[signature]	10-24-12 / 1030

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project NASA 6 WJI ENV-0013 Notebook No. D32 #95

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. Carboy G2 in use.

Total DTW - 46.51m (152.59 ft.)
Initial DTW - 39.82m (130.65ft.)
3 casing vols. - 12 gallons
start purge - 0810 hrs.
stop purge - 1010 hrs.
purge rate - 0.125 gpm
Total gals. purged - 15 gals.
Final DTW - 140.84ft.

Meter ID		Buffers	Lot	Exp
pH/cond	- 54	7	110747	2/13
Turb	- 7	10	113925	7/13
" Std	- 5.53 NTU's			
" Rdg	- 5.61 NTU's			
" Lot	- A2060			
" Exp	- 10/27/12			

Initial Parameters	Secondary	Final
Time - 1210030920	Time - 1210030955	Time - 1210031005
PH - 7.81	PH - 7.74	PH - 7.90
Temp - 21.2°c	Temp - 21.5°c	Temp - 21.8°c
Cond - 1303 us/cm	Cond - 1295 us/cm	Cond - 1285 us/cm
Turb - 2.29 NTU's	Turb - 1.80 NTU's	Turb - 1.77 NTU's
pH pre - 7.15/10.10 (20.4°c)	pH pre - 7.12/10.09 (23.1°c)	pH pre - 7.06/10.09 (23.3°c)
pH post - 7.17/10.11	pH post - 7.09/10.10	pH post - 7.04/10.11
DTW - 139.51ft.	DTW - 140.77ft.	

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121003 1000	VOA by 8260	ice/HCL	(3) 40ml vials	2059001	CAS
1001	" (F.B.)	"	"	"	"
1002	NDMA/DMN/Bromacil by 607	ice	(1) 1L Amber	7-13-2012	SRI
1003	Total Metals	ice/HNO_3	(1) 250ml poly	0327601W	ALS

Continued on Page

Read and Understood By

Craig Del Ferraro — Signed — 10/3/12 — Date

Jon Munnik — Signed — 10-3-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-3-12

Sample Location: NASA-6

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMS Bromacil by 8260	Total metals								
1210031000	3	A	+										
1001 (FB)	3	A	+										
1002	1	A		+									
1003	1	A			+								

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	10-3-12 / 1100hrs.	[illegible]	10-4-12 / 0945

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PFE-1 Notebook No. PFTS wells #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from A stainless steel sample port located near the well head. Sample port will be purged for one minute prior to parameters and sample collection. Carboy "G4" used for field blanks. Weather is clear and warm.

Parameters	Meter ID	Buffer	Lot	Exp
W1210221240	pH/cond #	7	110747	2/12
pH 7.1	Turb # 8	10	113925	7/12
Temp 23.9°c	" STD 6.90 NTU			
Cond 940 uS/cm	" std 5.98 NTU			
Turb 0.31 NTU	" LOT A2086			
pH/pre 7.1-10.0 (17.2°c)	" Exp 10/27/12			
pH/post 7.1-10.0				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lo
W1210221244	VOA by 8260	Ice/HCL	(3) 40 ml Vials	2059001	C
1245	" FA	"	"	"	
1246	method 607	Ice	(1) 1 LT Amb		Su

Continued on Page

Read and Understood By

Tom Moore — Signed — 22 Oct 2012 — Date

John Munch — Signed — 10-22-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 22 OCT 2012

Page 1 of 1

Sample Location: PFE-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Method 607	NDMA/DMN by 607	NDMA/DMN/Bromacil by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2			
W1210221244	3	A	X										
— 1245 FB	3	A	X										
— 1246	1	A		X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	22 OCT 2012 1520	[signature]	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PFE-2 Notebook No. PFTS Wells #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from a stainless steel sample port near the well head. Sample port will be ~~collected~~ purged for one minute prior to parameters and sample collection. Trip blanks made at bldg 637 directly from the NANOpure. Weather is clear and warm.

Parameters	Meter ID	Buffer	Lot	Exp
W1210221312	pH/cond #	7	110747	2/13
pH 6.9	Turb # 8	10	113925	7/13
Temp 22.1°C	" STD 6.09 NTU			
Cond 930 US/CM	" Ldg 6.01 NTU			
Turb 0.33 NTU	" Lot A2086			
pH/Pre 7.1 - 10.0 (18.2°C)	" Exp 10/27/12			
pH/Post				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W1210221315	VOA by 8260	Ice / 4CL	(3) 40 mL Vials	2059001	CAS
—— 1316	" TB	"	"	"	"
—— 1317	method 607	Ice	(1) 1 LT Amb		SWRI

Continued on Page

Read and Understood By

Tom Moore — Signed — 22 Oct 2012 — Date

[signature] — Signed — 10-22-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 22 OCT 2012

Sample Location: PFE-2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Method 607	NDMA/DMN by 607	NDMA/DMN/Bromide/ by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2			
W1210221315	3	A	X										
1316 TB	3	A	X										
1317	1	A		X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tom Moss	22 OCT 2012 1520	Jon Munch	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PFE-3 Notebook No. PFTS wells #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from a Stainl Steel Sample port located near the well head. The sample port will be purged for one minute prior to parameters and sample collect Carboy "54" ~~present~~ used for field blanks.

Parameters	Meter ID	Buffer	Lot	Ex
W1210221340	PH/cond #	7	110747	2/13
PH 6.8	Turb # 8	10	113925	7/13
Temp 21.2°C	" STD 6.09 NTU			
Cond 1070 us/cm	" Rdg 5.99 NTU			
Turb 0.30 NTU	" Lot A2086			
PH/Pre 7.0-10.1 (19.2°C)	" Exp 10/27/12			
PH/Post				

Samples

Sample #	Analysis	Preserve	Container	Lot	La
W1210221343	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	C
—— 1344	" FB	"	"	"	
—— 1345	Method 607	Ice	(1) 1 LT Amb		S

Continued on Page

Read and Understood By

Signed: [signature] Date: 22 OCT 2012 Signed: [signature] Date: 10-22-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 22 Oct 2012

Page 1 of 1

Sample Location: PFE-3

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Method 607	NDMA/DMN by 607	NDMA/DMN/Bromacil by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2			
W1210221343	3	A	X										
1344 FB	3	A	X										
1345	1	A		X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Tim Moore	22 Oct 2012 1520	Jon Munch	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PFE-4A Notebook No. PFTS Wells #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from a stainless steel sample port located near the well head. The sample port will be purged for one minute prior to parameters and sample collection. Weather is clear and warm.

Parameters	Meter ID	Buffer	Lot	Exp
W1210221420	PH/cond #	7	110747	2/13
PH 6.9	Turb #8	10	113925	7/13
Temp 18.2°C	" STD 6.09 NTU			
Cond 990 us/cm	" Rdg 5.99 NTU			
Turb 0.36 NTU	" Lot A2086			
PH/Pre 7.0-10.1 (20.2°C)	" Exp 10/27/12			
PH/Post				

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
W1210221424	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2059001	CAS
—— 1425	" FB	"	"	"	"
—— 1426	Method 607	Ice	(1) 1 LT Amb		SWEL

Continued on Page

Read and Understood By

[signature] 22 OCT 2012 [signature] 10-22-12

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 22 OCT 2012

Sample Location: PFE-4A

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Method 607	NDMA/DMN by 607	NDMA/DMN/Bromide by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2			
W1210221424	3	A	X										
1425 FB	3	A	X										
1426	1	A		X									

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	22 OCT 2012 1520	[illegible]	10-23-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project PFE-7 Notebook No. PFTS wells #2

Continues from Page

T. Moore / K. Amis present. Samples will be collected from a stainless steel sample port located near the well head. Sa port will be purged for one minute before parameters and Sample are collected. Well has been off for approximately 2 wks. PFE-7 will pump for one hour prior to sample activities will begin. Trip blanks made at Bldg 637 directly from the Nanopure. Carboy "G Used for Field Blanks. Weather is mostly clear and warm.

Pump START: 0940

Pump off:

Parameters	Meter ID	Buffer	Lot	Ex
W1210241043	PH/cond	7	110797	2/1
PH 6.7	Turb #8	10	113925	7/1
Temp 20.1°C	"STD 6.09 NTU			
Cond 980 uS/cm	"Rdg 5.98 NTU			
Turb 0.36 NTU	"Lot A2086			
PH/Pre 7.1-10.0 (15.0°C)	"Exp 10/27/12			
PH/Post 7.0-10.1				

Samples

Sample #	Analysis	Preserve	Container	Lot	La
W1210241047	VOA by 8260	Ice/HCL	(3) 40 mL vial	2059001	CA
—— 1048	" Dup	"	"	"	"
—— 1049	" TB	"	"	"	"
—— 1050	method 607	Ice	(1) 1 LT Amb		SW
—— 1051	Low Level NDMA	"	"	070212-1AA	C
—— 1052	" Dup	"	"	"	"
—— 1053	" FB	"	"	"	"

Continued on Page

Read and Understood By

Signed: [signature] Date: 24 Oct 2012 Signed: [signature] Date: 10-24-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 24 OCT 2012

Sample Location: PFE-7

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Method 607	NDMA/DMN by 607	NDMA/DMN/Bromide by 607	Low Level NDMA	Total Metals	Anions/TDS	NO2/NO3 by 353.2			
W1210241047	3	A	X										
1048 Dup	3		X										
1049 TB	3		X										
1050	1			X									
1051	1						X						
1052	1						X						
1053 FB	1						X						

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	24 OCT 2012 1117	[signature]	10-25-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-5-481 ENV-0053 Notebook No. D 32 #84 B

Continues from Page

T. Kordy + A. Montes present. Weather is partly cloudy and warm. Well will be purged and sampled using a dedicated teflon bladder pump. Water quality parameters will be collected using a QED MP 20 Flow cell water analyzer.

Calib.

DO - in saturated air. 644 mmHg

pH - using 7-10 Buffers

Cond - using 1413 uS/cm standard

TURB - meter # 7 Std - 5.53 Rdg - 5.54 Lot # 2086 Exp 10-27-1

Initial DTW (FT) - 411.70

IDW - 2 gal

Carboy - G3

Parameters

Time	Temp °C	cond	DO	pH	ORP	TURB	DTW
121024/0930 B	21.00	1.129	8.55	7.28	225	1.26	411.70
— 0935 B	21.05	1.134	7.61	7.30	226	1.13	411.70
— 0940 B	21.01	1.129	7.50	7.19	226	1.07	411.70

Samples

Sample #	Analysis	Preserv	Lot #	Cont.	Lab
121024/0945 B	VOAs by 8260 LL	Ice, HCL	2059001	(3) 40 ml Vial	CAS
— 0946 B	" (FB)	"	"	"	"
— 0947 B	607	Ice	NA	(1) 1 LT Amber	SRI
— 0948 B	LL NDMA	"	070212-LAA	"	CAS
— 0700 B	" (TB)	"	"	"	"
— 0949 B	Total Metals	Ice, HNO3	0327601W	(1) 250 ml poly	"
— 0950 B	" (FB)	"	"	"	"
— 0951 B	perchlorate	Ice	NA	(1) 125 ml poly	"
— 0952 B	NO2/NO3 by 353.2	H2SO4, Ice	0427601W	"	"
— 0953 B	Anions	Ice	0227601W	(1) 250 ml poly	"

Continued on Page

Read and Understood By

Tim Kordy — Signed — 10-24-2012 — Date

Jim Munch — Signed — 10-24-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-24-12

Page 1 of 1

Sample Location: ST-5-481

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA	NDMA	LCNDMA	TOTAL METAL	PERCHLORATE	NO2 NO3	ANIONS				
1210240945B	3	A	X										
0946B	3		X										
0947B	1			X									
0948B	1				X								
0949B	1					X							
0950B	1					X							
0951B	1						X						
0952B	1							X					
0953B	1								X				

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[signature]	10-24-12	[signature]	10-24-12 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-535 WJI ENV-0020 Notebook No. D64 #110(Z)

Continues from Page

B. Tufts & C. Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
121016143OZ	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1431Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	"

Initial Parameters		Final		Meter ID	
Time	121017081 1Z	Time	121017094 0Z	pH/Cond	56
PH	8.78	PH	8.20	Turb	3
Temp	19.4	Temp	21.1	" Std	5.29 NTU's
Cond	1061	Cond	1078	" Rdg	5.36 NTU's
Turb	0.61	Turb	0.44	" Lot	A2060
pH pre	7.25/10.39 (10.6°C)	pH pre	7.26/10.30 13.902	" Exp	10/27/12
pH post	7.18/10.35	pH post	7.30/1022		
DTW	438.95 ft	DTW	438.46 ft		
Atmos	12.64	Atmos	12.60		
		IDW	1 gallon on the 16th		

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

*Note: Fill DI water early after lunch

*Note: B. Golaz + B. Tufts on the 16th from 1:50 to 4:00

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121017085 7Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0858Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	"

Runs	1)	2)	3)
	59.02	58.99	59.01
	64.65	64.66	64.66
	64.66	64.65	64.63
	59.02	59.02	59.03

Continued on Page

Read and Understood By

Signed 10-17-12 Date

Signed 10-17-12 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-16-12

Page 1 of 1

Sample Location: ST-6-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260LL	LL NDMA									
1210161430Z	3	A	X										
1431Z	1	A		X									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	10-16-12 / 346	[illegible]	10-17-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10.17.12

Page 1 of 1

Sample Location: ST-6-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260C	LL NDMA									
1210170857Z	3	A	✓										
0858Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	10-17-12 / 11:20	[illegible]	10-18-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

Project ST-6-575 WI ENU-0020 Notebook No. D64 #110Z
Continues from Page

B. GALAZ & P. TUFTS PRESENT. WEATHER IS WARM & CLEAR. THIS ZONE WILL BE SAMPLED USING 5 STAINLESS STEEL SAMPLE BOTTLES WHICH WHERE TRIPLE RINSED USING DI WATER FROM CARBOY G-2

EQUIPMENT BLANKS

SAMPLE #	ANALYSIS	PRESERVATIVE	CONTAINER	LOT #	LA
121017030Z	VOA 8260 LL	ICE/HCL	(3) 40ml VIALS	2059001	CA
—— 1031Z	LOW LEVEL NDMA	ICE	(1) 1L AMBER	07212-1A	"

INITIAL PARAMETER		FINAL	METER ID	
TIME	121017 1320Z	121017	PH/COND #	56
PH	8.31	8.26	TURB #	3
TEMP	23.6 °C	23.7 °C	" RDG	5.40
COND	1071	1106	" STD	5.29
TURB	1.11 NTUS	1.28 NTUS	" LOT#	A20 86
PH PRE	7.11/10.21 (25.7)	7.04/10.11 (29.7)	" EXP	10-22-
PH POST	7.14/10.20	7.08/10.14	BUFFERS	LOT # / EX
ATMOS	12.58	12.57	7	107447 / 211
DTW	438.46 FT	438.28 FT	10	113925 / 7/1
			IDW 1.5 gals	

SAMPLES

SAMPLE #	ANALYSIS	PRESERVATIVE	CONTAINER	LOT #	L
121017 1400Z	VOA 8260 LL	ICE/HCL	(3) 40ml VIALS	2059001	C
—— 1401Z	VOA 8260 LL (DUP)	"	(3) "	"	"
—— 1402Z	NDMA LL	ICE	(1) 1L AMBER	07212-1AA	"
—— 1450Z	NDMA LL (DUP)	"	(1) "	"	"

RUNS	1)	2)	3)	4)
	76.44	76.43	76.39	76.39
	81.96	81.96	81.95	81.96
	30.22	29.34	30.18	30.98
	81.91	81.93	81.94	81.98

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
[illegible]	10-17-12	Jon Munch	10-17-12

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10-17-12 Page 1 of 1

Sample Location: ST-6.575

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260LL	LL NDMA									
1210171030Z	3	A	+										
1031Z	1	A		+									
1400Z	3	A	+										
1401Z (D)	3	A	+										
1402Z	1	A		+									
1450Z (D)	1	A		+									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
[illegible]	10-17-12 / 3:35	[illegible]	10-18-12 / 1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

B. Tufts & C. Del Fenaro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed & alconox rinsed, stainless steel sample tubes. Steam cleaner is still unavailable. Gen. in use. Probe #1539.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
121016 0930Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 0931Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	"

Initial Parameters
Time - 121016 1015Z
PH - 8.41
Temp - 22.1°C
Cond - 1022 us/cm
Turb - 2.07 NTU's
pH pre - 7.09/10.13 (22.2°C)
pH post - 7.11/10.13
DTW - 438.40 ft.
Atmos - 12.58 psia

Final
Time - 121016 1052Z
PH - 8.33
Temp - 22.8°C
Cond - 1041 us/cm
Turb - 1.18 NTU's
pH pre - 7.05/10.08 (26.2°C)
pH post - 7.07/10.12
DTW - 438.95 ft.
Atmos - 12.60 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 56
Turb - 3
" Std - 5.29 NTU's
" Rdg - 5.36 NTU's
" Lot - A2060
" Exp - 10/27/12

Buffers	Lot	Exp
7	110747	2/13
10	113925	7/13

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
121016 1050Z	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2059001	CAS
——— 1051Z	Low Level NDMA	ice	(1) 1L Amber	070212-1AA	"

Runs 1) 124.38, 129.56, 129.60, 124.36
2) 124.31, 129.35, 129.37, 124.30

Continued on Page

Read and Understood By

Craig Del Fenaro — Signed — 10/16/12 — Date
Jim Munch — Signed — 10-16-12 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 10/16/12

Page _____ of _____

Sample Location: ST-6-685

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA									
1210160930Z	3	A	✓										
——— 0931Z	1	A		✓									
——— 1050Z	3	A	✓										
——— 1051Z	1	A		✓									

Analytical Requirement

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	10/16/12 1120 hrs.	John Munch	10-17-12 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: _____

WSTF 381C (03/09)

National Aeronautics and
Space Administration

NASA WSTF Periodic Monitoring Report

Comprehensive Annual 2012

Appendix B.2
Laboratory Chains of Custody

WSTF CHAIN OF CUSTODY RECORD

Date 8-2-12

1208050

Page 1 of 1

Laboratory / PO # NAVARRO 175

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004

Attn: ☐ Lori Minnick ☐ Other _____

(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	METALS	ANIONS, TOTAL ALKALINITY Cl, Fl, SULFATE / TDS	NO_2 / NO_3 353.2		Comments
① 1208010948	Blm-25-455	1	X					X				
② 1208011435	Blm-6-488	1	X					X				
③ 1208011436	"	1	X					X				
④ 1208011437	"	1	X						X			
⑤ 1208011438	"	1	X							X		
⑥ 1208020830Z	Blm-30-585	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-2-12 / 1015 HRS.	Kandi Bunai	8-3-12 0910

WSTF – 381B (02/00)

Date 8-9-12

WSTF CHAIN OF CUSTODY RECORD

1208123

Laboratory / PO # NAVARRO 175

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☒ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions, Total Alkalinity, Cl, Fl, Sulfate / TDS	NO_2/NO_3		Comments
1208021021Z (1)	WB-14-520	1	X					X				
1208060835Z (2)	"	1	X					X				
1208060836Z (3)	"	1	X						X			
1208060916Z (4)	"	1	X							X		
1208061416Z (5)	400-D-355	1	X					X				
1208061423 (6)	300-C-128	1	X					X				
1208071055Z (7)	400-D-275	1	X					X				
1208071056Z (8)	"	1	X						X			
1208071450 (9)	BW-1-268	1	X					X				
1208071058Z (10)	400-D-275	1	X							X		
1208081044 (11)	BLM-14-327	1	X						X			
1208081045 (12)	"	1	X							X		

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-9-12 / 1115 hrs	Lauren Schmidt	8/10/12 @ 0935

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 8-9-12

1208123

Laboratory / PO # NAVARRO 175

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions Total Alkalinity Cl, F, Sulfate / TDS	NO_2/NO_3 353.2		Comments
1208090731Z (13)	400-D-195	1	X					X		X		

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-9-12 / 1115 MDT	Lauren Clem	8/10/12 @ 0935

WSTF – 381B (02/00)

Date 8-14-12

WSTF CHAIN OF CUSTODY RECORD

RC8175

Laboratory / PO # NAVARRO 175

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions Total Alkalinity Cl, Fl, Sulfate / TDS	NO_2 / NO_3 353.2		Comments
1 1208091412	200-JG-110	1	X					X				
2 1208091413	"	1	X					X				
3 1208091414	"	1	X						X			
4 1208091415	"	1	X							X		
5 1208100750Z	Blm-36-610	1	X						X			
6 1208100752Z	"	1	X							X		
7 1208101301Z	Blm-36-860	1	X							X		
8 1208131010Y	700-H-670	1	X					X				
9 1208131011Y	"	1	X						X			
10 1208131013Y	"	1	X							X		
11 1208131411Y	700-H-535	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-14-12 / 1100 HRS.	[illegible]	8/15/12 0940

WSTF – 381B (02/00)

Date 8-20-12

WSTF CHAIN OF CUSTODY RECORD

1208290 Page 1 of 1

Laboratory / PO # NAVARRO 175

Return Address for Analytical Reports:

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Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

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Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	TOTAL METALS	ANIONS, TOTAL ALKALINITY Cl, Fl, SULFATE / TDS	NO_2/NO_3 353.2		Comments
(1) 1208140800Y	700-H-535	1	X					X				
(2) 1208160821Y	WB-5-345	1	X					X				
(3) 1208161005Y	"	1	X					X				
(4) 1208161421Z	Blm-38-620	1	X					X				
(5) 1208161422Z	"	1	X					X				
(6) 1208161420Z	"	1	X						X			
(7) 1208161423Z	"	1	X							X		
(8) 1208161440Y	WB-5-280	1	X					X				
(9) 1208161441Y	"	1	X						X			
(10) 1208200751Y	WB-5-280	1	X							X		
(11) 1208201015Y	WB-5-250	1	X					X				
↓ 1208201016Y	"	1	X					X				* MATRIX SPIKE FOR #1208201015Y

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-20-12 / 1130 HRS	[illegible signature]	8/21/12 @ 0920

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 8-23-12

1208376

Page 1 of 1

Laboratory / PO # NAVARRO 176

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	METALS (TOTAL)	ANIONS, TOTAL ALKALINITY Cl, F, SULFATE / TDS	NO_2/NO_3		Comments
1 1208210803	NASA 8	1	X					X				
2 1208210804	"	1	X					X				
3 1208210815Z	Blm-38-480	1	X					X				
4 1208220833	NASA 7	1	X					X				
5 4 1208220834	"	1	X					X				*MATRIX SPIKE FOR # 1208220833
6 1208221356Y	ST-5-989	1	X					X				
7 1208221435Y	"	1	X						X			
8 1208221437Y	"	1	X							X		
9 1208221517	200-D-109	1	X					X				

CW 8/24/12

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-23-12 / 1130 HRS.	[illegible]	8/24/12 0920

WSTF – 381B (02/00)

Date 8-29-12

WSTF CHAIN OF CUSTODY RECORD

1208467

Laboratory / PO # NAVARRO 175

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions Total Alkalinity Cl, Fl, Sulfate /TDS	NO_2/NO_3 353.2		Comments
1208240831Y ①	ST-5-815	1	X					X				
E1208240957 ②	B650-EFF-1	1	X						X			
E1208240959 ③	"	1	X							X		
I1208241024 ④	B650-INF-1	1	X						X			
I1208241026 ⑤	"	1	X							X		
1208241035 ⑥	200-D-109	1	X					X				
1208251031Y ⑦	ST-5-1175	1	X					X				
1208270931Z ⑧	200-H-331	1	X					X				
1208271404 ⑨	300-D-153	1	X					X				
1208271411Z ⑩	200-H-433	1	X					X				
1208280910Z ⑪	200-H-225	1	X					X				
1208280911Z ⑫	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-29-12 / 1115 HRS.	Kandi Baca	8-30-12 0940

WSTF – 381B (02/00)

1208467

WSTF CHAIN OF CUSTODY RECORD

Date 5-29-12

Laboratory / PO # NAVARRO 175

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(575) 524-5119 (575) 524-_____

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions, Total Alkalinity Cl, Fl, Sulfate / TDS	NO_2/NO_3 353.2		Comments
E1208281001 (13)	B655-EFF-2	1	X					X				
I1208281022 (14)	B655-INF-1	1	X					X				
I1208281024 (15)	"	1	X							X		

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-29-12 / 1115 HRS	Kandi Barrow	8-30-12 0940

WSTF – 381B (02/00)

Date 8-30-12

WSTF CHAIN OF CUSTODY RECORD

1208911

Laboratory / PO # NAVARRO 175

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Attn: ☑ Lori Minnick ☐ Other _____
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Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	NO_2 / NO_3 353.2			Comments
① W1208291227	MPE-11	1	X					X				
② W1208291229	"	1	X						X			
③ W1208291302	MPE-1	1	X					X				
④ W1208291304	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-30-12 / 1100 HRS.	[illegible]	8/31/12 0930

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 9-6-12

1209088

Page 1 of 1

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions, Total Alkalinity, Cl, Fl, Sulfate / TDS	NO_2 / NO_3		Comments
(1) 1209051004B	NASA 5	1	X					X				
(2) 1209051005B	"	1	X						X			
(3) 1209051007B	"	1	X							X		
(4) 1209051407B	NASA 10	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-6-12 / 1115 Hrs.	[signature]	9/7/12 @ 1245

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 9-10-12

1209135

Laboratory / PO # NAVARRO 175

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Special Instructions

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	TOTAL METALS	ANIONS, TOTAL ALKALINITY Cl, F, SULFATE / TDS	NO_2/NO_3 353.2	9014 CYANIDE	Comments
(1) 1209081118B	200-SG-1	1	X					X				
(2) 1209080923B	NASA 9	1	X					X				
(1) 1209081119B	200-SG-1	1	X					X				* MATRIX SPIKE FOR # 1209081118B
(3) 1209081112B	"	1	X						X			
(4) 1209081120B	"	1	X							X		
(5) 1209081121B	"	1	X								X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-10-12 / 1115 HRS.	Lauren [illegible]	9/11/12 @ 0930

WSTF – 381B (02/00)

Date 9-10-12

WSTF CHAIN OF CUSTODY RECORD

1209135

Laboratory / PO # NAVARRO 175

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Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	376.1 SULFIDE	9066 PHENOLICS			Comments
(6) 1209081122B	200-SG-1	1	X					X				
(7) 1209081117B	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-10-12 / 1115 Hrs.	Lauren Schmidt	9/11/12 @ 0930

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 9-17-12

1209264 Page 1 of 1

Laboratory / PO # NAVARRO 175

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(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	TOTAL METALS	ANIONS, TOTAL ALKALINITY Cl, Fl, SULFATE / TDS	NO_2/NO_3 353.2		Comments
① 1209140932B	100-HG-139	1	X						X			
② 1209140931B	"	1	X					X				
③ 1209140934B	"	1	X							X		
④ 1209150917	BW-3-180	1	X					X				
⑤ 1209151109	BW-6-355	1	X					X				
⑥ 1209151110	"	1	X						X			
⑦ 1209151112	"	1	X							X		

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-17-12 / 1115 Hrs.	Lauren Schmidt	9/18/12 @ 0915

WSTF – 381B (02/00)

Date 9-20-12

WSTF CHAIN OF CUSTODY RECORD

1209349

Page 1 of 1

Laboratory / PO # NAVARRO 175

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Special Instructions

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions, Total Alkalinity Cl, Fl, Sulfate / TDS	NO_2/NO_3 353.2		Comments
① 1209191442	Blm-1-435	1	X					X				
② 1209191407	600-G-138	1	X					X				
③ 1209191408	"	1	X						X			
④ 1209191410	"	1	X							X		
⑤ 1209191406	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-20-12 / 1115 HRS	C Trumble	9-21-12 0945

WSTF – 381B (02/00)

Date 9-24-12

WSTF CHAIN OF CUSTODY RECORD

1209391

Laboratory / PO # NAVARRO 175

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Special Instructions

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO$_3$ (500 ml Poly)	Total Metals	Anions, Total Alkalinity Cl, Fl, Sulfate / TDS	NO_2 / NO_3		Comments
1209201418 (1)	200-D-240	1	X					X				
1209201419 (2)	"	1	X					X				
1209201420 (3)	"	1	X						X			
1209201422 (4)	"	1	X							X		

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-24-12 / 1100 HRS.	Lauren Schmit	9/25/12 @ 0915

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 9-26-12

1209430

Page 1 of 1

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Special Instructions

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	ANIONS, TOTAL ALKALINITY Cl, Fl, SULFATE / TDS	NO_2/NO_3 353.2	TOTAL METALS		Comments
E1209241023 ①	B650-EFF-1	1	X					X				
E1209241025 ②	"	1	X						X			
I1209241040 ③	B650-INF-1	1	X					X				
I1209241042 ④	"	1	X						X			
E1209251011 ⑤	B655-EFF-2	1	X						X			
I1209251032 ⑥	B655-INF-1	1	X							X		
I1209251034 ⑦	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-26-12 / 1100 HRS	Kandi Barrow	9-27-12 0945

WSTF – 381B (02/00)

Date 8-2-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 176

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Special Instructions

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
W1207301228	PFE-1	3	X		X							
W1207301229	"	3	X		X							
W1207301230	"	3	X		X							
W1207301539	PFE-4A	3	X		X							
W1207301540	"	3	X		X							
1208010750	Blm-26-455	3	X		X							
1208010945	"	3	X		X							
1208011430	Blm-6-488	3	X		X							
1208011431	"	3	X		X							
1208011405Z	Blm-30-585	3	X		X							
1208020800Z	"	3	X		X							
1208020801Z	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-2-12 / 1015 HRS.	Sergio [illegible]	8/3/12 0915

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WSTF – 381B (02/00)

R1205024 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-2-12

WSTF CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory / PO # NAV0000093

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Special Instructions

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Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1208010946	Blm-25-455	1	X					X				
1208010947	"	1	X					X				
1208011433	Blm-6-488	1	X					X				
1208011434	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-2-12 / 1015 Hrs.	[signature]	8/3/12 0915

WSTF – 381B (02/00)

R1205029 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 8-6-12

Laboratory / PO # NAV 0000093

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1208021017	ST-2-466	1	X					X				
1208021018	"	1	X					X				
1208060917	Blm-22-570	1	X					X				
1208060918	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-6-12 / 1115 HRS.	Amy Hentz	8/7/12 1005

WSTF – 381B (02/00)

R1205067 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-6-12

WSTF CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory / PO # NAVBKT0108

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1208060915Z	WB-14-S20	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-6-12 / 1115HRS.	Amy Hentz	8/7/12 1005

WSTF – 381B (02/00)

5 of 10

R1205068 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-6-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 176

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Las Cruces, NM 88004
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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
1208021015	ST-2-466	3	X					X				
1208021016	"	3	X					X				
1208021020Z	WB-14-520	3	X					X				
1208060800Z	"	3	X					X				
1208060915	Blm-22-570	3	X					X				
1208060916	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-6-12 / 1115 HRS.	Amy Heath	8/7/12 1005

WSTF – 381B (02/00)

R1205069 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-8-12

WSTF CHAIN OF CUSTODY RECORD

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Laboratory / PO # NAVBKT0108

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1208071057Z	400-D-275	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-8-12 / 1100 HRS -	Amy Hentz	8/9/12 0910

WSTF – 381B (02/00)

R1205167 5
NASA/WSTF/Navarro
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5 of 10

Date 8-8-12

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Attn: Lori Minnick

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
1208061300Z	400-D-355	3	X					X				
1208061355Z	"	3	X					X				
1208070830Z	400-D-275	3	X					X				
1208070955Z	"	3	X					X				
1208071420Z	400-D-195	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Jon Minnick	8-8-12 / 1100 HRS	Amy Hentz	8/9/12 0910

WSTF – 381B (02/00)

R1205169 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-8-12

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208061245	300-C-128	3	X		X							
1208061420	"	3	X		X							
1208070945	ST-1-541	3	X		X							
1208070946	"	3	X		X							
1208070947	"	3	X		X							(Bubbles)
1208071445	BW-1-268	3	X		X							
1208071446	"	3	X		X							
1208071447	"	3	X		X							(Bubbles)

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-8-12 / 1100 HRS	Amy Hestes	8/9/12 0910

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WSTF – 381B (02/00)

R1205171 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-8-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAV-0000093

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1208061301Z	400-D-355	1	X					X				
~~1208061356Z~~	"	1	X					X				
1208061415Z	"	1	X					X				
1208070831Z	400-D-275	1	X					X				
1208071025Z	"	1	X					X				
1208071421Z	400-D-195	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-8-12 / 1100 HRS	Amy Henetz	8/9/12 0910

WSTF – 381B (02/00)

R1205172 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-9-12

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1208081301	Blm-7-509	1	X					X				
1208081446	"	1	X					X				
1208081447	"	1	X					X				*Matrix Spike for #1208081446
1208081448	"	1	X					X				*Matrix Spike Duplicate for #1208081446
1208090730Z	400-D-195	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-9-12 / 1115 HRS.	[illegible signature]	8/10/12 0910

WSTF – 381B (02/00)

R1205219 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-9-12

WSTF CHAIN OF CUSTODY RECORD

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208081040	Blm-14-327	3	X		X							
1208081041	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-9-12 / 1115 HRS	[signature]	8/10/12 0910

WSTF – 381B (02/00)

R1205223 5
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White Sands Test Facility

Date 8-9-12

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
1208081300	Blm-7-509	3	X					X				
1208081445	"	3	X					X				
1208080920Z	400-D-195	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-9-12 1115 HRS.	[signature]	8/10/12 0910

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WSTF – 381B (02/00)

R1205224 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-13-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 1176

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Special Instructions

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208090930Z	BLM-36-610	3	X		X							
1208091335Z	"	3	X		X							
1208091405	200-JG-110	3	X		X							
1208091406	"	3	X		X							(BUBBLES)
1208100900Z	BLM-36-860	3	X		X							
1208101020Z	"	3	X		X							(BUBBLES)

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Munch	8-13-12 / 1100 HRS.	Amy Heath	8/14/12 0920

WSTF – 381B (02/00)

R1205297 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-13-12

WSTF CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory / PO # NAVARRO 176

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Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
1208100715	Bim-10-517	3	X					X				
1208101020	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-13-12 / 1100 HRS.	Amy Hentz	8/14/12 0920

WSTF – 381B (02/00)

R1205298 5
NASA/WSTF/Navarro
White Sands Test Facility

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WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVBIG0108

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1208091416	200-SG-110	1	X					X				
1208100751Z	blm-36-610	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-13-12 / 1100HRS.	Amy Heath	8/14/12 0920

5 of 12

WSTF – 381B (02/00)

R1205299 5
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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	SVOA 8270				Comments
1208091411	200-JG-110	2	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-13-12 / 1100 HRS	Amy Hentz	8/14/12 0920

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WSTF – 381B (02/00)

R1205301 5
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Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1208091409	200-JG-110	1	X					X				
1208091410	"	1	X					X				
1208090931Z	Blm-36-610	1	X					X				
1208091410Z	"	1	X					X				
1208091440Z	"	1	X					X				
1208100716	Blm-10-517	1	X					X				
1208101021	"	1	X					X				
1208100901Z	Blm-36-860	1	X					X				
1208101021Z	"	1	X					X				
1208101300Z	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-13-12 / 1100HRS.	Amy Hentz	8/14/12 0920

WSTF – 381B (02/00)

R1205302 5
NASA/WSTF/Navarro
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WSTF CHAIN OF CUSTODY RECORD

Date 8-16-12

Laboratory / PO # NAVARRO 176

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208130830Y	700-H-670	3	X		X							
1208130935Y	"	3	X		X							
1208131305	700-J-200.	3	X		X							
1208131306	"	3	X		X							(Bubbles)
1208131410Y	700H-535	3	X		X							
1208140630	700-D-186	3	X		X							
1208141000	"	3	X		X							
1208141001	"	3	X		X							
1208140755Z	Blm-36-800	3	X		X							
1208140945Z	"	3	X		X							
1208140720Y	700-H-535	3	X		X							
1208140940Y	700-H-350	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-16-12 / 1115 HRS	Amy Heath	8/17/12 0925

WSTF – 381B (02/00)

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R1205413 5
NASA/WSTF/Navarro
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Date 8-16-12

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Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (5260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208141350Y	700-H-350	3	X		X							
1208141434Z	Bkn-36-350	3	X		X							
1208150858Z	"	3	X		X							
1208160830	700-A-253	3	X		X							
1208160831	"	3	X		X							
1208160832	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-16-12 / 1115 HRS.	Amy Hentz	8/17/12 0925

R1205413
NASA/WSTF/Navarro
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5

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1208131012Y	700-H-670	1	X					X				
1208131309	700-J-200	1	X					X				
1208141003	700-D-186	1	X					X				
1208141415Y	700-H-350	1	X					X				
1208160834	700-A-253	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-16-12 / 1115HRS.	Amy Hentz	8/17/12 0925

WSTF – 381B (02/00)

R1205416 5
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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1208140756Z	Blm-36-800	1	X					X				
1208140946Z	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-16-12 / 1115HRS.	Amy Heath	8/17/12 0925

WSTF – 381B (02/00)

R1205419 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-20-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO- NAVBKT0108

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Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
12082007504	WB-5-280	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-20-12 / 1130HRS.	[illegible]	8/21/12 / 0925

WSTF – 381B (02/00)

5 of 10

R1205465 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-20-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 176

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Special Instructions

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208160820Y	WB-5-345	3	X		X							
1208160935Y	"	3	X		X							
1208161050Y	WB-5-280	3	X		X							
1208161415Y	"	3	X		X							
1208200830Y	WB-5-250	3	X		X							
1208200935Y	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-20-12 / 1130 HRS	[illegible]	8/21/12 / 0925

WSTF – 381B (02/00)

R1205467 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-20-12

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Las Cruces, NM 88004
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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
1208160930Z	Blm-38-620	3	X					X				
1208161350Z	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	8-20-12 / 1130 HRS	[illegible]	8/21/12 / 0925

WSTF – 381B (02/00)

R1205468 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-23-12

WSTF CHAIN OF CUSTODY RECORD

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Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208200800	NASA 8	3	X		X							
1208210801	"	3	X		X							
1208220830	NASA 7	3	X		X							
1208220831	"	3	X		X							
1208221515	200-D-109	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-23-12 / 1130 HRS.	Amy Hewitt	8/24/12 0920

WSTF – 381B (02/00)

R1205553 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-23-12

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Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
1208200800Z	BLM-38-480	3	X					X				
1208210740Z	"	3	X					X				
1208210741Z	"	3	X					X				*MATRIX SPIKE FOR #1208210740Z.
1208210945Y	ST-5-655	3	X					X				
1208211340Y	"	3	X					X				
1208220930Y	ST-5-985	3	X					X				
1208221315Y	"	3	X					X				
1208221040Z	PL-7-560	3	X					X				
1208221405Z	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-23-12 / 1130 HRS.	Amy Hentto	8/24/12 0920

WSTF – 381B (02/00)

R1205555 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-23-12

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1208221430Z	PL-7-560	1	X					X				
1208221436Y	ST-5-985	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-23-12 / 1130 HRS.	Amy Hentz	8/24/12 0920

WSTF – 381B (02/00)

Date 8-23-12

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Lowlevel NDMA/DMN				Comments
1208200801Z	Blm-38-480	1	X					X				
1208210742Z	"	1	X					X				
1208210946Y	ST-5-655	1	X					X				
1208211341Y	"	1	X					X				
1208220931Y	ST-5-985	1	X					X				
1208221355Y	"	1	X					X				
1208221500Y	"	1	X					X				
1208221041Z	PL-7-560	1	X					X				
1208221406Z	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	8-23-12 / 1130 HRS.	Amy Henteth	8/24/12 0920

WSTF – 381B (02/00)

R1205557 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-27-12

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Boule) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1208231401Y	ST-5-815	1	X					X				
1208240830Y	"	1	X					X				
1208240801Z	PL-7-480	1	X					X				
1208240918Z	"	1	X					X				
E1208240951	B650-EFF-1	1	X					X				
E1208240953	"	1	X					X				
E1208240955	"	1	X					X				
1208241032	200-D-109	1	X					X				
1208241033	"	1	X					X				
1208241026Y	ST-5-485	1	X					X				
1208250725Y	"	1	X					X				
1208250816Y	ST-5-1175	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-27-12 / 1115 HRS	Amy Hentz	8/28/12 0920

WSTF – 381B (02/00)

R1205607 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-27-12

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Special Instructions

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Lowlevel NDMA/DMN				Comments
1208251030Y	ST-5-1175	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-27-12 / 1115HRS	Amy Hentz	8/28/12 0920
			R1205607

WSTF – 381B (02/00)

Date 8-27-12

WSTF CHAIN OF CUSTODY RECORD

Page 1 of

Laboratory / PO # NAVARRO 176

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Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
12082314004	ST-5-815	3	X					X				
12082408004	"	3	X					X				
12082408002	PL-7-480	3	X					X				
12082409172	"	3	X					X				
E12082409 43	B650-EFF-1	3	X					X				
E12082409 45	"	3	X					X				
12082410254	ST-5-485	3	X					X				
12082413404	"	3	X					X				
12082508154	ST-5-1175	3	X					X				
12082509454	"	3	X					X				(Bubbles)

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-27-12 / 1115HRS	Amy Heath	8/28/12 0920

WSTF – 381B (02/00)

R1205611 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-27-12

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Special Instructions

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
I1208241016	B650-INF-1	3	X		X							
I1208241018	"	3	X		X							
1208241015	200-D-109	3	X		X							
1208241030	"	3	X		X							
1208241031	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-27-12 / 1115 HRS	Amy Hentto	8/28/12 0920

WSTF – 381B (02/00)

R1205614 5
NASA/WSTF/Navarro
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Date 8-28-12

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1208270801Z	200-H-331	1	X					X				
1208270930Z	"	1	X					X				
1208271041Z	200-H-433	1	X					X				
1208271410Z	"	1	X					X				
1208271230	300-D-153	1	X					X				
1208271403	"	1	X					X				
1208280816	Well K	1	X					X				
1208280818	"	1	X					X				
1208280840	Well J	1	X					X				
1208280842	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-28-12 / 1115 HRS.	Amy Heritt	8/29/12 0945

WSTF – 381B (02/00)

R1205644 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-29-12

WSTF CHAIN OF CUSTODY RECORD

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1208280935Z	200-H-225	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-29-12 / 1115 HRS.	Gregory [illegible]	8/30/12 0915

WSTF – 381B (02/00)

5 of 10

R1205669 5
NASA/WSTF/Navarro
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Date 8-29-12

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Analysis Requirements

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low level NDMA/DMN				Comments
1208280741Z	200-H-225	1	X					X				
1208280850Z	"	1	X					X				
E1208280955	B655-EFF-2	1	X					X				
E1208280957	"	1	X					X				
E1208280959	"	1	X					X				
W1208281253	PFE-7	1	X					X				
W1208281254	"	1	X					X				

Relinquished By	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-29-12 / 1115 HRS.	[illegible signature]	8/30/12 0915

WSTF – 381B (02/00)

R1205670 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-29-12

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1208270800Z	200-H-331	3	X		X							
1208270905Z	"	3	X		X							
1208271040Z	200-H-433	3	X		X							
1208271340Z	"	3	X		X							(BUBBLES)
1208271400	300-D-153	3	X		X							
1208271401	"	3	X		X							
1208280740Z	200-H-225	3	X		X							
1208280825Z	"	3	X		X							
I1208281016	B655-INF-1	3	X		X							
I1208281018	"	3	X		X							
W1208281250	PFE-7	3	X		X							
W1208281251	"	3	X		X							(

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-29-12 / 1115 HRS.	[signature]	8/30/12 0915

WSTF – 381B (02/00)

R1205671 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-29-12

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Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
1208280730	Well J	3	X					X				
1208280841	"	3	X					X				
1208280815	Well K	3	X					X				
1208280817	"	3	X					X				
E1208280947	B655-EFF-2	3	X					X				
E1208280949	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-29-12 / 1115 HRS.	Gregory LaFon	8/30/12 0915

WSTF – 381B (02/00)

000057

R1205672 5
NASA/WSTF/Navarro
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WSTF CHAIN OF CUSTODY RECORD

Date 8-30-12

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low level NDMA/DMN				Comments
1208300916Z	SI-6-685	1	X					X				
1208301036Z	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-30-12 / 1100 HRS.	Amy Henth	8/31/12 0945

WSTF – 381B (02/00)

R1205721 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-30-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 176

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
1208300915Z	ST-6-685	3	X					X				
1208301035Z	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-30-12 / 1100 Hrs	Amy Heath	8/31/12 0945

WSTF – 381B (02/00)

Date 8-30-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
W1208291224	MPE-11	3	X		X							
W1208291225	"	3	X		X							(BUBBLES)
W1208291258	MPE-1	3	X		X							
W1208291259	"	3	X		X							(BUBBLES)

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-30-12 / 1100 HRS.	Amy Hewitt	8/31/12 0945

WSTF – 381B (02/00)

00051

R1205725 5
NASA/WSTF/Navarro
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Date 9-30-12

WSTF CHAIN OF CUSTODY RECORD

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Las Cruces, NM 88012
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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
W1208291228	MPE-11	1	X					X				
W1208291303	MPE-1	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-30-12 / 1100 hrs	Amy Dentto	8/31/12 0945

WSTF – 381B (02/00)

5 of 12

R1205726 5
NASA/WSTF/Navarro
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Date 9-6-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1209040831Z	ST-6-535	1	X					X				
1209040951Z	"	1	X					X				
1209041251Z	ST-6-575	1	X					X				
1209041402Z	"	1	X					X				
1209050900	Blm-13-300	1	X					X				
1209051053	"	1	X					X				
1209051402	100-F-358	1	X					X				
1209051403	"	1	X					X				
1209060923	Blm-5-527	1	X					X				
1209060924	"	1	X					X				
1209060925	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-6-12 / 1115HRS.	[illegible signature]	9/7/12 @ 0935

WSTF – 381B (02/00)

R1205894 5
NASA/WSTF/Navarro
White Sands Test Facility

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Date 9-6-12

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 UL				Comments
1209040830Z	ST-6-535	3	X					X				
1209040950Z	"	3	X					X				(Bubbles) - ~~from~~ ALS noted
1209041250Z	ST-6-575	3	X					X				
1209041400Z	"	3	X					X				(Bubbles)
1209041401Z	"	3	X					X				(Bubbles)
1209051400	100-F-358	3	X					X				
1209051401	"	3	X					X				(Bubbles)

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-6-12 / 1115 HRS	[illegible signature]	9/7/12 @ 0935

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R1205895 5
NASA/WSTF/Navarro
White Sands Test Facility

00051

Date 9-6-12

WSTF CHAIN OF CUSTODY RECORD

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (Bottle)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1209050845B	NASA 5	3	X		X							
1209051002B	"	3	X		X							(Bubbles) - from ALS noted
1209051050	Blm-13-300	3	X		X							
1209051051	"	3	X		X							
1209051404B	NASA 10	3	X		X							
1209051405B	"	3	X		X							(BUBBLES)
1209060920	Blm-5-527	3	X		X							
1209060921	"	3	X		X							

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Lori Minnick	9-6-12 / 1115 Hrs	[illegible]	9/7/12 @ 0935

WSTF – 381B (02/00)

R1205896 5
NASA/WSTF/Navarro
White Sands Test Facility

000057

Date 9-6-12

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Laboratory / PO # NAVBK10108

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Return Address:

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1209051006B	NASA 5	1	X					X				

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Lori Minnick	9-6-12 / 1115 HRS	[illegible]	9/6/12 @ 0935

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Date 9-10-12

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8270 SVOA	8081 Pesticides	8151 Herbicides	8082 PCB's	Comments
1209081111B	200-SG-1	2	X					X				
1209081113B	"	1	X						X			
1209081115B	"	1	X							X		
1209081116B	"	1	X								X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	9-10-12 / 1115 HRS.	[signature]	9-11-12 @ 9:45

WSTF – 381B (02/00)

R1205951 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 9-10-12

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1209070701	NW-1-452	1	X					X				
1209070846	"	1	X					X				
1209071327	PL-2-504	1	X					X				
1209071328	"	1	X					X				
1209071329	"	1	X					X				
1209080631	ST-4-690	1	X					X				
1209081012	"	1	X					X				
1209080842	ST-4-481	1	X					X				
1209080843	"	1	X					X				*MATRIX SPIKE FOR # 1209080842
1209080844	"	1	X					X				*MATRIX SPIKE DUPLICATE FOR # 1209080842
1209080845	"	1	X					X				
1209081107B	200-SG-1	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-10-12 / ~~09~~ 1115 HRS	[signature]	9-11-12 @ 9:45

WSTF – 381B (02/00)

R1205953 5
NASA/WSTF/Navarro
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Date 9-10-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN	8290 DIOXINS/FURANS			Comments
1209081110B	200-SG-1	1	X					X				
1209081114B	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-10-12 / 1115 HRS.	[signature]	9-11-12 @09:45

R1205953 5
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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 VL				Comments
1209070700	WW-1-452	3	X					X				
1209070845	"	3	X					X				
1209080840	ST-4-481	3	X					X				
1209080841	"	3	X					X				
1209080630	ST-4-690	3	X					X				
1209081010	"	3	X					X				
1209081011	"	3	X					X				*MATRIX SPIKE FOR #1209081010

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-10-12 / 1115 HRS.	[illegible]	9-11-12 @ 9:45

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1209071325	PL-2-604	3	X		X							
1209071326	"	3	X		X							(BUBBLES)
1209080920B	NASA 9	3	X		X							
1209080921B	"	3	X		X							
1209081106B	200-SG-1	3	X		X							
1209081108B	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	9-10-12 / 1115 HRS.	[illegible]	9-11-12 @ 9:45

WSTF – 381B (02/00)

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Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low level NDMA/DMN				Comments
1209101317	ST-4-589	1	X					X				
1209101318	"	1	X					X				
1209110917	Blm-10-517	1	X					X				
1209110918	"	1	X					X				
1209110726	PL-1-486	1	X					X				
1209111342	"	1	X					X				
1209111423	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-12-12 / 1100 Hrs.	[illegible]	9-13-12 09:35

WSTF – 381B (02/00)

R1206049 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 9-12-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
1209101315	ST-4-589	3	X					X				
1209101316	"	3	X					X				
1209110915	BLM-10-517	3	X					X				
1209110916	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-12-12 / 1100 HRS.	[signature]	9-13-12 09:35

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1209110725	PL-1-486	3	X		X							
1209111340	"	3	X		X							
1209111341	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-12-12 / 1100 HRS.	[signature]	9-13-12 9:35

WSTF – 381B (02/00)

R1206051 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 9-13-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1209120847	PL-3-453	1	X					X				
1209120848	"	1	X					X				
1209130827	WELL K	1	X					X				
1209130828	"	1	X					X				
1209130922	WELL J	1	X					X				
1209130923	"	1	X					X				

Relinquished By	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-13-12 1130 HRS.	[illegible]	9-14-12 9:30

WSTF – 381B (02/00)

R1206121
NASA/WSTF/Navarro
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5

Date 9-13-12

WSTF CHAIN OF CUSTODY RECORD

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
1209120845	PL-3-453	3	X					X				
1209120846	"	3	X					X				
1209130825	Well K	3	X					X				
1209130826	"	3	X					X				
1209130920	Well J	3	X					X				
1209130921	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Ron Minnick	9-13-12 / 1130 HRS.	[signature]	9-14-12 @ 09:30

WSTF – 381B (02/00)

R1206122
NASA/WSTF/Navarro
White Sands Test Facility

5

Date 9-13-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 176

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Analysis Requirements

Special Instructions

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1209121400	Blm-18-430	3	X		X							
1209121401	"	3	X		X							
1209130715	Blm-23-431	3	X		X							
1209130915	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	9-13-12 / 1130 HRS.	[signature]	9-14-12 9:30

WSTF – 381B (02/00)

R1206123 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 9-17-12

WSTF CHAIN OF CUSTODY RECORD

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Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1209140928B	100-HG-139	1	X					X				
1209140929B	"	1	X					X				
1209140941	PL-4-464	1	X					X				
1209141036	"	1	X					X				
1209141037	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-17-12 / 1115 HRS	Gregory Lafon	9/18/12 1000

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R1206188 5
NASA/WSTF/Navarro
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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1209131309	Blm-9-419	3	X		X							
1209131310	"	3	X		X							
1209140915	Blm-15-305	3	X		X							
1209140916	"	3	X		X							
1209140925B	100-HG-139	3	X		X							
1209140926B	"	3	X		X							
1209140940	PL-4-464	3	X		X							
1209141035	"	3	X		X							
1209150630	BW-3-180	3	X		X							
1209150915	"	3	X		X							
1209151105	BW-6-355	3	X		X							R1206190
1209151106	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-17-12 / 1115 HRS.	[illegible]	9/18/12 1020

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R1206190 5
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Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	SVOA 8270				Comments
1209140930B	100-HG-139	2	X					X				
												R1206191

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-17-12 / 1115 HRS	[signature]	9/18/12 1000

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R1206191 5
NASA/WSTF/Navarro
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00037

Date 9-17-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Perchlorate 331.0				Comments
1209140933B	100-HG-139	1	X					X				
1209151111	BW-6-355	1	X					X				

R1206192 5
NASA/WSTF/Navarro
White Sands Test Facility

Relinquished By	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-17-12 / 1115 HRS	[illegible signature]	9/18/12 1020

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000005

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Date 9-20-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1209191409	600-G-138	1	X					X				-001
												R1206360

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-20-12 / 1115HRS.	[illegible]	9/21/12 0945

WSTF – 381B (02/00)

R1206360 5
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00007

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Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	SVOA 8270				Comments
1209191405	600-G-138	2	X					X				-001
												R1206361

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-20-12 / 1115HRS.	[signature]	9/21/12 0945

WSTF – 381B (02/00)

R1206361 5
NASA/WSTF/Navarro
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00035

Date 9-20-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1209181300	Blm-1-435	3	X		X							-001
1209181440	"	3	X		X							-002
1209181441	"	3	X		X							-003
1209191400	600-6-138	3	X		X							-004
1209191401	"	3	X		X							-005
												R1206363

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-20-12 / 1115HRS.	[illegible]	9/21/12 0945

WSTF – 381B (02/00)

R1206363 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 9-20-12

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1209191403	600-C-138	1	X					X				-001
1209191404	"	1	X					X				-002
												R1206365

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-20-12 / 1115 Hrs.	[illegible signature]	9/21/12 0945

WSTF – 381B (02/00)

Date 9-24-12

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Laboratory / PO # NAVBKG0108

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Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1209201421	200-D-240	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-24-12 / 1100 HRS.	Amy Hentz	9/25/12 1000

WSTF – 381B (02/00)

R1206409 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 9-24-12

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Return Address:

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Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low level NDMA/DMN				Comments
1209201331	200-D-240	1	X					X				
1209201417	"	1	X					X				
1209210901Z	ST-6-685	1	X					X				
1209211026Z	"	1	X					X				
1209211251Z	ST-6-535	1	X					X				
1209211346Z	"	1	X					X				
1209240841Z	ST-6-575	1	X					X				
1209240952Z	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-24-12 / 1100 Hrs.	Amy Hentz	9/25/12 1000

WSTF – 381B (02/00)

R1206410 5
NASA/WSTF/Navarro
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Date 9-24-12

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1209201330	200-D-240	3	X		X							
1209201415	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-24-12 / 1100 HRS.	Amy Henetta	9/25/12 1000

WSTF – 381B (02/00)

R1206411 5
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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
120921090OZ	ST-6-685	3	X					X				
120921102SZ	"	3	X					X				
120921 1250Z	ST-6-535	3	X					X				
120921134SZ	"	3	X					X				
120924084OZ	ST-6-575	3	X					X				
120924095OZ	"	3	X					X				
120924095IZ	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-24-12 / 1100 HRS.	Amy Hentes	9/25/12 1000

WSTF – 381B (02/00)

R1206412 5
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White Sands Test Facility

000051

Date 9-26-12

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
E120924 1019	B650-EFF-1	1	X					X				
E120924 1021	"	1	X					X				
W120924 1332	PFE-7	1	X					X				
W120924 1333	"	1	X					X				
E120925 1007	B655-EFF-2	1	X					X				
E120925 1009	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-26-12 / 1100 HRS.	[illegible]	9/27/12 0935

WSTF – 381B (02/00)

R1206502 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 9-26-12

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Return Address:

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 VL				Comments
E1209241013	B650-EFF-1	3	X					X				
E1209241015	"	3	X					X				
E1209251001	B655-EFF-2	3	X					X				
E1209251003	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-26-12 / 1100HRS.	[illegible]	9/27/12 / 0935

WSTF – 381B (02/00)

Date 9-26-12

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Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
I1209241032	B650-INF-1	3	X		X							
I1209241034	"	3	X		X							
W1209241329	PFE-7	3	X		X							
W1209241330	"	3	X		X							
I1209251026	B655-INF-1	3	X		X							
I1209251028	"	3	X		X							
W1209260823	MPE-8	3	X		X							
W1209260824	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-26-12 / 1100 HRS.	[illegible]	9/27/12 / 0935

WSTF – 381B (02/00)

R1206504 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-2-12

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Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	DIOXINS/FURANS 8290				Comments
1210011306	400-C-118	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	10-2-12 / 1100 HRS.	[signature]	10/2/12 0945

WSTF – 381B (02/00)

R1206640 5
NASA/WSTF/Navarro
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Date 10-2-12

WSTF CHAIN OF CUSTODY RECORD

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(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1210011312	400-C-118	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-2-12 / 1100 HRS.	[illegible]	10/2/12 0945

WSTF – 381B (02/00)

50000

R1206641 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 10-2-12

Page 1 of 1

Laboratory / PO # 13 WSTF 002 B

Return Address for Analytical Reports:

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Las Cruces, NM 88004
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(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) 8260	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1210011300	400-C-118	3	X		X							
1210011301	"	3	X		X							
1210011302	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	10-2-12 / 1100 HRS.	[illegible]	10/3/12 0945

WSTF – 381B (02/00)

R1206647 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-2-12

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Laboratory / PO # 13-WSTF-001-B

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	SVOA 8270	HERBICIDES 8151	PESTICIDES 8081	PCB's 8082	Comments
1210011304	400-C-118	2	X					X				
1210011305	"	1	X						X			
1210011307	"	1	X							X		
1210011308	"	1	X								X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-2-12 / 1100HRS	[illegible]	10/3/12 0945

WSTF – 381B (02/00)

R1206649 5
NASA/WSTF/Navarro
White Sands Test Facility

00051

Date 10-2-12

WSTF CHAIN OF CUSTODY RECORD

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PHENOLICS 9066	TOTAL METALS	ANIONS, TOTAL ALKALINITY Cl, Fl, SULFATE / TDS	NO_2/NO_3 353.2	Comments
12100113 09	400-C-118	1	X					X				
12100113 10	"	1	X						X			
12100113 11	"	1	X							X		
12100113 13	"	1	X								X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-2-12 / 1100 HRS	[illegible signature]	10/3/12 0945

WSTF – 381B (02/00)

R1206649
NASA/WSTF/Navarro
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5

000552

WSTF CHAIN OF CUSTODY RECORD

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Analysis Requirements: Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	CYANIDE 9014	SULFIDE 376.1			Comments
1210011314	400-C-118	1	X					X				
121001315	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-2-12 / 1100 HRS	[signature]	10/3/12 0945
			R1206649

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00053

Date 10-4-12

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals				Comments
1210021302	400-C-143	1	X					X				
1210021417	400-C-118	1	X					X				
1210031003	NASA 6	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	10-4-12 / 1100 HRS.	Amy Hendo	10/5/12 0940

WSTF – 381B (02/00)

R1206748 5
NASA/WSTF/Navarro
White Sands Test Facility

00015

WSTF CHAIN OF CUSTODY RECORD

Date 10-4-12

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1210020700	400-C-143	3	X		X							
1210021300	"	3	X		X							
1210021415	400-C-118	3	X		X							
1210031000	NASA 6	3	X		X							
1210031001	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-4-12 / 1100 HRS.	Amy Hendrix	10/5/12 0940

WSTF – 381B (02/00)

R1206749 5
NASA/WSTF/Navarro
White Sands Test Facility

00066

Date 10-9-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF 0001 B

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8270 SVOA	HERBICIDES 8151	PESTICIDES 8081	PCB's 8082	Comments
1210041329	200-B-240	2	X					X				
1210041330	"	1	X						X			
1210041332	"	1	X							X		
1210041333	"	1	X								X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-9-12 / 1100 HRS.	[signature]	10/10/12 1000

WSTF – 381B (02/00)

R1206838 5
NASA/WSTF/Navarro
White Sands Test Facility

00050

Date 10-9-12

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Analysis Requirements

Special Instructions

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PHENOLICS 9066	TOTAL METALS	CYANIDE 9014	SULFIDE 376.1	Comments
1210041334	200-B-240	1	X					X				
1210041335	"	1	X						X			
1210041336	"	1	X						X			
1210041337	"	1	X							X		
1210041338	"	1	X								X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-9-12 / 1100 HRS.	Amy Heath	10/10/12 1000

WSTF – 381B (02/00)

R1206838 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 10-9-12

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Laboratory / PO # 13 WSTF 007 B

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Special Instructions

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
1210050840Z	JP-3-970	3	X					X				
1210051015Z	"	3	X					X				(BUBBLES)
1210051300Z	JP-3-825	3	X					X				
1210051400Z	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-9-12 / 1100 HRS.	Amy Hentho	10/10/12 1000

WSTF – 381B (02/00)

R1206839 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-9-12

WSTF CHAIN OF CUSTODY RECORD

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(575) 524-5119 (575) 524-_____

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Analysis Requirements: Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1210041325	200-B-240	3	X		X							
1210041326	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-9-12 / 1100 HRS.	Amy Hentto	10/10/12 1000

WSTF – 381B (02/00)

R1206840 5
NASA/WSTF/Navarro
White Sands Test Facility

00036

Date 10-9-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAV0000093

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Special Instructions

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN	Dioxins/Furans			Comments
1210050841Z	JP-3-970	1	X					X				
1210051016Z	"	1	X					X				
1210051301Z	JP-3-825	1	X					X				
1210051401Z	"	1	X					X				
1210051331	200-B-240	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-9-12 / 1100 HRS.	Amy Hentz	10/10/12 1000

WSTF – 381B (02/00)

R1206841 5
NASA/WSTF/Navarro
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Date 10-9-12

WSTF CHAIN OF CUSTODY RECORD

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN	Dioxins/Furans			Comments
1210050841Z	JP-3-970	1	X					X				
1210051016Z	"	1	X					X				
1210051301Z	JP-3-825	1	X					X				
1210051401Z	"	1	X					X				
1210051331	200-B-240	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-9-12 / 1100 HRS.	Amy Hentz	10/10/12 1000

WSTF – 381B (02/00)

R1206841 5
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WSTF CHAIN OF CUSTODY RECORD

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN			Comments
1210091016Z	JP-3-695	1	X					X			
1210091401Z	"	1	X					X			
1210091441Z	JP-3-515	1	X					X			
1210101013	JP-1-424	1	X					X			
1210101014	"	1	X					X			
1210100931Z	JP-3-515	1	X					X			
1210101041Z	Blm-37-885	1	X					X			
1210101430Z	"	1	X					X			
1210110831Z	Blm-37-750	1	X					X			
1210111020Z	"	1	X					X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-11-12 / 1100 HRS.	Lizzy Lopez	10/12/12 0955

WSTF – 381B (02/00)

R1206940 5
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White Sands Test Facility

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Date 10-11-12

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions, Total Alkalinity Cl, Fl, Sulfate / TDS	NO_2 / NO_3 353.2		Comments
1210101431Z	Blm-37-885	1	X					X				
1210101500Z	"	1	X						X			
1210101502Z	"	1	X							X		
1210111021Z	Blm-37-750	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-11-12 / 1100 HRS.	[illegible signature]	10/12/12 0855

WSTF – 381B (02/00)

R1206942 5
NASA/WSTF/Navarro
White Sands Test Facility

00517

Date 10-11-12

WSTF CHAIN OF CUSTODY RECORD

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Laboratory / PO # NAVBKT0108

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Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
121010150 1 Z	Bun-37-885	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-11-12 / 1100 HRS.	[illegible]	10/12/12 0955

WSTF – 381B (02/00)

00005

R1206944 5
NASA/WSTF/Navarro
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WSTF CHAIN OF CUSTODY RECORD

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Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
1210091015Z	JP-3-695	3	X					X				
1210091400Z	"	3	X					X				(Bubbles)
1210091440Z	JP-3-515	3	X					X				
1210100930Z	"	3	X					X				
1210101010	JP-1-424	3	X					X				
1210101011	"	3	X					X				
1210101012	"	3	X					X				* Matrix Spike for # 1210101011
1210101040Z	Blm-37-885	3	X					X				
1210101400Z	"	3	X					X				(Bubbles)
1210110830Z	Blm-37-750	3	X					X				
1210110950Z	"	3	X					X				

Relinquished By	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-11-12 / 1100 HRS.	[signature]	10/12/12 0955

WSTF – 381B (02/00)

R1206945 5
NASA/WSTF/Navarro
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00077

WSTF CHAIN OF CUSTODY RECORD

Date 10-15-12

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Laboratory / PO # 13 WSTF 007B

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Analysis Requirements

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
121011134OZ	Blm-37-640	3	X					X				
121011150OZ	"	3	X					X				(Bubbles)

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-15-12 / 1100 HRS	[illegible]	10/16/12 / 0943

WSTF – 381B (02/00)

R1207019 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 10-17-12

Page 1 of 1

Laboratory / PO # 13WSTF 002B

Return Address for Analytical Reports:

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Attn: ☒ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
I 1210151442	B650-INF-1	3	X		X							
I 1210151444	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-17-12 / 1100 HRS.	[illegible]	10-18-12 9:50

WSTF – 381B (02/00)

R1207114 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-17-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF002B

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Las Cruces, NM 88004
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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
E1210151405	B650-EFF-1	3	X					X				
E1210151407	"	3	X					X				
1210160930Z	ST-6-685	3	X					X				
1210161050Z	"	3	X					X				
1210161430Z	ST-6-535	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-17-12 / 1100 HRS.	[signature]	10-18-12 9:50

WSTF – 381B (02/00)

R1207115 5
NASA/WSTF/Navarro
White Sands Test Facility

00053

Date 10-17-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF0001B

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Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	ANIONS, TOTAL ALKALINITY Cl, Fl, SULFATE /TDS	NO_2/NO_3 353.2			Comments
E121015141G	B650-EFF-1	1	X					X				
E121015141H	"	1	X						X			
I121015144G	B650-INF-1	1	X					X				
I121015145G	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	10-17-12 / 1100HRS.	[signature]	10-18-12 9:50

WSTF – 381B (02/00)

R1207116 5
NASA/WSTF/Navarro
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WSTF CHAIN OF CUSTODY RECORD

Date 10-17-12

Page 1 of 1

Laboratory / PO # NAV 0000093

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Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1210150835Z	Blm-37-640	1	X					X				
E1210151411	B650-EFF-1	1	X					X				
E1210151413	"	1	X					X				
1210151415Z	Blm-38-620	1	X					X				
1210160810Z	"	1	X					X				
1210160931Z	ST-6-685	1	X					X				
1210161051Z	"	1	X					X				
1210161431Z	ST-6-535	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-17-12 / 1100 HRS.	[illegible]	10-18-12 9:50

WSTF – 381B (02/00)

R1207119
NASA/WSTF/Navarro
White Sands Test Facility

5

Date 10-18-12

WSTF CHAIN OF CUSTODY RECORD

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1210170858Z	ST-6-535	1	X					X				
1210171031Z	ST-6-575	1	X					X				
1210171402Z	"	1	X					X				
1210171450Z	"	1	X					X				
E1210171243	B650-EFF-1	1	X					X				
E1210171315	B655-EFF-2	1	X					X				
E1210171317	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-18-12 / 1100 HRS.	Amy Hentto	10/19/12 0930

WSTF – 381B (02/00)

R1207151 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-18-12

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Laboratory / PO # 13 WSTF 0001 B

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Return Address:

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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	ANIONS, TOTAL ALKALINITY Cl, Fl, SULFATE / TDS	NO_2/NO_3 353.2			Comments
E121017319	B655-EFF-2	1	X					X				
E121017321	"	1	X						X			
I121017348	B655-INF-1	1	X					X				
I121017350	"	1	X						X			

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	10-18-12 / 1100 HRS.	Amy Heath	10/18/12 0930

WSTF – 381B (02/00)

0001 4

R1207154 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-18-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13 WSTF 002B

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(575) 524-5119 (575) 524-_____

Analysis Requirements

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 LL				Comments
1210170857Z	ST-6-535	3	X					X				
1210171030Z	ST-6-575	3	X					X				
1210171400Z	"	3	X					X				(Bubbles)
1210171401Z	"	3	X					X				(Bubbles)
E1210171309	B655-EFF-1	3	X					X				
E1210171311	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-18-12 / 1100 HRS.	Amy Heath	10/19/12 0930

WSTF – 381B (02/00)

R1207155
NASA/WSTF/Navarro
White Sands Test Facility

00058

WSTF CHAIN OF CUSTODY RECORD

Date 10-19-12

Page 1 of 1

Laboratory / PO # 13 WSTF 002 B

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
I1210171340	B655-ENF-1	3	X		X							
I1210171342	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-19-12 / 1100 HRS.	Amy Hendrix	10/19/12 0930

WSTF – 381B (02/00)

R1207157 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 10-23-12

Laboratory / PO # NAV0000093

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Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	LOW LEVEL NDMA/DMN				Comments
1210181101	JP-2-447	1	X					X				HOLD TIME WATCH
1210181421	"	1	X					X				
1210190710	Blm-10-517	1	X					X				
1210190932	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-23-12 / 1100 HRS.	Sergio Lopez	10/24/12 0935

WSTF – 381B (02/00)

R1207253 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-23-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF0001B

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Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions Total Alkalinity Cl, Fl, Sulfate / TDS	NO_2 / NO_3 353.2	Sulfide 376.1	Comments
1210190933	302 Pond	1	X							X		
W1210191338	MPE-10	1	X					X				
W1210191339	"	1	X						X			
W1210191340	"	1	X							X		
1210221335	200-B-240	1	X								X	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-23-12 / 1100 HRS.	[illegible]	10/24/12 0935

WSTF – 381B (02/00)

R1207260
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 10-23-12

Laboratory / PO # 13 WSTF 002B

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Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
W1210191015	MPE-11	3	X		X							
W1210191016	"	3	X		X							
W1210191251	MPE-1	3	X		X							
W1210191252	"	3	X		X							
W1210191335	MPE-10	3	X		X							
W1210191336	"	3	X		X							
W1210221244	PFE-1	3	X		X							
W1210221245	"	3	X		X							
W1210221315	PFE-2	3	X		X							
W1210221316	"	3	X		X							
W1210221343	PFE-3	3	X		X							
W1210221344	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
John Minnick	10-23-12 1100HRS	Sergio Lopez	10/24/12 0935

WSTF – 381B (02/00)

00125

R1207261 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-23-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF 002B

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P.O. Box 20
Las Cruces, NM 88004
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(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (8260)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
W1210221424	PFE-4A	3	X		X							
W1210221425	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-23-12 / 1100 HRS.	[signature]	10/24/12 0935
			R1207261

WSTF – 381B (02/00)

00127

Date 10-23-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13 WSTF 002B

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Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
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Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260LL				Comments
1210181100	JP-2-447	3	X					X				
1210181420	"	3	X					X				
1210190930	BLM-10-517	3	X					X				
1210190931	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-23-12 / 1100 HRS	[illegible]	10/24/12 0935

WSTF – 381B (02/00)

R1207264 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-26-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAV0000093

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Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Low Level NDMA/DMN				Comments
1210240836	WEUK	1	X					X				
1210240837	"	1	X					X				
1210240902	WEU J	1	X					X				
1210240903	"	1	X					X				
1210240700B	ST-5-481	1	X					X				
1210240948B	"	1	X					X				
W1210241051	PFE-7	1	X					X				
W1210241052	"	1	X					X				
W1210241053	"	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-26-12 / 1100 HRS.	Amy Henth	10/26/12 0955

WSTF – 381B (02/00)

R1207332 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 10-25-12

WSTF CHAIN OF CUSTODY RECORD

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Laboratory / PO # NAVBLK0108

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Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	PERCHLORATE 331.0				Comments
1210240951B	ST-5-481	1	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-25-12 / 1100 HRS.	Amy Henson	10/26/12 0955

WSTF – 381B (02/00)

R1207333 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 10-25-12

Page 1 of 1

Laboratory / PO # 13WSTF002B

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Return Address:

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Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	8260 VOC				Comments
1210240700	WELL K	3	X					X				
1210240835	"	3	X					X				
1210240900	WELL J	3	X					X				
1210240901	"	3	X					X				
1210240945B	ST-5-481	3	X					X				
1210240946B	"	3	X					X				

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-25-12 / 1100 HRS.	Amy Kentto	10/26/12 0955

WSTF – 381B (02/00)

R1207334 5
NASA/WSTF/Navarro
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09855

WSTF CHAIN OF CUSTODY RECORD

Date 10-26-12

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Please return coolers and contents of coolers as soon as possible.

Return Address:

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Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) (Sealed)	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1210230730B	Blm-21-400	3	X		X							
1210230941 B	"	3	X		X							
1210230942B	"	3	X		X							
W1210231342	MPE-8	3	X		X							
W1210231343	"	3	X		X							
W1210231354	MPE-9	3	X		X							
W1210231355	"	3	X		X							
W1210241047	PFE-7	3	X		X							
W1210241048	"	3	X		X							
W1210241049	"	3	X		X							

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-25-12 / 1100 HRS.	Amy Hendrix	10/26/12 0955

WSTF – 381B (02/00)

00055

R1207335 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 10-25-12

Page 1 of 1

Laboratory / PO # 13WSTF 0001 B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) ( )	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Total Metals	Anions, Total Alkalinity Cl, Fl, Sulfate / TDS	NO_2 / NO_3 353.2		Comments
1210230944B	Blm-21-400	1	X					X				
W1210231345	MPE-8	1	X					X				
W1210231346	"	1	X						X			
W1210231347	"	1	X							X		
W1210231357	MPE-9	1	X					X				
W1210231358	"	1	X						X			
W1210231359	"	1	X							X		
1210240949B	ST-5-481	1	X					X				
1210240950B	"	1	X					X				
1210240953B	"	1	X						X			
1210240952B	"	1	X							X		

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-25-12 / 1100HRS.	Amy Hentz	10/26/12 0955

WSTF – 381B (02/00)

00033

R1207336 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 8-2-12

WSTF CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Bromacil				Comments
1208011432	BLM-6-488	1	X					X				
1208020802Z	BLM-30-585	1	X			X						

Client: NAVARRO
SRR #48148
Project #16988.01.10X
Case: NAVARRO 179
VTSR: 08/03/12 0830
Sample(s) Received Intact
Temperature: -0.3 °C/#18440

010008

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-2-12 / 1015 HRS.	SwRI / DLmz	8/3/2012 830

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 8-8-12

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMRCIL				Comments
12080608017	WB-14-520	1	X					X				
FE1208060815	INFLUENT	1	X			X						7 DAY TAT
FE1208060835	EFFLUENT	1	X			X						
1208061421	300-C-128	1	X			X		X				
1208061422	"	1	X			X		X				
1208070956Z	400-D-275	1	X					X				
1208070948	ST-1-541	1	X			X		X				
1208070949	"	1	X			X		X				
1208071448	BW-1-268	1	X			X		X				
1208071449	"	1	X			X		X				
1208061356Z	400-D-355	1	X					X				

Client: NAVARRO RESEARCH & ENG.
SRR #48197
Project #16988.01.10X
Case: NAVARRO 179
VTSR: 08/09/12 0830
Sample(s) Received Intact
Temperature: 3.1 °C/#18439

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-8-12 / 1100 HRS.	[illegible] / SWRI	8.9.12 / 0830

010005

WSTF – 381B (02/00)

SAMPLES REC'D INTACT @ 3.0°C

WSTF CHAIN OF CUSTODY RECORD

Date 8-9-12

Laboratory / PO # NAVARRO 179

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial)	Volatile Organics Ice/No Headspace (40 ml Vial)	Nitroaromatics Ice (1 L Glass Bottle) 607	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL				Comments
FI 1208080840	INFLUENT	1	X			X						7 DAY TAT
FE 1208080900	EFFLUENT	1	X			X						
1218081042	BLM-14-327	1	X			X						
1208081043	"	1	X			X						
1208080921Z	400-D-195	1	X					X				

Client: NAVARRO RESEARCH & ENG.
SRR #48217
Project #16988.01.10X
Case: NAVARRO 179
VTSR: 08/10/12 0830
Sample(s) Received Intact
Temperature: 3.4 °C/#18439

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-9-12 / 1115 Hrs.		8/10/12 0830

010008

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 8-13-12

Page 1 of 1

Laboratory / PO # NAVARRO 179

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Las Cruces, NM 88004
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(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL				Comments
1208091336Z	Blm-36-610	1	X					X				
1208091407	200-JG-110	1	X					X				
1208091408	"	1	X					X				
FI1208130845	INFLUENT	1	X			X		X				7 DAY TAT
FE1208130905	EFFLUENT	1	X			X						

Client: Navarro
SRR #48238
Project #16988.01.10X
Case: Navarro 179
VTSR: 08/14/12 0830
Sample(s) Received Intact
Temperature: 3.2°C/#SN 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-13-12 / 1100 HRS.	[illegible]	8/14/12 0830

010005

WSTF – 381B (02/00)

Date 8-15-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Bromacil				Comments
1208130936Y	700-H-670	1	X			X						
1208131307	700-D-200	1	X			X						
1208131308	"	1	X			X						
1208140721Y	700-H-535	1	X			X		X				
1208141002	700-D-186	1	X			X						
1208141351Y	700-H-350	1	X			X						
1208150859Z	Bum-36-350	1	X			X						
1208141435Z	"	1	X			X						

Client: Navarro Research and Engineering, Inc.
SRR #48261
Project #16988.01.10K
Case: Navarro 179
VTSR: 08/16/12 0830
Sample(s) Received Intact
Temperature: 3.1 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-15-12 / 1100 HRS	[signature]	8/16/12 0830

WSTF – 381B (02/00)

010008

Date 8-20-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 179

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (300 ml Poly)	BROMACIL				Comments
FI1208160830	INFLUENT	1	X			X						7 DAY TAT
FE1208160850	EFFLUENT	1	X			X						
1208160833	700-A-253	1	X			X		X				
1208160936Y	WB-5-345	1	X					X				
1208161051Y	WB-5-280	1	X					X				
1208161416Y	"	1	X					X				
FI1208200810	INFLUENT	1	X			X						7 DAY TAT
FE1208200825	EFFLUENT	1	X			X						
FE1208200845	EFFLUENT	1	X			X						

Client: Navarro Research and Engineering, Inc.
SRR #48290
Project #16988.01.10X
Case: Navarro 179
VTSR: 08/21/12 0630
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-20-12 / 1130 HRS.	[illegible]	8/21/12 0830

WSTF – 381B (02/00)

010005

WSTF CHAIN OF CUSTODY RECORD

Date 8-23-12

Page 1 of 1

Laboratory / PO # NAVARRO 179

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO3 (500 ml Poly)	Bromacil				Comments
1208200936Y	WB-5-250	1	X					X				
1208210802	NASA 8	1	X					X				
1208220832	NASA 9	1	X					X				
FE1208220805	INFLUENT	1	X			X						7 DAY TAT
FE1208220820	EFFLUENT	1	X			X						7 DAY TAT
1208221316Y	ST-5-985	1	X					X				
1208221516	200-D-109	1	X			X		X				

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Client: Navarro
SRR #48315
Project #16988.01.10X
Case: Navarro 179
VTSR: 08/24/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

010005

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-23-12 / 1130 HRS.	[illegible]	8/24/12 0830

WSTF – 381B (02/03)

WSTF CHAIN OF CUSTODY RECORD

Date 8-27-12

Page 1 of 1

Laboratory / PO # NAVARRO 179

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO3 (500 ml Poly)	BROMACIL				Comments
1208240801Y	ST-S-815	1	X					X				
E1208240947	B650-EFF-1	1	X			X						
E1208240949	"	1	X			X						*MATRIX SPIKE FOR #E1208240947
I1208241020	B650-INF-1	1	X			X						
I1208241022	"	1	X			X						
1208241034	200-D-109	1	X					X				
1208250946Y	ST-S-1175	1	X					X				
FI1208270855	INFLUENT	1	X			X						7 DAY TAT
FE1208270920	EFFLUENT	1	X			X						

Client: Navarro
SRR #48340
Project #16988 01.10X
Case: Navarro 179
VTSR: 08/28/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-27-12 / 1115 Hrs.	SwRI / DRmz	08/28/12 08:30

WSTF - 381B (02/00)

010008

Date 9-29-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 179

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Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitroamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL				Comments
1208270906Z	200-H-331	1	X					X				
1208271341Z	200-H-433	1	X					X				
1208271402	300-D-153	1	X					X				
1208280826Z	200-H-225	1	X					X				
E1208280951	BGSS-EFF-2	1	X			X						
E1208280953	"	1	X			X						* MATRIX SPIKE FOR # E1208280951
I1208281020	BGSS-INF-1	1	X					X				
W1208281252	PFE-7	1	X			X						

Client: Navarro
SRR #48377
Project # 16988.01.10X
Case: Navarro 179
VTSR: 08/30/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-29-12 / 1115 hrs.	[illegible]	8/30/12

WSTF – 381B (02/00)

010005

WSTF CHAIN OF CUSTODY RECORD

Date 8-30-12

Page 1 of 1

Laboratory / PO # NAVARRO 179

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (007)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL				Comments
W1208291226	MPE-11	1	X			X		X				
W1208291300	MPE-1	1	X			X		X				
W1208291301	"	1	X			X		X				
FI 1208300900	INFLUENT	1	X			X						
FE 1208300925	EFFLUENT	1	X			X						

Client: Navarro
SRR #48393
Project # 16988.01.10X
Case: Navarro 179
VTSR: 08/31/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	8-30-12 / 1100 HRS	[illegible]	8/31/12 / 0830

010008

WSTF – 381B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 9-6-12

Page 1 of 1

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

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P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL				Comments
FI1209050830.	INFLUENT	1	X			X						7 DAY TAT
FE1209050850.	EFFLUENT	1	X			X						
1209051003B.	NASA 5	1	X			X		X				
1209051062.	BLM-13-300	1	X					X				
1209051406B.	NASA 10	1	X			X		X				
FI1209060715.	INFLUENT	1	X			X						7 DAY TAT
FE1209060735.	EFFLUENT	1	X			X						
1209060922.	BLM-5-527	1	X					X				

Client: Navarro
SRR #48444
Project # 16988.01.10X
Case: Navarro 179
VTSR: 09/07/12 0900
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-6-12 / 1115 MDT	[signature]	9/7/12 0900

WSTF – 381B (02/00)

010011

WSTF CHAIN OF CUSTODY RECORD

Date 9-10-12

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO3 (500 ml Poly)	BROMACIL				Comments
1209080922B	NASA 9	1	X			X		X				
1209081109B	200-SG-1	1	X					X				
FI1209100930	INFLUENT	1	X			X						7 DAY TAT
FE1209100850	EFFLUENT	1	X			X						7 DAY TAT

Client: Navarro
SRR #48484
Project # 16988.01 00X
Case: Navarro 179
VTSR: 09/11/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 13440

Relinquished By	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-10-12 / 1115 HRS.	[signature]	9/11/12 0830

0100013

WSTF – 38:B (02/00)

WSTF CHAIN OF CUSTODY RECORD

Date 9-13-12

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Laboratory / PO # NAVARRO 179

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(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (300 ml Poly)	BROMACIL				Comments
FE 1209120750	INFLUENT	1	X			X						7 DAY TAT
FE 1209120810	EFFLUENT	1	X			X						
1209121402	Blm-18-430	1	X			X						
1209130916	Blm-23-431	1	X			X						

Client: Navarro Research and Engineering, Inc.
SRR #48523
Project # 16988.01.10X
Case: Navarro 179
VTSR: 09/14/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-13-12 / 1130HRS	[illegible]	9/14/12 0830

WSTF – 381B (02/00)

010005

WSTF CHAIN OF CUSTODY RECORD

Date 9-17-12

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO3 (500 ml Poly)	BROMACIL				Comments
1209140917	Blm-15-305	1	X			X						
1209140918	"	1	X			X						
1209140927B	100-HG-139	1	X					X				
1209131311	Blm-9-419	1	X			X						
1209150916	BW-3-180	1	X					X				
1209151107	BW-6-355	1	X			X						
1209151108	"	1	X			X						*MATRIX SPIKE FOR # 1209151107.

Client: Navarro
SRR #48546
Project # 16988.01.10X
Case: Navarro 179
VTSR: 09/18/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 8440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-17-12 / 1115 HRS.	[illegible]	9/18/12 0830

WSTF – 381B (02/00)

010008

Date 9-20-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO3 (500 ml Poly)	BROMACIL				Comments
1209191402	600-G-138	1	X					X				
1209190730	Blm-1-435	1	X			X						
FI1209200745	INFLUENT	1	X			X						7-DAY TAT
FE1209200805	EFFLUENT	1	X			X						7-DAY TAT

Client: Navarro
SRR #4E583
Project # 16988.01.10X
Case: Navarro 179
VTSR: 09/21/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

010005

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-20-12 / 1115 HRS.	[signature]	9/21/12 0830

WSTF – 381B (02/00)

Date 9-24-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO# NAVARRO 179

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 83004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	Bromacil				Comments
1209201416	200-D-240	1	X					X				
FI 1209240745	INFLUENT	1	X			X						7 DAY TAT
FE 1209240805	EFFLUENT	1	X			X						

Client: Navarro
SRR #48605
Project # 16988.01.10X
Case: Navarro 179
VTSR: 09/25/12 0830
Sample(s) Received Intact
Temperature: 3.2 °C/#SN: 18440

010008

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-24-12 / 1100 HRS.	[signature]	9/25/12 0830

WSTF – 381B (02/00)

Date 9-26-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # NAVARRO 179

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial)	Volatile Organics Ice/No Headspace (40 ml Vial)	Nitrosamines Ice (1 L Glass Bottle) 607	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL				Comments
E1209241017	B650-EFF-1	1	X			X						
I1209241036	B650-INF-1	1	X			X						
I1209241038	"	1	X			X						
W1209241331	PFE-7	1	X			X						
E1209251005	B655-EFF-2	1	X			X		X				
I1209251030	B655-INF-1	1	X					X				
FI1209260820	INFLUENT	1	X			X						7 DAY ~~RPT~~
FE1209260840	EFFLUENT	1	X			X						
W1209260825	MPE-8	1	X			X						

Client: Navarro
SRR #48637
Project # 16988.01.10X
Case: Navarro 179
VTSR: 09/27/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	9-26-12 / 1100 Hrs.	[illegible]	9/27/12 0830

WSTF – 381B (02/00)

010005

Date 10-3-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF ~~0008~~ 003B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (1007)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL			Comments
1210011303	400-C-118	1	X			X		X			
FI1210020745	INFLUENT	1	X			X		X			7 DAY TAT
FE1210020805	EFFLUENT	1	X			X		X			
1200213C1	400-C-173	1	X			X		X			
1210021416	400-C-118	1	X			X		X			

Client: Navarro
SRR #48686
Project # 16988.01.10X
Case: Navarro 179
VTSR: 10/04/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-3-12 / 1030 HRS.	[illegible]	10/4/12 0830

WSTF – 381B (02/00)

010005

Date 10-4-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF003B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☐ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL				Comments
1210031002	NASA 6	1	X			X		X				
FE1210040825	INFLUENT	1	X			X						7 DAY TAT
FE1210040845	EFFLUENT	1	X			X						

Client: Navarro
SRR #48698
Project # 16988.01.10X
Case: 13WSTF003B
VTSR: 10/05/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-4-12 / 1100 HRS	[illegible]	10/5/12 0830

WSTF – 381B (02/00)

010008

WSTF CHAIN OF CUSTODY RECORD

Date 10-9-12

Laboratory / PO # 13WSTF 003 B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
~~Las Cruces, NM 88004~~
Attn: ☐ Lori Mirnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO3 (500 ml Poly)	BROMACIL				Comments
1210041327	200-B-240	1	X			X		X				
1210041328	"	1	X			X		X				

Client: Navarro
SRR #48731
Project # 16988.01.10X
Case: 13WSTF003B
VTSR: 10/10/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	10-9-12 / 1100 Hrs.	[signature] / ART ARGUELLO	10.10.12 / 0830

WSTF – 381B (02/00)

010005

WSTF CHAIN OF CUSTODY RECORD

Date 10-11-12

Laboratory / PO # 13WSTF003B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO3 (500 ml Poly)	BROMACIL				Comments
FE1210100840	INFLUENT	1	X			X						7 DAY TAT
FE1210100910	EFFLUENT	1	X			X						
1210101701Z	Blm-37-885	1	X			X		X				
FE1210110800	INFLUENT	1	X			X						7 DAY TAT
FE1210110820	EFFLUENT	1	X			X						
1210110951Z	Blm-37-750	1	X			X		X				

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Client: Navarro
SRR #48755
Project # 16988.01.10X
Case: 13WSTF003B
VTSR: 10/12/12 0845
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-11-12 / 1100 HRS	[illegible]	10/12/12 0845

010008

WSTF – 381B (02/00)

Date 10-15-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF003B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)	BROMACIL			
121011150 1Z	Blm-37-640	1	X			X		X			
FI 1210150755	INFLUENT	1	X			X					
FE 1210150820	EFFLUENT	1	X			X					

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Comments

507567

3 7 DAY TAT

Client: Navarro Research and Engineering, Inc.
SRR #49774
Project # 16988.01.10X
Case: 13WSTF003B
VTSR: 10/16/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-15-12 / 1100 HRS	[illegible]	10/16/12 0830

WSTF – 381B (02/00)

010011

Date 10-17-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF003B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☒ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
E121015 1409	B650-EFF-1	1	X			X						507657
I121015 1446	B650-INF-1	1	X			X						
FI 1210170805	INFLUENT	1	X			X						7 DAY TAT
FI 1210170800	"	1	X			X						
FE 1210170825	EFFLUENT	1	X			X						

Client: Navarro
SRR #48787
Project # 16988.01.10X
Case: 13WSTF003B
VTSR: 10/18/12 0830
Sample(s) Received Intact
Temperature: 3.0 °C/#SN: 18440

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-17-12 / 1100 MDT	[illegible]	10/18/12 0830

WSTF – 381B (02/00)

010014

Date 10-18-12

WSTF CHAIN OF CUSTODY RECORD

Laboratory / PO # 13WSTF008B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
E1210171313	B655-EFF-2	1	X			X						507864
I1210171344	B655-INF-1	1	X			X						
I1210171346	"	1	X			X						
												SRR
												48798

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-18-12 / 1100 HRS.		

WSTF – 381B (02/00)

010017

WSTF CHAIN OF CUSTODY RECORD

Date 10-23-12

Page 1 of 1

Laboratory / PO # 13WSTF003B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☒ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1210190932	302 POND	1	X			X						508182
W1210191017	MPE-11	1	X			X						
W1210191253	MPE-1	1	X			X						SRR 48833
W1210191337	MPE-10	1	X			X						
W1210221246	PFE-1	1	X			X						
W1210221317	PFE-2	1	X			X						
W1210221345	PFE-3	1	X			X						
W1210221426	PFE-4A	1	X			X						
FI1210220820	INFLUENT	1	X			X						7 DAY TAT
FE1210220845	EFFLUENT	1	X			X						

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-23-12 / 1100 HRS.		

WSTF – 381B (02/00)

010005

WSTF CHAIN OF CUSTODY RECORD

Date 10-25-12

Page 1 of 1

Laboratory / PO # 13WSTF003B

Return Address for Analytical Reports:

NASA / WSTF
P.O. Box 20
Las Cruces, NM 88004
Attn: ☑ Lori Minnick ☐ Other _____
(575) 524-5119 (575) 524-_____

Analysis Requirements

Special Instructions

Please return coolers and contents of coolers as soon as possible.

Return Address:

NASA / WSTF
Building 120 / Route 70
Las Cruces, NM 88012
Attn: Lori Minnick

Sample No.	Well ID.	# of Containers	Sample Type (Aqueous)	Halogenated Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Volatile Organics Ice/No Headspace (40 ml Vial) ( )	Nitrosamines Ice (1 L Glass Bottle) (607)	RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se and Ag) Ice/HNO_3 (500 ml Poly)					Comments
1210230943B	Blm-21-400	1	X			X						508509
W1210231344	MPE-8	1	X			X						
W1210231356	MPE-9	1	X			X						
FI 1210240815	INFLUENT	1	X			X						7 DAY TAT
FI 1210240820	"	1	X			X						
FE 1210240845	EFFLUENT	1	X			X						
FE 1210240930	"	1	X			X						
W1210241050	PFE-7	1	X			X						
1210240947B	ST-5-481	1	X			X						

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	10-25-12 / 1100HRS.	SER 48864	

WSTF – 381B (02/00)

010007

National Aeronautics and
Space Administration

NASA WSTF Periodic Monitoring Report

Comprehensive Annual 2012

Appendix C
Chemical Analytical Program (Internal QA Reports) for Fourth Quarter 2012

National Aeronautics and
Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

August 2012

Report Submitted: January 22, 2012

Report Prepared by:
Carlyn A. Tufts
Environmental Scientist
Navarro Research and Engineering, Inc.

NM8800019434
NASA Johnson Space Center White Sands Test Facility
12600 NASA Road Las Cruces, New Mexico 88012

1.0 Introduction

The WSTF Groundwater Monitoring Plan (GMP) requires the preparation of a monthly report to assess the quality of analytical data reported. The monthly QAR prepared by the environmental contractor and reviewed by the contractor QA/QC Coordinator provides the following information:

- A summary of notable anomalies and a follow-up on previous anomalies, if necessary.
- A summary of notable data quality issues by analytical method.
- A list of the sample events for which samples were collected in August 2012.
- The quantity and type of quality control samples analyzed.
- Definitions of data qualifiers used in WSTF data reporting.
- The quantity and type of data qualifiers applied to individual analytical results.
- A list of QA narratives for the month arranged by analytical method.
- A summary table of blank sample detections.

2.0 Data Quality

2.1 Notable Anomalies Identified in Previous QA Reports

There were no notable anomalies in the groundwater data associated with the July 2012 QA Report.

2.2 Notable Anomalies

There are no notable anomalies in the groundwater data associated with this QA Report.

2.3 Low Level Nitrosamine Method

The low level nitrosamine equipment blank and sample collected from BLM-38-620 on 8/16/2012 were lost during extraction at the laboratory and were not analyzed. Access to the well was blocked due to arroyo flooding until resampling was conducted on 10/16/2012. The sample collected on 10/16/2012 was lost at the laboratory due to poor NDMA-d6 internal standard recoveries. Additional resampling was conducted on 11/28/2012 and reportable results were obtained.

3.0 Data Tables

Table 1 summarizes the sample events initiated in August 2012. This report is based on data quality issues related to the sample events listed in Table 1. Tables 2 through 8 contain information related to the sample events in Table 1. As specified by the WSTF GMP, specific quality control samples are utilized to assess the quality of analytical data. When data quality criteria are not met, data qualifiers are applied to the data. Table 2 presents the quantity of quality control samples collected for each analytical method. Table 3 compares the quality control sample percentages collected to the requirements in the GMP. Definitions of data qualifiers used for WSTF chemical analytical data are listed in Table 4. Table 5 and Table 6 present the total number of individual result records and summarize the quantity of field and laboratory data qualifiers assigned to individual analyte result records in the WSTF analytical database. Table 7 provides all quality assurance narratives associated with the sample events in Table 1. Narratives associated with qualified data are identified by **bold text** in Table 7. Table 8 provides a summary of all detections in WSTF blank samples.

Table 1 – Sample Events for August 2012

Well ID	Event Date
BLM-25-455	8/1/2012
BLM-30-585	8/1/2012
BLM-6-488	8/1/2012
ST-2-466	8/2/2012
WB-14-520	8/2/2012
300-C-128	8/6/2012
400-D-355	8/6/2012
BLM-22-570	8/6/2012
400-D-195	8/7/2012
400-D-275	8/7/2012
BW-1-268	8/7/2012
ST-1-541	8/7/2012
BLM-14-327	8/8/2012
BLM-7-509	8/8/2012
200-JG-110	8/9/2012
BLM-36-610	8/9/2012
BLM-10-517	8/10/2012
BLM-36-860	8/10/2012

Well ID	Event Date
700-H-535	8/13/2012
700-H-670	8/13/2012
700-J-200	8/13/2012
700-D-186	8/14/2012
700-H-350	8/14/2012
BLM-36-350	8/14/2012
BLM-36-800	8/14/2012
700-A-253	8/16/2012
BLM-38-620	8/16/2012
WB-5-280	8/16/2012
WB-5-345	8/16/2012
BLM-38-480	8/20/2012
WB-5-250	8/20/2012
NASA 7	8/21/2012
NASA 8	8/21/2012
ST-5-655	8/21/2012
PL-7-560	8/22/2012
ST-5-985	8/22/2012

Well ID	Event Date
ST-5-815	8/23/2012
200-D-109	8/24/2012
B650-EFF-1	8/24/2012
B650-INF-1	8/24/2012
PL-7-480	8/24/2012
ST-5-485	8/24/2012
ST-5-1175	8/25/2012
200-H-331	8/27/2012
200-H-433	8/27/2012
300-D-153	8/27/2012
200-H-225	8/28/2012
B655-EFF-2	8/28/2012
B655-INF-1	8/28/2012
PFE-7	8/28/2012
MPE-1	8/29/2012
MPE-11	8/29/2012
ST-6-685	8/30/2012

Table 2 - Quantity of Quality Control Samples

Method	Samples	Field Blanks	Equip Blanks	Trip Blanks	Blind Controls	Duplicates	Matrix Spikes
Perchlorate by EPA Method 331.0	**15**	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**16**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**39**	**3**	**2**	0	**1**	**5**	**2**
Volatile Organics by SW-846 Method 8260C	**35**	**15**	**15**	**5**	**1**	**6**	0
Low Level Volatile Organics by SW-846 Method 8260C	**18**	**3**	**13**	**2**	0	0	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**1**	0	0	0	0	0	0
Anions by Various EPA Methods	**13**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**31**	**1**	**3**	0	**1**	**3**	**2**
Nitrosamines by Low-Level Method	**33**	**9**	**21**	**3**	**1**	**4**	**1**

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 9/1/2011	QC Qty. since 9/1/2011	QC % since 9/1/2011	Sample Quantity August 2012	QC Quantity August 2012	QC % August 2012
VOA Duplicates	10	563	58	**10**	53	6	11
VOA Matrix Spikes	2	563	14	**2**	53	1	2
607 Duplicates	10	370	35	**9**	39	5	13
607 Matrix Spikes	2	370	9	**2**	39	2	5
607 Equipment Blanks	2	370	10	**3**	39	3	8
607 Field Blanks	2	370	10	**3**	39	3	8
NDMA_LL Duplicates	10	366	40	**11**	33	4	12
NDMA_LL Matrix Spikes	2	366	10	**3**	33	1	3
Metals Duplicates	10	259	26	**10**	31	3	10
Metals Matrix Spikes	2	259	6	**2**	31	2	6
Metals Equipment Blanks	5	259	15	**6**	31	3	10
Metals Field Blanks	5	259	14	**5**	31	1	3

Quality Control Requirement	Requirement %	Sample Events since 9/1/2011	QC Qty. since 9/1/2011	QC % since 9/1/2011	Sample Events August 2012	QC Quantity August 2012	QC % August 2012
VOA Equipment Blanks, Trip Blanks, and Field Blanks	*Should approach 100%*	563	563	100%	53	53	100%
Low Level Nitrosamine Equipment Blanks, Trip Blanks, and Field Blanks	*Should approach 100%*	354	352	99%	31	30	97%

Table 4 - Definitions of Data Qualifiers

Qualifier	Definition
*	User defined qualifier. See quality assurance narrative.
A	The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
AD	Relative percent difference for analyst (laboratory) duplicates was outside standard limits.
D	The reported result is from a dilution.
EB	The analyte was detected in the equipment blank.
FB	The analyte was detected in the field blank.
G	The result is an estimated value greater than the upper calibration limit.
i	The result, quantitation limit, and/or detection limit may have been affected by matrix interference.
J	The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA	The value/result was either not analyzed for or not applicable.
ND	The analyte was not detected above the detection limit.
Q	The result for a blind control sample was outside standard limits.
QD	The relative percent difference for a field duplicate was outside standard limits.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
RB	The analyte was detected in the method blank.
S	The result was determined by the method of standard addition.
SP	The matrix spike recovery and/or the relative percent difference for matrix spike duplicates was outside standard limits.
T	The sample was analyzed outside the specified holding time or temperature.
TB	The analyte was detected in the trip blank.
TIC	The analyte was tentatively identified by a GC/MS library search and the amount reported is an estimated value.

Table 5 - Quantity of Field Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Perchlorate by EPA Method 331.0	**15**	0	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**16**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**132**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**2673**	**5**	**9**	0	**2**	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**1170**	0	**8**	**1**	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**121**	0	0	0	0	0	0	0
Anions by Various EPA Methods	**91**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**918**	**2**	**6**	0	0	**2**	**1**	0
Nitrosamines by Low-Level Method	**71**	**3**	**13**	**1**	**1**	0	0	0

Table 6 - Quantity of Laboratory based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"*"	"A"	"AD"	"G"	"RB"	"T"	"D"	"i"	"J"
Perchlorate by EPA Method 331.0	**15**	0	0	0	0	0	0	0	0	**1**
Nitrate plus Nitrite as N by EPA Method 353.2	**16**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**132**	0	0	0	0	0	0	0	0	**1**
Volatile Organics by SW-846 Method 8260C	**2673**	0	**1**	0	0	**6**	0	0	0	**61**
Low Level Volatile Organics by SW-846 Method 8260C	**1170**	0	0	0	0	**1**	0	0	0	**16**
Semi-Volatile Organics by SW-846 Method 8270D	**121**	**3**	0	0	0	0	0	0	0	**1**
Anions by Various EPA Methods	**91**	0	0	0	0	0	**2**	0	0	0
Total Metals by Various SW-846 Methods	**918**	**2**	**3**	0	0	**7**	0	0	0	**172**
Nitrosamines by Low-Level Method	**71**	0	0	0	0	**4**	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
400-D-195	**8/7/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208071420Z) at 1.7 ug/L below the reporting limit. Affected data are appropriately qualified.**
400-D-275	8/7/2012	For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208070830Z) at 1.7 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1208070830Z) at 0.24 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208070830Z) at 0.29 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
ST-5-1175	8/25/2012	For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208250815Y) at 1.6 ug/L. No groundwater data are affected by this equipment blank contamination.
ST-5-655	**8/21/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208210945Y) at 1.8 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208210945Y) at 0.81 ug/L. Tetrahydrofuran (THF) was detected in the equipment blank (1208210945Y) at 0.66 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-5-815	**8/23/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208231400Y) at 2.0 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208231400Y) at 0.46 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-5-985	**8/22/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208220930Y) at 1.7 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208220930Y) at 0.72 ug/L. Affected data are appropriately qualified.**
ST-6-685	**8/30/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208300915Z) at 1.5 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1208300915Z) at 0.9 ug/L. Chloromethane was detected in the equipment blank (1208300915Z) at 0.24 ug/L below the reporting limit. Affected data are appropriately qualified.**
WB-14-520	**8/2/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1208021020Z) at 1.7 ug/L below the reporting limit. Affected data are appropriately qualified.**
B650-EFF-1	8/24/2012	For Low Level SW-846 Method 8260C, acetone was detected in the field blank (E1208240945) at 1.6 ug/L. No groundwater data are affected by this field blank contamination.
BLM-22-570	8/6/2012	For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1208060916) at 1.6 ug/L below the reporting limit. Dichloromethane was detected in the field blank (1208060916) at 0.28 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
ST-2-466	8/2/2012	For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1208021016) at 2.6 ug/L below the reporting limit. No groundwater data were affected by this field blank contamination.
BLM-10-517	**8/10/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the trip blank (1208100715) at 1.2 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-7-509	8/8/2012	For Low Level SW-846 Method 8260C, acetone was detected in the trip blank (1208081300) at 1.6 ug/L below the reporting limit. No groundwater data are affected by this trip blank contamination.
B650-EFF-1	**8/24/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.24 ug/L) was detected in the method blank of analytical batch 308006 below the reporting limit. Affected data are appropriately qualified.**
PL-7-480	8/24/2012	For Low Level SW-846 Method 8260C, bromomethane (0.24 ug/L) was detected in the method blank of analytical batch 308006 below the reporting limit. No groundwater data are affected by this method

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		blank contamination.
ST-5-1175	8/25/2012	For Low Level SW-846 Method 8260C, bromomethane (0.24 ug/L) was detected in the method blank of analytical batch 308006 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-5-485	8/24/2012	For Low Level SW-846 Method 8260C, bromomethane (0.24 ug/L) was detected in the method blank of analytical batch 308006 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-6-685	8/30/2012	For Low Level SW-846 Method 8260C, bromomethane (0.24 ug/L) was detected in the method blank for analytical batch 308006 below the reporting limit. No groundwater data are affected by this method blank contamination.
400-D-355	8/6/2012	For Low Level SW-846 Method 8260C, carbon disulfide was detected in the equipment blank (1208061300Z) at 0.23 ug/L below the reporting limit. No groundwater data were affected by this equipment blank contamination.
BLM-38-480	8/20/2012	For Low Level SW-846 Method 8260C, carbon disulfide was detected in the equipment blank (1208200800Z) at 0.21 ug/L below the reporting limit. Tetrahydrofuran (THF) was detected in the equipment blank (1208200800Z) at 0.91 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
PL-7-480	8/24/2012	For Low Level SW-846 Method 8260C, carbon disulfide was detected in the equipment blank (1208240800Z) at 0.23 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208240800Z) at 0.2 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
ST-5-485	**8/24/2012**	**For Low Level SW-846 Method 8260C, carbon disulfide was detected in the equipment blank (1208241025Y) at 0.21 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208241025Y) at 0.7 ug/L. Affected data are appropriately qualified.**
BLM-22-570	8/6/2012	For Low Level SW-846 Method 8260C, iodomethane (5.0 ug/L) was detected in the method blank of analytical batch 303958 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-2-466	8/2/2012	For Low Level SW-846 Method 8260C, iodomethane (5.0 ug/L) was detected in the method blank of analytical batch 303958 below the reporting limit. No groundwater data are affected by this method blank contamination.
WB-14-520	8/2/2012	For Low Level SW-846 Method 8260C, iodomethane (5.0 ug/L) was detected in the method blank of analytical batch 303958 below the reporting limit. No groundwater data are affected by this method blank contamination.
400-D-195	8/7/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 304384 is outside laboratory control limits; refer to report R1205169 for details. Vinyl acetate detections, if any, should be considered estimated.
400-D-275	8/7/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 304384 is outside laboratory control limits; refer to report R1205169 for details. Vinyl acetate detections, if any, should be considered estimated.
400-D-355	8/6/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 304384 is outside laboratory control limits; refer to report R1205169 for details. Vinyl acetate detections, if any, should be considered estimated.
B650-EFF-1	8/24/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308006 is outside laboratory control limits; refer to report R1205611 for details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
BLM-38-480	8/20/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307025 is outside laboratory control limits; refer to report R1205555 for details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
PL-7-480	8/24/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308006 is outside laboratory control limits; refer to report R1205611 for details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
PL-7-560	8/22/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307025 is outside laboratory control limits; refer to report R1205555 for details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
ST-5-1175	8/25/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308006 is outside laboratory control limits; refer to report R1205611 for details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
ST-5-485	8/24/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308006 is outside laboratory control limits; refer to report R1205611 for

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
ST-5-815	8/23/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307534 is outside laboratory control limits; refer to report R1205611 for details. Bromomethane, tetrahydrofuran, and 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) detections, if any, should be considered estimated.
ST-5-815	8/23/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308006 is outside laboratory control limits; refer to report R1205611 for details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
ST-5-985	8/22/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307025 is outside laboratory control limits; refer to report R1205555 for details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
ST-6-685	8/30/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308006 is outside laboratory control limits; refer to report R1205611 for details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
200-H-225	8/28/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) recoveries of methacrylonitrile (126%) and (129%), methyl tert-butyl ether (125%) and (123%), trans-1,2-dichloroethane (121%), 1,1-dichloroethane (125%), 2-chloro-1,3-butadiene (135%), and allyl chloride (128%) and (121%) for analytical batch 307752 were outside of laboratory control limits (69-121%), (75-116%), (72-120%), (76-124%), (65-134%), and (65-119%). No groundwater data are affected by this LCS exceedance.
200-H-331	8/27/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) recoveries of methacrylonitrile (126%) and (129%), methyl tert-butyl ether (125%) and (123%), trans-1,2-dichloroethane (121%), 1,1-dichloroethane (125%), 2-chloro-1,3-butadiene (135%), and allyl chloride (128%) and (121%) for analytical batch 307752 were outside of laboratory control limits (69-121%), (75-116%), (72-120%), (76-124%), (65-134%), and (65-119%). No groundwater data are affected by this LCS exceedance.
200-H-433	8/27/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) recoveries of methacrylonitrile (126%) and (129%), methyl tert-butyl ether (125%) and (123%), trans-1,2-dichloroethane (121%), 1,1-dichloroethane (125%), 2-chloro-1,3-butadiene (135%), and allyl chloride (128%) and (121%) for analytical batch 307752 were outside of laboratory control limits (69-121%), (75-116%), (72-120%), (76-124%), (65-134%), and (65-119%). No groundwater data are affected by this LCS exceedance.
300-D-153	8/27/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) recoveries of methacrylonitrile (126%) and (129%), methyl tert-butyl ether (125%) and (123%), trans-1,2-dichloroethane (121%), 1,1-dichloroethane (125%), 2-chloro-1,3-butadiene (135%), and allyl chloride (128%) and (121%) for analytical batch 307752 were outside of laboratory control limits (69-121%), (75-116%), (72-120%), (76-124%), (65-134%), and (65-119%). No groundwater data are affected by this LCS exceedance.
BLM-38-480	8/20/2012	For Low Level SW-846 Method 8260C, the relative percent difference (RPD) for the matrix spike (MS) and matrix spike duplicate (MSD) recoveries for sample 1208210741Z for iodomethane (32%) was outside laboratory control limits (30%). No groundwater data are affected by this QC issue.
PL-7-560	8/22/2012	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
200-D-109	**8/24/2012**	**For SW-846 Method 8260C in blind control sample (1208221515), all recoveries were within control limits. However, 1,2-dichloro-1,1,2-trifluoroethane was detected (2 ug/L) but none was added. Affected data are appropriately qualified.**
BLM-6-488	8/1/2012	For SW-846 Method 8260C, 2-butanone (MEK) was detected in the field blank (1208011431) at 0.56 ug/L below the reporting limit. Acetone was detected in the field blank (1208011431) at 2.4 ug/L below the reporting limit. No groundwater data were affected by this field blank contamination.
ST-1-541	8/7/2012	For SW-846 Method 8260C, 2-butanone (MEK) was detected in the field blank (1208070947) at 0.58 ug/L below the reporting limit. Acetone was detected in the field blank (1208070947) at 2.5 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
200-H-225	8/28/2012	For SW-846 Method 8260C, acetone was detected in the equipment blank (1208280740Z) at 1.6 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1208280740Z) at 1.1 ug/L. No groundwater data are affected by this equipment blank contamination.
200-H-331	8/27/2012	For SW-846 Method 8260C, acetone was detected in the equipment blank (1208270800Z) at 2.0 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208270800Z) at 0.24 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
200-H-433	**8/27/2012**	**For SW-846 Method 8260C, acetone was detected in the equipment blank (1208271040Z) at 1.3**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208271040Z) at 0.21 ug/L below the reporting limit. Affected data are appropriately qualified.
700-H-350	**8/14/2012**	**For SW-846 Method 8260C, acetone was detected in the equipment blank (1208140940Y) at 3.2 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208140940Y) at 0.31 ug/L below the reporting limit. Affected data are appropriately qualified.**
700-H-535	8/13/2012	For SW-846 Method 8260C, acetone was detected in the equipment blank (1208131410Y) at 1.4 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
700-H-670	**8/13/2012**	**For SW-846 Method 8260C, acetone was detected in the equipment blank (1208130830Y) at 2.6 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208130830Y) at 0.81 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-30-585	8/1/2012	For SW-846 Method 8260C, acetone was detected in the equipment blank (1208011405Z) at 2.4 ug/L. below the reporting limit. No groundwater data were affected by this equipment blank contamination.
BLM-36-350	8/14/2012	For SW-846 Method 8260C, acetone was detected in the equipment blank (1208141434Z) at 1.4 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
BLM-36-610	8/9/2012	For SW-846 Method 8260C, acetone was detected in the equipment blank (1208090930Z) at 1.6 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
BLM-36-860	**8/10/2012**	**For SW-846 Method 8260C, acetone was detected in the equipment blank (1208100900Z) at 1.6 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208100900Z) at 0.31 ug/L below the reporting limit. Affected data are appropriately qualified.**
WB-5-250	**8/20/2012**	**For SW-846 Method 8260C, acetone was detected in the equipment blank (1208200830Y) at 2.7 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1208200830Y) at 0.65 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1208200830Y) at 2.2 ug/L. Affected data are appropriately qualified.**
200-D-109	8/24/2012	For SW-846 Method 8260C, acetone was detected in the field blank (1208241015) at 2.1 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
200-JG-110	8/9/2012	For SW-846 Method 8260C, acetone was detected in the field blank (1208091406) at 1.6 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
300-D-153	**8/27/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1208271401) at 2.0 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1208271401) at 1.4 ug/L. Affected data are appropriately qualified.**
B655-EFF-2	**8/28/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (E1208280949) at 2.2 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (E1208280949) at 0.39 ug/L below the reporting limit. Chloromethane was detected in the field blank (E1208280949) at 0.22 ug/L below the reporting limit. Affected data are appropriately qualified.**
B655-INF-1	**8/28/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (I1208281018) at 1.6 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (I1208281018) at 0.36 ug/L below the reporting limit. Chloromethane was detected in the field blank (I1208281018) at 0.24 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-14-327	8/8/2012	For SW-846 Method 8260C, acetone was detected in the field blank (1208081041) at 2.3 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
BW-1-268	**8/7/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1208071447) at 1.3 ug/L below the reporting limit. Affected data are appropriately qualified.**
300-C-128	8/6/2012	For SW-846 Method 8260C, acetone was detected in the trip blank (1208061245) at 1.8 ug/L below the reporting limit. Dichloromethane was detected in the trip blank (1208061245) at 0.63 ug/L below the reporting limit. No groundwater data were affected by this trip blank contamination.
BLM-25-455	8/1/2012	For SW-846 Method 8260C, acetone was detected in the trip blank (1208010750) at 1.8 ug/L below the reporting limit. No groundwater data were affected by this trip blank contamination.
200-H-225	**8/28/2012**	**For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.26 ug/L) were detected in the method blank for analytical batch 307951 below the reporting limit. Affected data are appropriately qualified.**
B655-INF-1	**8/28/2012**	**For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.26 ug/L) were detected in the method blank for analytical batch 307951 below the reporting limit. Affected data are appropriately qualified.**
PFE-7	8/28/2012	For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.26 ug/L) were detected in the method blank for analytical batch 307951 below the reporting limit. No groundwater data are affected by this method blank contamination.
MPE-1	**8/29/2012**	**For SW-846 Method 8260C, bromomethane (0.44 ug/L) was detected in the method blank for analytical batch 308220 below the reporting limit. Affected data are appropriately qualified.**
MPE-1	8/29/2012	For SW-846 Method 8260C, bromomethane was detected in the field blank (W1208291259) at 0.36 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-25-455	8/1/2012	For SW-846 Method 8260C, carbon disulfide (0.25 ug/L) was detected in the method blank of analytical batch 303485 below the reporting limit. No groundwater data are affected by this method

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		blank contamination.
BLM-30-585	**8/1/2012**	**For SW-846 Method 8260C, carbon disulfide (0.25 ug/L) was detected in the method blank of analytical batch 303485 below the reporting limit. Affected data are appropriately qualified.**
BLM-6-488	8/1/2012	For SW-846 Method 8260C, carbon disulfide (0.25 ug/L) was detected in the method blank of analytical batch 303485 below the reporting limit. No groundwater data are affected by this method blank contamination.
WB-5-280	8/16/2012	For SW-846 Method 8260C, carbon disulfide was detected in the equipment blank (1208161050Y) at 0.39 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
PFE-7	8/28/2012	For SW-846 Method 8260C, carbon disulfide was detected in the field blank (W1208281251) at 0.29 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
B650-INF-1	8/24/2012	For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (I1208241018) at 3.1 ug/L. Chloromethane was detected in the trip blank (I1208241018) at 0.21 ug/L below the reporting limit. No groundwater data are affected by this trip blank contamination.
NASA 8	8/21/2012	For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (1208200800) at 0.9 ug/L below the reporting limit. Chlorobenzene was detected in the trip blank (1208200800) at 0.36 ug/L below the reporting limit. Dichloromethane was detected in the trip blank (1208200800) at 0.34 ug/L below the reporting limit. No groundwater data are affected by this trip blank contamination.
200-H-225	**8/28/2012**	**For SW-846 Method 8260C, chloromethane (0.28 ug/L) was detected in the method blank for analytical batch 307752 below the reporting limit. Affected data are appropriately qualified.**
200-H-331	8/27/2012	For SW-846 Method 8260C, chloromethane (0.28 ug/L) was detected in the method blank for analytical batch 307752 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-H-433	**8/27/2012**	**For SW-846 Method 8260C, chloromethane (0.28 ug/L) was detected in the method blank for analytical batch 307752 below the reporting limit. Affected data are appropriately qualified.**
300-D-153	**8/27/2012**	**For SW-846 Method 8260C, chloromethane (0.28 ug/L) was detected in the method blank for analytical batch 307752 below the reporting limit. Affected data are appropriately qualified.**
BLM-36-800	**8/14/2012**	**For SW-846 Method 8260C, chloromethane was detected in the equipment blank (1208140755Z) at 0.37 ug/L below the reporting limit. Affected data are appropriately qualified.**
WB-5-345	**8/16/2012**	**For SW-846 Method 8260C, chloromethane was detected in the equipment blank (1208160820Y) at 0.23 ug/L below the reporting limit. Affected data are appropriately qualified.**
B655-EFF-2	**8/28/2012**	**For SW-846 Method 8260C, dichloromethane (0.23 ug/L), chloromethane (0.28 ug/L), and iodomethane (0.36 ug/L) were detected in the method blank for analytical batch 307757 below the reporting limit. Affected data are appropriately qualified.**
BLM-30-585	8/1/2012	For SW-846 Method 8260C, field duplicate samples 1208020800Z and 1208020801Z the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-30-585	8/1/2012	For SW-846 Method 8260C, field duplicate samples 1208020800Z and 1208020801Z the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-30-585	8/1/2012	For SW-846 Method 8260C, field duplicate samples 1208020800Z and 1208020801Z the relative percent difference for trichloroethene (TCE) was 14.5%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208070945 and 1208070946 the relative percent difference for trichlorofluoromethane (CFC 11) was 12.5%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208070945 and 1208070946 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 12.7%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208070945 and 1208070946 the relative percent difference for trichloroethene (TCE) was 10.2%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208070945 and 1208070946 the relative percent difference for tetrachloroethene (PCE) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208070945 and 1208070946 the relative percent difference for 1,1-dichloroethene was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208071445 and 1208071446 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0.0%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BW-1-268	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208071445 and 1208071446 the relative percent difference for dichlorofluoromethane (CFC 21) was 1.6%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208071445 and 1208071446 the relative percent difference for 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) was 2.2%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	8/7/2012	For SW-846 Method 8260C, field duplicate samples 1208071445 and 1208071446 the relative percent difference for trichlorofluoromethane (CFC 11) was 3.5%. Upper acceptance limit for relative percent difference is 25%.
700-D-186	8/14/2012	For SW-846 Method 8260C, field duplicate samples 1208141000 and 1208141001 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-D-109	8/24/2012	For SW-846 Method 8260C, field duplicate samples 1208241030 and 1208241031 the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-D-109	8/24/2012	For SW-846 Method 8260C, field duplicate samples 1208241030 and 1208241031 the relative percent difference for tetrachloroethene (PCE) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-D-109	8/24/2012	For SW-846 Method 8260C, field duplicate samples 1208241030 and 1208241031 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-D-109	8/24/2012	For SW-846 Method 8260C, field duplicate samples 1208241030 and 1208241031 the relative percent difference for trichloroethene (TCE) was 4.7%. Upper acceptance limit for relative percent difference is 25%.
200-D-109	8/24/2012	For SW-846 Method 8260C, iodomethane (1.3 ug/L) was detected in the method blank of analytical batch 307428 below the reporting limit. No groundwater data are affected by this method blank contamination.
B650-INF-1	8/24/2012	For SW-846 Method 8260C, iodomethane (1.3 ug/L) was detected in the method blank of analytical batch 307428 below the reporting limit. No groundwater data are affected by this method blank contamination.
NASA 7	8/21/2012	For SW-846 Method 8260C, iodomethane (1.3 ug/L) was detected in the method blank of analytical batch 3037428 below the reporting limit. No groundwater data are affected by this method blank contamination.
WB-5-345	**8/16/2012**	**For SW-846 method 8260C, one unknown compound (19 ug/L), and methyl mercaptan (15 ug/L) were tentatively identified by a GC/MS library search in sample 1208160935Y. Affected data are appropriately qualified.**
WB-5-280	**8/16/2012**	**For SW-846 Method 8260C, one unknown compound (25 ug/L), sulfur dioxide (8.3 ug/L), and methyl mercaptan (28 ug/L) were tentatively identified by a GC/MS library search in sample 1208161415Y. Affected data are appropriately qualified.**
WB-5-250	**8/20/2012**	**For SW-846 Method 8260C, one unknown compound (8.7 ug/L), 1-hexanol,2-ethyl (9.7 ug/L), and methyl mercaptan (7 ug/L) were tentatively identified by a GC/MS library search in sample 1208160935Y. Affected data are appropriately qualified.**
700-A-253	8/16/2012	For SW-846 Method 8260C, relative percent differences (RPD) for duplicate samples 1208160830 and 1208160831 were within control limits or below the calculable range.
700-A-253	8/16/2012	For SW-846 Method 8260C, tetrahydrofuran (THF) was detected in the field blank (1208160832) at 1.1 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-38-620	8/16/2012	For SW-846 Method 8260C, tetrahydrofuran (THF) was detected in the equipment blank (1208160930Z) at 0.81 ug/L below the reporting limit. No groundwater data are affected by this equipment blank contamination.
200-D-109	8/24/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307428 is outside laboratory control limits; refer to report R1205614 for details. Acrolein, 2-propanol, 1,4-dioxane, vinyl acetate, and tetrahydrofuran detections, if any should be considered estimated.
200-H-225	8/28/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307951 is outside laboratory control limits; refer to report R1205671 for details. Bromomethane and chloromethane detections, if any, should be considered estimated.
200-H-225	8/28/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307752 is outside laboratory control limits; refer to report R1205671 for details. 1,4-Dioxane, acetone, acrolein, and methacrylonitrile detections, if any, should be considered estimated.
200-H-331	8/27/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307752 is outside laboratory control limits; refer to report R1205671 for details. 1,4-Dioxane, acetone, acrolein, and methacrylonitrile detections, if any, should be considered estimated.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
200-H-433	8/27/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307752 is outside laboratory control limits; refer to report R1205671 for details. 1,4-Dioxane, acetone, acrolein, and methacrylonitrile detections, if any, should be considered estimated.
300-C-128	8/6/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batches 304293 is outside of laboratory control limits; refer to report R1205171 for details. Vinyl acetate detections, if any, should be estimated.
300-C-128	8/6/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batches 304387 and 304293 is outside of laboratory control limits; refer to report R1205171 for details. Vinyl acetate detections, if any, should be estimated.
300-D-153	8/27/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307752 is outside laboratory control limits; refer to report R1205671 for details. 1,4-Dioxane, acetone, acrolein, and methacrylonitrile detections, if any, should be considered estimated.
700-A-253	8/16/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306184 is outside laboratory control limits; refer to report R1205413 for details. 2-Chloro-1,3-butadiene, 4-methyl-2-pentanone, acetonitrile, iodomethane, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
700-D-186	8/14/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306015 is outside laboratory control limits; refer to report R1205413 for details. 2-Propanol, 4-methyl-2-pentanone, acetone, and acetonitrile detections, if any, should be considered estimated.
700-H-350	8/14/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306015 is outside laboratory control limits; refer to report R1205413 for details. 2-Propanol, 4-methyl-2-pentanone, acetone, and acetonitrile detections, if any, should be considered estimated.
700-H-350	8/14/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306184 is outside laboratory control limits; refer to report R1205413 for details. 2-Chloro-1,3-butadiene, 4-methyl-2-pentanone, acetonitrile, iodomethane, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
700-H-535	8/13/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306015 is outside laboratory control limits; refer to report R1205413 for details. 2-Propanol, 4-methyl-2-pentanone, acetone, and acetonitrile detections, if any, should be considered estimated.
700-H-670	8/13/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306015 is outside laboratory control limits; refer to report R1205413 for details. 2-Propanol, 4-methyl-2-pentanone, acetone, and acetonitrile detections, if any, should be considered estimated.
700-J-200	8/13/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306015 is outside laboratory control limits; refer to report R1205413 for details. 2-Propanol, 4-methyl-2-pentanone, acetone, and acetonitrile detections, if any, should be considered estimated.
B650-INF-1	8/24/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307428 is outside laboratory control limits; refer to report R1205614 for details. Acrolein, 2-propanol, 1,4-dioxane, vinyl acetate, and tetrahydrofuran detections, if any should be considered estimated.
B655-EFF-2	8/28/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307757 is outside of laboratory control limits; refer to report R1205672 for details. Methacrylonitrile, 1,4-dioxane, acetone, and acrolein detections, if any, should be estimated.
B655-INF-1	8/28/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307951 is outside laboratory control limits; refer to report R1205671 for details. Bromomethane and chloromethane detections, if any, should be considered estimated.
BLM-25-455	8/1/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 303485 is outside laboratory control limits; refer to report R1205024 for details. 2-Butanone, 2-hexanone, 2-propanol, 4-methyl-2-pentanone, acrolein, and tetrahydrofuran detections, if any, should be considered estimated.
BLM-30-585	8/1/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 303485 is outside laboratory control limits; refer to report R1205024 for details. 2-Butanone, 2-hexanone, 2-propanol, 4-methyl-2-pentanone, acrolein, and tetrahydrofuran detections, if any, should be considered estimated.
BLM-36-350	8/14/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306499 is outside laboratory control limits; refer to report R1205413 for details. Vinyl acetate, acrolein, and carbon disulfide detections, if any, should be considered estimated.
BLM-36-350	8/14/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		analytical batch 306184 is outside laboratory control limits; refer to report R1205413 for details. 2-Chloro-1,3-butadiene, 4-methyl-2-pentanone, acetonitrile, iodomethane, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
BLM-36-800	8/14/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306015 is outside laboratory control limits; refer to report R1205413 for details. 2-Propanol, 4-methyl-2-pentanone, acetone, and acetonitrile detections, if any, should be considered estimated.
BLM-38-620	8/16/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307007 is outside laboratory control limits; refer to report R1205468 for details. Acrolein and iodomethane detections, if any, should be considered estimated.
BLM-6-488	8/1/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 303485 is outside laboratory control limits; refer to report R1205024 for details. 2-Butanone, 2-hexanone, 2-propanol, 4-methyl-2-pentanone, acrolein, and tetrahydrofuran detections, if any, should be considered estimated.
BW-1-268	8/7/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batches 304387 is outside of laboratory control limits; refer to report R1205171 for details. Vinyl acetate detections, if any, should be estimated.
BW-1-268	8/7/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batches 304293 is outside of laboratory control limits; refer to report R1205171 for details. Vinyl acetate detections, if any, should be estimated.
MPE-1	**8/29/2012**	**For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308007 is outside laboratory control limits; refer to report R1205725 for details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.**
MPE-1	8/29/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308220 is outside laboratory control limits; refer to report R1205725 for details. Acrolein detections, if any, should be considered estimated.
MPE-11	8/29/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308007 is outside laboratory control limits; refer to report R1205725 for details. Acrolein, tetrahydrofuran, and dichlorofluoromethane (CFC 21) detections, if any, should be considered estimated.
NASA 7	8/21/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307428 is outside laboratory control limits; refer to report R1205553 for details. 1,4-Dioxane, 2-propanol, acrolein, tetrahydrofuran, and vinyl acetate detections, if any, should be considered estimated.
NASA 8	8/21/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307026 is outside laboratory control limits; refer to report R1205553 for details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
PFE-7	8/28/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307951 is outside laboratory control limits; refer to report R1205671 for details. Bromomethane and chloromethane detections, if any, should be considered estimated.
ST-1-541	8/7/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batches 304387 is outside of laboratory control limits; refer to report R1205171 for details. Vinyl acetate detections, if any, should be estimated.
ST-1-541	8/7/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batches 304293 is outside of laboratory control limits; refer to report R1205171 for details. Vinyl acetate detections, if any, should be estimated.
ST-5-655	8/21/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 307025 is outside laboratory control limits; refer to report R1205555 for details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
WB-5-250	8/20/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306990 is outside laboratory control limits; refer to report R1205467 for details. Acrolein and iodomethane detections, if any, should be considered estimated.
WB-5-280	8/16/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306990 is outside laboratory control limits; refer to report R1205467 for details. Acrolein and iodomethane detections, if any, should be considered estimated.
WB-5-345	8/16/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 306990 is outside laboratory control limits; refer to report R1205467 for details. Acrolein and iodomethane detections, if any, should be considered estimated.
B655-EFF-2	8/28/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) and/or laboratory control sample duplicated (LCSD) recoveries for methacrylonitrile (129%), cis-1,2-dichloroethene (123%), 1,1-dichloroethane (125%), 2-chloro-1,3-butadiene (135%) and (134%), and allyl chloride (128%) and

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		(121%) for analytical batch 307757 were outside laboratory control limits (69-126%), (78-122%), (76-124%), (59-130%) and (65-119%) . No groundwater data are affected by this laboratory control sample recovery exceedance.
700-D-186	8/14/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (140%) was outside of laboratory control limits (59-130%) for analytical batch 306015. No groundwater data are affected by this LCS exceedance.
700-H-350	8/14/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (140%) was outside of laboratory control limits (59-130%) for analytical batch 306015. No groundwater data are affected by this LCS exceedance.
700-H-535	8/13/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (140%) was outside of laboratory control limits (59-130%) for analytical batch 306015. No groundwater data are affected by this LCS exceedance.
700-H-670	8/13/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (140%) was outside of laboratory control limits (59-130%) for analytical batch 306015. No groundwater data are affected by this LCS exceedance.
700-J-200	8/13/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (140%) was outside of laboratory control limits (59-130%) for analytical batch 306015. No groundwater data are affected by this LCS exceedance.
BLM-36-800	8/14/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (140%) was outside of laboratory control limits (59-130%) for analytical batch 306015. No groundwater data are affected by this LCS exceedance.
700-D-186	8/14/2012	For SW-846 Method 8260C, the relative percent difference (RPD) between the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries of vinyl acetate (50%) for analytical batch 306015 was outside of laboratory control limits (30%). No data are affected by this QC exceedance.
700-H-350	8/14/2012	For SW-846 Method 8260C, the relative percent difference (RPD) between the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries of vinyl acetate (50%) for analytical batch 306015 was outside of laboratory control limits (30%). No data are affected by this QC exceedance.
700-H-535	8/13/2012	For SW-846 Method 8260C, the relative percent difference (RPD) between the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries of vinyl acetate (50%) for analytical batch 306015 was outside of laboratory control limits (30%). No data are affected by this QC exceedance.
700-H-670	8/13/2012	For SW-846 Method 8260C, the relative percent difference (RPD) between the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries of vinyl acetate (50%) for analytical batch 306015 was outside of laboratory control limits (30%). No data are affected by this QC exceedance.
700-J-200	8/13/2012	For SW-846 Method 8260C, the relative percent difference (RPD) between the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries of vinyl acetate (50%) for analytical batch 306015 was outside of laboratory control limits (30%). No data are affected by this QC exceedance.
BLM-36-800	8/14/2012	For SW-846 Method 8260C, the relative percent difference (RPD) between the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries of vinyl acetate (50%) for analytical batch 306015 was outside of laboratory control limits (30%). No data are affected by this QC exceedance.
700-J-200	8/13/2012	For SW-846 Method 8260C, there were no detections in the field blank.
MPE-11	8/29/2012	For SW-846 Method 8260C, there were no detections in the field blank.
NASA 7	8/21/2012	For SW-846 Method 8260C, there were no detections in the field blank.
700-D-186	8/14/2012	For SW-846 Method 8260C, there were no detections in the trip blank.

Well ID	Event Date	EPA Method 607 QA Narratives
200-D-109	8/24/2012	For Modified EPA Method 607 in blind control sample (1208221516), all recoveries were within standard limits.
300-C-128	8/6/2012	For Modified EPA Method 607, field duplicate samples 1208061421 and 1208061422 the relative percent difference for bromacil was 3.3%. Upper acceptance limit for relative percent difference is 25%.
300-C-128	8/6/2012	For Modified EPA Method 607, field duplicate samples 1208061421 and 1208061422 the relative percent difference for N-nitrosodimethylamine was 4.5%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	EPA Method 607 QA Narratives
300-C-128	8/6/2012	For Modified EPA Method 607, field duplicate samples 1208061421 and 1208061422 the relative percent difference for N-nitrodimethylamine was 2.6%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For Modified EPA Method 607, field duplicate samples 1208070948 and 1208070949 the relative percent difference for N-nitrodimethylamine was 9.1%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For Modified EPA Method 607, field duplicate samples 1208070948 and 1208070949 the relative percent difference for N-nitrosodimethylamine was 8.0%. Upper acceptance limit for relative percent difference is 25%.
ST-1-541	8/7/2012	For Modified EPA Method 607, field duplicate samples 1208070948 and 1208070949 the relative percent difference for bromacil was 5.1%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	8/7/2012	For Modified EPA Method 607, field duplicate samples 1208071448 and 1208071449 the relative percent difference for bromacil was 4.7%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	8/7/2012	For Modified EPA Method 607, field duplicate samples 1208071448 and 1208071449 the relative percent difference for N-nitrodimethylamine was 2.5%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	8/7/2012	For Modified EPA Method 607, field duplicate samples 1208071448 and 1208071449 the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-14-327	8/8/2012	For Modified EPA Method 607, field duplicate samples 1208081042 and 1208081043 the relative percent difference for bromacil was 7.3%. Upper acceptance limit for relative percent difference is 25%.
BLM-14-327	8/8/2012	For Modified EPA Method 607, field duplicate samples 1208081042 and 1208081043 the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-14-327	8/8/2012	For Modified EPA Method 607, field duplicate samples 1208081042 and 1208081043 the relative percent difference for N-nitrodimethylamine was 4.1%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	8/24/2012	For Modified EPA Method 607, field duplicate samples I1208241020 and I1208241022 the relative percent difference for bromacil was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	8/24/2012	For Modified EPA Method 607, field duplicate samples I1208241020 and I1208241022 the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	8/24/2012	For Modified EPA Method 607, field duplicate samples I1208241020 and I1208241022 the relative percent difference for N-nitrosodimethylamine was 8.7%. Upper acceptance limit for relative percent difference is 25%.
B650-EFF-1	8/24/2012	For Modified EPA Method 607, matrix spike recoveries for sample E1208240949 were within laboratory control limits.
B655-EFF-2	8/28/2012	For Modified EPA Method 607, matrix spike recoveries for sample E1208280953 were within laboratory control limits.
BLM-36-350	8/14/2012	For Modified EPA Method 607, there were no detections in the equipment blank.
WB-5-280	8/16/2012	For Modified EPA Method 607, there were no detections in the equipment blank.
200-JG-110	8/9/2012	For Modified EPA Method 607, there were no detections in the field blank.
700-J-200	8/13/2012	For Modified EPA Method 607, there were no detections in the field blank.
MPE-1	8/29/2012	For Modified EPA Method 607, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
ST-5-985	**8/22/2012**	**For Low Level Nitrosamine Method in blind control sample (1208221500Y), the percent recovery for N-nitrosodimethylamine (66.8%) was outside of the standard limits (70.0-130.0%). Affected data are appropriately qualified.**
BLM-38-620	8/16/2012	For Low Level Nitrosamine Method, equipment blank 1208160931Z and sample 1208161351Z were lost during extraction at the laboratory and were not analyzed. Resampling was conducted on 10/16/12.
BLM-38-480	8/20/2012	For Low Level Nitrosamine Method, equipment blank 1208200801Z and sample 1208210742Z were received at the laboratory at 7.6 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
ST-5-655	8/21/2012	For Low Level Nitrosamine Method, equipment blank 1208210946Y and sample 1208211341Y were received at the laboratory at 7.6 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
ST-5-985	8/22/2012	For Low Level Nitrosamine Method, equipment blank 1208220931Y and sample 1208221355Y were received at the laboratory at 7.6 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
PL-7-560	8/22/2012	For Low Level Nitrosamine Method, equipment blank 1208221041Z and sample were received at the laboratory at 7.6 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
ST-5-815	8/23/2012	For Low Level Nitrosamine Method, equipment blank 1208231401Y and sample 1208240830Y were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
PL-7-480	8/24/2012	For Low Level Nitrosamine Method, equipment blank 1208240801Z and sample E1208240918Z were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
ST-5-485	8/24/2012	For Low Level Nitrosamine Method, equipment blank 1208241026Y and sample were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
ST-5-1175	8/25/2012	For Low Level Nitrosamine Method, equipment blank 1208250816Y and sample E1208251030Y were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
200-H-331	8/27/2012	For Low Level Nitrosamine Method, equipment blank 1208270801Z and sample were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
200-H-433	8/27/2012	For Low Level Nitrosamine Method, equipment blank 1208271041Z and sample 1208271410Z were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
B650-EFF-1	8/24/2012	For Low Level Nitrosamine Method, field blank 1208240955 and samples E1208240951 and E1208240953 were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
200-D-109	8/24/2012	For Low Level Nitrosamine Method, field blank 1208241032 and sample 1208241033 were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.
BLM-36-860	8/10/2012	For Low Level Nitrosamine Method, field duplicate samples 1208101021Z and 1208101300Z the relative percent difference for N-nitrosodimethylamine was 4.2%. Upper acceptance limit for relative percent difference is 25%.
400-D-195	8/7/2012	For Low Level Nitrosamine Method, laboratory control sample (LCS) recovery of N-nitrodimethylamine (155%) for analytical batch WG1525285 is outside control limits (65-135%). No groundwater data were affected by these LCS exceedances.
400-D-275	8/7/2012	For Low Level Nitrosamine Method, laboratory control sample (LCS) recovery of N-nitrodimethylamine (155%) for analytical batch WG1525285 is outside control limits (65-135%). No groundwater data were affected by these LCS exceedances.
400-D-355	8/6/2012	For Low Level Nitrosamine Method, laboratory control sample (LCS) recovery of N-nitrodimethylamine (155%) for analytical batch WG1525285 is outside control limits (65-135%). No groundwater data were affected by these LCS exceedances.
ST-5-985	**8/22/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.565 ng/L) was detected in the method blank for analytical batch WG1535649-1 below the reporting limit. Affected data are appropriately qualified.**
BLM-38-620	**8/16/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.380 ng/L) and N-nitrodimethylamine (0.410 ng/L) were detected in the method blank for analytical batch NDMA-#225 below the reporting limit. Affected data are appropriately qualified.**
PL-7-560	**8/22/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.565 ng/L) was detected in the method blank for analytical batch WG1535649-1 below the reporting limit. Affected data are appropriately qualified.**
200-D-109	**8/24/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1208241032) at 0.71 ng/L. Affected data are appropriately qualified.**
200-H-225	8/28/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208280741Z) at 2.67 ng/L. No groundwater data are affected by this equipment blank contamination.
200-H-331	8/27/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208270801Z) at 1.61 ng/L. No groundwater data are affected by this equipment blank contamination.
200-H-433	8/27/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208271041Z) at 0.85 ng/L. No groundwater data are affected by this equipment blank contamination.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
300-D-153	**8/27/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (1208271230) at 3.26 ng/L. Affected data are appropriately qualified.**
400-D-275	8/7/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208070831Z) at 0.55 ng/L. No groundwater data are affected by this equipment blank contamination.
400-D-355	**8/6/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208061301Z) at 1.96 ng/L. Affected data are appropriately qualified.**
B650-EFF-1	**8/24/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (E1208240955) at 1.15 ng/L. Affected data are appropriately qualified.**
BLM-36-860	**8/10/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208100901Z) at 0.68 ng/L. Affected data are appropriately qualified.**
BLM-38-480	**8/20/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208200801Z) at 1.14 ng/L. Affected data are appropriately qualified.**
BLM-38-620	**8/16/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1211281355Z) at 2.8 ng/L. N-nitrodimethylamine was detected in the equipment blank (1211281355Z) at 0.22 ng/L below the detection limit. Affected data are appropriately qualified.**
BLM-38-620	8/16/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1210151415Z) at 2.02 ng/L. No groundwater data are affected by this equipment blank contamination.
PFE-7	**8/28/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (W1208281254) at 0.55 ng/L. Affected data are appropriately qualified.**
PL-7-480	**8/24/2012**	**For Low Level Nitrosamine Method, N-Nitrosodimethylamine was detected in the equipment blank (1208240801Z) at 2.56 ng/L. Affected data are appropriately qualified.**
PL-7-560	**8/22/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208221041Z) at 1.15 ng/L. Affected data are appropriately qualified.**
ST-5-1175	**8/25/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208250816Y) at 2.14 ng/L. Affected data are appropriately qualified.**
ST-5-485	**8/24/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208241026Y) at 2.48 ng/L. Affected data are appropriately qualified.**
ST-5-815	**8/23/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208231401Y) at 0.96 ng/L. Affected data are appropriately qualified.**
ST-5-985	**8/22/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208220931Y) at 0.89 ng/L. Affected data are appropriately qualified.**
ST-6-685	**8/30/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1208300916Z) at 3.79 ng/L. Affected data are appropriately qualified.**
B655-EFF-2	8/28/2012	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples E1208280955 and E1208280957 were within control limits or below the calculable range.
BLM-36-610	8/9/2012	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 1208091410Z and 1208091440Z were within control limits or below the calculable range.
BLM-38-620	8/16/2012	For Low Level Nitrosamine Method, sample 1210160810Z had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples. Additional resampling was conducted on 11/28/2012.
PL-7-560	8/22/2012	For Low Level Nitrosamine Method, the laboratory control sample (LCS) recovery of N-nitrodimethylamine (193%) was outside laboratory control limits (65-135%). No groundwater data are affected by this LCS exceedance.
ST-5-985	8/22/2012	For Low Level Nitrosamine Method, the laboratory control sample (LCS) recovery of N-nitrodimethylamine (193%) was outside laboratory control limits (65-135%). No groundwater data are affected by this LCS exceedance.
BLM-7-509	8/8/2012	For Low Level Nitrosamine Method, the samples were diluted however, matrix spike recoveries for samples 1208081447 and 1208081448 were within laboratory control limits.
200-JG-110	8/9/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
400-D-195	8/7/2012	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
B655-EFF-2	8/28/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-10-517	8/10/2012	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-22-570	8/6/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-25-455	8/1/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-36-610	8/9/2012	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
BLM-36-800	8/14/2012	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
BLM-6-488	8/1/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-7-509	8/8/2012	For Low Level Nitrosamine Method, there were no detections in the trip blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
ST-2-466	8/2/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-5-655	8/21/2012	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
300-D-153	8/27/2012	For Low Level Nitrosamine Method, trip blank 1208271230 and sample 1208271403 were received at the laboratory at 8.8 °C. This temperature is within holding temperature guidance provided in EPA Method 521. No data are qualified based on hold temperature.

Well ID	Event Date	Total Metals QA Narratives
200-D-109	8/24/2012	For Total Metals in blind control sample (1208221517), the sample was prepared at a concentration below the reporting limits for calcium and magnesium. The sample results for these elements are not qualified based on this control.
700-H-535	**8/13/2012**	**For Total Metals, arsenic (0.0015 mg/L) and antimony (0.0001 mg/L) were detected in the method blank for analytical batch IP120822-5 below the reporting limit. Affected data are appropriately qualified.**
BLM-38-620	8/16/2012	For Total Metals, arsenic (0.0015 mg/L) and antimony (0.0001 mg/L) was detected in the method blank for analytical batch 120822-5 below the reporting limit. No groundwater data are affected by this method blank contamination.
WB-5-250	8/20/2012	For Total Metals, arsenic (0.0015 mg/L) and antimony (0.0001 mg/L) was detected in the method blank for analytical batch 120822-5 below the reporting limit. No groundwater data are affected by this method blank contamination.
WB-5-280	8/16/2012	For Total Metals, arsenic (0.0015 mg/L) and antimony (0.0001 mg/L) was detected in the method blank for analytical batch 120822-5 below the reporting limit. No groundwater data are affected by this method blank contamination.
WB-5-345	8/16/2012	For Total Metals, arsenic (0.0015 mg/L) and antimony (0.0001 mg/L) was detected in the method blank for analytical batch 120822-5 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-25-455	**8/1/2012**	**For Total Metals, beryllium (0.00036 mg/L) was detected in the method blank for analytical batch 120807-1 below the reporting limit. Affected data are appropriately qualified.**
BLM-30-585	**8/1/2012**	**For Total Metals, beryllium (0.00036 mg/L) was detected in the method blank for analytical batch 120807-1 below the reporting limit. Affected data are appropriately qualified.**
BLM-6-488	**8/1/2012**	**For Total Metals, beryllium (0.00036 mg/L) was detected in the method blank for analytical batch 120807-1 below the reporting limit. Affected data are appropriately qualified.**
200-D-109	8/24/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
200-H-225	8/28/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
200-H-331	8/27/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
200-H-433	8/27/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
300-D-153	8/27/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
B655-EFF-2	8/28/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
B655-INF-1	8/28/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
ST-5-1175	8/25/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
ST-5-815	8/23/2012	For Total Metals, calcium (0.18 mg/L), magnesium (0.1 mg/L), and sodium (0.19 mg/L) were detected in the method blank for analytical batch IP120831-3-6. No groundwater data are affected by this method blank contamination.
BLM-6-488	8/1/2012	For Total Metals, field duplicate samples 1208011435 and 1208011436 the relative percent difference for barium was 0.0%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Total Metals QA Narratives
BLM-6-488	8/1/2012	For Total Metals, field duplicate samples 1208011435 and 1208011436 the relative percent difference for sodium was 1.4%. Upper acceptance limit for relative percent difference is 25%.
BLM-6-488	8/1/2012	For Total Metals, field duplicate samples 1208011435 and 1208011436 the relative percent difference for strontium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-6-488	8/1/2012	For Total Metals, field duplicate samples 1208011435 and 1208011436 the relative percent difference for potassium was 1.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-6-488	8/1/2012	For Total Metals, field duplicate samples 1208011435 and 1208011436 the relative percent difference for magnesium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-6-488	8/1/2012	For Total Metals, field duplicate samples 1208011435 and 1208011436 the relative percent difference for nickel was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-6-488	8/1/2012	For Total Metals, field duplicate samples 1208011435 and 1208011436 the relative percent difference for calcium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-JG-110	8/9/2012	For Total Metals, field duplicate samples 1208091412 and 1208091413 the relative percent difference for barium was 12.9%. Upper acceptance limit for relative percent difference is 25%.
200-JG-110	8/9/2012	For Total Metals, field duplicate samples 1208091412 and 1208091413 the relative percent difference for calcium was 6.5%. Upper acceptance limit for relative percent difference is 25%.
200-JG-110	**8/9/2012**	**For Total Metals, field duplicate samples 1208091412 and 1208091413 the relative percent difference for iron was 104.3%. This value is outside the upper acceptance limit for relative percent difference of 25%. Affected data are appropriately qualified.**
200-JG-110	8/9/2012	For Total Metals, field duplicate samples 1208091412 and 1208091413 the relative percent difference for potassium was 3.1%. Upper acceptance limit for relative percent difference is 25%.
200-JG-110	8/9/2012	For Total Metals, field duplicate samples 1208091412 and 1208091413 the relative percent difference for strontium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-JG-110	8/9/2012	For Total Metals, field duplicate samples 1208091412 and 1208091413 the relative percent difference for sodium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-JG-110	8/9/2012	For Total Metals, field duplicate samples 1208091412 and 1208091413 the relative percent difference for magnesium was 1.4%. Upper acceptance limit for relative percent difference is 25%.
NASA 8	8/21/2012	For Total Metals, field duplicate samples 1208210803 and 1208210804 the relative percent difference for barium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
NASA 8	8/21/2012	For Total Metals, field duplicate samples 1208210803 and 1208210804 the relative percent difference for iron was 2.7%. Upper acceptance limit for relative percent difference is 25%.
NASA 8	8/21/2012	For Total Metals, field duplicate samples 1208210803 and 1208210804 the relative percent difference for potassium was 3.1%. Upper acceptance limit for relative percent difference is 25%.
NASA 8	8/21/2012	For Total Metals, field duplicate samples 1208210803 and 1208210804 the relative percent difference for magnesium was 1.9%. Upper acceptance limit for relative percent difference is 25%.
NASA 8	8/21/2012	For Total Metals, field duplicate samples 1208210803 and 1208210804 the relative percent difference for sodium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
NASA 8	8/21/2012	For Total Metals, field duplicate samples 1208210803 and 1208210804 the relative percent difference for calcium was 2.2%. Upper acceptance limit for relative percent difference is 25%.
NASA 8	8/21/2012	For Total Metals, field duplicate samples 1208210803 and 1208210804 the relative percent difference for strontium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
700-H-535	**8/13/2012**	**For Total Metals, iron was detected in the equipment blank (1208131411Y) at 0.033 mg/L below the reporting limit. Zinc was detected in the equipment blank (1208131411Y) at 0.047 mg/L . Sodium was detected in the equipment blank (1208131411Y) at 0.17 mg/L below the reporting limit. Arsenic was detected in the equipment blank (1208131411Y) at 0.0024 mg/L below the reporting limit. Calcium was detected in the equipment blank (1208131411Y) at 0.22 mg/L below the reporting limit. Strontium was detected in the equipment blank (1208131411Y) at 0.025 mg/L below the reporting limit. Affected data are appropriately qualified.**
NASA 7	8/21/2012	For Total Metals, matrix spike recoveries for sample 1208220834 were within laboratory control limits. However, the concentrations of calcium and strontium in the native sample were greater than four times the concentration of the matrix spike added. The sample result is not qualified based on this control.
MPE-1	8/29/2012	For Total Metals, potassium (0.12 mg/L) was detected in the method blank for analytical batch IP120904-2-9. No groundwater data were affected by this method blank contamination.
MPE-11	8/29/2012	For Total Metals, potassium (0.12 mg/L) was detected in the method blank for analytical batch IP120904-2-9. No groundwater data were affected by this method blank contamination.
BLM-38-620	**8/16/2012**	**For Total Metals, selenium was detected in the field blank (1208161422Z) at 0.0056 mg/L. Beryllium was detected in the field blank (1208161422Z) at 0.00022 mg/L below the reporting limit. Calcium was detected in the field blank (1208161422Z) at 0.09 mg/L below the reporting limit. Affected data are appropriately qualified.**
WB-5-250	8/20/2012	For Total Metals, the concentration of strontium in the native sample was greater than four times the concentration of the matrix spike added. The sample result is not qualified based on this control.

Well ID	Event Date	Total Metals QA Narratives
200-D-109	8/24/2012	For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). No groundwater data are affected by this LCS exceedance.
200-H-225	**8/28/2012**	**For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). Affected data are appropriately qualified.**
200-H-331	8/27/2012	For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). No groundwater data are affected by this LCS exceedance.
200-H-433	8/27/2012	For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). No groundwater data are affected by this LCS exceedance.
300-D-153	8/27/2012	For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). No groundwater data are affected by this LCS exceedance.
B655-EFF-2	8/28/2012	For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). No groundwater data are affected by this LCS exceedance.
B655-INF-1	8/28/2012	For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). No groundwater data are affected by this LCS exceedance.
ST-5-1175	**8/25/2012**	**For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). Affected data are appropriately qualified.**
ST-5-815	8/23/2012	For Total Metals, the laboratory control sample (LCS) recovery of antimony (331%) was outside laboratory control limits (80-120%). No groundwater data are affected by this LCS exceedance.
WB-5-250	**8/20/2012**	**For Total Metals, the matrix spike recovery for selenium (65%) was outside laboratory control limits (80-120%) for sample 1208201015Y. Affected data are appropriately qualified.**
NASA 7	**8/21/2012**	**For Total Metals, the serial dilution for sodium failed laboratory acceptance criteria for sample 1207241035Z. Affected data are appropriately qualified.**
WB-5-250	**8/20/2012**	**For Total Metals, the serial dilution for sodium failed laboratory acceptance criteria for sample 1207241035Z. Affected data are appropriately qualified.**
200-D-109	8/24/2012	For Total Metals, zinc (0.0019 mg/L) was detected in the method blank for analytical batch IP120828-3-6 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-38-480	**8/20/2012**	**For Total Metals, zinc (0.0019 mg/L) was detected in the method blank for analytical batch IP120828-3-6 below the reporting limit. Affected data are appropriately qualified.**
NASA 7	**8/21/2012**	**For Total Metals, zinc (0.0019 mg/L) was detected in the method blank for analytical batch IP120828-3-6 below the reporting limit. Affected data are appropriately qualified.**
NASA 8	8/21/2012	For Total Metals, zinc (0.0019 mg/L) was detected in the method blank for analytical batch IP120828-3-6 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-5-985	8/22/2012	For Total Metals, zinc (0.0019 mg/L) was detected in the method blank for analytical batch IP120828-3-6 below the reporting limit. No groundwater data are affected by this method blank contamination.
WB-14-520	**8/2/2012**	**For Total Metals, zinc was detected in the equipment blank (1208021021Z) at 0.034 mg/L. Calcium was detected in the equipment blank (1208021021Z) at 0.32 mg/L below the reporting limit. Magnesium was detected in the equipment blank (1208021021Z) at 0.17 mg/L below the reporting limit. Strontium was detected in the equipment blank (1208021021Z) at 0.0047 mg/L below the reporting limit. Affected data are appropriately qualified.**
WB-5-345	**8/16/2012**	**For Total Metals, zinc was detected in the equipment blank (1208160821Y) at 0.0054 mg/L. Cobalt was detected in the equipment blank (1208160821Y) at 0.00081 mg/L. Nickel was detected in the equipment blank (1208160821Y) at 0.00076 mg/L. Silver was detected in the equipment blank (1208160821Y) at 0.0017 mg/L. Sodium was detected in the equipment blank (1208160821Y) at 0.11 mg/L. Arsenic was detected in the equipment blank (1208160821Y) at 0.0024 mg/L. calcium was detected in the equipment blank (1208160821Y) at 0.23 mg/L. Chromium was detected in the equipment blank (1208160821Y) at 0.001 mg/L. Vanadium was detected in the equipment blank (1208160821Y) at 0.0027 mg/L. Beryllium was detected in the equipment blank (1208160821Y) at 0.00025 mg/L. Magnesium was detected in the equipment blank (1208160821Y) at 0.16 mg/L. Strontium was detected in the equipment blank (1208160821Y) at 0.0061 mg/L. Affected data are appropriately qualified.**

Well ID	Event Date	Miscellaneous QA Narratives
BLM-6-488	**8/1/2012**	**For EPA Method 160.1 total dissolved solids, sample 1208011437 was originally analyzed within the recommended hold time, however the QC for this batch failed acceptance criteria. The re-analysis was conducted out of hold time and the results are appropriately qualified.**
200-JG-110	**8/9/2012**	**For EPA Method 160.1 total dissolved solids, sample 1208091414 was analyzed out of the recommended hold time and the results are appropriately qualified.**
400-D-275	8/7/2012	For EPA Method 300.0, chloride (0.1 mg/L) was detected in the method blank for analytical batch 120810-1 below the reporting limit. No groundwater data were affected by this method blank contamination.

Well ID	Event Date	Miscellaneous QA Narratives
BLM-14-327	8/8/2012	For EPA Method 300.0, chloride (0.1 mg/L) was detected in the method blank for analytical batch 120810-1 below the reporting limit. No groundwater data were affected by this method blank contamination.
WB-14-520	8/2/2012	For EPA Method 300.0, chloride (0.1 mg/L) was detected in the method blank for analytical batch 120810-1 below the reporting limit. No groundwater data were affected by this method blank contamination.
200-JG-110	**8/9/2012**	**For SW-846 Method 8270D, an MDL and LCS/LCSD recovery cannot be determined for p-Phenylenediamine, diphenylamine, and a,a-Dimethylphenethylamine. Diphenylamine is degraded when the sample is injected, p-Phenylenediamine is degraded in the extraction procedure and a,a-Dimethylphenethylamine is degraded during extraction and injection. All of these compounds have been flagged with an "*" and should be considered indeterminate.**
200-JG-110	8/9/2012	For SW-846 Method 8270D, the continuing calibration verification (CCV) for one or more analyte(s) is outside laboratory control limits; refer to report R1205301 for details. No groundwater data are affected by the CCV exceedances.

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
ST-6-685	8/30/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	3.79	ng/L	EB
300-D-153	8/27/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	3.26	ng/L	T TB
B650-INF-1	8/24/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	3.1	ug/L	TB
BLM-38-620	8/16/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2.8	ng/L	RB EB
WB-5-250	8/20/2012	Carboy G2	8260	VOA-EB	67-64-1	Acetone	2.7	ug/L	J EB
200-H-225	8/28/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2.67	ng/L	EB
ST-2-466	8/2/2012		8260_LL	VOA-FB	67-64-1	Acetone	2.6	ug/L	J FB
PL-7-480	8/24/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2.56	ng/L	T EB
ST-1-541	8/7/2012	Carboy G2	8260	VOA-FB	67-64-1	Acetone	2.5	ug/L	J FB
ST-5-485	8/24/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2.48	ng/L	T EB
BLM-6-488	8/1/2012		8260	VOA-FB	67-64-1	Acetone	2.4	ug/L	J FB
BLM-30-585	8/1/2012	Carboy G3	8260	VOA-EB	67-64-1	Acetone	2.4	ug/L	J EB
BLM-14-327	8/8/2012		8260	VOA-FB	67-64-1	Acetone	2.3	ug/L	J FB
WB-5-250	8/20/2012	Carboy G2	8260	VOA-EB	74-87-3	Chloromethane	2.2	ug/L	EB
B655-EFF-2	8/28/2012	Carboy G3	8260	VOA-FB	67-64-1	Acetone	2.2	ug/L	J FB
ST-5-1175	8/25/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2.14	ng/L	T EB
200-D-109	8/24/2012		8260	VOA-FB	67-64-1	Acetone	2.1	ug/L	J FB
BLM-38-620	8/16/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2.02	ng/L	RB EB
200-H-331	8/27/2012	Carboy G2	8260	VOA-EB	67-64-1	Acetone	2	ug/L	J EB
300-D-153	8/27/2012		8260	VOA-FB	67-64-1	Acetone	2	ug/L	J FB
ST-5-815	8/23/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	2	ug/L	J EB
400-D-355	8/6/2012	Carboy G5	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.96	ng/L	EB
BLM-25-455	8/1/2012		8260	VOA-TB	67-64-1	Acetone	1.8	ug/L	J TB
300-C-128	8/6/2012	Carboy G2	8260	VOA-TB	67-64-1	Acetone	1.8	ug/L	J TB
ST-5-655	8/21/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	1.8	ug/L	J EB
ST-5-985	8/22/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	1.7	ug/L	J EB
WB-14-520	8/2/2012	Carboy G5	8260_LL	VOA-EB	67-64-1	Acetone	1.7	ug/L	J EB
400-D-275	8/7/2012	Carboy G5	8260_LL	VOA-EB	67-64-1	Acetone	1.7	ug/L	J EB
400-D-195	8/7/2012	Carboy G5	8260_LL	VOA-EB	67-64-1	Acetone	1.7	ug/L	J EB
200-H-331	8/27/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.61	ng/L	T EB
BLM-22-570	8/6/2012		8260_LL	VOA-FB	67-64-1	Acetone	1.6	ug/L	J FB
B655-INF-1	8/28/2012	Carboy G3	8260	VOA-FB	67-64-1	Acetone	1.6	ug/L	J FB
BLM-36-610	8/9/2012	Carboy G5	8260	VOA-EB	67-64-1	Acetone	1.6	ug/L	J EB
BLM-36-860	8/10/2012	Carboy G5	8260	VOA-EB	67-64-1	Acetone	1.6	ug/L	J EB

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
BLM-7-509	8/8/2012		8260_LL	VOA-TB	67-64-1	Acetone	1.6	ug/L	J TB
200-JG-110	8/9/2012	Carboy G2	8260	VOA-FB	67-64-1	Acetone	1.6	ug/L	J FB
200-H-225	8/28/2012	Carboy G4	8260	VOA-EB	67-64-1	Acetone	1.6	ug/L	J EB
B650-EFF-1	8/24/2012	Carboy G3	8260_LL	VOA-FB	67-64-1	Acetone	1.6	ug/L	J FB
ST-5-1175	8/25/2012	Carboy G4	8260_LL	VOA-EB	67-64-1	Acetone	1.6	ug/L	J EB
ST-6-685	8/30/2012	Carboy G4	8260_LL	VOA-EB	67-64-1	Acetone	1.5	ug/L	J EB
300-D-153	8/27/2012		8260	VOA-FB	75-15-0	Carbon Disulfide	1.4	ug/L	FB
BLM-36-350	8/14/2012	Carboy G3	8260	VOA-EB	67-64-1	Acetone	1.4	ug/L	J EB
BW-1-268	8/7/2012	Carboy G2	8260	VOA-FB	67-64-1	Acetone	1.3	ug/L	J FB
200-H-433	8/27/2012	Carboy G2	8260	VOA-EB	67-64-1	Acetone	1.3	ug/L	J EB
BLM-10-517	8/10/2012		8260_LL	VOA-TB	67-64-1	Acetone	1.2	ug/L	J TB
B650-EFF-1	8/24/2012	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.15	ng/L	T FB
PL-7-560	8/22/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.15	ng/L	T RB EB
BLM-38-480	8/20/2012		NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.14	ng/L	T EB
200-H-225	8/28/2012	Carboy G4	8260	VOA-EB	75-15-0	Carbon Disulfide	1.1	ug/L	EB
ST-5-815	8/23/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.96	ng/L	T EB
BLM-38-480	8/20/2012		8260_LL	VOA-EB	109-99-9	Tetrahydrofuran (THF)	0.91	ug/L	J EB
NASA 8	8/21/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	0.9	ug/L	J TB
ST-6-685	8/30/2012	Carboy G4	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.9	ug/L	EB
ST-5-985	8/22/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.89	ng/L	T RB EB Q
200-H-433	8/27/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.85	ng/L	T EB
BLM-38-620	8/16/2012	Carboy G4	8260	VOA-EB	109-99-9	Tetrahydrofuran (THF)	0.81	ug/L	J EB
ST-5-655	8/21/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.81	ug/L	EB
ST-5-985	8/22/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.72	ug/L	EB
200-D-109	8/24/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.71	ng/L	T FB
ST-5-485	8/24/2012	Carboy G4	8260_LL	VOA-EB	74-87-3	Chloromethane	0.7	ug/L	EB
BLM-36-860	8/10/2012	Carboy G5	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.68	ng/L	EB
ST-5-655	8/21/2012	Carboy G2	8260_LL	VOA-EB	109-99-9	Tetrahydrofuran (THF)	0.66	ug/L	J EB
WB-5-250	8/20/2012	Carboy G2	8260	VOA-EB	75-15-0	Carbon Disulfide	0.65	ug/L	J EB
300-C-128	8/6/2012	Carboy G2	8260	VOA-TB	75-09-2	Dichloromethane	0.63	ug/L	J TB
ST-1-541	8/7/2012	Carboy G2	8260	VOA-FB	78-93-3	2-Butanone (MEK)	0.58	ug/L	J FB
BLM-6-488	8/1/2012		8260	VOA-FB	78-93-3	2-Butanone (MEK)	0.56	ug/L	J FB
400-D-275	8/7/2012	Carboy G5	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.55	ng/L	EB
PFE-7	8/28/2012	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.55	ng/L	FB
ST-5-815	8/23/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.46	ug/L	J EB
B655-EFF-2	8/28/2012	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.39	ug/L	J FB
WB-5-280	8/16/2012	Carboy G2	8260	VOA-EB	75-15-0	Carbon Disulfide	0.39	ug/L	J EB
BLM-36-800	8/14/2012	Carboy G3	8260	VOA-EB	74-87-3	Chloromethane	0.37	ug/L	J EB
NASA 8	8/21/2012		8260	VOA-TB	108-90-7	Chlorobenzene	0.36	ug/L	J TB
MPE-1	8/29/2012	Carboy G3	8260	VOA-FB	74-83-9	Bromomethane	0.36	ug/L	J RB FB
B655-INF-1	8/28/2012	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.36	ug/L	J FB
NASA 8	8/21/2012		8260	VOA-TB	75-09-2	Dichloromethane	0.34	ug/L	J TB
WB-14-520	8/2/2012	Carboy G5	METALS	METALS-EB	7440-70-2	CALCIUM	0.32	MG/L	J EB
BLM-36-860	8/10/2012	Carboy G5	8260	VOA-EB	74-87-3	Chloromethane	0.31	ug/L	J EB
PFE-7	8/28/2012	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.29	ug/L	J FB
400-D-275	8/7/2012	Carboy G5	8260_LL	VOA-EB	74-87-3	Chloromethane	0.29	ug/L	J EB
BLM-22-570	8/6/2012		8260_LL	VOA-FB	75-09-2	Dichloromethane	0.28	ug/L	J FB
200-H-331	8/27/2012	Carboy G2	8260	VOA-EB	74-87-3	Chloromethane	0.24	ug/L	J RB EB

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
400-D-275	8/7/2012	Carboy G5	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.24	ug/L	J EB
ST-6-685	8/30/2012	Carboy G4	8260_LL	VOA-EB	74-87-3	Chloromethane	0.24	ug/L	J EB
B655-INF-1	8/28/2012	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.24	ug/L	J RB FB
WB-5-345	8/16/2012	Carboy G2	8260	VOA-EB	74-87-3	Chloromethane	0.23	ug/L	J EB
PL-7-480	8/24/2012	Carboy G4	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.23	ug/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-70-2	CALCIUM	0.23	MG/L	J EB
400-D-355	8/6/2012	Carboy G5	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.23	ug/L	J EB
BLM-38-620	8/16/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	4164-28-7	N-Nitrodimethylamine	0.22	ng/L	RB EB
B655-EFF-2	8/28/2012	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.22	ug/L	J RB FB
BLM-38-480	8/20/2012		8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.21	ug/L	J EB
200-H-433	8/27/2012	Carboy G2	8260	VOA-EB	74-87-3	Chloromethane	0.21	ug/L	J RB EB
B650-INF-1	8/24/2012		8260	VOA-TB	74-87-3	Chloromethane	0.21	ug/L	J TB
ST-5-485	8/24/2012	Carboy G4	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.21	ug/L	J EB
PL-7-480	8/24/2012	Carboy G4	8260_LL	VOA-EB	74-87-3	Chloromethane	0.2	ug/L	J EB
WB-14-520	8/2/2012	Carboy G5	METALS	METALS-EB	7439-95-4	MAGNESIUM	0.17	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7439-95-4	MAGNESIUM	0.16	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-23-5	SODIUM	0.11	MG/L	J EB
BLM-38-620	8/16/2012	Carboy G4	METALS	METALS-FB	7440-70-2	CALCIUM	0.09	MG/L	J FB
WB-14-520	8/2/2012	Carboy G5	METALS	METALS-EB	7440-66-6	ZINC	0.034	MG/L	EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-24-6	STRONTIUM	0.0061	MG/L	J EB
BLM-38-620	8/16/2012	Carboy G4	METALS	METALS-FB	7782-49-2	SELENIUM	0.0056	MG/L	FB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-66-6	ZINC	0.0054	MG/L	J EB
WB-14-520	8/2/2012	Carboy G5	METALS	METALS-EB	7440-24-6	STRONTIUM	0.0047	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-62-2	VANADIUM	0.0027	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-38-2	ARSENIC	0.0024	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-22-4	SILVER	0.0017	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-47-3	CHROMIUM	0.001	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-48-4	COBALT	0.00081	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-02-0	NICKEL	0.00076	MG/L	J EB
WB-5-345	8/16/2012	Carboy G2	METALS	METALS-EB	7440-41-7	BERYLLIUM	0.00025	MG/L	J EB
BLM-38-620	8/16/2012	Carboy G4	METALS	METALS-FB	7440-41-7	BERYLLIUM	0.00022	MG/L	J FB

National Aeronautics and
Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

September 2012

Report Submitted: January 22, 2013

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1.0 Introduction

The WSTF Groundwater Monitoring Plan (GMP) requires the preparation of a monthly report to assess the quality of analytical data reported. The monthly QAR prepared by the environmental contractor and reviewed by the contractor QA/QC Coordinator provides the following information:

- A summary of notable anomalies and a follow-up on previous anomalies, if necessary.
- A summary of notable data quality issues by analytical method.
- A list of the sample events for which samples were collected in September 2012.
- The quantity and type of quality control samples analyzed.
- Definitions of data qualifiers used in WSTF data reporting.
- The quantity and type of data qualifiers applied to individual analytical results.
- A list of QA narratives for the month arranged by analytical method.
- A summary table of blank sample detections.

2.0 Data Quality

2.1 Notable Anomalies Identified in Previous QA Reports

There were no notable anomalies in the groundwater data associated with the August 2012 QA Report.

2.2 Notable Anomalies

There are no notable anomalies in the groundwater data associated with this QA Report.

2.3 Low Level Nitrosamine Method

For Low Level Nitrosamine Method, internal standards N-nitrosodimethylamine-d6 and N-nitrodimethylamine -d6 were not recovered in duplicate groundwater samples 1209060924 and 1209071328 collected from BLM-5-527 on 9/6/2012 and PL-2-504 on 9/7/2012, respectively. As a result there were no reportable results for these duplicate samples. The original groundwater samples for both events were not affected by the internal standard recovery issue.

2.4 SW-846 Method 8290

The SW-846 Method 8290 sample collected from 200-SG-1 on 9/8/2012 for dioxins and furans analysis was inadvertently analyzed by an incorrect analytical method. Resampling was conducted on 12/3/2012 and reportable analytical results were obtained.

3.0 Data Tables

Table 1 summarizes the sample events initiated in September 2012. This report is based on data quality issues related to the sample events listed in Table 1. Tables 2 through 8 contain information related to the sample events in Table 1. As specified by the WSTF GMP, specific quality control samples are utilized to assess the quality of analytical data. When data quality criteria are not met, data qualifiers are applied to the data. Table 2 presents the quantity of quality control samples collected for each analytical method. Table 3 compares the quality control sample percentages collected to the requirements in the GMP. Definitions of data qualifiers used for WSTF chemical analytical data are listed in Table 4. Table 5 and Table 6 present the total number of individual result records and summarize the quantity of field and laboratory data qualifiers assigned to individual analyte result records in the WSTF analytical database. Table 7 provides all quality assurance

narratives associated with the sample events in Table 1. Narratives associated with qualified data are identified by **bold text** in Table 7. Table 8 provides a summary of all detections in WSTF blank samples.

Table 1 – Sample Events for September 2012

Well ID	Event Date
ST-6-535	9/4/2012
ST-6-575	9/4/2012
100-F-358	9/5/2012
BLM-13-300	9/5/2012
NASA 10	9/5/2012
NASA 5	9/5/2012
BLM-5-527	9/6/2012
PL-2-504	9/7/2012
WW-1-452	9/7/2012
200-SG-1	9/8/2012
NASA 9	9/8/2012
ST-4-481	9/8/2012
ST-4-690	9/8/2012

Well ID	Event Date
ST-4-589	9/10/2012
BLM-10-517	9/11/2012
PL-1-486	9/11/2012
BLM-18-430	9/12/2012
PL-3-453	9/12/2012
BLM-23-431	9/13/2012
BLM-9-419	9/13/2012
100-HG-139	9/14/2012
BLM-15-305	9/14/2012
PL-4-464	9/14/2012
BW-3-180	9/15/2012
BW-6-355	9/15/2012
BLM-1-435	9/18/2012

Well ID	Event Date
600-G-138	9/19/2012
200-D-240	9/20/2012
ST-6-535	9/21/2012
ST-6-685	9/21/2012
B650-EFF-1	9/24/2012
B650-INF-1	9/24/2012
PFE-7	9/24/2012
ST-6-575	9/24/2012
B655-EFF-2	9/25/2012
B655-INF-1	9/25/2012
MPE-8	9/26/2012

Table 2 - Quantity of Quality Control Samples

Method	Samples	Field Blanks	Equip Blanks	Trip Blanks	Blind Controls	Duplicates	Matrix Spikes
Perchlorate by EPA Method 331.0	**5**	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0
Sulfide by EPA Method 376.1	**1**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**22**	0	0	0	0	**2**	**1**
Pesticides by SW-846 Method 8081	**1**	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**1**	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**1**	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**23**	**15**	0	**8**	0	**2**	0
Low Level Volatile Organics by SW-846 Method 8260C	**14**	**6**	**5**	**3**	0	**2**	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**3**	0	0	0	0	0	0
Dioxins/Furans by SW-846 Method 8290	**1**	0	0	0	0	0	0
Cyanide by SW-846 Method 9014	**1**	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**1**	0	0	0	0	0	0
Anions by Various EPA Methods	**8**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**11**	**1**	0	0	0	**1**	**1**
Nitrosamines by Low-Level Method	**24**	**12**	**5**	**7**	**1**	**1**	**1**

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 10/1/2011	QC Qty. since 10/1/2011	QC % since 10/1/2011	Sample Quantity September 2012	QC Quantity September 2012	QC % September 2012
VOA Duplicates	10	556	57	**10**	37	4	11
VOA Matrix Spikes	2	556	14	**3**	37	1	3
607 Duplicates	10	364	34	**9**	22	2	9
607 Matrix Spikes	2	364	10	**3**	22	1	5
607 Equipment Blanks	2	364	9	**2**	22	0	0
607 Field Blanks	2	364	9	**2**	22	0	0
NDMA_LL Duplicates	10	355	36	**10**	24	1	4
NDMA_LL Matrix Spikes	2	355	10	**3**	24	1	4

Quality Control Requirement	Requirement %	Samp. Qty. since 10/1/2011	QC Qty. since 10/1/2011	QC % since 10/1/2011	Sample Quantity September 2012	QC Quantity September 2012	QC % September 2012
Metals Duplicates	10	257	26	**10**	11	1	9
Metals Matrix Spikes	2	257	7	**3**	11	1	9
Metals Equipment Blanks	5	257	14	**5**	11	0	0
Metals Field Blanks	5	257	14	**5**	11	1	9

Quality Control Requirement	Requirement %	Sample Events since 10/1/2011	QC Qty. since 10/1/2011	QC % since 10/1/2011	Sample Events September 2012	QC Quantity September 2012	QC % September 2012
VOA Equipment Blanks, Trip Blanks, and Field Blanks	*Should approach 100%*	556	556	100%	37	37	100%
Low Level Nitrosamine Equipment Blanks, Trip Blanks, and Field Blanks	*Should approach 100%*	345	343	99%	24	24	100%

Table 4 - Definitions of Data Qualifiers

Qualifier	Definition
*	User defined qualifier. See quality assurance narrative.
A	The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
AD	Relative percent difference for analyst (laboratory) duplicates was outside standard limits.
D	The reported result is from a dilution.
EB	The analyte was detected in the equipment blank.
FB	The analyte was detected in the field blank.
G	The result is an estimated value greater than the upper calibration limit.
i	The result, quantitation limit, and/or detection limit may have been affected by matrix interference.
J	The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA	The value/result was either not analyzed for or not applicable.
ND	The analyte was not detected above the detection limit.
Q	The result for a blind control sample was outside standard limits.
QD	The relative percent difference for a field duplicate was outside standard limits.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
RB	The analyte was detected in the method blank.
S	The result was determined by the method of standard addition.
SP	The matrix spike recovery and/or the relative percent difference for matrix spike duplicates was outside standard limits.
T	The sample was analyzed outside the specified holding time or temperature.
TB	The analyte was detected in the trip blank.
TIC	The analyte was tentatively identified by a GC/MS library search and the amount reported is an estimated value.

Table 5 - Quantity of Field Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Perchlorate by EPA Method 331.0	**5**	0	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0	0
Sulfide by EPA Method 376.1	**1**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**72**	0	0	0	0	0	0	0
Pesticides by SW-846 Method 8081	**23**	0	0	0	0	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
PCBs by SW-846 Method 8082	**7**	0	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**6**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1625**	**14**	0	**6**	0	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**1040**	**4**	**9**	**4**	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**366**	0	0	0	0	0	0	0
Dioxins/Furans by SW-846 Method 8290	**25**	0	0	0	0	0	0	0
Cyanide by SW-846 Method 9014	**1**	0	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**1**	0	0	0	0	0	0	0
Anions by Various EPA Methods	**56**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**324**	**1**	0	0	0	0	0	0
Nitrosamines by Low-Level Method	**50**	**5**	**3**	**2**	**1**	0	0	0

Table 6 - Quantity of Laboratory based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"*"	"A"	"AD"	"G"	"RB"	"T"	"D"	"i"	"J"
Perchlorate by EPA Method 331.0	**5**	0	0	0	0	0	0	0	0	**1**
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0	0	0	0
Sulfide by EPA Method 376.1	**1**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**72**	0	0	0	0	0	0	0	0	**4**
Pesticides by SW-846 Method 8081	**23**	0	0	0	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**7**	0	0	0	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**6**	0	0	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1625**	0	0	0	0	**8**	0	0	0	**57**
Low Level Volatile Organics by SW-846 Method 8260C	**1040**	0	0	0	0	**8**	0	0	0	**27**
Semi-Volatile Organics by SW-846 Method 8270D	**366**	**9**	0	0	0	0	0	0	0	**2**
Dioxins/Furans by SW-846 Method 8290	**25**	0	0	0	0	0	0	0	0	0
Cyanide by SW-846 Method 9014	**1**	0	0	0	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**1**	0	0	0	0	0	0	0	0	0
Anions by Various EPA Methods	**56**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**324**	**1**	0	0	0	**2**	0	0	0	**64**
Nitrosamines by Low-Level Method	**50**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-6-535	**9/4/2012**	**For Low Level SW-846 Method 8260C, 2-propanol was detected in the equipment blank (1209040830Z) at 14.0 ug/L below the reporting limit. Acetone was detected in the equipment blank (1209040830Z) at 3.2 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1209040830Z) at 1.5 ug/L. Chloromethane was detected in the equipment blank (1209040830Z) at 0.31 ug/L below the reporting limit. Iodomethane was detected in the equipment blank (1209040830Z) at 0.61 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-6-535	**9/21/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1209211250Z) at 1.8 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1209211250Z) at 0.43 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1209211250Z) at 0.34 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-6-575	**9/4/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1209041250Z) at 1.7 ug/L below the reporting limit. Bromomethane was detected in the equipment blank (1209041250Z) at 0.26 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1209041250Z) at 0.48 ug/L below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-6-575	**9/24/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1209240840Z) at 2.6 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1209240840Z) at 0.45 ug/L. Chloromethane was detected in the equipment blank (1209240840Z) at 0.67 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-6-685	**9/21/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1209210900Z) at 2.7 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1209210900Z) at 0.63 ug/L. Chloromethane was detected in the equipment blank (1209210900Z) at 0.21 ug/L below the reporting limit. Affected data are appropriately qualified.**
B655-EFF-2	**9/25/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the field blank (E1209251003) at 2.2 ug/L below the reporting limit. Chloromethane was detected in the field blank (E1209251003) at 0.3 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-10-517	9/11/2012	For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1209110916) at 1.5 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209110916) at 0.46 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
PL-3-453	**9/12/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1209120846) at 1.5 ug/L. Bromomethane was detected in the field blank (1209120846) at 0.32 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209120846) at 0.25 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-4-481	9/8/2012	For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1209080841) at 2.3 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209080841) at 0.6 ug/L. Chloromethane was detected in the field blank (1209080841) at 0.23 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
ST-4-589	**9/10/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1209101316) at 1.6 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209101316) at 0.66 ug/L. Chloromethane was detected in the field blank (1209101316) at 0.22 ug/L below the reporting limit. Affected data are appropriately qualified.**
WW-1-452	**9/7/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the trip blank (1209070700) at 1.5 ug/L below the reporting limit. Bromomethane was detected in the trip blank (1209070700) at 0.27 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (1209070700) at 1.1 ug/L. Chloromethane was detected in the trip blank (1209070700) at 0.28 ug/L below the reporting limit. Affected data are appropriately qualified.**
PL-3-453	**9/12/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.37 ug/L) and iodomethane (0.68 ug/L) were detected in the method blank for analytical batch 310776 below the reporting limit. Affected data are appropriately qualified.**
BLM-10-517	9/11/2012	For Low Level SW-846 Method 8260C, bromomethane (0.39 ug/L) and iodomethane (0.46 ug/L) were detected in the method blank for analytical batch 310090 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-4-589	9/10/2012	For Low Level SW-846 Method 8260C, bromomethane (0.39 ug/L) and iodomethane (0.46 ug/L) were detected in the method blank for analytical batch 310090 below the reporting limit. No groundwater data are affected by this method blank contamination.
100-F-358	**9/5/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.44 ug/L) and carbon disulfide (0.23 ug/L) were detected in the method blank for analytical batch 308652 below the reporting limit. Affected data are appropriately qualified.**
ST-6-535	**9/4/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.44 ug/L) and carbon disulfide (0.23 ug/L) were detected in the method blank for analytical batch 308652 below the reporting limit. Affected data are appropriately qualified.**
ST-6-575	**9/4/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.44 ug/L) and carbon disulfide (0.23 ug/L) were detected in the method blank for analytical batch 308652 below the reporting limit. Affected data are appropriately qualified.**
B650-EFF-1	**9/24/2012**	**For Low Level SW-846 Method 8260C, carbon disulfide was detected in the trip blank (E1209241015) at 8.1 ug/L. Iodomethane was detected in the trip blank (E1209241015) at 0.31 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-4-690	**9/8/2012**	**For Low Level SW-846 Method 8260C, carbon disulfide was detected in the trip blank (1209080630) at 7.6 ug/L. Chloromethane was detected in the trip blank (1209080630) at 0.24 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-4-481	9/8/2012	For Low Level SW-846 Method 8260C, chloromethane (0.24 ug/L) and iodomethane (0.35 ug/L) were detected in the method blank for analytical batch 309257 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-4-690	**9/8/2012**	**For Low Level SW-846 Method 8260C, chloromethane (0.24 ug/L) and iodomethane (0.35 ug/L) were detected in the method blank for analytical batch 309257 below the reporting limit. Affected**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		data are appropriately qualified.
WW-1-452	**9/7/2012**	**For Low Level SW-846 Method 8260C, chloromethane (0.24 ug/L) and iodomethane (0.35 ug/L) were detected in the method blank for analytical batch 309257 below the reporting limit. Affected data are appropriately qualified.**
100-F-358	**9/5/2012**	**For Low Level SW-846 Method 8260C, chloromethane was detected in the field blank (1209051401) at 0.29 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-6-575	9/4/2012	For Low Level SW-846 Method 8260C, field duplicate samples 1209041400Z and 1209041401Z the relative percent difference for trichloroethene (TCE) was 5.3%. Upper acceptance limit for relative percent difference is 25%.
ST-6-575	9/4/2012	For Low Level SW-846 Method 8260C, field duplicate samples 1209041400Z and 1209041401Z the relative percent difference for trichlorofluoromethane (CFC 11) was 2.1%. Upper acceptance limit for relative percent difference is 25%.
ST-6-575	9/24/2012	For Low Level SW-846 Method 8260C, field duplicate samples 1209240950Z and 1209240951Z the relative percent difference for trichloroethene (TCE) was 15.0%. Upper acceptance limit for relative percent difference is 25%.
ST-6-575	9/24/2012	For Low Level SW-846 Method 8260C, field duplicate samples 1209240950Z and 1209240951Z the relative percent difference for trichlorofluoromethane (CFC 11) was 22.2%. Upper acceptance limit for relative percent difference is 25%.
B650-EFF-1	**9/24/2012**	**For Low Level SW-846 Method 8260C, iodomethane (0.47 ug/L) was detected in the method blank for analytical batch 312151 below the reporting limit. Affected data are appropriately qualified.**
B655-EFF-2	9/25/2012	For Low Level SW-846 Method 8260C, iodomethane (0.47 ug/L) was detected in the method blank for analytical batch 312151 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-4-690	9/8/2012	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 1209081011 were within laboratory control limits.
100-F-358	9/5/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308652 is outside laboratory control limits; refer to report R1205895 for details. Acrolein and tetrahydrofuran detections, if any, should be considered estimated.
BLM-10-517	9/11/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 310090 is outside laboratory control limits; refer to report R1206050 for details. 1,4-Dioxane, 2-chloro-1,3-butadiene, acrolein, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
PL-3-453	9/12/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 310776 is outside laboratory control limits; refer to report R1206122 for details. Bromoform and bromomethane detections, if any, should be considered estimated.
ST-4-481	9/8/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309257 is outside laboratory control limits; refer to report R1205956 for details. Bromomethane, chloromethane, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
ST-4-589	9/10/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 310090 is outside laboratory control limits; refer to report R1206050 for details. 1,4-Dioxane, 2-chloro-1,3-butadiene, acrolein, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
ST-4-690	9/8/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309257 is outside laboratory control limits; refer to report R1205956 for details. Bromomethane, chloromethane, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
ST-6-535	9/4/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308652 is outside laboratory control limits; refer to report R1205895 for details. Acrolein and tetrahydrofuran detections, if any, should be considered estimated.
ST-6-535	9/21/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 311843 is outside laboratory control limits; refer to report R1206412 for details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
ST-6-575	9/24/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 311843 is outside laboratory control limits; refer to report R1206412 for details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
ST-6-575	9/4/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308652 is outside laboratory control limits; refer to report R1205895 for details. Acrolein and tetrahydrofuran detections, if any, should be considered estimated.
ST-6-685	9/21/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 311843 is outside laboratory control limits; refer to report R1206412 for

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		details. Acrolein and vinyl acetate detections, if any, should be considered estimated.
WW-1-452	9/7/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309257 is outside laboratory control limits; refer to report R1205956 for details. Bromomethane, chloromethane, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
B650-EFF-1	9/24/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) recoveries for 1,4-dioxane (200%), isobutyl alcohol (145%), and 2-propanol (167%) for analytical batch 312151 were outside laboratory control limits (51-180%), (58-144%), and (49-162%). No groundwater data are affected by these LCS exceedances.
B655-EFF-2	9/25/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) recoveries for 1,4-dioxane (200%), isobutyl alcohol (145%), and 2-propanol (167%) for analytical batch 312151 were outside laboratory control limits (51-180%), (58-144%), and (49-162%). No groundwater data are affected by these LCS exceedances.
NASA 9	9/8/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (137%) for analytical batch 309256 was outside laboratory control limits (65-134%). No groundwater data are affected by this laboratory control sample recovery exceedance.
ST-4-481	9/8/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (137%) for analytical batch 309257 was outside laboratory control limits (65-134%). No groundwater data are affected by this LCS exceedance.
ST-4-690	9/8/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (137%) for analytical batch 309257 was outside laboratory control limits (65-134%). No groundwater data are affected by this LCS exceedance.
WW-1-452	9/7/2012	For Low Level SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (137%) for analytical batch 309257 was outside laboratory control limits (65-134%). No groundwater data are affected by this LCS exceedance.
BW-6-355	9/15/2012	For SW-846 Method 8260C, 2-butanone (MEK) was detected in the field blank (1209151106) at 0.99 ug/L below the reporting limit. Acetone was detected in the field blank (1209151106) at 2.8 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209151106) at 0.32 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209151106) at 0.27 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
200-SG-1	**9/8/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1209081106B) at 1.9 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209081106B) at 0.86 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209081106B) at 0.33 ug/L below the reporting limit. Affected data are appropriately qualified.**
B650-INF-1	**9/24/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (I1209241034) at 1.9 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (I1209241034) at 0.34 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-13-300	**9/5/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1209051051) at 2.0 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209051051) at 0.43 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209051051) at 1.1 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-18-430	9/12/2012	For SW-846 Method 8260C, acetone was detected in the field blank (1209121401) at 1.4 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-5-527	**9/6/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1209060921) at 2.1 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209060921) at 0.22 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209060921) at 0.27 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-9-419	**9/13/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1209131310) at 1.6 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209131310) at 0.35 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209131310) at 0.21 ug/L below the reporting limit. Affected data are appropriately qualified.**
MPE-8	**9/26/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (W1209260824) at 2.8 ug/L below the reporting limit. Chloromethane was detected in the field blank (W1209260824) at 0.32 ug/L below the reporting limit. Affected data are appropriately qualified.**
NASA 10	**9/5/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1209051405B) at 1.5 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209051405B) at 0.52 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209051405B) at 0.21 ug/L below the reporting limit. Affected data are appropriately qualified.**
NASA 9	9/8/2012	For SW-846 Method 8260C, acetone was detected in the field blank (1209080920B) at 1.8 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209080920B) at 0.83 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209080920B) at 0.38 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
PFE-7	**9/24/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (W1209241330) at 2.7 ug/L below the reporting limit. Chloromethane was detected in the field blank (W1209241330) at 0.3 ug/L below the reporting limit. Affected data are appropriately qualified.**
PL-2-504	9/7/2012	For SW-846 Method 8260C, acetone was detected in the field blank (1209071326) at 1.9 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209071326) at 0.31 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-1-435	**9/18/2012**	**For SW-846 Method 8260C, acetone was detected in the trip blank (1209181300) at 2.2 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (1209181300) at 1.7 ug/L. Chloromethane was detected in the trip blank (1209181300) at 0.26 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-23-431	**9/13/2012**	**For SW-846 Method 8260C, acetone was detected in the trip blank (1209130715) at 2.3 ug/L below the reporting limit. Bromomethane was detected in the trip blank (1209130715) at 0.29 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (1209130715) at 2.9 ug/L. Chloromethane was detected in the trip blank (1209130715) at 0.41 ug/L below the reporting limit. Affected data are appropriately qualified.**
NASA 5	9/5/2012	For SW-846 Method 8260C, acetone was detected in the trip blank (1209050845B) at 2.2 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (1209050845B) at 13.0 ug/L. Chlorobenzene was detected in the trip blank (1209050845B) at 0.39 ug/L below the reporting limit. Dichloromethane was detected in the trip blank (1209050845B) at 2.2 ug/L. No groundwater data are affected by this trip blank contamination.
PL-1-486	9/11/2012	For SW-846 Method 8260C, acetone was detected in the trip blank (1209110725) at 1.7 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (1209110725) at 2.7 ug/L. Chloromethane was detected in the trip blank (1209110725) at 0.42 ug/L below the reporting limit. No groundwater data are affected by this trip blank contamination.
PL-4-464	9/14/2012	For SW-846 Method 8260C, acetone was detected in the trip blank (1209140940) at 2.1 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (1209140940) at 9.8 ug/L. Chloromethane was detected in the trip blank (1209140940) at 0.46 ug/L below the reporting limit. No groundwater data are affected by this trip blank contamination.
100-HG-139	**9/14/2012**	**For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.42 ug/L) were detected in the method blank for analytical batch 310929 below the reporting limit. Affected data are appropriately qualified.**
BLM-15-305	**9/14/2012**	**For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.42 ug/L) were detected in the method blank for analytical batch 310929 below the reporting limit. Affected data are appropriately qualified.**
BLM-9-419	**9/13/2012**	**For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.42 ug/L) were detected in the method blank for analytical batch 310929 below the reporting limit. Affected data are appropriately qualified.**
BW-3-180	9/15/2012	For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.42 ug/L) were detected in the method blank for analytical batch 310929 below the reporting limit. No groundwater data are affected by this method blank contamination.
BW-6-355	9/15/2012	For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.42 ug/L) were detected in the method blank for analytical batch 310929 below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-4-464	9/14/2012	For SW-846 Method 8260C, bromomethane (0.37 ug/L) and chloromethane (0.42 ug/L) were detected in the method blank for analytical batch 310929 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-18-430	9/12/2012	For SW-846 Method 8260C, bromomethane (0.37 ug/L) was detected in the method blank for analytical batch 310852 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-23-431	**9/13/2012**	**For SW-846 Method 8260C, bromomethane (0.37 ug/L) was detected in the method blank for analytical batch 310852 below the reporting limit. Affected data are appropriately qualified.**
PL-1-486	9/11/2012	For SW-846 Method 8260C, bromomethane (0.39 ug/L) was detected in the method blank for analytical batch 310092 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-15-305	**9/14/2012**	**For SW-846 Method 8260C, bromomethane was detected in the field blank (1209140916) at 0.54 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1209140916) at 0.35 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209140916) at 0.77 ug/L below the reporting limit. Affected data are appropriately qualified.**
100-HG-139	**9/14/2012**	**For SW-846 Method 8260C, carbon disulfide was detected in the field blank (1209140926B) at 0.56 ug/L below the reporting limit. Chloromethane was detected in the field blank (1209140926B) at 0.25 ug/L below the reporting limit. Affected data are appropriately qualified.**
200-D-240	9/20/2012	For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (1209201330) at 3.2 ug/L.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		No groundwater data are affected by this trip blank contamination.
B655-INF-1	**9/25/2012**	**For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (I1209251028) at 3.9 ug/L. Chloromethane was detected in the trip blank (I1209251028) at 0.25 ug/L below the reporting limit. Affected data are appropriately qualified.**
BW-3-180	9/15/2012	For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (1209150630) at 8.2 ug/L. Chloromethane was detected in the trip blank (1209150630) at 0.26 ug/L below the reporting limit. No groundwater data are affected by this trip blank contamination.
200-SG-1	**9/8/2012**	**For SW-846 Method 8260C, chloromethane (0.24 ug/L) was detected in the method blank for analytical batch 309256 below the reporting limit. Affected data are appropriately qualified.**
NASA 9	9/8/2012	For SW-846 Method 8260C, chloromethane (0.24 ug/L) was detected in the method blank for analytical batch 309256 below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-2-504	**9/7/2012**	**For SW-846 Method 8260C, chloromethane (0.24 ug/L) was detected in the method blank for analytical batch 309256 below the reporting limit. Affected data are appropriately qualified.**
PL-1-486	9/11/2012	For SW-846 Method 8260C, field duplicate samples 1209111340 and 1209111341 the relative percent difference for trichloroethene (TCE) was 3.2%. Upper acceptance limit for relative percent difference is 25%.
PL-1-486	9/11/2012	For SW-846 Method 8260C, field duplicate samples 1209111340 and 1209111341 the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
PL-1-486	9/11/2012	For SW-846 Method 8260C, field duplicate samples 1209111340 and 1209111341 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 13.3%. Upper acceptance limit for relative percent difference is 25%.
BLM-1-435	9/18/2012	For SW-846 Method 8260C, field duplicate samples 1209181440 and 1209181441 the relative percent difference for trichlorofluoromethane (CFC 11) was 5.3%. Upper acceptance limit for relative percent difference is 25%.
BLM-1-435	9/18/2012	For SW-846 Method 8260C, field duplicate samples 1209181440 and 1209181441 the relative percent difference for trichloroethene (TCE) was 8.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-1-435	9/18/2012	For SW-846 Method 8260C, field duplicate samples 1209181440 and 1209181441 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 6.1%. Upper acceptance limit for relative percent difference is 25%.
NASA 5	9/5/2012	For SW-846 Method 8260C, hexanal (9.6 ug/L) was tentatively identified in trip blank 1209050845B by a GC/MS library search. No groundwater data are affected by this trip blank contamination.
200-SG-1	9/8/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309256 is outside laboratory control limits; refer to report R1205958 for details. Bromomethane, chloromethane, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
B650-INF-1	9/24/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 311915 is outside laboratory control limits; refer to report R1206504 for details. 1,4-Dioxane, acrolein, and bromomethane detections, if any, should be considered estimated.
B655-INF-1	9/25/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 311915 is outside laboratory control limits; refer to report R1206504 for details. 1,4-Dioxane, acrolein, and bromomethane detections, if any, should be considered estimated.
BLM-13-300	9/5/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309254 is outside laboratory control limits; refer to report R1205896 for details. Bromomethane and iodomethane detections, if any, should be considered estimated.
BLM-13-300	9/5/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308751 is outside laboratory control limits; refer to report R1205896 for details. 1,4-Dioxane and acrolein detections, if any, should be considered estimated.
BLM-18-430	9/12/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 310852 is outside laboratory control limits; refer to report R1206123 for details. Bromoform and bromomethane detections, if any, should be considered estimated.
BLM-23-431	9/13/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 310852 is outside laboratory control limits; refer to report R1206123 for details. Bromoform and bromomethane detections, if any, should be considered estimated.
BLM-5-527	9/6/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309254 is outside laboratory control limits; refer to report R1205896 for details. Bromomethane and iodomethane detections, if any, should be considered estimated.
MPE-8	9/26/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 311915 is outside laboratory control limits; refer to report R1206504 for details. 1,4-Dioxane, acrolein, and bromomethane detections, if any, should be considered estimated.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
NASA 10	9/5/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309254 is outside laboratory control limits; refer to report R1205896 for details. Bromomethane and iodomethane detections, if any, should be considered estimated.
NASA 5	9/5/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 308751 is outside laboratory control limits; refer to report R1205896 for details. 1,4-Dioxane and acrolein detections, if any, should be considered estimated.
NASA 9	9/8/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309256 is outside laboratory control limits; refer to report R1205958 for details. Bromomethane, chloromethane, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
PFE-7	9/24/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 311915 is outside laboratory control limits; refer to report R1206504 for details. 1,4-Dioxane, acrolein, and bromomethane detections, if any, should be considered estimated.
PL-1-486	9/11/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 310092 is outside laboratory control limits; refer to report R1206051 for details. 1,4-Dioxane, 2-chloro-1,3-butadiene, acrolein, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
PL-2-504	9/7/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 309256 is outside laboratory control limits; refer to report R1205958 for details. Bromomethane, chloromethane, and dichlorodifluoromethane (CFC 12) detections, if any, should be considered estimated.
200-D-240	9/20/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery of bromomethane (138%) for analytical batch 311502 was outside laboratory control limits (70-130%). No groundwater data are affected by this LCS exceedance.
200-SG-1	9/8/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (137%) for analytical batch 309256 was outside laboratory control limits (65-134%). No groundwater data are affected by this LCS exceedance.
B650-INF-1	9/24/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery of bromomethane (139%) for analytical batch 311915 was outside laboratory control limits (70-130%). No groundwater data are affected by this LCS exceedance.
B655-INF-1	9/25/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery of bromomethane (139%) for analytical batch 311915 was outside laboratory control limits (70-130%). No groundwater data are affected by this LCS exceedance.
MPE-8	9/26/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery of bromomethane (139%) for analytical batch 311915 was outside laboratory control limits (70-130%). No groundwater data are affected by this LCS exceedance.
PFE-7	9/24/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery of bromomethane (139%) for analytical batch 311915 was outside laboratory control limits (70-130%). No groundwater data are affected by this LCS exceedance.
PL-2-504	9/7/2012	For SW-846 Method 8260C, the laboratory control sample (LCS) recovery for 2-chloro-1,3-butadiene (137%) for analytical batch 309256 was outside laboratory control limits (65-134%). No groundwater data are affected by this LCS exceedance.
600-G-138	9/19/2012	For SW-846 Method 8260C, there were no detections in the field blank.

Well ID	Event Date	EPA Method 607 QA Narratives
BLM-15-305	9/14/2012	For Modified EPA Method 607, field duplicate samples 1209140917 and 1209140918 the relative percent difference for bromacil was 1.4%. Upper acceptance limit for relative percent difference is 25%.
BLM-15-305	9/14/2012	For Modified EPA Method 607, field duplicate samples 1209140917 and 1209140918 the relative percent difference for N-nitrodimethylamine was 3.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-15-305	9/14/2012	For Modified EPA Method 607, field duplicate samples 1209140917 and 1209140918 the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	9/24/2012	For Modified EPA Method 607, field duplicate samples I1209241036 and I1209241038 the relative percent difference for bromacil was 3.1%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	9/24/2012	For Modified EPA Method 607, field duplicate samples I1209241036 and I1209241038 the relative percent difference for N-nitrodimethylamine was 3.1%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	EPA Method 607 QA Narratives
B650-INF-1	9/24/2012	For Modified EPA Method 607, field duplicate samples I1209241036 and I1209241038 the relative percent difference for N-nitrosodimethylamine was 7.4%. Upper acceptance limit for relative percent difference is 25%.
BW-6-355	9/15/2012	For Modified EPA Method 607, matrix spike recoveries for sample 1209151108 were within laboratory control limits.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-1-486	**9/11/2012**	**For Low Level Nitrosamine Method in blind control sample (1209111423), the percent recovery for N-nitrosodimethylamine (57.5%) was outside of the standard limits (70.0-130.0%). Affected data are appropriately qualified.**
BLM-5-527	9/6/2012	For Low Level Nitrosamine Method, internal extraction standards NDMA-d6 and DMN-d6 were not recovered in duplicate groundwater sample 1209060924. As a result there were no reportable results for this duplicate sample.
100-F-358	9/5/2012	For Low Level Nitrosamine Method, field blank 1209051403, the recovery for the internal standard N-nitrodimethylamine-d6 (116%) was outside laboratory control limits (10-141%). No groundwater data are affected by this QC issue.
ST-4-481	9/8/2012	For Low Level Nitrosamine Method, matrix spike recoveries for samples 1209080843 and 12090844 were within laboratory control limits.
100-F-358	9/5/2012	For Low Level Nitrosamine Method, N-Nitrosodimethylamine was detected in the field blank (1209051403) at 1.9 ng/L. No groundwater data are affected by this field blank contamination.
100-HG-139	9/14/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209140929B) at 1.17 ng/L. No groundwater data are affected by this field blank contamination.
200-D-240	**9/20/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (1209201331) at 3.28 ng/L. Affected data are appropriately qualified.**
200-SG-1	**9/8/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209081107B) at 1.19 ng/L. Affected data are appropriately qualified.**
600-G-138	**9/19/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209191404) at 0.94 ng/L. Affected data are appropriately qualified.**
B650-EFF-1	**9/24/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (E1209241021) at 3.97 ng/L. Affected data are appropriately qualified.**
BLM-10-517	9/11/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209110918) at 1.18 ng/L. No groundwater data are affected by this field blank contamination.
BLM-13-300	9/5/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (1209050900) at 2.31 ng/L. No groundwater data are affected by this trip blank contamination.
BLM-5-527	9/6/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209060925) at 2.07 ng/L. No groundwater data are affected by this field blank contamination.
PFE-7	**9/24/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (W1209241333) at 0.69 ng/L. Affected data are appropriately qualified.**
PL-1-486	9/11/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (1209110726) at 1.51 ng/L. No groundwater data are affected by this trip blank contamination.
PL-2-504	**9/7/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209071329) at 1.82 ng/L. Affected data are appropriately qualified.**
PL-3-453	9/12/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209120848) at 1.02 ng/L. No groundwater data are affected by this field blank contamination.
PL-4-464	9/14/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (1209140941) at 5.11 ng/L. No groundwater data are affected by this trip blank contamination.
ST-4-481	9/8/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209080845) at 1.54 ng/L. No groundwater data are affected by this field blank contamination.
ST-4-589	9/10/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1209101318) at 1.13 ng/L. No groundwater data are affected by this field blank contamination.
ST-4-690	9/8/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (1209080631) at 3.08 ng/L. No groundwater data are affected by this trip blank contamination.
ST-6-535	9/4/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1209040831Z) at 1.97 ng/L. No groundwater data are affected by this equipment blank contamination.
ST-6-535	**9/21/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1209211251Z) at 1.19 ng/L. Affected data are appropriately qualified.**
ST-6-575	**9/24/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1209240841Z) at 1.52 ng/L. Affected data are appropriately qualified.**
ST-6-575	**9/4/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1209041251Z) at 1.73 ng/L. Affected data are appropriately qualified.**

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
ST-6-685	9/21/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1209210901Z) at 1.09 ng/L. No groundwater data are affected by this equipment blank contamination.
WW-1-452	9/7/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the trip blank (1209070701) at 1.95 ng/L. No groundwater data are affected by this trip blank contamination.
PL-4-464	9/14/2012	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 1209141036 and 1209141037 were within control limits or below the calculable range.
BLM-5-527	9/6/2012	For Low Level Nitrosamine Method, the recovery for the internal standard N-nitrosodimethylamine-d6 (11%) was outside laboratory control limits (13-109%) for the method blank in analytical batch WG1545283. No groundwater data are affected by this QC issue.
PL-2-504	9/7/2012	For Low Level Nitrosamine Method, the recovery of extraction standard N-nitrosodimethylamine-d6 (11%) in the method blank for analytical batch WG1545283 was outside laboratory control limits (13-109%). No groundwater data are affected by this QC issue.
WW-1-452	9/7/2012	For Low Level Nitrosamine Method, the recovery of extraction standard N-nitrosodimethylamine-d6 (11%) in the method blank for analytical batch WG1545283 was outside laboratory control limits (13-109%). No groundwater data are affected by this QC issue.
B655-EFF-2	9/25/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-2-504	9/7/2012	For Low Level Nitrosamines Method, internal extraction standards NDMA-d6 and DMN-d6 were not recovered in duplicate groundwater sample 1209071328. As a result there were no reportable results for this duplicate sample.

Well ID	Event Date	Total Metals QA Narratives
B655-INF-1	**9/25/2012**	**For Total Metals, arsenic (0.0023 mg/L), chromium (0.00082 mg/L), cobalt (0.0021 mg/L), copper (0.0016 mg/L), lead (0.001 mg/L), and nickel (0.00084 mg/L) were detected in the method blank for analytical batch 120928-4 below the detection limit. Affected data are appropriately qualified.**
600-G-138	**9/19/2012**	**For Total Metals, calcium was detected in the field blank (1209191407) at 0.14 mg/L below the reporting limit. Zinc was detected in the field blank (1209191407) at 0.015 mg/L below the reporting limit. Affected data are appropriately qualified.**
200-D-240	9/20/2012	For Total Metals, field duplicate samples 1209201418 and 1209201419 the relative percent difference for sodium was 1.7%. Upper acceptance limit for relative percent difference is 25%.
200-D-240	9/20/2012	For Total Metals, field duplicate samples 1209201418 and 1209201419 the relative percent difference for calcium was 7.4%. Upper acceptance limit for relative percent difference is 25%.
200-D-240	9/20/2012	For Total Metals, field duplicate samples 1209201418 and 1209201419 the relative percent difference for magnesium was 3.0%. Upper acceptance limit for relative percent difference is 25%.
200-D-240	9/20/2012	For Total Metals, field duplicate samples 1209201418 and 1209201419 the relative percent difference for strontium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-D-240	9/20/2012	For Total Metals, field duplicate samples 1209201418 and 1209201419 the relative percent difference for barium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-D-240	9/20/2012	For Total Metals, field duplicate samples 1209201418 and 1209201419 the relative percent difference for potassium was 3.0%. Upper acceptance limit for relative percent difference is 25%.
200-SG-1	9/8/2012	For Total Metals, matrix spike recoveries for sample 1209081119B were within laboratory control limits. However, the concentration of strontium in the native sample was greater than four times the concentration of the matrix spike added. The sample result is not qualified based on this control.
200-SG-1	**9/8/2012**	**For Total Metals, the serial dilution for sodium failed laboratory acceptance criteria for sample 1209081118B. Affected data are appropriately qualified.**

Well ID	Event Date	Miscellaneous QA Narratives
200-D-240	9/20/2012	For EPA Method 300.0, chloride (0.065 mg/L) was detected in the method blank for analytical batch 120925-1 below the reporting limit. No groundwater data were affected by this method blank contamination.
200-SG-1	9/8/2012	For EPA Method 300.0, chloride (0.065 mg/L) was detected in the method blank for analytical batch 120912-1 below the reporting limit. No groundwater data were affected by this method blank contamination.
600-G-138	9/19/2012	For EPA Method 300.0, chloride (0.078 mg/L) was detected in the method blank for analytical batch 120921-1 below the reporting limit. No groundwater data were affected by this method blank contamination.
NASA 5	9/5/2012	For EPA Method 300.0, sulfate (0.4 mg/L) was detected in the method blank for analytical batch 120907-3 below the reporting limit. No groundwater data were affected by this method blank contamination.

Well ID	Event Date	Miscellaneous QA Narratives
200-SG-1	9/8/2012	For SW-846 Method 8081B, the relative percent difference (RPD) for the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for endrin aldehyde (44%) was outside laboratory control limits (30%). No groundwater data are affected by this QC issue.
100-HG-139	**9/14/2012**	**For SW-846 Method 8270D, an MDL and LCS/LCSD recovery cannot be determined for p-Phenylenediamine, diphenylamine, and a,a-Dimethylphenethylamine. Diphenylamine is degraded when the sample is injected, p-Phenylenediamine is degraded in the extraction procedure and a,a-Dimethylphenethylamine is degraded during extraction and injection. All of these compounds have been flagged with an "*" and should be considered indeterminate.**
200-SG-1	**9/8/2012**	**For SW-846 Method 8270D, an MDL and LCS/LCSD recovery cannot be determined for p-Phenylenediamine, diphenylamine, and a,a-Dimethylphenethylamine. Diphenylamine is degraded when the sample is injected, p-Phenylenediamine is degraded in the extraction procedure and a,a-Dimethylphenethylamine is degraded during extraction and injection. All of these compounds have been flagged with an "*" and should be considered indeterminate.**
600-G-138	**9/19/2012**	**For SW-846 Method 8270D, an MDL and LCS/LCSD recovery cannot be determined for p-Phenylenediamine, diphenylamine, and a,a-Dimethylphenethylamine. Diphenylamine is degraded when the sample is injected, p-Phenylenediamine is degraded in the extraction procedure and a,a-Dimethylphenethylamine is degraded during extraction and injection. All of these compounds have been flagged with an "*" and should be considered indeterminate.**
600-G-138	**9/19/2012**	**For SW-846 Method 8270D, bromacil (12 ug/L) and two unknown compounds were tentatively identified in sample 1209191405 by a GC/MS library search.**
100-HG-139	9/14/2012	For SW-846 Method 8270D, di-n-butyl phthalate (1.5 ug/L), methyl methanesulfonate (2.0 ug/L), n-nitrosopiperidine (8.2 ug/L), and p-dimethylaminoazobenzene (2.0 ug/L) were detected below the reporting limit in the method blank for analytical batch 167335. No groundwater data are affected by this method blank contamination.
100-HG-139	9/14/2012	For SW-846 Method 8270D, the continuing calibration verification (CCV) for one or more analyte(s) is outside laboratory control limits; refer to report R1206191 for details. Bis(2-ethylhexyl) phthalate detections should be considered estimated.
200-SG-1	9/8/2012	For SW-846 Method 8270D, the continuing calibration verification (CCV) for one or more analyte(s) is outside laboratory control limits; refer to report R1204558 for details. No groundwater data are affected by the CCV exceedances.
600-G-138	9/19/2012	For SW-846 Method 8270D, the continuing calibration verification (CCV) for one or more analyte(s) is outside laboratory control limits; refer to report R1206361 for details. Bis(2-ethylhexyl) phthalate detections should be considered estimated.
200-SG-1	9/8/2012	For SW-846 Method 8290, sample 1209081114B was inadvertently run by an incorrect method at the analytical laboratory and results are not provided. Resampling was conducted on 12/03/12.
200-SG-1	9/8/2012	For SW-846 Method 8290A, OCDD (4.74 pg/L) was detected in the method blank for analytical batch Dioxins-#1. No data are affected by this method blank contamination.

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
ST-6-535	9/4/2012	Carboy G4	8260_LL	VOA-EB	67-63-0	2-Propanol	14	ug/L	J EB
NASA 5	9/5/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	13	ug/L	TB
PL-4-464	9/14/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	9.8	ug/L	TB
NASA 5	9/5/2012		8260	VOA-TB	66-25-1	Hexanal	9.6	ug/L	TIC TB
BW-3-180	9/15/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	8.2	ug/L	TB
B650-EFF-1	9/24/2012		8260_LL	VOA-TB	75-15-0	Carbon Disulfide	8.1	ug/L	TB
ST-4-690	9/8/2012		8260_LL	VOA-TB	75-15-0	Carbon Disulfide	7.6	ug/L	TB
PL-4-464	9/14/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	5.11	ng/L	TB
B650-EFF-1	9/24/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	3.97	ng/L	TB
B655-INF-1	9/25/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	3.9	ug/L	TB
200-D-240	9/20/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	3.28	ng/L	TB
200-D-240	9/20/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	3.2	ug/L	TB
ST-6-535	9/4/2012	Carboy G4	8260_LL	VOA-EB	67-64-1	Acetone	3.2	ug/L	J EB
ST-4-690	9/8/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	3.08	ng/L	TB
BLM-23-431	9/13/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	2.9	ug/L	TB

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
BW-6-355	9/15/2012	Carboy G3	8260	VOA-FB	67-64-1	Acetone	2.8	ug/L	J FB
MPE-8	9/26/2012		8260	VOA-FB	67-64-1	Acetone	2.8	ug/L	J FB
PFE-7	9/24/2012		8260	VOA-FB	67-64-1	Acetone	2.7	ug/L	J FB
PL-1-486	9/11/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	2.7	ug/L	TB
ST-6-685	9/21/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	2.7	ug/L	J EB
ST-6-575	9/24/2012	Carboy G4	8260_LL	VOA-EB	67-64-1	Acetone	2.6	ug/L	J EB
BLM-13-300	9/5/2012	Carboy G4	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	2.31	ng/L	TB
BLM-23-431	9/13/2012		8260	VOA-TB	67-64-1	Acetone	2.3	ug/L	J TB
ST-4-481	9/8/2012	Carboy G4	8260_LL	VOA-FB	67-64-1	Acetone	2.3	ug/L	J FB
NASA 5	9/5/2012		8260	VOA-TB	67-64-1	Acetone	2.2	ug/L	J TB
NASA 5	9/5/2012		8260	VOA-TB	75-09-2	Dichloromethane	2.2	ug/L	TB
BLM-1-435	9/18/2012		8260	VOA-TB	67-64-1	Acetone	2.2	ug/L	J TB
B655-EFF-2	9/25/2012	Carboy G2	8260_LL	VOA-FB	67-64-1	Acetone	2.2	ug/L	J FB
PL-4-464	9/14/2012		8260	VOA-TB	67-64-1	Acetone	2.1	ug/L	J TB
BLM-5-527	9/6/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	2.1	ug/L	J FB
BLM-5-527	9/6/2012	Carboy G4	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	2.07	ng/L	FB
BLM-13-300	9/5/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	2	ug/L	J FB
ST-6-535	9/4/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.97	ng/L	EB
WW-1-452	9/7/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	1.95	ng/L	TB
PL-2-504	9/7/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	1.9	ug/L	J FB
200-SG-1	9/8/2012		8260	VOA-FB	67-64-1	Acetone	1.9	ug/L	J FB
B650-INF-1	9/24/2012		8260	VOA-FB	67-64-1	Acetone	1.9	ug/L	J FB
100-F-358	9/5/2012	Carboy G4	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.9	ng/L	FB
PL-2-504	9/7/2012	Carboy G4	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.82	ng/L	FB
ST-6-535	9/21/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	1.8	ug/L	J EB
NASA 9	9/8/2012	Carboy G3	8260	VOA-FB	67-64-1	Acetone	1.8	ug/L	J FB
ST-6-575	9/4/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.73	ng/L	EB
BLM-1-435	9/18/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	1.7	ug/L	TB
PL-1-486	9/11/2012		8260	VOA-TB	67-64-1	Acetone	1.7	ug/L	J TB
ST-6-575	9/4/2012	Carboy G4	8260_LL	VOA-EB	67-64-1	Acetone	1.7	ug/L	J EB
BLM-9-419	9/13/2012		8260	VOA-FB	67-64-1	Acetone	1.6	ug/L	J FB
ST-4-589	9/10/2012		8260_LL	VOA-FB	67-64-1	Acetone	1.6	ug/L	J FB
ST-4-481	9/8/2012	Carboy G4	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.54	ng/L	FB
ST-6-575	9/24/2012	Carboy G4	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.52	ng/L	EB
PL-1-486	9/11/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	1.51	ng/L	TB Q
BLM-10-517	9/11/2012		8260_LL	VOA-FB	67-64-1	Acetone	1.5	ug/L	J FB
ST-6-535	9/4/2012	Carboy G4	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	1.5	ug/L	EB RB
WW-1-452	9/7/2012		8260_LL	VOA-TB	67-64-1	Acetone	1.5	ug/L	J TB
NASA 10	9/5/2012	Carboy G5	8260	VOA-FB	67-64-1	Acetone	1.5	ug/L	J FB
PL-3-453	9/12/2012		8260_LL	VOA-FB	67-64-1	Acetone	1.5	ug/L	J FB
BLM-18-430	9/12/2012		8260	VOA-FB	67-64-1	Acetone	1.4	ug/L	J FB
200-SG-1	9/8/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.19	ng/L	FB
ST-6-535	9/21/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.19	ng/L	EB
BLM-10-517	9/11/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.18	ng/L	FB
100-HG-139	9/14/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.17	ng/L	FB
ST-4-589	9/10/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.13	ng/L	FB
WW-1-452	9/7/2012		8260_LL	VOA-TB	75-15-0	Carbon Disulfide	1.1	ug/L	TB
BLM-13-300	9/5/2012	Carboy G4	8260	VOA-FB	74-87-3	Chloromethane	1.1	ug/L	J FB

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
ST-6-685	9/21/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.09	ng/L	EB
PL-3-453	9/12/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.02	ng/L	FB
600-G-138	9/19/2012	Carboy G2	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.94	ng/L	FB
200-SG-1	9/8/2012		8260	VOA-FB	75-15-0	Carbon Disulfide	0.86	ug/L	J FB
NASA 9	9/8/2012	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.83	ug/L	J FB
BLM-15-305	9/14/2012		8260	VOA-FB	74-87-3	Chloromethane	0.77	ug/L	J RB FB
PFE-7	9/24/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.69	ng/L	FB
ST-6-575	9/24/2012	Carboy G4	8260_LL	VOA-EB	74-87-3	Chloromethane	0.67	ug/L	EB
ST-4-589	9/10/2012		8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.66	ug/L	FB
ST-6-685	9/21/2012	Carboy G2	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.63	ug/L	EB
ST-6-535	9/4/2012	Carboy G4	8260_LL	VOA-EB	74-88-4	Iodomethane	0.61	ug/L	J EB
ST-4-481	9/8/2012	Carboy G4	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.6	ug/L	FB
100-HG-139	9/14/2012		8260	VOA-FB	75-15-0	Carbon Disulfide	0.56	ug/L	J FB
BLM-15-305	9/14/2012		8260	VOA-FB	74-83-9	Bromomethane	0.54	ug/L	J RB FB
NASA 10	9/5/2012	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	0.52	ug/L	J FB
ST-6-575	9/4/2012	Carboy G4	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.48	ug/L	J RB EB
PL-4-464	9/14/2012		8260	VOA-TB	74-87-3	Chloromethane	0.46	ug/L	J TB
BLM-10-517	9/11/2012		8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.46	ug/L	J FB
ST-6-575	9/24/2012	Carboy G4	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.45	ug/L	J EB
BLM-13-300	9/5/2012	Carboy G4	8260	VOA-FB	75-15-0	Carbon Disulfide	0.43	ug/L	J FB
ST-6-535	9/21/2012	Carboy G2	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.43	ug/L	J EB
PL-1-486	9/11/2012		8260	VOA-TB	74-87-3	Chloromethane	0.42	ug/L	J TB
BLM-23-431	9/13/2012		8260	VOA-TB	74-87-3	Chloromethane	0.41	ug/L	J TB
NASA 5	9/5/2012		8260	VOA-TB	108-90-7	Chlorobenzene	0.39	ug/L	J TB
NASA 9	9/8/2012	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.38	ug/L	J RB FB
BLM-9-419	9/13/2012		8260	VOA-FB	75-15-0	Carbon Disulfide	0.35	ug/L	J FB
BLM-15-305	9/14/2012		8260	VOA-FB	75-15-0	Carbon Disulfide	0.35	ug/L	J FB
ST-6-535	9/21/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.34	ug/L	J EB
B650-INF-1	9/24/2012		8260	VOA-FB	75-15-0	Carbon Disulfide	0.34	ug/L	J FB
200-SG-1	9/8/2012		8260	VOA-FB	74-87-3	Chloromethane	0.33	ug/L	J RB FB
PL-3-453	9/12/2012		8260_LL	VOA-FB	74-83-9	Bromomethane	0.32	ug/L	J RB FB
BW-6-355	9/15/2012	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.32	ug/L	J FB
MPE-8	9/26/2012		8260	VOA-FB	74-87-3	Chloromethane	0.32	ug/L	J FB
B650-EFF-1	9/24/2012		8260_LL	VOA-TB	74-88-4	Iodomethane	0.31	ug/L	J RB TB
ST-6-535	9/4/2012	Carboy G4	8260_LL	VOA-EB	74-87-3	Chloromethane	0.31	ug/L	J EB
PL-2-504	9/7/2012	Carboy G4	8260	VOA-FB	75-15-0	Carbon Disulfide	0.31	ug/L	J FB
PFE-7	9/24/2012		8260	VOA-FB	74-87-3	Chloromethane	0.3	ug/L	J FB
B655-EFF-2	9/25/2012	Carboy G2	8260_LL	VOA-FB	74-87-3	Chloromethane	0.3	ug/L	J FB
100-F-358	9/5/2012	Carboy G4	8260_LL	VOA-FB	74-87-3	Chloromethane	0.29	ug/L	J FB
BLM-23-431	9/13/2012		8260	VOA-TB	74-83-9	Bromomethane	0.29	ug/L	J RB TB
WW-1-452	9/7/2012		8260_LL	VOA-TB	74-87-3	Chloromethane	0.28	ug/L	J RB TB
BLM-5-527	9/6/2012	Carboy G4	8260	VOA-FB	74-87-3	Chloromethane	0.27	ug/L	J FB
BW-6-355	9/15/2012	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.27	ug/L	J RB FB
WW-1-452	9/7/2012		8260_LL	VOA-TB	74-83-9	Bromomethane	0.27	ug/L	J TB
BW-3-180	9/15/2012		8260	VOA-TB	74-87-3	Chloromethane	0.26	ug/L	J RB TB
BLM-1-435	9/18/2012		8260	VOA-TB	74-87-3	Chloromethane	0.26	ug/L	J TB
ST-6-575	9/4/2012	Carboy G4	8260_LL	VOA-EB	74-83-9	Bromomethane	0.26	ug/L	J RB EB
PL-3-453	9/12/2012		8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.25	ug/L	J FB

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
B655-INF-1	9/25/2012		8260	VOA-TB	74-87-3	Chloromethane	0.25	ug/L	J TB
100-HG-139	9/14/2012		8260	VOA-FB	74-87-3	Chloromethane	0.25	ug/L	J FB
ST-4-690	9/8/2012		8260_LL	VOA-TB	74-87-3	Chloromethane	0.24	ug/L	J RB TB
ST-4-481	9/8/2012	Carboy G4	8260_LL	VOA-FB	74-87-3	Chloromethane	0.23	ug/L	J RB FB
BLM-5-527	9/6/2012	Carboy G4	8260	VOA-FB	75-15-0	Carbon Disulfide	0.22	ug/L	J FB
ST-4-589	9/10/2012		8260_LL	VOA-FB	74-87-3	Chloromethane	0.22	ug/L	J FB
ST-6-685	9/21/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.21	ug/L	J EB
BLM-9-419	9/13/2012		8260	VOA-FB	74-87-3	Chloromethane	0.21	ug/L	J RB FB
NASA 10	9/5/2012	Carboy G5	8260	VOA-FB	74-87-3	Chloromethane	0.21	ug/L	J FB
600-G-138	9/19/2012	Carboy G2	METALS	METALS-FB	7440-70-2	CALCIUM	0.14	MG/L	J FB
600-G-138	9/19/2012	Carboy G2	METALS	METALS-FB	7440-66-6	ZINC	0.015	MG/L	J FB

National Aeronautics and
Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

October 2012

Report Submitted: January 22, 2013

Report Prepared by:
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1.0 Introduction

The WSTF Groundwater Monitoring Plan (GMP) requires the preparation of a monthly report to assess the quality of analytical data reported. The monthly QAR prepared by the environmental contractor and reviewed by the contractor QA/QC Coordinator provides the following information:

- A summary of notable anomalies and a follow-up on previous anomalies, if necessary.
- A summary of notable data quality issues by analytical method.
- A list of the sample events for which samples were collected in October 2012.
- The quantity and type of quality control samples analyzed.
- Definitions of data qualifiers used in WSTF data reporting.
- The quantity and type of data qualifiers applied to individual analytical results.
- A list of QA narratives for the month arranged by analytical method.
- A summary table of blank sample detections.

2.0 Data Quality

2.1 Notable Anomalies Identified in Previous QA Reports

There were no notable anomalies in the groundwater data associated with the September 2012 QA Report.

2.2 Notable Anomalies

Eleven sampling events in October 2012 were affected by low level nitrosamine method N-nitrosodimethylamine-d6 internal standard recovery issues. N-Nitrosodimethylamine results were not reported by the laboratory for any samples affected by the internal standard recovery problem. Resampling was conducted as needed for all affected events.

The laboratory analyzing low level nitrosamines for WSTF changed to Southwest Research Institute as of December 1, 2012.

3.0 Data Tables

Table 1 summarizes the sample events initiated in October 2012. This report is based on data quality issues related to the sample events listed in Table 1. Tables 2 through 8 contain information related to the sample events in Table 1. As specified by the WSTF GMP, specific quality control samples are utilized to assess the quality of analytical data. When data quality criteria are not met, data qualifiers are applied to the data. Table 2 presents the quantity of quality control samples collected for each analytical method. Table 3 compares the quality control sample percentages collected to the requirements in the GMP. Definitions of data qualifiers used for WSTF chemical analytical data are listed in Table 4. Table 5 and Table 6 present the total number of individual result records and summarize the quantity of field and laboratory data qualifiers assigned to individual analyte result records in the WSTF analytical database. Table 7 provides all quality assurance narratives associated with the sample events in Table 1. Narratives associated with qualified data are identified by **bold text** in Table 7. Table 8 provides a summary of all detections in WSTF blank samples.

Table 1 – Sample Events for October 2012

Well ID	Event Date
400-C-118	10/1/2012
400-C-143	10/2/2012
NASA 6	10/3/2012
200-B-240	10/4/2012
JP-3-825	10/5/2012
JP-3-970	10/5/2012
JP-3-515	10/9/2012
JP-3-695	10/9/2012
BLM-37-885	10/10/2012
JP-1-424	10/10/2012
BLM-37-640	10/11/2012

Well ID	Event Date
BLM-37-750	10/11/2012
B650-EFF-1	10/15/2012
B650-INF-1	10/15/2012
ST-6-535	10/16/2012
ST-6-685	10/16/2012
B655-EFF-2	10/17/2012
B655-INF-1	10/17/2012
ST-6-575	10/17/2012
JP-2-447	10/18/2012
BLM-10-517	10/19/2012
MPE-1	10/19/2012

Well ID	Event Date
MPE-10	10/19/2012
MPE-11	10/19/2012
PFE-1	10/22/2012
PFE-2	10/22/2012
PFE-3	10/22/2012
PFE-4A	10/22/2012
BLM-21-400	10/23/2012
MPE-8	10/23/2012
MPE-9	10/23/2012
PFE-7	10/24/2012
ST-5-481	10/24/2012

Table 2 - Quantity of Quality Control Samples

Method	Samples	Field Blanks	Equip Blanks	Trip Blanks	Blind Controls	Duplicates	Matrix Spikes
Perchlorate by EPA Method 331.0	**3**	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0
Sulfide by EPA Method 376.1	**3**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**23**	0	0	0	**1**	**2**	0
Pesticides by SW-846 Method 8081	**2**	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**2**	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**2**	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**17**	**11**	0	**6**	**1**	**3**	0
Low Level Volatile Organics by SW-846 Method 8260C	**16**	**4**	**10**	**2**	0	**1**	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**2**	0	0	0	0	0	0
Dioxins/Furans by SW-846 Method 8290	**2**	0	0	0	0	0	0
Cyanide by SW-846 Method 9014	**2**	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**2**	0	0	0	0	0	0
Anions by Various EPA Methods	**10**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**11**	**1**	0	0	**1**	**1**	0
Nitrosamines by Low-Level Method	**20**	**5**	**10**	**4**	**1**	**2**	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 11/1/2011	QC Qty. since 11/1/2011	QC % since 11/1/2011	Sample Quantity October 2012	QC Quantity October 2012	QC % October 2012
VOA Duplicates	10	536	55	**10**	33	4	12
VOA Matrix Spikes	2	536	14	**3**	33	1	3
607 Duplicates	10	338	32	**9**	23	2	9
607 Matrix Spikes	2	338	9	**3**	23	0	0
607 Equipment Blanks	2	338	8	**2**	23	0	0
607 Field Blanks	2	338	8	**2**	23	0	0
NDMA_LL Duplicates	10	339	35	**10**	20	2	10
NDMA_LL Matrix Spikes	2	339	8	**2**	20	0	0
Metals Duplicates	10	253	26	**10**	11	1	9
Metals Matrix Spikes	2	253	7	**3**	11	0	0
Metals Equipment Blanks	5	253	13	**5**	11	0	0
Metals Field Blanks	5	253	14	**6**	11	1	9

Quality Control Requirement	Requirement %	Sample Events since 11/1/2011	QC Qty. since 11/1/2011	QC % since 11/1/2011	Sample Events October 2012	QC Quantity October 2012	QC % October 2012
VOA Equipment Blanks, Trip Blanks, and Field Blanks	*Should approach 100%*	536	536	100%	33	33	100%
Low Level Nitrosamine Equipment Blanks, Trip Blanks, and Field Blanks	*Should approach 100%*	331	329	99%	17	17	100%

Table 4 - Definitions of Data Qualifiers

Qualifier	Definition
*	User defined qualifier. See quality assurance narrative.
A	The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
AD	Relative percent difference for analyst (laboratory) duplicates was outside standard limits.
D	The reported result is from a dilution.
EB	The analyte was detected in the equipment blank.
FB	The analyte was detected in the field blank.
G	The result is an estimated value greater than the upper calibration limit.
i	The result, quantitation limit, and/or detection limit may have been affected by matrix interference.
J	The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA	The value/result was either not analyzed for or not applicable.
ND	The analyte was not detected above the detection limit.
Q	The result for a blind control sample was outside standard limits.
QD	The relative percent difference for a field duplicate was outside standard limits.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
RB	The analyte was detected in the method blank.
S	The result was determined by the method of standard addition.
SP	The matrix spike recovery and/or the relative percent difference for matrix spike duplicates was outside standard limits.
T	The sample was analyzed outside the specified holding time or temperature.
TB	The analyte was detected in the trip blank.
TIC	The analyte was tentatively identified by a GC/MS library search and the amount reported is an estimated value.

Table 5 - Quantity of Field Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Perchlorate by EPA Method 331.0	**3**	0	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0	0
Sulfide by EPA Method 376.1	**3**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**72**	0	0	0	0	0	0	0
Pesticides by SW-846 Method 8081	**46**	0	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**14**	0	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**12**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1300**	**13**	0	**6**	0	**4**	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**1105**	**6**	**14**	**3**	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**245**	0	0	0	0	0	0	0
Dioxins/Furans by SW-846 Method 8290	**72**	0	0	0	0	0	0	0
Cyanide by SW-846 Method 9014	**2**	0	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**2**	0	0	0	0	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Anions by Various EPA Methods	**49**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**324**	**1**	0	0	**3**	0	0	0
Nitrosamines by Low-Level Method	**33**	**1**	**5**	0	0	0	0	0

Table 6 - Quantity of Laboratory based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"*"	"A"	"AD"	"G"	"RB"	"T"	"D"	"i"	"J"
Perchlorate by EPA Method 331.0	**3**	0	0	0	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0	0	0	0
Sulfide by EPA Method 376.1	**3**	0	0	0	0	0	**1**	0	0	0
Nitrosamines by EPA Method 607	**72**	0	0	0	0	0	0	0	0	**3**
Pesticides by SW-846 Method 8081	**46**	0	0	0	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**14**	0	0	0	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**12**	0	0	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1300**	0	**2**	0	0	**8**	0	0	0	**47**
Low Level Volatile Organics by SW-846 Method 8260C	**1105**	0	0	0	0	**15**	0	0	0	**34**
Semi-Volatile Organics by SW-846 Method 8270D	**245**	**6**	0	0	0	0	0	0	0	**1**
Dioxins/Furans by SW-846 Method 8290	**72**	0	0	0	0	0	0	0	0	0
Cyanide by SW-846 Method 9014	**2**	0	0	0	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**2**	0	0	0	0	0	0	0	0	0
Anions by Various EPA Methods	**49**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**324**	0	0	0	0	**15**	0	0	0	**89**
Nitrosamines by Low-Level Method	**33**	**1**	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-10-517	**10/19/2012**	**For Low Level SW-846 Method 8260C, acetone (1.5 ug/L) was detected in the method blank for analytical batch 315798 below the reporting limit. Affected data are appropriately qualified.**
JP-2-447	**10/18/2012**	**For Low Level SW-846 Method 8260C, acetone (1.5 ug/L) was detected in the method blank for analytical batch 315798 below the reporting limit. Affected data are appropriately qualified.**
BLM-37-750	**10/11/2012**	**For Low Level SW-846 Method 8260C, acetone (1.8 ug/L) was detected in the method blank for analytical batch 314061 below the reporting limit. Affected data are appropriately qualified.**
BLM-37-885	**10/10/2012**	**For Low Level SW-846 Method 8260C, acetone (1.8 ug/L) was detected in the method blank for analytical batch 314061 below the reporting limit. Affected data are appropriately qualified.**
JP-1-424	**10/10/2012**	**For Low Level SW-846 Method 8260C, acetone (1.8 ug/L) was detected in the method blank for analytical batch 314061 below the reporting limit. Affected data are appropriately qualified.**
JP-3-515	**10/9/2012**	**For Low Level SW-846 Method 8260C, acetone (1.8 ug/L) was detected in the method blank for analytical batch 314061 below the reporting limit. Affected data are appropriately qualified.**
JP-3-695	**10/9/2012**	**For Low Level SW-846 Method 8260C, acetone (1.8 ug/L) was detected in the method blank for analytical batch 314061 below the reporting limit. Affected data are appropriately qualified.**
BLM-37-640	**10/11/2012**	**For Low Level SW-846 Method 8260C, acetone (2.2 ug/L) was detected in the method blank for analytical batch 314649 below the reporting limit. Affected data are appropriately qualified.**
BLM-37-640	**10/11/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210111340Z) at 2.7 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210111340Z) at 0.68 ug/L. Affected data are appropriately qualified.**
BLM-37-750	**10/11/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210110830Z) at 3.2 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210110830Z) at 0.74 ug/L. Chloromethane was detected in the equipment blank (1210110830Z) at 0.22 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-37-885	**10/10/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210101040Z) at 2.6 ug/L. Carbon disulfide was detected in the equipment blank (1210101040Z)**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		at 1.3 ug/L. Affected data are appropriately qualified.
JP-3-515	**10/9/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210091440Z) at 2.1 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210091440Z) at 0.46 ug/L below the reporting limit. Affected data are appropriately qualified.**
JP-3-695	**10/9/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210091015Z) at 3.1 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210091015Z) at 0.66 ug/L. Affected data are appropriately qualified.**
JP-3-825	10/5/2012	For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210051300Z) at 2.1 ug/L below the reporting limit. Bromomethane was detected in the equipment blank (1210051300Z) at 0.28 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210051300Z) at 0.73 ug/L. No groundwater data are affected by this equipment blank contamination.
JP-3-970	**10/5/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210050840Z) at 2.9 ug/L below the reporting limit. Bromomethane was detected in the equipment blank (1210050840Z) at 0.34 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210050840Z) at 0.82 ug/L. Chloromethane was detected in the equipment blank (1210050840Z) at 0.23 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-6-535	**10/16/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210161430Z) at 1.4 ug/L below the reporting limit. Bromomethane was detected in the equipment blank (1210161430Z) at 0.28 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210161430Z) at 0.27 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1210161430Z) at 0.41 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-6-575	**10/17/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210171030Z) at 1.8 ug/L below the reporting limit. Bromomethane was detected in the equipment blank (1210171030Z) at 0.35 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1210171030Z) at 0.53 ug/L. Affected data are appropriately qualified.**
ST-6-685	**10/16/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the equipment blank (1210160930Z) at 2.8 ug/L below the reporting limit. Bromomethane was detected in the equipment blank (1210160930Z) at 0.39 ug/L below the reporting limit. Carbon disulfide was detected in the equipment blank (1210160930Z) at 0.21 ug/L below the reporting limit. Chloromethane was detected in the equipment blank (1210160930Z) at 0.37 ug/L below the reporting limit. Affected data are appropriately qualified.**
B650-EFF-1	**10/15/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the field blank (E1210151407) at 1.5 ug/L below the reporting limit. Bromomethane was detected in the field blank (E1210151407) at 0.29 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (E1210151407) at 1.9 ug/L. Affected data are appropriately qualified.**
BLM-10-517	**10/19/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1210190931) at 2.7 ug/L below the reporting limit. Chloromethane was detected in the field blank (1210190931) at 0.66 ug/L. Affected data are appropriately qualified.**
JP-1-424	**10/10/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1210101011) at 3.3 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1210101011) at 0.27 ug/L below the reporting limit. Chloromethane was detected in the field blank (1210101011) at 0.33 ug/L below the reporting limit. Affected data are appropriately qualified.**
ST-5-481	**10/24/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the field blank (1210240946B) at 1.9 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1210240946B) at 0.3 ug/L below the reporting limit. Affected data are appropriately qualified.**
B655-EFF-2	**10/17/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the trip blank (E1210171311) at 2.0 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (E1210171311) at 1.4 ug/L. Chloromethane was detected in the trip blank (E1210171311) at 0.31 ug/L below the reporting limit. Affected data are appropriately qualified.**
JP-2-447	**10/18/2012**	**For Low Level SW-846 Method 8260C, acetone was detected in the trip blank (1210181100) at 2.2 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (1210181100) at 1.1 ug/L. Affected data are appropriately qualified.**
B650-EFF-1	**10/15/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.30 ug/L) was detected in the method blank for analytical batch 315523 below the reporting limit. Affected data are appropriately qualified.**
B655-EFF-2	**10/17/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.30 ug/L) was detected in the method blank for analytical batch 315523 below the reporting limit. Affected data are appropriately**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		qualified.
ST-6-535	**10/16/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.30 ug/L) was detected in the method blank for analytical batch 315523 below the reporting limit. Affected data are appropriately qualified.**
ST-6-575	**10/17/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.30 ug/L) was detected in the method blank for analytical batch 315523 below the reporting limit. Affected data are appropriately qualified.**
ST-6-685	**10/16/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.30 ug/L) was detected in the method blank for analytical batch 315523 below the reporting limit. Affected data are appropriately qualified.**
JP-3-825	10/5/2012	For Low Level SW-846 Method 8260C, bromomethane (0.41 ug/L) was detected in the method blank for analytical batch 313845 below the reporting limit. No groundwater data are affected by this method blank contamination.
JP-3-970	**10/5/2012**	**For Low Level SW-846 Method 8260C, bromomethane (0.41 ug/L) was detected in the method blank for analytical batch 313845 below the reporting limit. Affected data are appropriately qualified.**
ST-6-575	10/17/2012	For Low Level SW-846 Method 8260C, field duplicate samples 1210171400Z and 1210171401Z the relative percent difference for trichloroethene (TCE) was 14.1%. Upper acceptance limit for relative percent difference is 25%.
ST-6-575	10/17/2012	For Low Level SW-846 Method 8260C, field duplicate samples 1210171400Z and 1210171401Z the relative percent difference for trichlorofluoromethane (CFC 11) was 22.2%. Upper acceptance limit for relative percent difference is 25%.
JP-1-424	10/10/2012	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 1210101012 were within laboratory control limits.
B650-EFF-1	10/15/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315523 is outside laboratory control limits; refer to report R1207115 for details. Iodomethane detections, if any, should be considered estimated.
B655-EFF-2	10/17/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315523 is outside laboratory control limits; refer to report R1207155 for details. Iodomethane detections, if any, should be considered estimated.
BLM-10-517	10/19/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315798 is outside laboratory control limits; refer to report R1207264 for details. Acrolein, vinyl acetate, and trans-1, 4-dichloro-2-butene detections, if any, should be considered estimated.
BLM-37-640	10/11/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 314649 is outside laboratory control limits; refer to report R1207019 for details. Vinyl acetate and trans-1, 4-dichloro-2-butene detections, if any, should be considered estimated.
JP-2-447	10/18/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315798 is outside laboratory control limits; refer to report R1207264 for details. Acrolein, vinyl acetate, and trans-1, 4-dichloro-2-butene detections, if any, should be considered estimated.
JP-3-825	10/5/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 313845 is outside laboratory control limits; refer to report R1206839 for details. Acrolein, iodomethane, and trans-1, 4-dichloro-2-butene detections, if any, should be considered estimated.
JP-3-970	10/5/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 313845 is outside laboratory control limits; refer to report R1206839 for details. Acrolein, iodomethane, and trans-1, 4-dichloro-2-butene detections, if any, should be considered estimated.
ST-5-481	10/24/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 316889 is outside laboratory control limits; refer to report R1207334 for details. Vinyl acetate and trans-1, 4-dichloro-2-butene detections, if any, should be considered estimated.
ST-6-535	10/16/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315523 is outside laboratory control limits; refer to report R1207115 and R1207155 for details. Iodomethane detections, if any, should be considered estimated.
ST-6-575	10/17/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315523 is outside laboratory control limits; refer to report R1207155 for details. Iodomethane detections, if any, should be considered estimated.
ST-6-685	10/16/2012	For Low Level SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315523 is outside laboratory control limits; refer to report R1207115 for

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		details. Iodomethane detections, if any, should be considered estimated.
400-C-118	10/1/2012	For SW-846 Method 8260C in blind control sample (1210021415), all recoveries were within standard limits.
B650-INF-1	**10/15/2012**	**For SW-846 Method 8260C, acetone (1.5 ug/L) was detected in the method blank for analytical batch 315797 below the reporting limit. Affected data are appropriately qualified.**
B655-INF-1	**10/17/2012**	**For SW-846 Method 8260C, acetone (1.5 ug/L) was detected in the method blank for analytical batch 315797 below the reporting limit. Affected data are appropriately qualified.**
MPE-1	10/19/2012	For SW-846 Method 8260C, acetone (1.5 ug/L) was detected in the method blank for analytical batch 315797 below the reporting limit. No groundwater data are affected by this method blank contamination.
MPE-11	**10/19/2012**	**For SW-846 Method 8260C, acetone (1.5 ug/L) was detected in the method blank for analytical batch 315797 below the reporting limit. Affected data are appropriately qualified.**
MPE-10	**10/19/2012**	**For SW-846 Method 8260C, acetone (1.6 ug/L) was detected in the method blank for analytical batch 315913 below the reporting limit. Affected data are appropriately qualified.**
PFE-1	10/22/2012	For SW-846 Method 8260C, acetone (1.6 ug/L) was detected in the method blank for analytical batch 315913 below the reporting limit. No groundwater data are affected by this method blank contamination.
PFE-2	**10/22/2012**	**For SW-846 Method 8260C, acetone (1.6 ug/L) was detected in the method blank for analytical batch 315913 below the reporting limit. Affected data are appropriately qualified.**
PFE-3	10/22/2012	For SW-846 Method 8260C, acetone (1.6 ug/L) was detected in the method blank for analytical batch 315913 below the reporting limit. No groundwater data are affected by this method blank contamination.
PFE-4A	**10/22/2012**	**For SW-846 Method 8260C, acetone (2.0 ug/L) was detected in the method blank for analytical batch 316139 below the reporting limit. Affected data are appropriately qualified.**
200-B-240	**10/4/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1210041326) at 1.9 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1210041326) at 0.47 ug/L below the reporting limit. Affected data are appropriately qualified.**
400-C-118	**10/1/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1210011302) at 2.6 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1210011302) at 1.4 ug/L. Chloromethane was detected in the field blank (1210011302) at 0.29 ug/L below the reporting limit. Affected data are appropriately qualified.**
B650-INF-1	**10/15/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (I1210151444) at 2.6 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (I1210151444) at 2.4 ug/L. Chloromethane was detected in the field blank (I1210151444) at 0.34 ug/L below the reporting limit. Affected data are appropriately qualified.**
B655-INF-1	**10/17/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (I1210171342) at 2.2 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (I1210171342) at 0.42 ug/L below the reporting limit. Chloromethane was detected in the field blank (I1210171342) at 0.25 ug/L below the reporting limit. Affected data are appropriately qualified.**
MPE-1	10/19/2012	For SW-846 Method 8260C, acetone was detected in the field blank (W1210191252) at 2.0 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (W1210191252) at 0.25 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
MPE-11	**10/19/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (W1210191016) at 2.9 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (W1210191016) at 0.26 ug/L below the reporting limit. Chloromethane was detected in the field blank (W1210191016) at 0.38 ug/L below the reporting limit. Affected data are appropriately qualified.**
NASA 6	**10/3/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (1210031001) at 2.5 ug/L below the reporting limit. Carbon disulfide was detected in the field blank (1210031001) at 1.1 ug/L. Chloromethane was detected in the field blank (1210031001) at 0.37 ug/L below the reporting limit. Affected data are appropriately qualified.**
PFE-1	10/22/2012	For SW-846 Method 8260C, acetone was detected in the field blank (W1210221245) at 3.0 ug/L below the reporting limit. No groundwater data are affected by this field blank contamination.
PFE-3	**10/22/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (W1210221344) at 2.7 ug/L below the reporting limit. Chloromethane was detected in the field blank (W1210221344) at 0.29 ug/L below the reporting limit. Trichloroethene (TCE) was detected in the field blank (W1210221344) at 0.23 ug/L below the reporting limit. Affected data are appropriately qualified.**
PFE-4A	**10/22/2012**	**For SW-846 Method 8260C, acetone was detected in the field blank (W1210221425) at 2.5 ug/L. Affected data are appropriately qualified.**
MPE-10	**10/19/2012**	**For SW-846 Method 8260C, acetone was detected in the trip blank (W1210191336) at 3.4 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (W1210191336) at 2.7 ug/L. Chloromethane was detected in the trip blank (W1210191336) at 0.31 ug/L below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
PFE-2	**10/22/2012**	**For SW-846 Method 8260C, acetone was detected in the trip blank (W1210221316) at 3.0 ug/L below the reporting limit. Carbon disulfide was detected in the trip blank (W1210221316) at 12.0 ug/L. Chloromethane was detected in the trip blank (W1210221316) at 0.25 ug/L below the reporting limit. Affected data are appropriately qualified.**
400-C-118	10/1/2012	For SW-846 Method 8260C, bromomethane (0.29 ug/L) and chloromethane (0.24 ug/L) were detected in the method blank for analytical batch 313007 below the reporting limit. No groundwater data are affected by this method blank contamination.
400-C-143	**10/2/2012**	**For SW-846 Method 8260C, bromomethane (0.29 ug/L) and chloromethane (0.24 ug/L) were detected in the method blank for analytical batch 313007 below the reporting limit. Affected data are appropriately qualified.**
NASA 6	**10/3/2012**	**For SW-846 Method 8260C, bromomethane (0.29 ug/L) and chloromethane (0.24 ug/L) were detected in the method blank for analytical batch 313007 below the reporting limit. Affected data are appropriately qualified.**
400-C-143	**10/2/2012**	**For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (1210020700) at 7.9 ug/L. Chloromethane was detected in the trip blank (1210020700) at 0.24 ug/L below the reporting limit. Affected data are appropriately qualified.**
BLM-21-400	10/23/2012	For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (1210230730B) at 5.4 ug/L. No groundwater data are affected by this trip blank contamination.
MPE-9	**10/23/2012**	**For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (W1210231355) at 1.6 ug/L. Chloromethane was detected in the trip blank (W1210231355) at 0.21 ug/L below the reporting limit. Affected data are appropriately qualified.**
PFE-7	10/24/2012	For SW-846 Method 8260C, carbon disulfide was detected in the trip blank (W1210241049) at 0.69 ug/L below the reporting limit. No groundwater data are affected by this trip blank contamination.
MPE-8	**10/23/2012**	**For SW-846 Method 8260C, chloromethane was detected in the field blank (W1210231343) at 0.33 ug/L below the reporting limit. Affected data are appropriately qualified.**
400-C-118	10/1/2012	For SW-846 Method 8260C, field duplicate samples 1210011300 and 1210011301 the relative percent difference for dichlorofluoromethane (CFC 21) was 6.9%. Upper acceptance limit for relative percent difference is 25%.
400-C-118	10/1/2012	For SW-846 Method 8260C, field duplicate samples 1210011300 and 1210011301 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 2.7%. Upper acceptance limit for relative percent difference is 25%.
400-C-118	10/1/2012	For SW-846 Method 8260C, field duplicate samples 1210011300 and 1210011301 the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-21-400	10/23/2012	For SW-846 Method 8260C, field duplicate samples 1210230941B and 1210230942B the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 15.4%. Upper acceptance limit for relative percent difference is 25%.
BLM-21-400	**10/23/2012**	**For SW-846 Method 8260C, field duplicate samples 1210230941B and 1210230942B the relative percent difference for trichlorofluoromethane (CFC 11) was 25.9%. This value is outside the upper acceptance limit for relative percent difference of 25%. Affected data are appropriately qualified.**
BLM-21-400	**10/23/2012**	**For SW-846 Method 8260C, field duplicate samples 1210230941B and 1210230942B the relative percent difference for trichloroethene (TCE) was 36.7%. This value is outside the upper acceptance limit for relative percent difference of 25%. Affected data are appropriately qualified.**
PFE-7	10/24/2012	For SW-846 Method 8260C, field duplicate samples W1210241047 and W1210241048 the relative percent difference for trichloroethene (TCE) was 3.4%. Upper acceptance limit for relative percent difference is 25%.
PFE-7	10/24/2012	For SW-846 Method 8260C, field duplicate samples W1210241047 and W1210241048 the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
PFE-3	**10/22/2012**	**For SW-846 Method 8260C, laboratory control sample duplicate recovery of 1,1,2-trichloro-1,2,2-trifluoroethane (67%) for analytical batch 316139 is outside control limits (70-130%). Affected data are appropriately qualified.**
PFE-4A	**10/22/2012**	**For SW-846 Method 8260C, laboratory control sample duplicate recovery of 1,1,2-trichloro-1,2,2-trifluoroethane (67%) for analytical batch 316139 is outside control limits (70-130%). Affected data are appropriately qualified.**
200-B-240	10/4/2012	For SW-846 Method 8260C, laboratory control sample recovery of bromomethane (168%) in analytical batch 313703 was outside control limits (70.130%). No data are affected by the elevated recovery.
200-B-240	10/4/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 313703 is outside laboratory control limits; refer to report R1206840 for details. Acrolein, bromomethane, iodomethane, and vinyl acetate detections, if any, should be considered estimated.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
400-C-118	10/1/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 313007 is outside laboratory control limits; refer to report R1206749 for details. Vinyl acetate and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
400-C-118	10/1/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 312400 is outside laboratory control limits; refer to report R1206647 for details. Chloromethane and vinyl acetate detections, if any, should be considered estimated.
400-C-143	10/2/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 313007 is outside laboratory control limits; refer to report R1206749 for details. Vinyl acetate and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
B650-INF-1	10/15/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315797 is outside laboratory control limits; refer to report R1207114 for details. Acrolein, vinyl acetate, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
B655-INF-1	10/17/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315797 is outside laboratory control limits; refer to report R1207157 for details. Acrolein, vinyl acetate, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
MPE-1	10/19/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315797 is outside laboratory control limits; refer to report R1207261 for details. Acrolein, vinyl acetate, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
MPE-10	10/19/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315913 is outside laboratory control limits; refer to report R1207261 for details. 1,2-Dichloroethane, acrolein, iodomethane, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
MPE-11	10/19/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315797 is outside laboratory control limits; refer to report R1207261 for details. Acrolein, vinyl acetate, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
NASA 6	10/3/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 313007 is outside laboratory control limits; refer to report R1206749 for details. Vinyl acetate and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
PFE-1	10/22/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315913 is outside laboratory control limits; refer to report R1207261 for details. 1,2-Dichloroethane, acrolein, iodomethane, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
PFE-2	10/22/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315913 is outside laboratory control limits; refer to report R1207261 for details. 1,2-Dichloroethane, acrolein, iodomethane, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
PFE-3	10/22/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 315913 is outside laboratory control limits; refer to report R1207261 for details. 1,2-Dichloroethane, acrolein, iodomethane, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.
PFE-4A	10/22/2012	For SW-846 Method 8260C, the continuing calibration verification (CCV) for one or more analyte(s) in analytical batch 316139 is outside laboratory control limits; refer to report R1207261 for details. 4-Methyl-2-pentanone, iodomethane, and trans-1,4-dichloro-2-butene detections, if any, should be considered estimated.

Well ID	Event Date	EPA Method 607 QA Narratives
400-C-118	10/1/2012	For Modified EPA Method 607 in blind control sample (1210021416), all recoveries were within standard limits.
200-B-240	10/4/2012	For Modified EPA Method 607, field duplicate samples 1210041327 and 1210041328 the relative percent difference for N-nitrodimethylamine was 6.5%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	10/4/2012	For Modified EPA Method 607, field duplicate samples 1210041327 and 1210041328 the relative percent difference for bromacil was 9.5%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	10/4/2012	For Modified EPA Method 607, field duplicate samples 1210041327 and 1210041328 the relative percent difference for N-nitrosodimethylamine was 8.5%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	EPA Method 607 QA Narratives
B655-INF-1	10/17/2012	For Modified EPA Method 607, field duplicate samples I1210171344 and I1210171346 the relative percent difference for bromacil was 9.5%. Upper acceptance limit for relative percent difference is 25%.
B655-INF-1	10/17/2012	For Modified EPA Method 607, field duplicate samples I1210171344 and I1210171346 the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B655-INF-1	10/17/2012	For Modified EPA Method 607, field duplicate samples I1210171344 and I1210171346 the relative percent difference for N-nitrosodimethylamine was 4.4%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
JP-3-970	10/5/2012	For Low Level Nitrosamine Method, equipment blank 1210050841Z had no recovery for internal standards for NDMA and DMN. No data was reported from the analytical laboratory and no sample was available for re-analysis.
BLM-37-640	10/11/2012	For Low Level Nitrosamine Method, equipment blank 1210111341Z and blind control 1210111520Z were inadvertently run by the incorrect method by the analytical laboratory. No data are provided.
ST-6-535	10/16/2012	For Low Level Nitrosamine Method, equipment blank 1210161431Z and sample 1210170858Z had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples.
ST-6-575	10/17/2012	For Low Level Nitrosamine Method, equipment blank 1210171031Z, sample 1210171402Z, and duplicate sample 1210171450Z had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples.
JP-2-447	10/18/2012	For Low Level Nitrosamine Method, for trip blank 121261415B and sample 1211261416B, the lower quantification limit is elevated (2.5 ng/L) for N-nitrodimethylamine due to low calibration standard recovery.
JP-2-447	10/18/2012	For Low Level Nitrosamine Method, N-nitrodimethylamine was detected in the trip blank (1211261415B) at 3.2 ng/L. N-nitrosodimethylamine was detected in the trip blank (1211261415B) at 17.0 ng/L. No groundwater data are affected by this trip blank contamination.
B655-EFF-2	10/17/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine (2.82 ng/L) was detected in the method blank for analytical batch WG1589736. Due to interference, the estimated detection limit is elevated for this method blank. No groundwater data are affected by this QC issue.
B650-EFF-1	**10/15/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (E1210151413) at 2.73 ng/L. Affected data are appropriately qualified.**
B655-EFF-2	10/17/2012	For Low Level Nitrosamine Method, N-Nitrosodimethylamine was detected in the field blank (E1211161237) at 1.12 ng/L. No groundwater data are affected by this field blank contamination.
BLM-37-750	**10/11/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1210110831Z) at 1.56 ng/L. Affected data are appropriately qualified.**
BLM-37-885	**10/10/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1210101041Z) at 1.51 ng/L. Affected data are appropriately qualified.**
JP-1-424	**10/10/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (1210101014) at 1.35 ng/L. No groundwater data are affected by this field blank contamination.**
JP-3-515	**10/9/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1210091441Z) at 0.71 ng/L. Affected data are appropriately qualified.**
JP-3-695	**10/9/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1210091016Z) at 0.93 ng/L. Affected data are appropriately qualified.**
JP-3-825	**10/5/2012**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1210051301Z) at 0.94 ng/L. Affected data are appropriately qualified.**
ST-6-685	10/16/2012	For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the equipment blank (1210160931Z) at 0.71 ng/L. No groundwater data are affected by this equipment blank contamination.
PFE-7	10/24/2012	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples W1210241051 and W1210241052 were within control limits or below the calculable range.
ST-6-685	10/16/2012	For Low Level Nitrosamine Method, sample 1210161051Z had poor recovery of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for this sample.
B650-EFF-1	10/15/2012	For Low Level Nitrosamine Method, sample E1210171243 had poor recovery of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for this sample.
B655-EFF-2	10/17/2012	For Low Level Nitrosamine Method, sample E1210171315 and field blank E1210171317 had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples. Resampling was conducted on

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
		11/16/2012.
PFE-7	10/24/2012	For Low Level Nitrosamine Method, sample W1210241051, duplicate sample W1210241052, and field blank W1210241053 had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples.
BLM-37-750	10/11/2012	For Low Level Nitrosamine Method, the internal standard recovery for NMDA-d6 (159%) for the method blank in analytical batch WG1566417 was outside laboratory control limits (10-141%). No groundwater data are affected by this QC issue.
BLM-37-885	10/10/2012	For Low Level Nitrosamine Method, the internal standard recovery for NMDA-d6 (159%) for the method blank in analytical batch WG1566417 was outside laboratory control limits (10-141%). No groundwater data are affected by this QC issue.
JP-3-515	10/9/2012	For Low Level Nitrosamine Method, the internal standard recovery for NMDA-d6 (159%) for the method blank in analytical batch WG1566417 was outside laboratory control limits (10-141%). No groundwater data are affected by this QC issue.
JP-3-695	10/9/2012	For Low Level Nitrosamine Method, the internal standard recovery for NMDA-d6 (159%) for the method blank in analytical batch WG1566417 was outside laboratory control limits (10-141%). No groundwater data are affected by this QC issue.
B655-EFF-2	10/17/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-10-517	10/19/2012	For Low Level Nitrosamine Method, there were no detections in the trip blank.
JP-2-447	10/18/2012	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PFE-7	10/24/2012	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-5-481	10/24/2012	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-6-535	10/16/2012	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
ST-6-575	10/17/2012	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
JP-2-447	10/18/2012	For Low Level Nitrosamine Method, trip blank 1210181101 and sample 1210181421 had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples. Resampling was conducted on 11/26/2012.
BLM-10-517	10/19/2012	For Low Level Nitrosamine Method, trip blank 1210190710 and sample 12101190932 had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples.
ST-5-481	10/24/2012	For Low Level Nitrosamine Method, trip blank 1210240700B and sample 1210240948B had poor recoveries of the internal standard for N-nitrosodimethylamine and no sample was available for re-extraction. There are no NDMA reportable results for these samples.

Well ID	Event Date	Total Metals QA Narratives
400-C-118	**10/1/2012**	**For Total Metals, barium (0.002 mg/L), copper (0.002 mg/L), and iron (0.04 mg/L) were detected in the method blank for analytical batch 168707 below the reporting limit. Affected data are appropriately qualified.**
MPE-9	**10/23/2012**	**For Total Metals, barium (0.006 mg/L), copper (0.003 mg/L), potassium (0.2 mg/L), and cobalt (0.000020 mg/L) were detected in the method blank for analytical batch 170393 and 170664 below the reporting limit. Affected data are appropriately qualified.**
200-B-240	**10/4/2012**	**For Total Metals, barium (0.003 mg/L), iron (0.01 mg/L), magnesium (0.03 mg/L), and strontium (0.005 mg/L) were detected in the method blank for analytical batch 169085 below the reporting limit. Affected data are appropriately qualified.**
BLM-21-400	**10/23/2012**	**For Total Metals, barium (0.006 mg/L), copper (0.003 mg/L), potassium (0.2 mg/L), and cobalt (0.000020 mg/L) were detected in the method blank for analytical batch 170393 and 170664 below the reporting limit. Affected data are appropriately qualified.**
MPE-10	**10/19/2012**	**For Total Metals, barium (0.006 mg/L), copper (0.003 mg/L), potassium (0.2 mg/L), and cobalt (0.000010 mg/L) were detected in the method blank for analytical batch 170393 and 170097 below the reporting limit. Affected data are appropriately qualified.**
BLM-37-750	10/11/2012	For Total Metals, iron (0.010 mg/L), magnesium (0.02 mg/L), potassium (0.1 mg/L), and mercury (0.00004 mg/L) were detected in the method blank for analytical batches 169295 and 169274 below the reporting limit. No groundwater data are affected by the method blank contamination.
BLM-37-885	10/10/2012	For Total Metals, iron (0.010 mg/L), magnesium (0.02 mg/L), potassium (0.1 mg/L), and mercury (0.00004 mg/L) were detected in the method blank for analytical batches 169295 and 169274 below the reporting limit. No groundwater data are affected by the method blank contamination.
MPE-8	**10/23/2012**	**For Total Metals, barium (0.006 mg/L), copper (0.003 mg/L), potassium (0.2 mg/L), and cobalt (0.000020 mg/L) were detected in the method blank for analytical batch 170393 and 170664 below**

Well ID	Event Date	Total Metals QA Narratives
		the reporting limit. Affected data are appropriately qualified.
ST-5-481	**10/24/2012**	**For Total Metals, barium (0.006 mg/L), copper (0.003 mg/L), potassium (0.2 mg/L), and cobalt (0.000020 mg/L) were detected in the method blank for analytical batch 170393 and 170664 below the reporting limit. Affected data are appropriately qualified.**
NASA 6	10/3/2012	For Total Metals, copper (0.006 mg/L) was detected in the method blank for analytical batch 168721 below the reporting limit. No groundwater data are affected by this method blank contamination.
400-C-143	10/2/2012	For Total Metals, copper (0.006 mg/L) was detected in the method blank for analytical batch 168721 below the reporting limit. No groundwater data are affected by this method blank contamination.
400-C-143	10/2/2012	For Total Metals, antimony (0.0003 mg/L) was detected in the method blank for analytical batch 168793 below the reporting limit. No groundwater data are affected by this method blank contamination.
NASA 6	10/3/2012	For Total Metals, antimony (0.0003 mg/L) was detected in the method blank for analytical batch 168793 below the reporting limit. No groundwater data are affected by this method blank contamination.
400-C-118	10/1/2012	For Total Metals in blind control sample (1208221517), the sample was prepared at a concentration below the reporting limits for calcium and boron. The sample results for these elements are not qualified based on this control.
400-C-118	10/1/2012	For Total Metals, antimony (0.0003 mg/L) was detected in the method blank for analytical batch 168793 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-5-481	**10/24/2012**	**For Total Metals, barium was detected in the field blank (1210240950B) at 0.001 mg/L below the reporting limit. Cobalt was detected in the field blank (1210240950B) at 0.000008 mg/L below the reporting limit. Magnesium was detected in the field blank (1210240950B) at 0.01 mg/L below the reporting limit. Zinc was detected in the field blank (1210240950B) at 0.005 mg/L below the reporting limit. Affected data are appropriately qualified.**
400-C-118	10/1/2012	For Total Metals, copper (0.006 mg/L) was detected in the method blank for analytical batch 168721 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-B-240	10/4/2012	For Total Metals, field duplicate samples 1210041335 and 1210041336 the relative percent difference for sodium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	10/4/2012	For Total Metals, field duplicate samples 1210041335 and 1210041336 the relative percent difference for magnesium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	10/4/2012	For Total Metals, field duplicate samples 1210041335 and 1210041336 the relative percent difference for strontium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	10/4/2012	For Total Metals, field duplicate samples 1210041335 and 1210041336 the relative percent difference for calcium was 0.8%. Upper acceptance limit for relative percent difference is 25%.
400-C-118	10/1/2012	For Total Metals, mercury (0.00004 mg/L) was detected in the method blank for analytical batch 169153 below the reporting limit. No groundwater data are affected by this method blank contamination.
400-C-143	10/2/2012	For Total Metals, mercury (0.00004 mg/L) was detected in the method blank for analytical batch 169153 below the reporting limit. No groundwater data are affected by this method blank contamination.
NASA 6	10/3/2012	For Total Metals, mercury (0.00004 mg/L) was detected in the method blank for analytical batch 169153 below the reporting limit. No groundwater data are affected by this method blank contamination.

Well ID	Event Date	Miscellaneous QA Narratives
200-B-240	10/4/2012	For EPA Method 376.1, sample 1210041338 was analyzed outside of the recommended hold time. Resampling was conducted on 10/22/2012.
MPE-8	10/23/2012	For Standard Method SM2320B, alkalinity (0.8 mg/L) was detected below the reporting limit in the method blank for analytical batch 316421. No groundwater data are affected by this method blank contamination.
MPE-9	10/23/2012	For Standard Method SM2320B, alkalinity (0.8 mg/L) was detected below the reporting limit in the method blank for analytical batch 316421. No groundwater data are affected by this method blank contamination.
ST-5-481	10/24/2012	For Standard Method SM2320B, alkalinity (0.8 mg/L) was detected below the reporting limit in the method blank for analytical batch 316421. No groundwater data are affected by this method blank contamination.
MPE-10	10/19/2012	For Standard Method SM2320B, alkalinity (0.9 mg/L) was detected below the reporting limit in the method blank for analytical batch 315978. No groundwater data are affected by this method blank contamination.

Well ID	Event Date	Miscellaneous QA Narratives
B650-EFF-1	10/15/2012	For Standard Method SM2320B, alkalinity (1.5 mg/L) was detected below the reporting limit in the method blank for analytical batch 315128. No groundwater data are affected by this method blank contamination.
B650-INF-1	10/15/2012	For Standard Method SM2320B, alkalinity (1.5 mg/L) was detected below the reporting limit in the method blank for analytical batch 315128. No groundwater data are affected by this method blank contamination.
400-C-118	10/1/2012	For SW-846 Method 8082, for sample 1210011308 the recovery of the internal standard decachlorobiphenyl (180%) was outside laboratory control limits (10-124%). No groundwater data are affected by this QC issue.
200-B-240	**10/4/2012**	**For SW-846 Method 8270D, an MDL and LCS/LCSD recovery cannot be determined for p-Phenylenediamine, diphenylamine, and a,a-Dimethylphenethylamine. Diphenylamine is degraded when the sample is injected, p-Phenylenediamine is degraded in the extraction procedure and a,a-Dimethylphenethylamine is degraded during extraction and injection. All of these compounds have been flagged with an "*" and should be considered indeterminate.**
400-C-118	**10/1/2012**	**For SW-846 Method 8270D, an MDL and LCS/LCSD recovery cannot be determined for p-Phenylenediamine, diphenylamine, and a,a-Dimethylphenethylamine. Diphenylamine is degraded when the sample is injected, p-Phenylenediamine is degraded in the extraction procedure and a,a-Dimethylphenethylamine is degraded during extraction and injection. All of these compounds have been flagged with an "*" and should be considered indeterminate.**
200-B-240	10/4/2012	For SW-846 Method 8270D, benzyl alcohol (41 ug/L) was detected in the method blank for analytical batch 169009. No data are affected by this method blank contamination.
200-B-240	**10/4/2012**	**For SW-846 Method 8270D, one unknown compound (4.2 ug/L) was tentatively identified in sample 1210041329 by a GC/MS library search. This detection corresponds with an unknown compound detection in the method blank and is appropriately qualified.**
200-B-240	10/4/2012	For SW-846 Method 8270D, the continuing calibration verification (CCV) for one or more analyte(s) is outside laboratory control limits; refer to report R1206838 for details. No groundwater data are qualified based on this CCV.
200-B-240	**10/4/2012**	**For SW-846 Method 8270D, two unknown compounds (5.4 ug/L and 4.5 ug/L) were tentatively identified in the method blank for analytical batch 169009 by a GC/MS library search. Affected data are appropriately qualified.**
400-C-118	**10/1/2012**	**For SW-846 Method 8270D, two unknown compounds were tentatively identified in sample 1210011304 by a GC/MS library search.**
200-B-240	10/4/2012	For SW-846 Method 8290A, recoveries for several extraction standards in the laboratory control sample (LCS) and one of continuing calibration verification (CCV) samples were outside laboratory control limits. Native targets have been well quantified and no negative impact to overall data quality is expected.
400-C-118	10/1/2012	For SW-846 Method 8290A, total-HpCDF (0.775 pg/L) was detected in the method blank for analytical batch WG1569019. No groundwater data are affected by this method blank contamination.
200-B-240	10/4/2012	For SW-846 Method 9034, relative percent difference between laboratory control sample and laboratory control sample duplicate recoveries of acid-soluble sulfide (23%) exceeded the control limit (20%). No groundwater data are affected by this exceedance.

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
JP-2-447	10/18/2012		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	17	ng/L	TB
PFE-2	10/22/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	12	ug/L	TB
400-C-143	10/2/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	7.9	ug/L	TB
BLM-21-400	10/23/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	5.4	ug/L	TB
MPE-10	10/19/2012		8260	VOA-TB	67-64-1	Acetone	3.4	ug/L	J RB TB
JP-1-424	10/10/2012		8260_LL	VOA-FB	67-64-1	Acetone	3.3	ug/L	J RB FB
JP-2-447	10/18/2012		NDMA_LL	NDMA_LL-TB	4164-28-7	N-nitrodimethylamine	3.2	ng/L	TB *
BLM-37-750	10/11/2012	Carboy G3	8260_LL	VOA-EB	67-64-1	Acetone	3.2	ug/L	J RB EB
JP-3-695	10/9/2012	Carboy G3	8260_LL	VOA-EB	67-64-1	Acetone	3.1	ug/L	J RB EB
PFE-1	10/22/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	3	ug/L	J RB FB
PFE-2	10/22/2012		8260	VOA-TB	67-64-1	Acetone	3	ug/L	J RB TB
MPE-11	10/19/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	2.9	ug/L	J RB FB
JP-3-970	10/5/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	2.9	ug/L	J EB

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
ST-6-685	10/16/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	2.8	ug/L	J EB
B650-EFF-1	10/15/2012	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	2.73	ng/L	FB
PFE-3	10/22/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	2.7	ug/L	J RB FB
MPE-10	10/19/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	2.7	ug/L	TB
BLM-10-517	10/19/2012	Carboy G2	8260_LL	VOA-FB	67-64-1	Acetone	2.7	ug/L	J RB FB
BLM-37-640	10/11/2012	Carboy G3	8260_LL	VOA-EB	67-64-1	Acetone	2.7	ug/L	J RB EB
B650-INF-1	10/15/2012	Carboy G3	8260	VOA-FB	67-64-1	Acetone	2.6	ug/L	J RB FB
BLM-37-885	10/10/2012	Carboy G3	8260_LL	VOA-EB	67-64-1	Acetone	2.6	ug/L	J RB EB
400-C-118	10/1/2012	Carboy G2	8260	VOA-FB	67-64-1	Acetone	2.6	ug/L	J FB
PFE-4A	10/22/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	2.5	ug/L	J RB FB
NASA 6	10/3/2012	Carboy G2	8260	VOA-FB	67-64-1	Acetone	2.5	ug/L	J FB
B650-INF-1	10/15/2012	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	2.4	ug/L	FB
B655-INF-1	10/17/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	2.2	ug/L	J RB FB
JP-2-447	10/18/2012		8260_LL	VOA-TB	67-64-1	Acetone	2.2	ug/L	J RB TB
JP-3-515	10/9/2012	Carboy G3	8260_LL	VOA-EB	67-64-1	Acetone	2.1	ug/L	J RB EB
JP-3-825	10/5/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	2.1	ug/L	J EB
MPE-1	10/19/2012	Carboy G4	8260	VOA-FB	67-64-1	Acetone	2	ug/L	J RB FB
B655-EFF-2	10/17/2012	Carboy G4	8260_LL	VOA-TB	67-64-1	Acetone	2	ug/L	J TB
B650-EFF-1	10/15/2012	Carboy G3	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	1.9	ug/L	FB
ST-5-481	10/24/2012		8260_LL	VOA-FB	67-64-1	Acetone	1.9	ug/L	J FB
200-B-240	10/4/2012	Carboy G2	8260	VOA-FB	67-64-1	Acetone	1.9	ug/L	J FB
ST-6-575	10/17/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	1.8	ug/L	J EB
MPE-9	10/23/2012		8260	VOA-TB	75-15-0	Carbon Disulfide	1.6	ug/L	TB
BLM-37-750	10/11/2012	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.56	ng/L	EB
BLM-37-885	10/10/2012	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.51	ng/L	EB
B650-EFF-1	10/15/2012	Carboy G3	8260_LL	VOA-FB	67-64-1	Acetone	1.5	ug/L	J FB
400-C-118	10/1/2012	Carboy G2	8260	VOA-FB	75-15-0	Carbon Disulfide	1.4	ug/L	FB
B655-EFF-2	10/17/2012	Carboy G4	8260_LL	VOA-TB	75-15-0	Carbon Disulfide	1.4	ug/L	TB
ST-6-535	10/16/2012	Carboy G2	8260_LL	VOA-EB	67-64-1	Acetone	1.4	ug/L	J EB
JP-1-424	10/10/2012		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.35	ng/L	FB
BLM-37-885	10/10/2012	Carboy G3	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	1.3	ug/L	EB
B655-EFF-2	10/17/2012	Carboy G4	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.12	ng/L	RB FB
JP-2-447	10/18/2012		8260_LL	VOA-TB	75-15-0	Carbon Disulfide	1.1	ug/L	TB
NASA 6	10/3/2012	Carboy G2	8260	VOA-FB	75-15-0	Carbon Disulfide	1.1	ug/L	FB
JP-3-825	10/5/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.94	ng/L	EB
JP-3-695	10/9/2012	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.93	ng/L	EB
JP-3-970	10/5/2012	Carboy G2	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.82	ug/L	EB
BLM-37-750	10/11/2012	Carboy G3	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.74	ug/L	EB
JP-3-825	10/5/2012	Carboy G2	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.73	ug/L	EB
ST-6-685	10/16/2012	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.71	ng/L	EB
JP-3-515	10/9/2012	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.71	ng/L	EB
PFE-7	10/24/2012	Carboy G3	8260	VOA-TB	75-15-0	Carbon Disulfide	0.69	ug/L	J TB
BLM-37-640	10/11/2012	Carboy G3	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.68	ug/L	EB
BLM-10-517	10/19/2012	Carboy G2	8260_LL	VOA-FB	74-87-3	Chloromethane	0.66	ug/L	FB
JP-3-695	10/9/2012	Carboy G3	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.66	ug/L	EB
ST-6-575	10/17/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.53	ug/L	EB
200-B-240	10/4/2012	Carboy G2	8260	VOA-FB	75-15-0	Carbon Disulfide	0.47	ug/L	J FB
JP-3-515	10/9/2012	Carboy G3	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.46	ug/L	J EB
B655-INF-1	10/17/2012	Carboy G4	8260	VOA-FB	75-15-0	Carbon Disulfide	0.42	ug/L	J FB

Table 8 – Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
ST-6-535	10/16/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.41	ug/L	J EB
ST-6-685	10/16/2012	Carboy G2	8260_LL	VOA-EB	74-83-9	Bromomethane	0.39	ug/L	J RB EB
MPE-11	10/19/2012	Carboy G4	8260	VOA-FB	74-87-3	Chloromethane	0.38	ug/L	J FB
NASA 6	10/3/2012	Carboy G2	8260	VOA-FB	74-87-3	Chloromethane	0.37	ug/L	J RB FB
ST-6-685	10/16/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.37	ug/L	J EB
ST-6-575	10/17/2012	Carboy G2	8260_LL	VOA-EB	74-83-9	Bromomethane	0.35	ug/L	J RB EB
B650-INF-1	10/15/2012	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.34	ug/L	J FB
JP-3-970	10/5/2012	Carboy G2	8260_LL	VOA-EB	74-83-9	Bromomethane	0.34	ug/L	J RB EB
MPE-8	10/23/2012	Carboy G4	8260	VOA-FB	74-87-3	Chloromethane	0.33	ug/L	J FB
JP-1-424	10/10/2012		8260_LL	VOA-FB	74-87-3	Chloromethane	0.33	ug/L	J FB
MPE-10	10/19/2012		8260	VOA-TB	74-87-3	Chloromethane	0.31	ug/L	J TB
B655-EFF-2	10/17/2012	Carboy G4	8260_LL	VOA-TB	74-87-3	Chloromethane	0.31	ug/L	J TB
ST-5-481	10/24/2012		8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.3	ug/L	J FB
400-C-118	10/1/2012	Carboy G2	8260	VOA-FB	74-87-3	Chloromethane	0.29	ug/L	J FB
B650-EFF-1	10/15/2012	Carboy G3	8260_LL	VOA-FB	74-83-9	Bromomethane	0.29	ug/L	J RB FB
PFE-3	10/22/2012	Carboy G4	8260	VOA-FB	74-87-3	Chloromethane	0.29	ug/L	J FB
JP-3-825	10/5/2012	Carboy G2	8260_LL	VOA-EB	74-83-9	Bromomethane	0.28	ug/L	J RB EB
ST-6-535	10/16/2012	Carboy G2	8260_LL	VOA-EB	74-83-9	Bromomethane	0.28	ug/L	J RB EB
JP-1-424	10/10/2012		8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.27	ug/L	J FB
ST-6-535	10/16/2012	Carboy G2	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.27	ug/L	J EB
MPE-11	10/19/2012	Carboy G4	8260	VOA-FB	75-15-0	Carbon Disulfide	0.26	ug/L	J FB
B655-INF-1	10/17/2012	Carboy G4	8260	VOA-FB	74-87-3	Chloromethane	0.25	ug/L	J FB
MPE-1	10/19/2012	Carboy G4	8260	VOA-FB	75-15-0	Carbon Disulfide	0.25	ug/L	J FB
PFE-2	10/22/2012		8260	VOA-TB	74-87-3	Chloromethane	0.25	ug/L	J TB
400-C-143	10/2/2012		8260	VOA-TB	74-87-3	Chloromethane	0.24	ug/L	J RB TB
PFE-3	10/22/2012	Carboy G4	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.23	ug/L	J FB
JP-3-970	10/5/2012	Carboy G2	8260_LL	VOA-EB	74-87-3	Chloromethane	0.23	ug/L	J EB
BLM-37-750	10/11/2012	Carboy G3	8260_LL	VOA-EB	74-87-3	Chloromethane	0.22	ug/L	J EB
ST-6-685	10/16/2012	Carboy G2	8260_LL	VOA-EB	75-15-0	Carbon Disulfide	0.21	ug/L	J EB
MPE-9	10/23/2012		8260	VOA-TB	74-87-3	Chloromethane	0.21	ug/L	J TB
ST-5-481	10/24/2012		METALS	METALS-FB	7439-95-4	Magnesium, Total	0.01	mg/L	J FB
ST-5-481	10/24/2012		METALS	METALS-FB	7440-66-6	Zinc, Total	0.005	mg/L	J FB
ST-5-481	10/24/2012		METALS	METALS-FB	7440-39-3	Barium, Total	0.001	mg/L	J RB FB
ST-5-481	10/24/2012		METALS	METALS-FB	7440-48-4	Cobalt, Total	0.000008	mg/L	J RB FB

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Appendix D
Comparison to Cleanup Levels

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Appendix D.1
Groundwater Monitoring Wells

Analytical Results for GW Monitoring Wells that Exceed Clean Up Levels

CAS Number 107-13-1 **Analyte** Acrylonitrile

Cleanup Level 0.45 ug/L **Source** EPA RSL

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
400-D-275	8/7/2012	8260_LL	1208070955Z	Acrylonitrile	4.5	ug/L	2.5	0.86		
400-D-355	8/6/2012	8260_LL	1208061355Z	Acrylonitrile	2.8	ug/L	2.5	0.86		

CAS Number **7440-47-3** **Analyte** **CHROMIUM**

Cleanup Level **0.05 mg/L** **Source** **WQCC**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
200-D-109	8/24/2012	METALS	1208241035	CHROMIUM	0.12	MG/L	0.01	0.0006		
BW-3-180	9/15/2012	METALS	1209150917	CHROMIUM	1.5	MG/L	0.01	0.0006		
NASA 5	9/5/2012	METALS	1209051004B	CHROMIUM	0.17	MG/L	0.01	0.0006		

CAS Number **7440-02-0** **Analyte** **NICKEL**

Cleanup Level **0.2 mg/L** **Source** **WQCC**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
BW-3-180	9/15/2012	METALS	1209150917	NICKEL	1	MG/L	0.02	0.0006		

CAS Number **1-005** **Analyte** **NITRATE/NITRITE AS N**

Cleanup Level **10 mg/L** **Source** **MCL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
600-G-138	9/19/2012	353.2	1209191410	NITRATE/NITRITE AS N	13	MG/L	0.1	0.03		

CAS Number 62-75-9 **Analyte N-Nitrosodimethylamine**

Cleanup Level 0.0042 ug/L **Source EPA RSL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
200-B-240	10/4/2012	607	1210041328	N-Nitrosodimethylamine	0.098	ug/L	0.0089	0.0044	41	
200-B-240	10/4/2012	607	1210041327	N-Nitrosodimethylamine	0.09	ug/L	0.0089	0.0044	41	
300-C-128	8/6/2012	607	1208061422	N-Nitrosodimethylamine	4.3	ug/L	0.01	0.005	40	
300-C-128	8/6/2012	607	1208061421	N-Nitrosodimethylamine	4.5	ug/L	0.01	0.005	40	
400-C-118	10/1/2012	607	1210011303	N-Nitrosodimethylamine	2.2	ug/L	0.0089	0.0044	43	
400-C-118	10/1/2012	8270	1210011304	N-Nitrosodimethylamine	2.6	ug/L	9.4	1.0		J
400-C-143	10/2/2012	607	1210021301	N-Nitrosodimethylamine	2.5	ug/L	0.0089	0.0044	43	
BLM-14-327	8/8/2012	607	1208081043	N-Nitrosodimethylamine	0.17	ug/L	0.01	0.005	40	
BLM-14-327	8/8/2012	607	1208081042	N-Nitrosodimethylamine	0.17	ug/L	0.01	0.005	40	
BLM-1-435	9/18/2012	607	1209190730	N-Nitrosodimethylamine	1.1	ug/L	0.0091	0.0045	47	
BLM-15-305	9/14/2012	607	1209140918	N-Nitrosodimethylamine	10	ug/L	0.0089	0.0044	75	
BLM-15-305	9/14/2012	607	1209140917	N-Nitrosodimethylamine	10	ug/L	0.0089	0.0044	75	
BLM-18-430	9/12/2012	607	1209121402	N-Nitrosodimethylamine	0.048	ug/L	0.0089	0.0044	75	
BLM-21-400	10/23/2012	607	1210230943B	N-Nitrosodimethylamine	0.47	ug/L	0.0092	0.0046	76	
BLM-23-431	9/13/2012	607	1209130916	N-Nitrosodimethylamine	0.15	ug/L	0.0089	0.0044	75	
BLM-30-585	8/1/2012	607	1208020802Z	N-Nitrosodimethylamine	0.14	ug/L	0.0094	0.0047	66	
BLM-36-350	8/14/2012	607	1208150859Z	N-Nitrosodimethylamine	0.43	ug/L	0.0096	0.0048	60	
BLM-9-419	9/13/2012	607	1209131311	N-Nitrosodimethylamine	0.51	ug/L	0.0089	0.0044	75	
BW-1-268	8/7/2012	607	1208071449	N-Nitrosodimethylamine	5.6	ug/L	0.01	0.005	40	
BW-1-268	8/7/2012	607	1208071448	N-Nitrosodimethylamine	5.6	ug/L	0.01	0.005	40	
NASA 10	9/5/2012	607	1209051406B	N-Nitrosodimethylamine	0.26	ug/L	0.0091	0.0045	65	
NASA 5	9/5/2012	607	1209051003B	N-Nitrosodimethylamine	1.2	ug/L	0.0092	0.0046	65	
NASA 6	10/3/2012	607	1210031002	N-Nitrosodimethylamine	4.3	ug/L	0.0089	0.0044	43	
NASA 9	9/8/2012	607	1209080922B	N-Nitrosodimethylamine	1.2	ug/L	0.0094	0.0047	65	
ST-1-541	8/7/2012	607	1208070949	N-Nitrosodimethylamine	1.2	ug/L	0.01	0.005	40	
ST-1-541	8/7/2012	607	1208070948	N-Nitrosodimethylamine	1.3	ug/L	0.01	0.005	40	

CAS Number 127-18-4 **Analyte** Tetrachloroethene (PCE)

Cleanup Level 1.1 ug/L **Source** EPA RSL

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
200-B-240	10/4/2012	8260	1210041325	Tetrachloroethene (PCE)	3.2	ug/L	1.0	0.30		
200-D-109	8/24/2012	8260	1208241030	Tetrachloroethene (PCE)	14	ug/L	1.0	0.30		
200-D-109	8/24/2012	8260	1208241031	Tetrachloroethene (PCE)	14	ug/L	1.0	0.30		
200-D-109	8/24/2012	8260	1208241031	Tetrachloroethene (PCE)	14	ug/L	1.0	0.30		
200-SG-1	9/8/2012	8260	1209081108B	Tetrachloroethene (PCE)	6.8	ug/L	1.0	0.30		
BLM-14-327	8/8/2012	8260	1208081040	Tetrachloroethene (PCE)	3.3	ug/L	1.0	0.20		
BLM-18-430	9/12/2012	8260	1209121400	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.30		
BLM-21-400	10/23/2012	8260	1210230942B	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.30		
BLM-23-431	9/13/2012	8260	1209130915	Tetrachloroethene (PCE)	3.4	ug/L	1.0	0.30		
BLM-30-585	8/1/2012	8260	1208020801Z	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.20		
BLM-30-585	8/1/2012	8260	1208020800Z	Tetrachloroethene (PCE)	1.3	ug/L	1.0	0.20		
BLM-36-350	8/14/2012	8260	1208150858Z	Tetrachloroethene (PCE)	3.9	ug/L	1.0	0.30		
BLM-9-419	9/13/2012	8260	1209131309	Tetrachloroethene (PCE)	1.6	ug/L	1.0	0.30		
ST-1-541	8/7/2012	8260	1208070946	Tetrachloroethene (PCE)	16	ug/L	1.0	0.20		
ST-1-541	8/7/2012	8260	1208070945	Tetrachloroethene (PCE)	16	ug/L	1.0	0.20		

CAS Number 79-01-6 **Analyte Trichloroethene (TCE)**

Cleanup Level 5 ug/L **Source MCL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
200-B-240	10/4/2012	8260	1210041325	Trichloroethene (TCE)	62	ug/L	1.0	0.22		
200-D-109	8/24/2012	8260	1208241030	Trichloroethene (TCE)	220	ug/L	2.5	0.55		
200-D-109	8/24/2012	8260	1208241031	Trichloroethene (TCE)	210	ug/L	2.5	0.55		
200-D-109	8/24/2012	8260	1208241031	Trichloroethene (TCE)	210	ug/L	2.5	0.55		
200-D-240	9/20/2012	8260	1209201415	Trichloroethene (TCE)	22	ug/L	1.0	0.22		
200-JG-110	8/9/2012	8260	1208091405	Trichloroethene (TCE)	16	ug/L	1.0	0.23		
200-SG-1	9/8/2012	8260	1209081108B	Trichloroethene (TCE)	180	ug/L	1.0	0.22		
600-G-138	9/19/2012	8260	1209191400	Trichloroethene (TCE)	110	ug/L	1.0	0.22		
BLM-14-327	8/8/2012	8260	1208081040	Trichloroethene (TCE)	76	ug/L	1.0	0.23		
BLM-1-435	9/18/2012	8260	1209181440	Trichloroethene (TCE)	51	ug/L	1.0	0.22		
BLM-1-435	9/18/2012	8260	1209181441	Trichloroethene (TCE)	47	ug/L	1.0	0.22		
BLM-18-430	9/12/2012	8260	1209121400	Trichloroethene (TCE)	37	ug/L	1.0	0.22		
BLM-21-400	10/23/2012	8260	1210230941B	Trichloroethene (TCE)	20	ug/L	1.0	0.22		QD
BLM-21-400	10/23/2012	8260	1210230942B	Trichloroethene (TCE)	29	ug/L	1.0	0.22		QD
BLM-23-431	9/13/2012	8260	1209130915	Trichloroethene (TCE)	70	ug/L	1.0	0.22		
BLM-30-585	8/1/2012	8260	1208020801Z	Trichloroethene (TCE)	32	ug/L	1.0	0.23		
BLM-30-585	8/1/2012	8260	1208020800Z	Trichloroethene (TCE)	37	ug/L	1.0	0.23		
BLM-36-350	8/14/2012	8260	1208150858Z	Trichloroethene (TCE)	79	ug/L	1.0	0.22		
BLM-5-527	9/6/2012	8260	1209060920	Trichloroethene (TCE)	15	ug/L	1.0	0.22		
BLM-9-419	9/13/2012	8260	1209131309	Trichloroethene (TCE)	31	ug/L	1.0	0.22		
NASA 7	8/21/2012	8260	1208220831	Trichloroethene (TCE)	25	ug/L	1.0	0.22		
PL-1-486	9/11/2012	8260	1209111341	Trichloroethene (TCE)	6.2	ug/L	1.0	0.22		
PL-1-486	9/11/2012	8260	1209111340	Trichloroethene (TCE)	6.4	ug/L	1.0	0.22		
PL-1-486	9/11/2012	8260	1209111341	Trichloroethene (TCE)	6.2	ug/L	1.0	0.22		
PL-2-504	9/7/2012	8260	1209071325	Trichloroethene (TCE)	41	ug/L	1.0	0.22		
PL-2-504	9/7/2012	8260	1209071325	Trichloroethene (TCE)	41	ug/L	1.0	0.22		
PL-2-504	9/7/2012	8260	1209071325	Trichloroethene (TCE)	41	ug/L	1.0	0.22		
ST-1-541	8/7/2012	8260	1208070945	Trichloroethene (TCE)	310	ug/L	10	2.4		
ST-1-541	8/7/2012	8260	1208070946	Trichloroethene (TCE)	280	ug/L	10	2.4		
ST-6-575	9/24/2012	8260_LL	1209240950Z	Trichloroethene (TCE)	7.9	ug/L	0.50	0.20		
ST-6-575	9/24/2012	8260_LL	1209240951Z	Trichloroethene (TCE)	6.8	ug/L	0.50	0.20		
ST-6-575	9/24/2012	8260_LL	1209240951Z	Trichloroethene (TCE)	6.8	ug/L	0.50	0.20		

CAS Number **79-01-6** **Analyte** **Trichloroethene (TCE)**

Cleanup Level **5 ug/L** **Source** **MCL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
ST-6-575	9/4/2012	8260_LL	1209041401Z	Trichloroethene (TCE)	9.2	ug/L	0.50	0.20		
ST-6-575	9/4/2012	8260_LL	1209041400Z	Trichloroethene (TCE)	9.7	ug/L	0.50	0.20		
ST-6-575	9/4/2012	8260_LL	1209041401Z	Trichloroethene (TCE)	9.2	ug/L	0.50	0.20		

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Appendix D.2
PFTS Influent/Extraction Wells/Effluent

Analytical Results for PFTS and Extraction Wells that Exceed Clean Up Levels

CAS Number 62-75-9 **Analyte** N-Nitrosodimethylamine

Cleanup Level 0.0042 ug/L **Source** EPA RSL

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B650-INF-1	10/15/2012	607	I1210151446	N-Nitrosodimethylamine	0.16	ug/L	0.0094	0.0047	41	
B650-INF-1	9/24/2012	607	I1209241036	N-Nitrosodimethylamine	0.14	ug/L	0.01	0.005	43	
B650-INF-1	9/24/2012	607	I1209241038	N-Nitrosodimethylamine	0.13	ug/L	0.0089	0.0044	43	
B650-INF-1	8/24/2012	607	I1208241020	N-Nitrosodimethylamine	0.12	ug/L	0.01	0.005	65	
B650-INF-1	8/24/2012	607	I1208241022	N-Nitrosodimethylamine	0.11	ug/L	0.01	0.005	65	
PFE-1	10/22/2012	607	W1210221246	N-Nitrosodimethylamine	0.13	ug/L	0.0089	0.0044	66	
PFE-2	10/22/2012	607	W1210221317	N-Nitrosodimethylamine	0.08	ug/L	0.0089	0.0044	66	
PFE-3	10/22/2012	607	W1210221345	N-Nitrosodimethylamine	0.33	ug/L	0.0089	0.0044	66	
PFE-4A	10/22/2012	607	W1210221426	N-Nitrosodimethylamine	0.058	ug/L	0.0089	0.0044	66	
PFE-7	8/28/2012	NDMA_LL	W1208281253	N-Nitrosodimethylamine	4.38	ng/L	0.24	0.5		FB

CAS Number **127-18-4** **Analyte** **Tetrachloroethene (PCE)**

Cleanup Level **1.1 ug/L** **Source** **EPA RSL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B650-INF-1	10/15/2012	8260	I1210151442	Tetrachloroethene (PCE)	3.2	ug/L	1.0	0.30		
B650-INF-1	9/24/2012	8260	I1209241032	Tetrachloroethene (PCE)	2.9	ug/L	1.0	0.30		
B650-INF-1	8/24/2012	8260	I1208241016	Tetrachloroethene (PCE)	2.8	ug/L	1.0	0.30		
PFE-1	10/22/2012	8260	W1210221244	Tetrachloroethene (PCE)	2.5	ug/L	1.0	0.30		
PFE-2	10/22/2012	8260	W1210221315	Tetrachloroethene (PCE)	2.1	ug/L	1.0	0.30		
PFE-3	10/22/2012	8260	W1210221343	Tetrachloroethene (PCE)	7.2	ug/L	1.0	0.30		

CAS Number **79-01-6** **Analyte** **Trichloroethene (TCE)**

Cleanup Level **5 ug/L** **Source** **MCL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B650-INF-1	10/15/2012	8260	I1210151442	Trichloroethene (TCE)	77	ug/L	1.0	0.22		
B650-INF-1	9/24/2012	8260	I1209241032	Trichloroethene (TCE)	68	ug/L	1.0	0.22		
B650-INF-1	8/24/2012	8260	I1208241016	Trichloroethene (TCE)	69	ug/L	1.0	0.22		
PFE-1	10/22/2012	8260	W1210221244	Trichloroethene (TCE)	60	ug/L	1.0	0.22		
PFE-2	10/22/2012	8260	W1210221315	Trichloroethene (TCE)	58	ug/L	1.0	0.22		
PFE-3	10/22/2012	8260	W1210221343	Trichloroethene (TCE)	170	ug/L	1.0	0.22		
PFE-4A	10/22/2012	8260	W1210221424	Trichloroethene (TCE)	22	ug/L	1.0	0.22		
PFE-7	10/24/2012	8260	W1210241048	Trichloroethene (TCE)	5.8	ug/L	1.0	0.22		
PFE-7	10/24/2012	8260	W1210241047	Trichloroethene (TCE)	6	ug/L	1.0	0.22		
PFE-7	9/24/2012	8260	W1209241329	Trichloroethene (TCE)	6.3	ug/L	1.0	0.22		
PFE-7	8/28/2012	8260	W1208281250	Trichloroethene (TCE)	6	ug/L	1.0	0.22		

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Appendix D.3
MPITS Influent/Extraction Wells/Effluent

Analytical Results for MPITS and MPE Wells that Exceed Clean Up Levels

CAS Number 62-75-9 **Analyte** N-Nitrosodimethylamine

Clean Up Level 0.0042 ug/L **Source** EPA RSL

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B655-INF-1	10/17/2012	607	I1210171344	N-Nitrosodimethylamine	2.2	ug/L	0.0089	0.0044	41	
B655-INF-1	10/17/2012	607	I1210171346	N-Nitrosodimethylamine	2.3	ug/L	0.0089	0.0044	41	
B655-INF-1	9/25/2012	607	I1209251030	N-Nitrosodimethylamine	0.52	ug/L	0.0094	0.0047	43	
B655-INF-1	8/28/2012	607	I1208281020	N-Nitrosodimethylamine	0.09	ug/L	0.01	0.005	76	
MPE-1	10/19/2012	607	W1210191253	N-Nitrosodimethylamine	5.8	ug/L	0.0089	0.0044	66	
MPE-1	8/29/2012	607	W1208291300	N-Nitrosodimethylamine	6.3	ug/L	0.0098	0.0049	35	
MPE-10	10/19/2012	607	W1210191337	N-Nitrosodimethylamine	0.42	ug/L	0.0089	0.0044	66	
MPE-11	10/19/2012	607	W1210191017	N-Nitrosodimethylamine	0.071	ug/L	0.0089	0.0044	66	
MPE-11	8/29/2012	607	W1208291226	N-Nitrosodimethylamine	0.058	ug/L	0.0089	0.0044	35	
MPE-8	10/23/2012	607	W1210231344	N-Nitrosodimethylamine	0.27	ug/L	0.0091	0.0045	76	
MPE-8	9/26/2012	607	W1209260825	N-Nitrosodimethylamine	0.6	ug/L	0.0089	0.0044	43	
MPE-9	10/23/2012	607	W1210231356	N-Nitrosodimethylamine	0.96	ug/L	0.0089	0.0044	76	

CAS Number **127-18-4** **Analyte** **Tetrachloroethene (PCE)**

Clean Up Level **1.1 ug/L** **Source** **EPA RSL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B655-INF-1	10/17/2012	8260	I1210171340	Tetrachloroethene (PCE)	2.3	ug/L	1.0	0.30		
B655-INF-1	9/25/2012	8260	I1209251026	Tetrachloroethene (PCE)	2	ug/L	1.0	0.30		
MPE-1	10/19/2012	8260	W1210191251	Tetrachloroethene (PCE)	6.7	ug/L	1.0	0.30		
MPE-1	8/29/2012	8260	W1208291258	Tetrachloroethene (PCE)	6.1	ug/L	1.0	0.30		

CAS Number **79-01-6** **Analyte** **Trichloroethene (TCE)**

Clean Up Level **5 ug/L** **Source** **MCL**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B655-INF-1	10/17/2012	8260	I1210171340	Trichloroethene (TCE)	50	ug/L	1.0	0.22		
B655-INF-1	9/25/2012	8260	I1209251026	Trichloroethene (TCE)	46	ug/L	1.0	0.22		
B655-INF-1	8/28/2012	8260	I1208281016	Trichloroethene (TCE)	10	ug/L	1.0	0.22		
MPE-1	10/19/2012	8260	W1210191251	Trichloroethene (TCE)	140	ug/L	1.0	0.22		
MPE-1	8/29/2012	8260	W1208291258	Trichloroethene (TCE)	140	ug/L	1.0	0.22		
MPE-10	10/19/2012	8260	W1210191335	Trichloroethene (TCE)	16	ug/L	1.0	0.22		
MPE-8	10/23/2012	8260	W1210231342	Trichloroethene (TCE)	11	ug/L	1.0	0.22		
MPE-8	9/26/2012	8260	W1209260823	Trichloroethene (TCE)	20	ug/L	1.0	0.22		
MPE-9	10/23/2012	8260	W1210231354	Trichloroethene (TCE)	32	ug/L	1.0	0.22		

CAS Number 79-01-6 **Analyte** Trichloroethene (TCE)

Clean Up Level 5 ug/L **Source** MCL

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag

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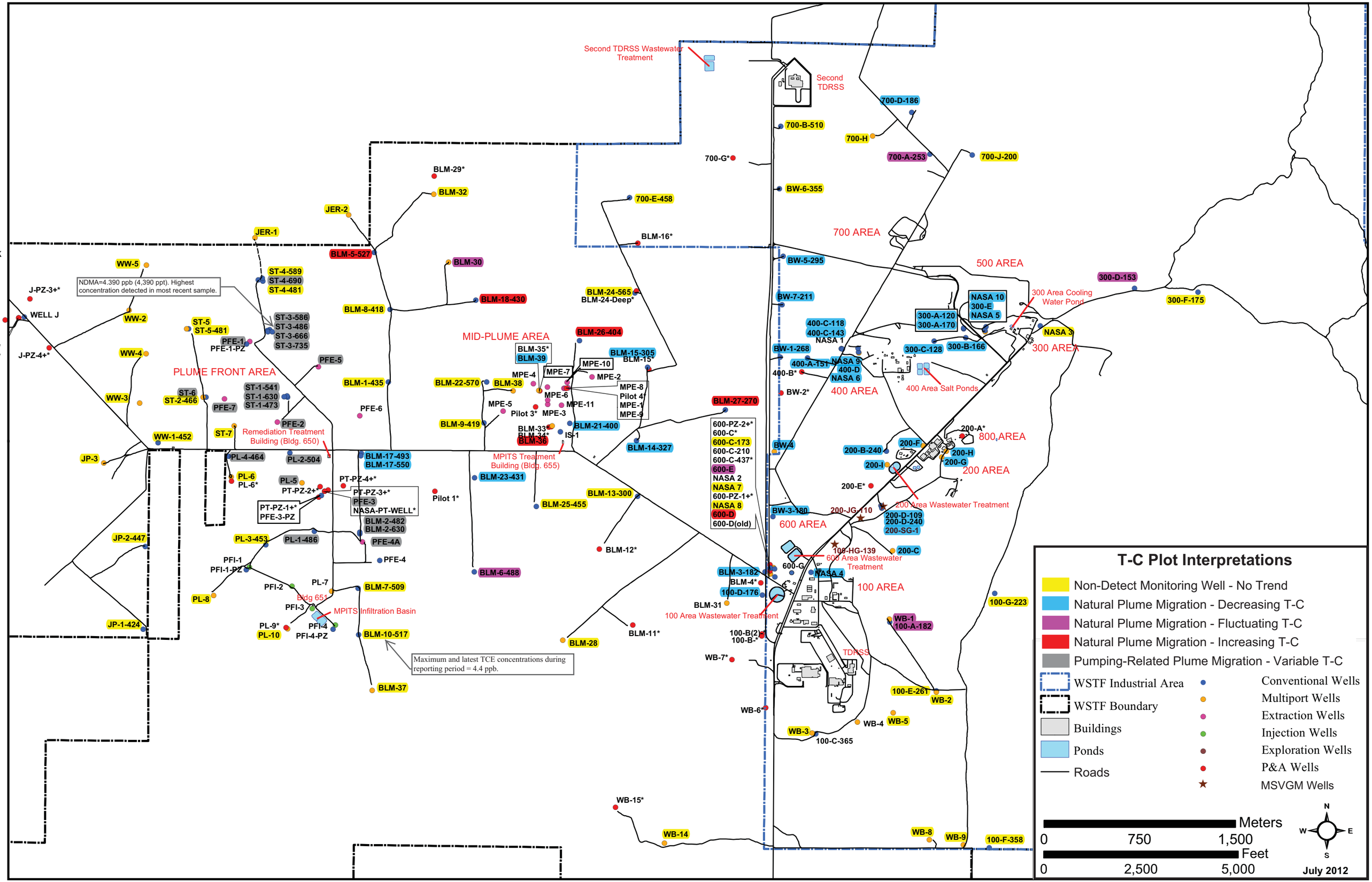
Appendix E
Time Concentration Plots


Second TDRSS Wastewater Treatment
Second TDRSS
700 AREA
500 AREA
300 AREA
400 AREA
800 AREA
200 AREA
600 AREA
100 AREA
MID-PLUME AREA
PLUME FRONT AREA
300 Area Cooling Water Pond
400 Area Salt Ponds
200 Area Wastewater Treatment
600 Area Wastewater Treatment
100 Area Wastewater Treatment
Remediation Treatment Building (Bldg. 650)
MPITS Treatment Building (Bldg. 655)
MPITS Infiltration Basin
Bldg 651
TDRSS
NDMA=4.390 ppb (4,390 ppt). Highest concentration detected in most recent sample.
Maximum and latest TCE concentrations during reporting period = 4.4 ppb.
T-C Plot Interpretations
Non-Detect Monitoring Well - No Trend
Natural Plume Migration - Decreasing T-C
Natural Plume Migration - Fluctuating T-C
Natural Plume Migration - Increasing T-C
Pumping-Related Plume Migration - Variable T-C
WSTF Industrial Area
WSTF Boundary
Buildings
Ponds
Roads
Conventional Wells
Multiport Wells
Extraction Wells
Injection Wells
Exploration Wells
P&A Wells
MSVGM Wells
Meters
0 750 1,500
Feet
0 2,500 5,000
N
W
E
S
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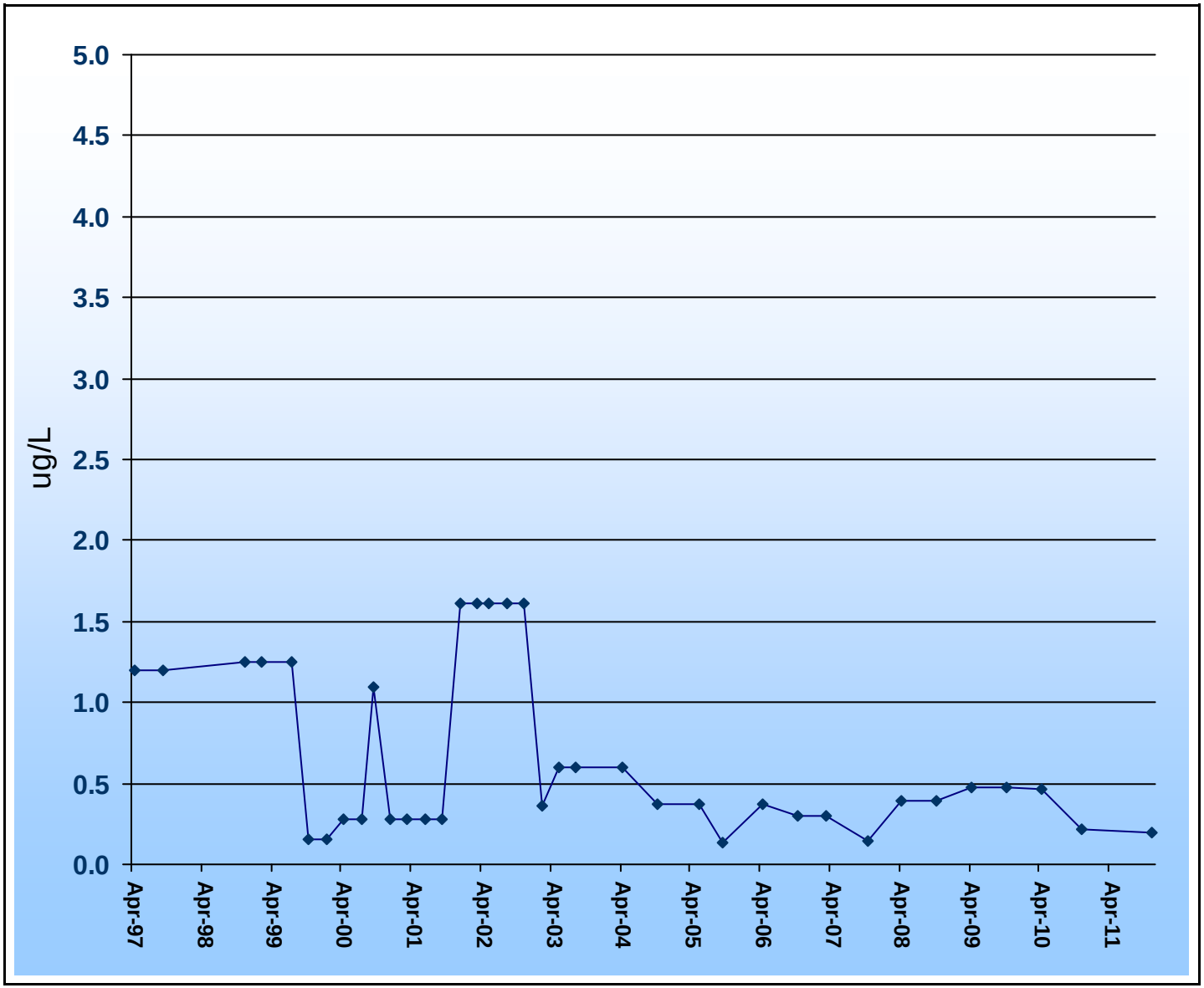
Appendix E
Time Concentration Plots

100/600 Area Well Group

Well ID 600-D-230

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

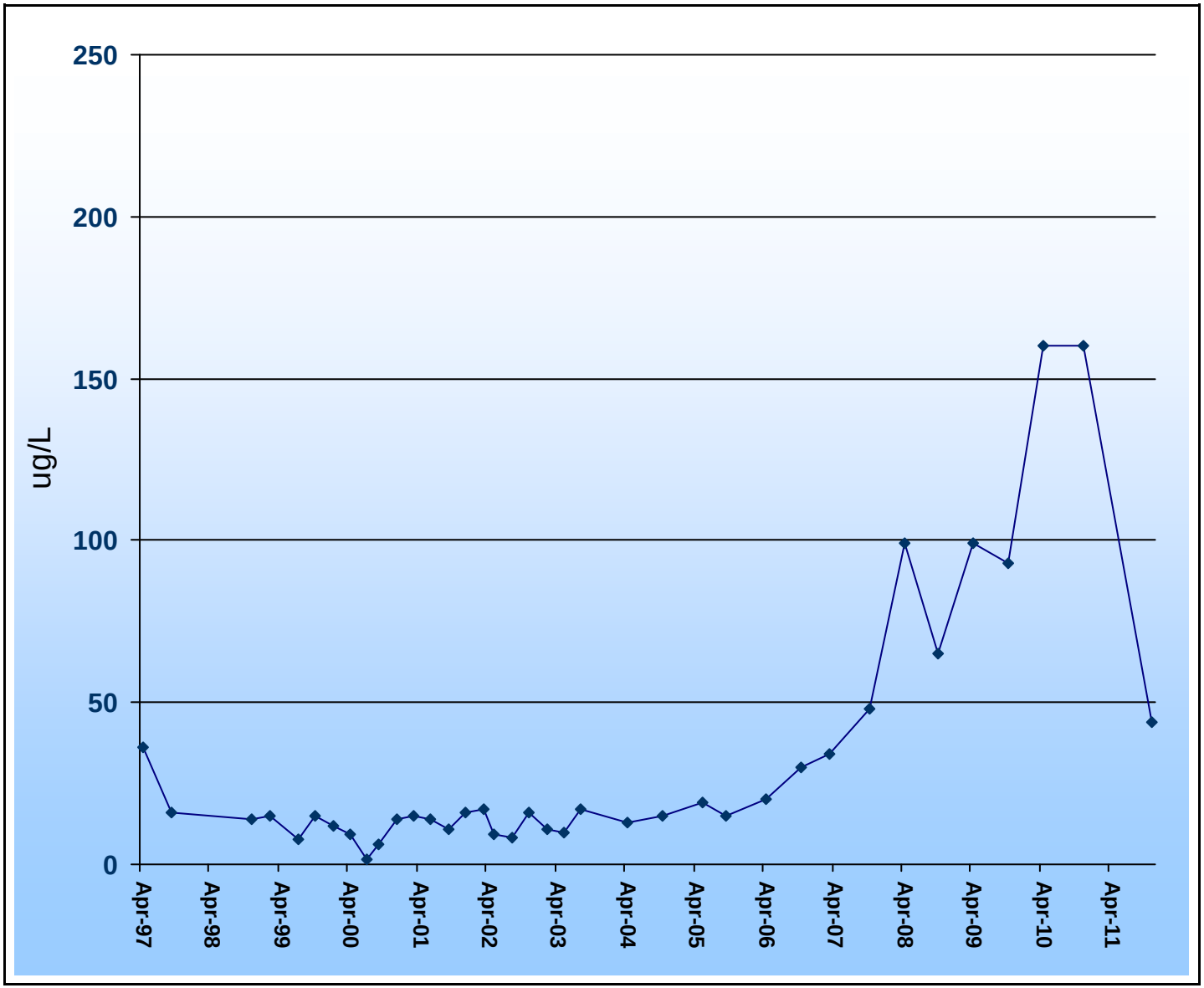
Cleanup Level 1,100 ug/L EPA RSL



Well ID 600-D-230

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

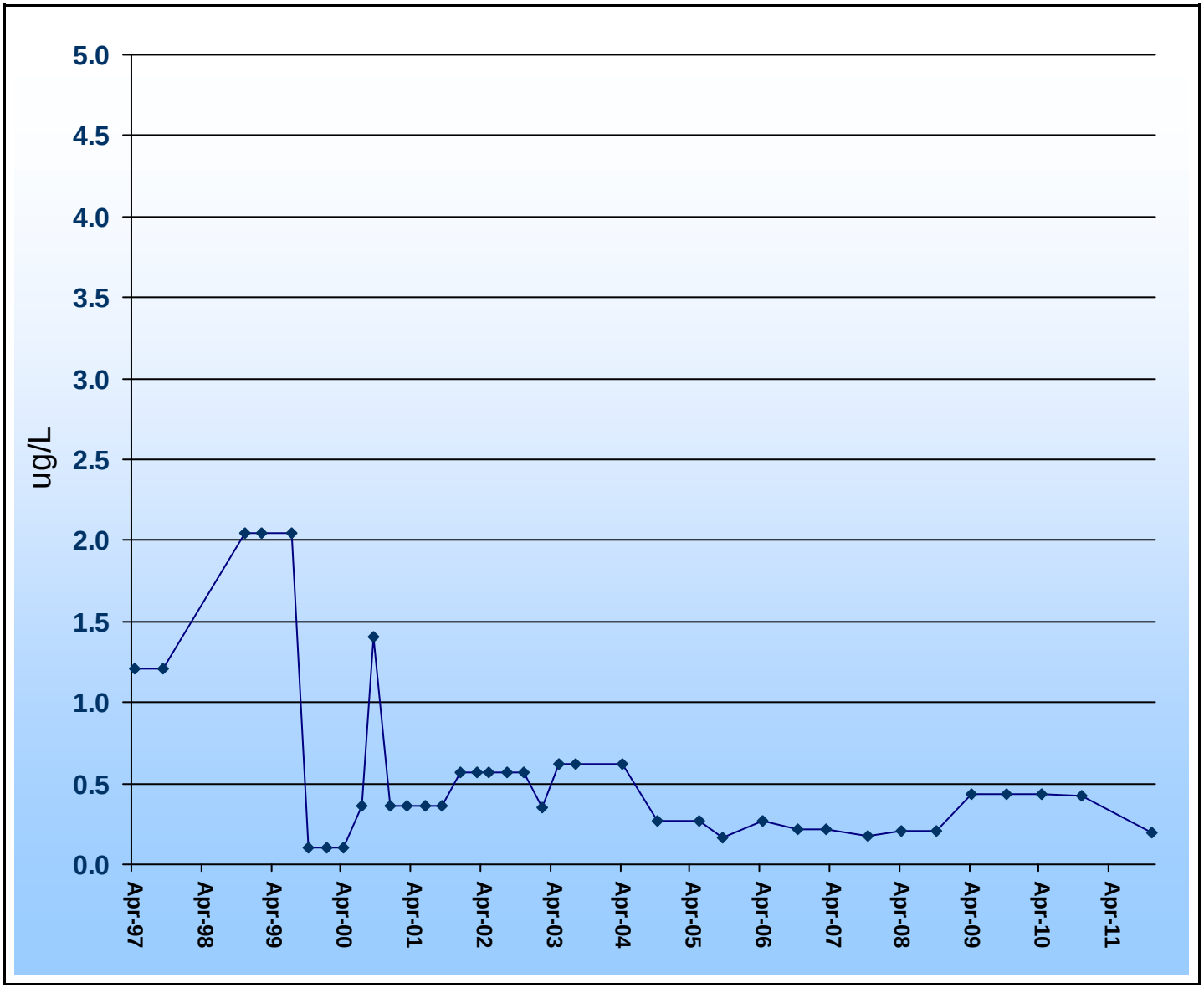
Cleanup Level 53,000 ug/L EPA RSL



Well ID 600-D-230

Casno 127-18-4 Analyte Tetrachloroethene

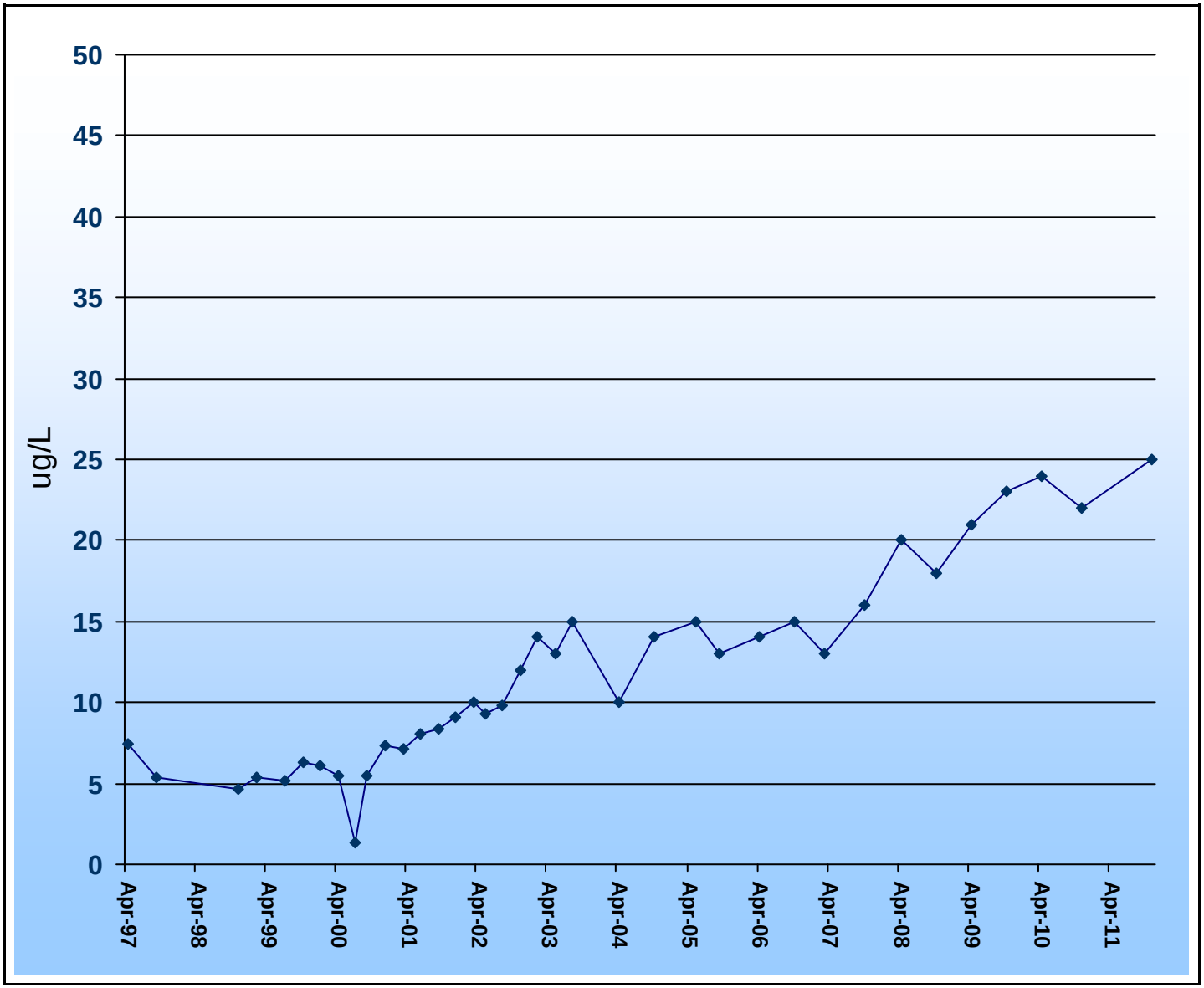
Cleanup Level 1.1 ug/L EPA RSL



Well ID 600-D-230

Casno 79-01-6 Analyte Trichloroethene

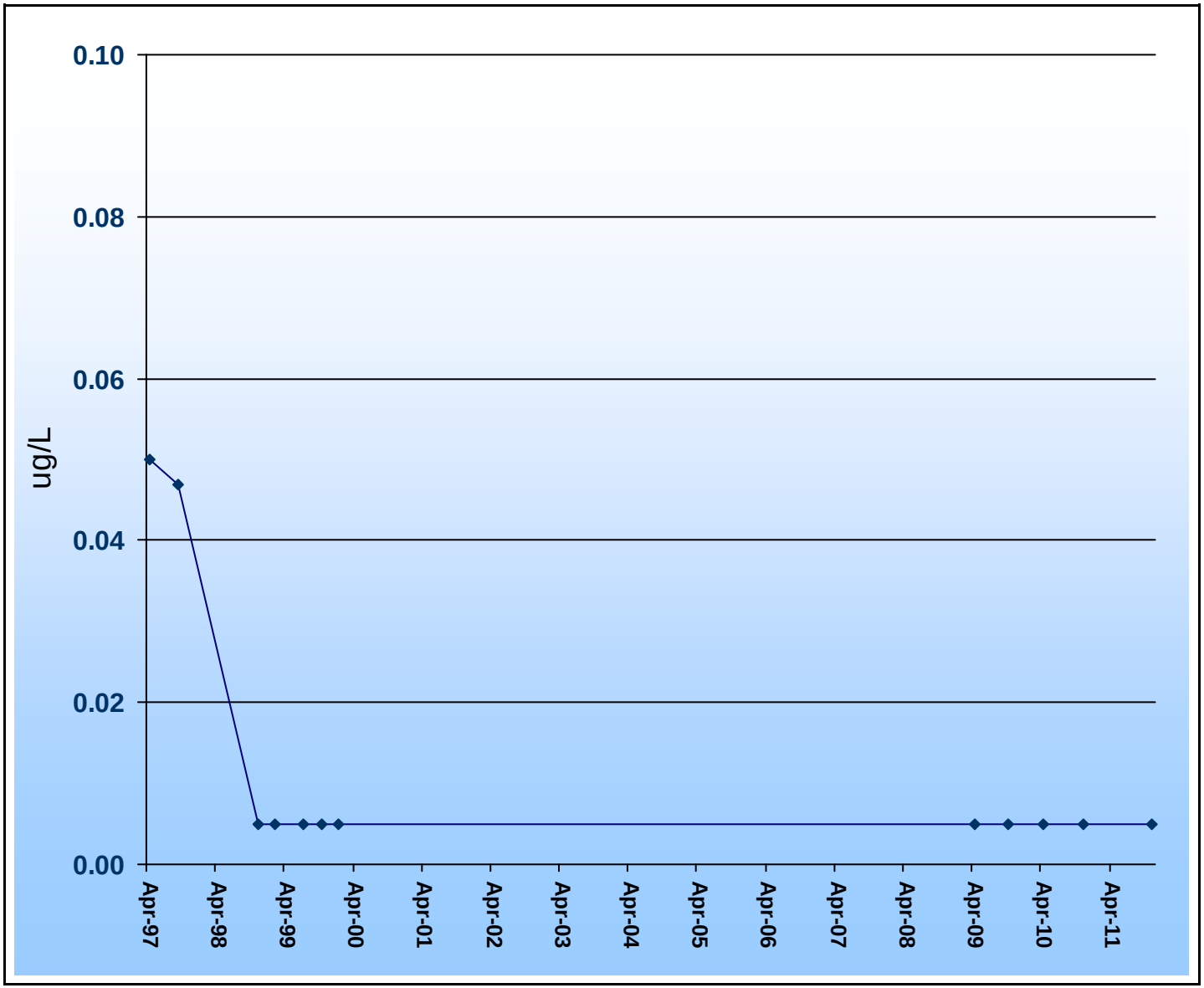
Cleanup Level 5.0 ug/L MCL



Well ID 600-D-230

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

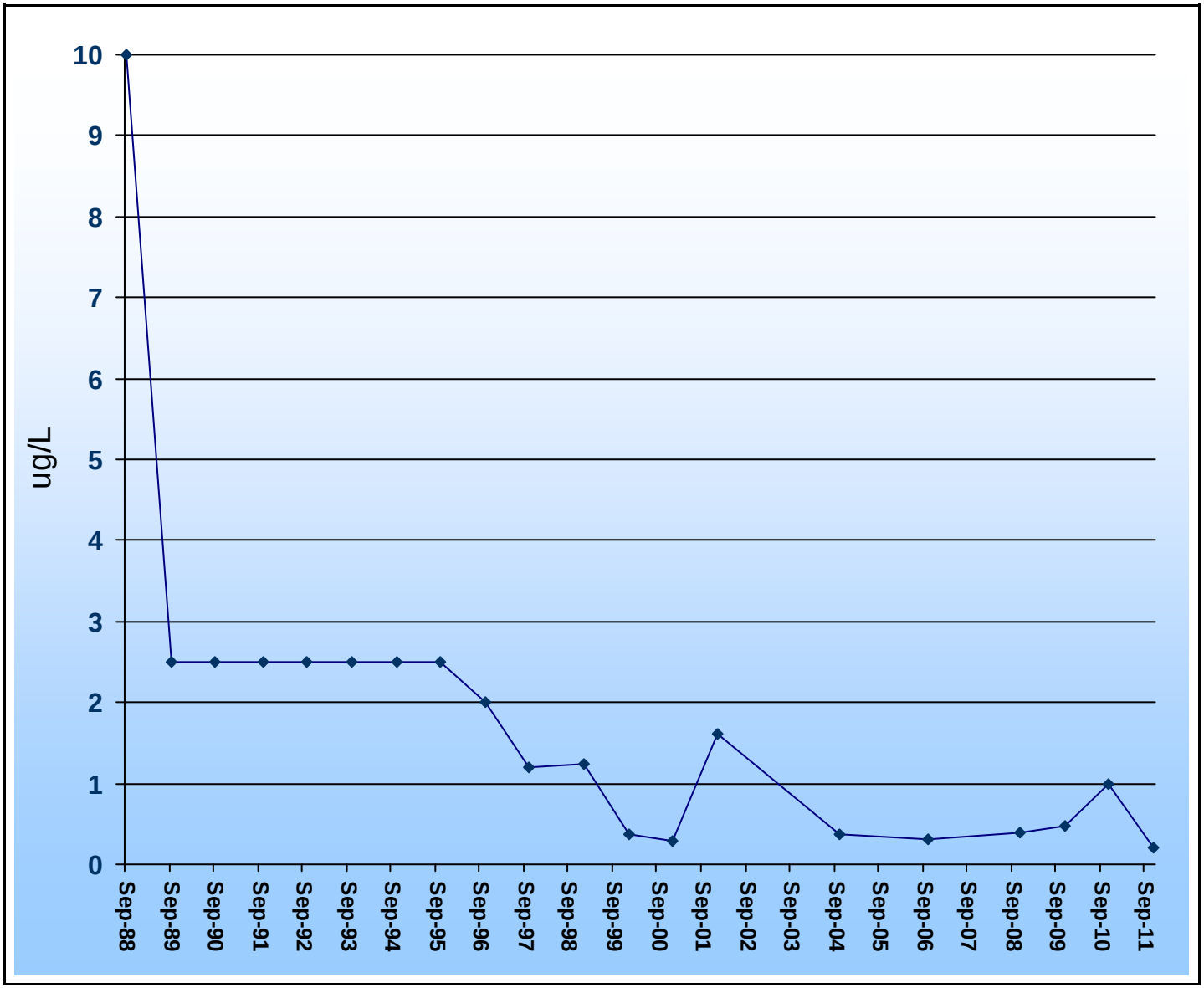
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BLM-3-182

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

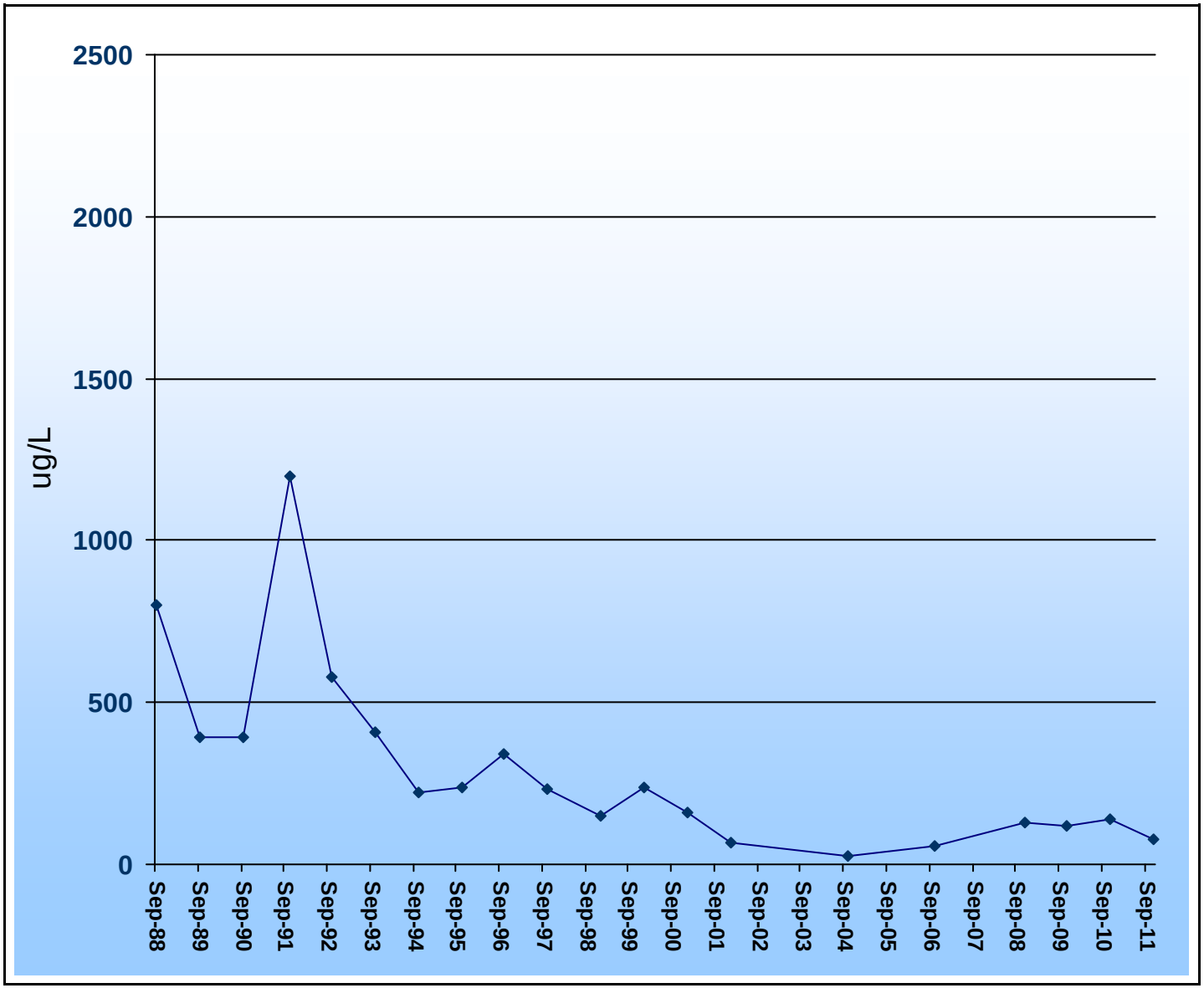
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-3-182

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

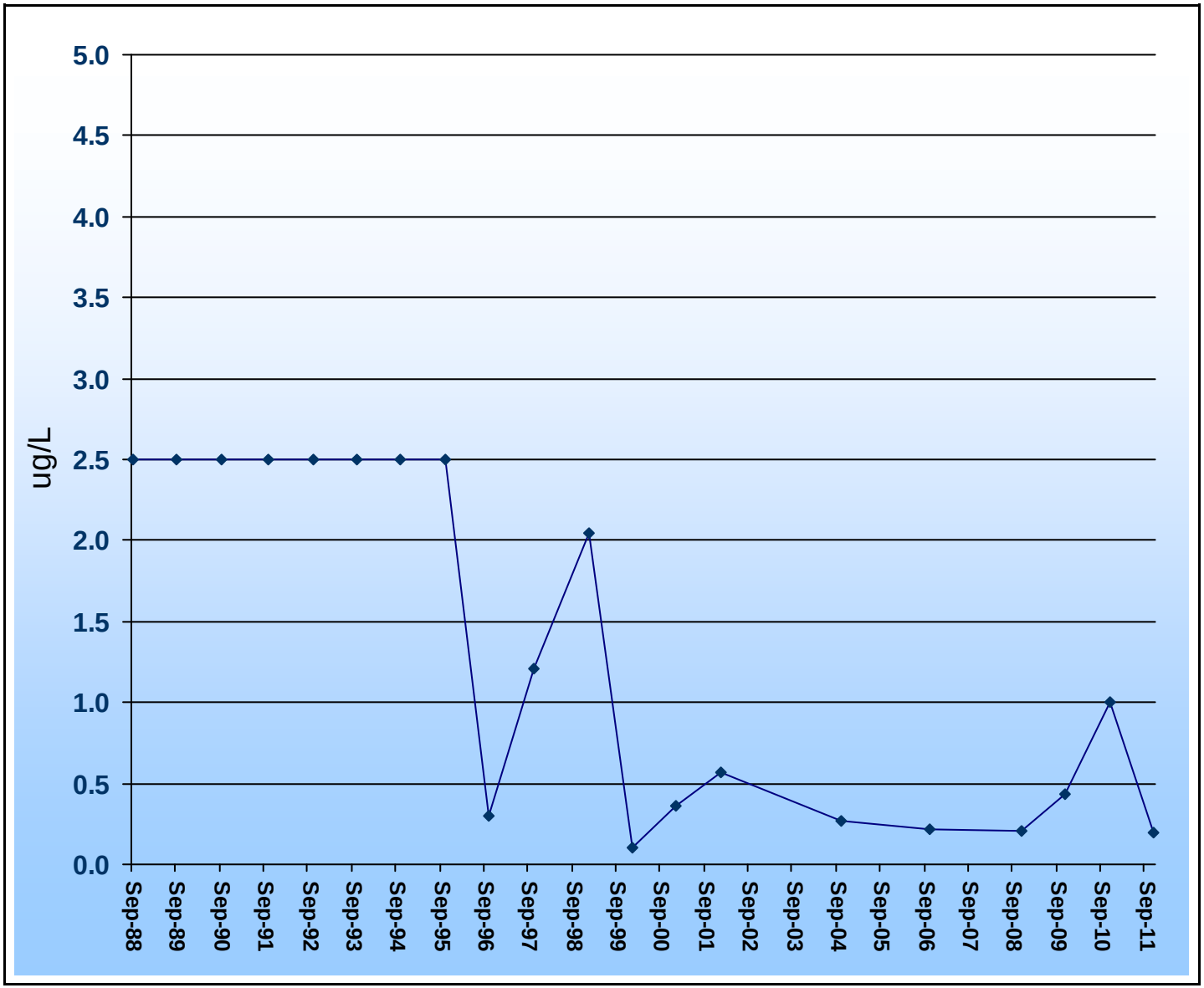
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-3-182

Casno 127-18-4 Analyte Tetrachloroethene

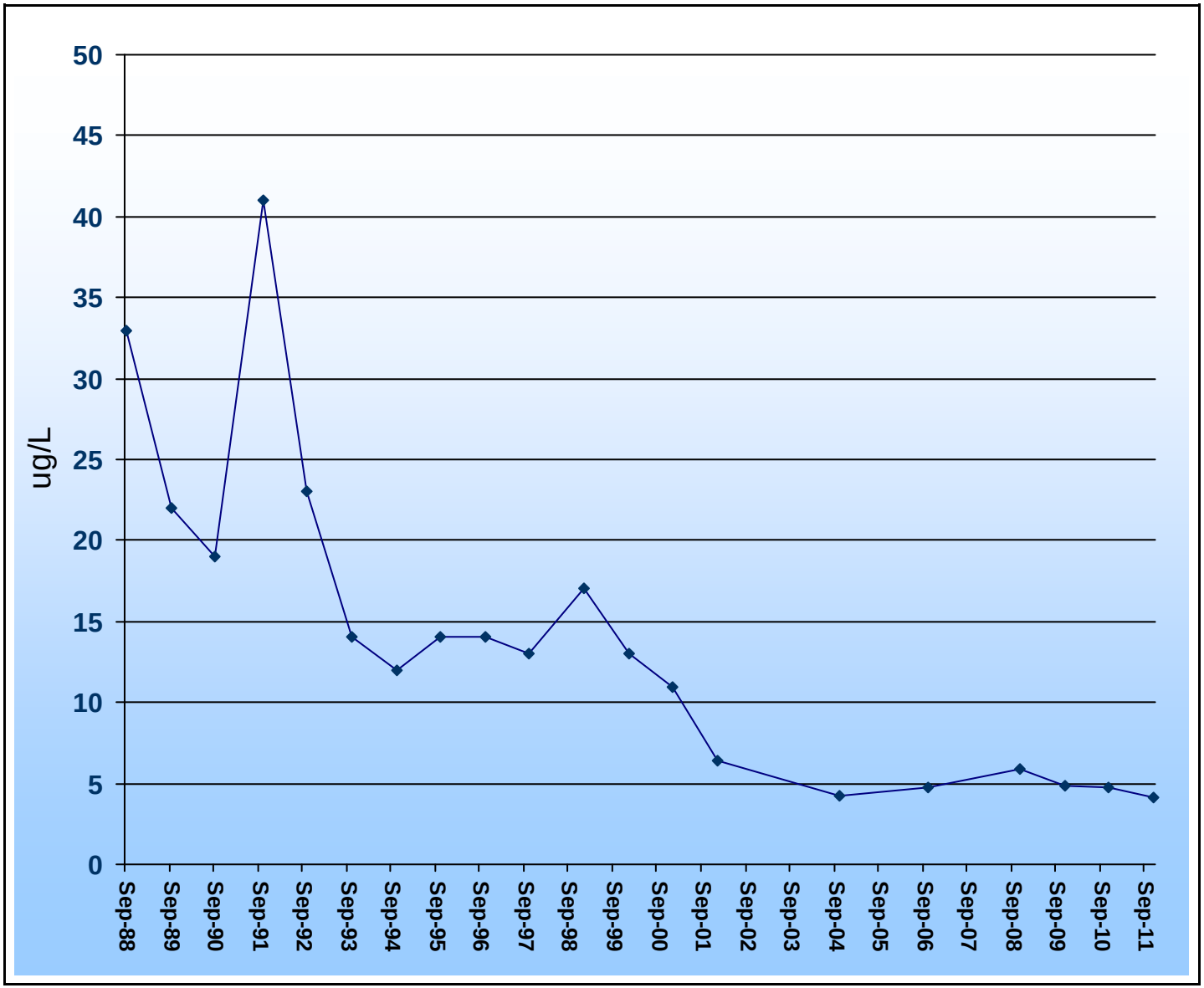
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-3-182

Casno 79-01-6 Analyte Trichloroethene

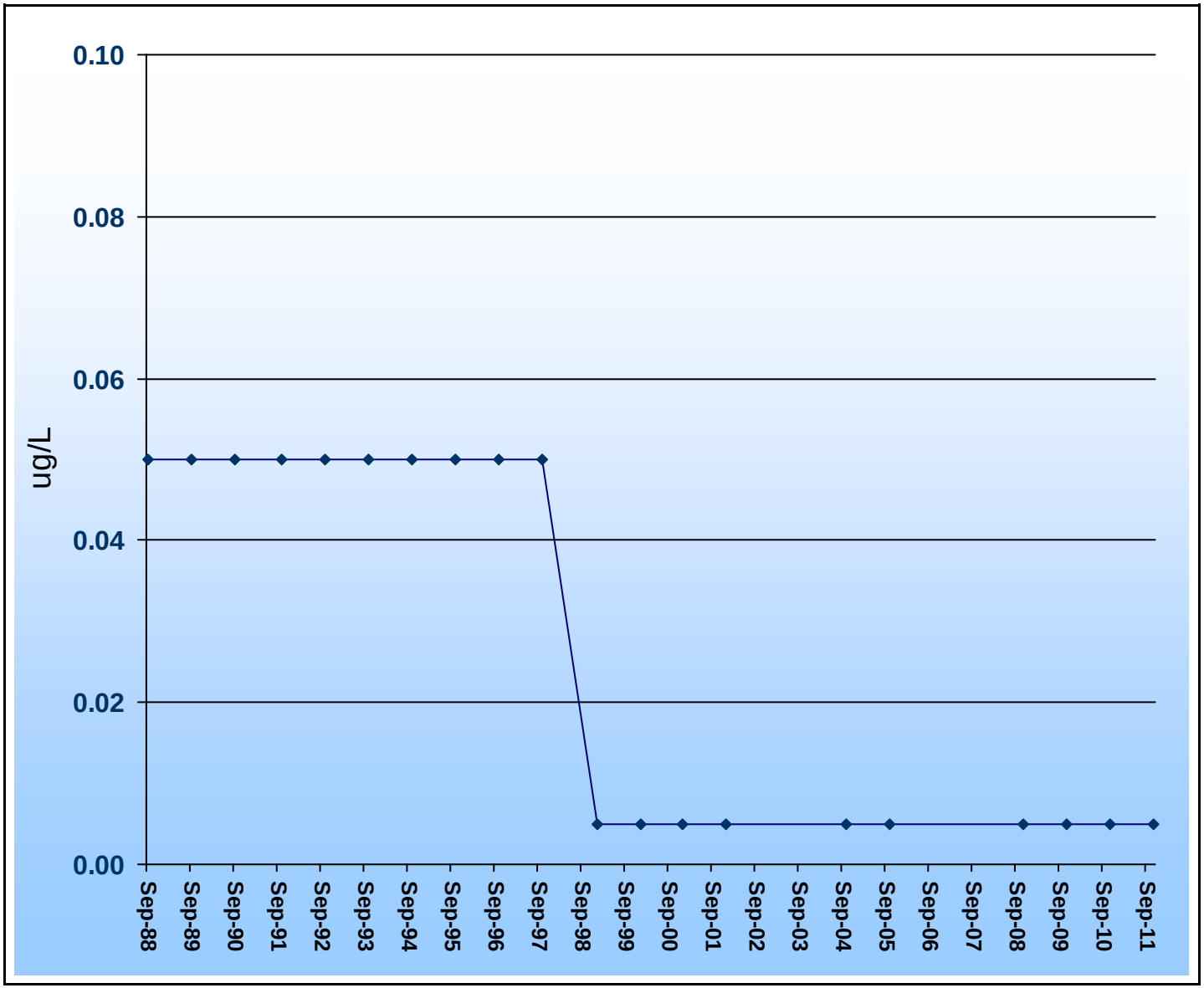
Cleanup Level 5.0 ug/L MCL



Well ID BLM-3-182

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



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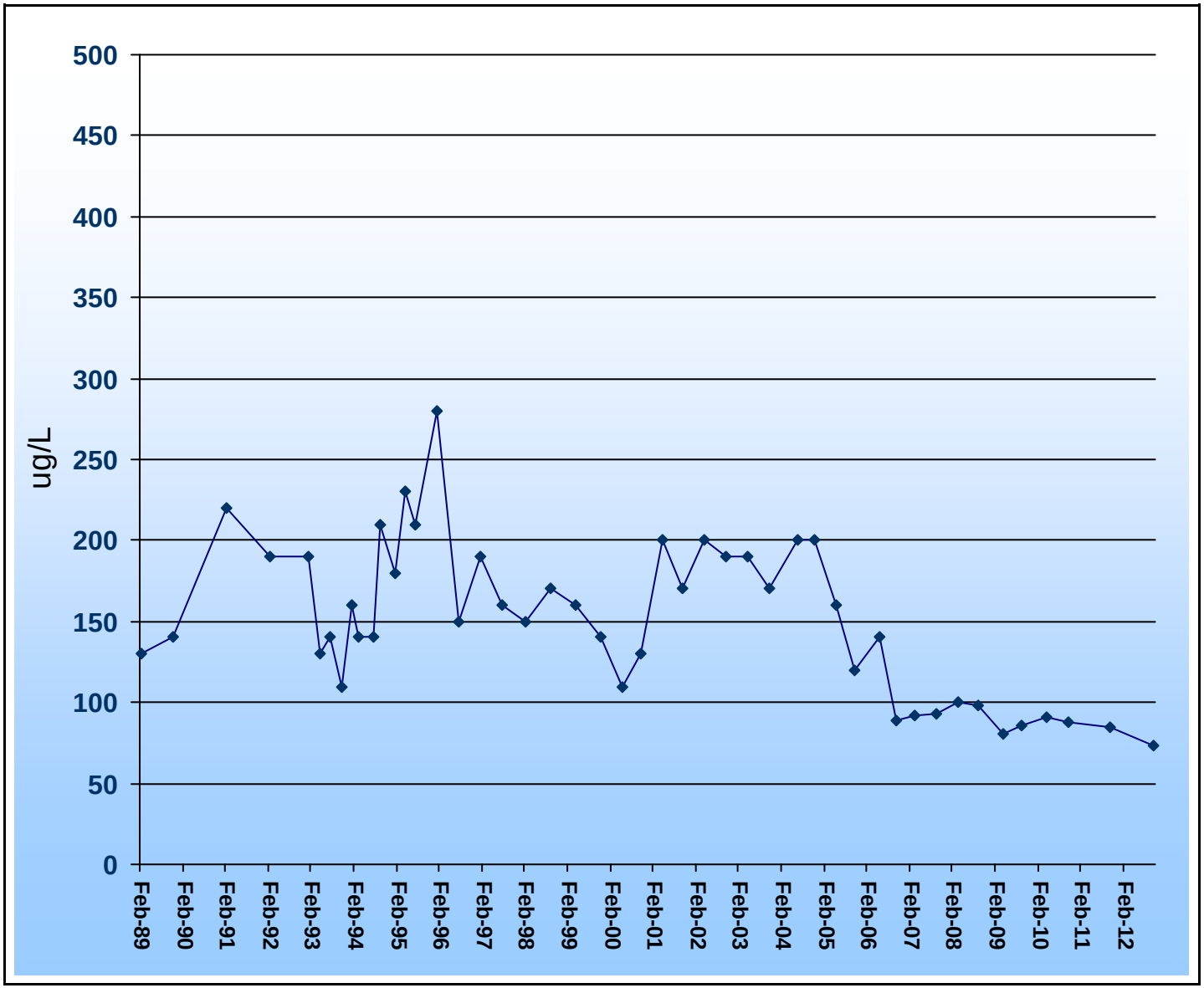
Appendix E
Time Concentration Plots

200 Area Well Group

Well ID 200-B-240

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

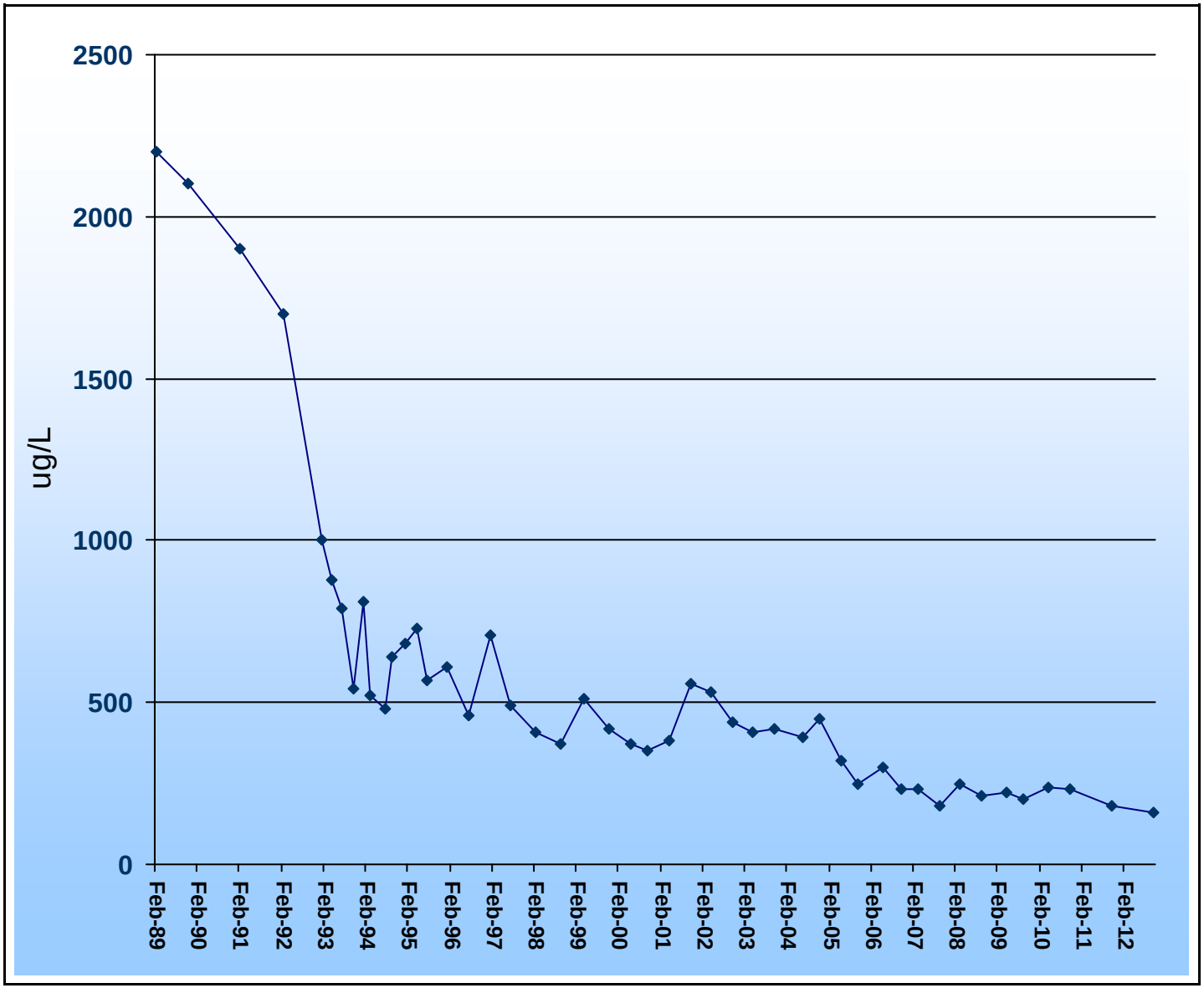
Cleanup Level 1,100 ug/L EPA RSL



Well ID 200-B-240

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

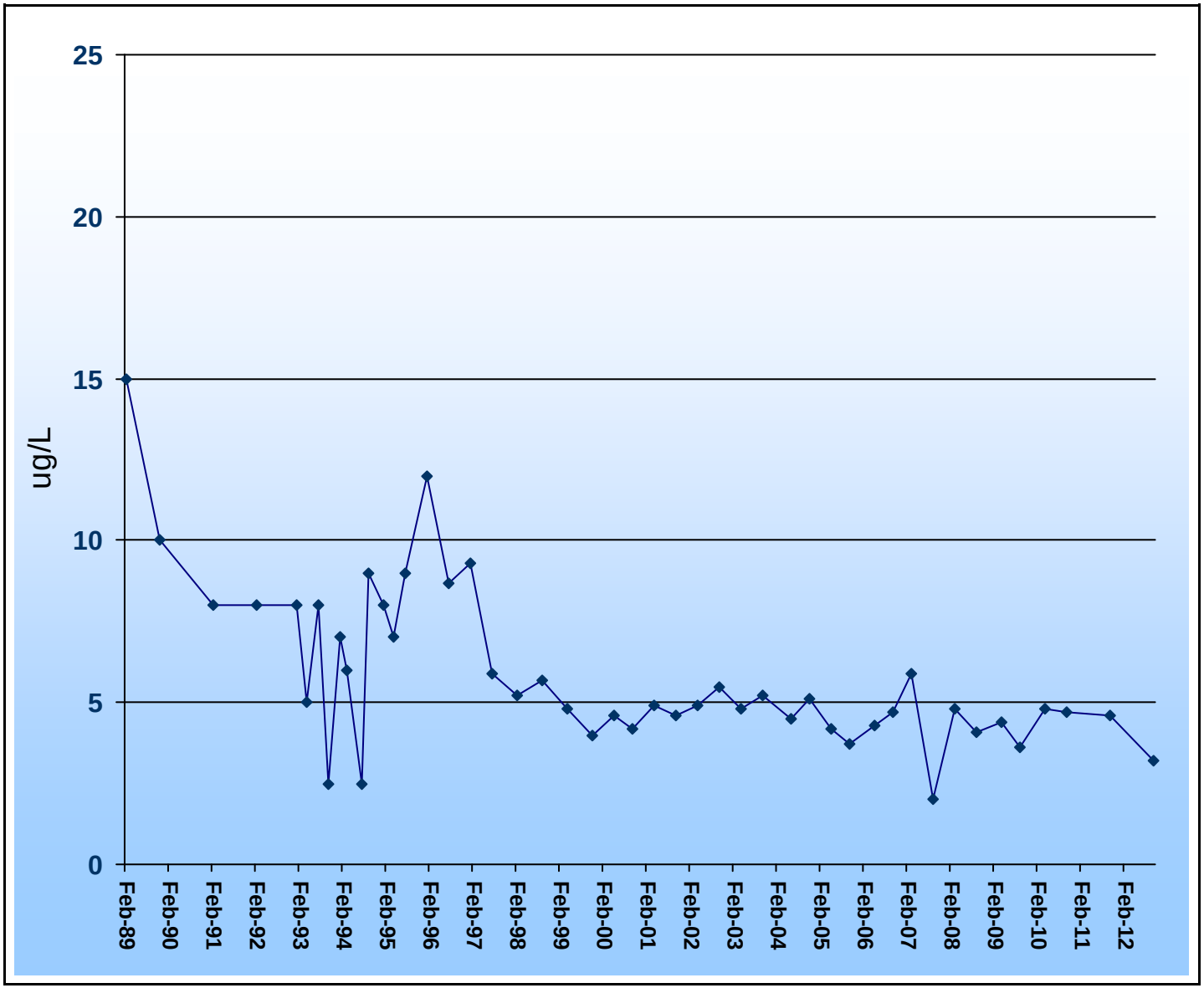
Cleanup Level 53,000 ug/L EPA RSL



Well ID 200-B-240

Casno 127-18-4 Analyte Tetrachloroethene

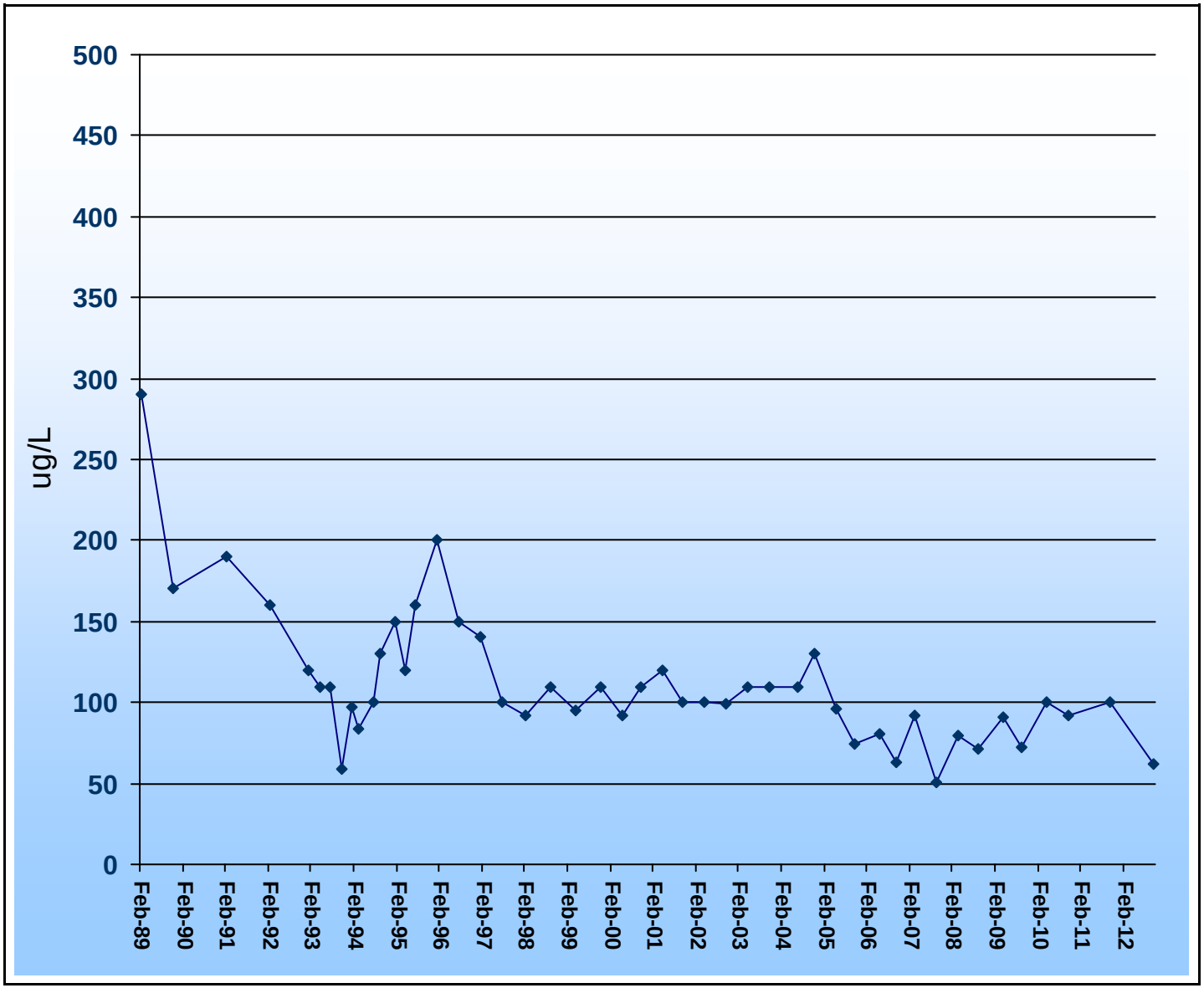
Cleanup Level 1.1 ug/L EPA RSL



Well ID 200-B-240

Casno 79-01-6 Analyte Trichloroethene

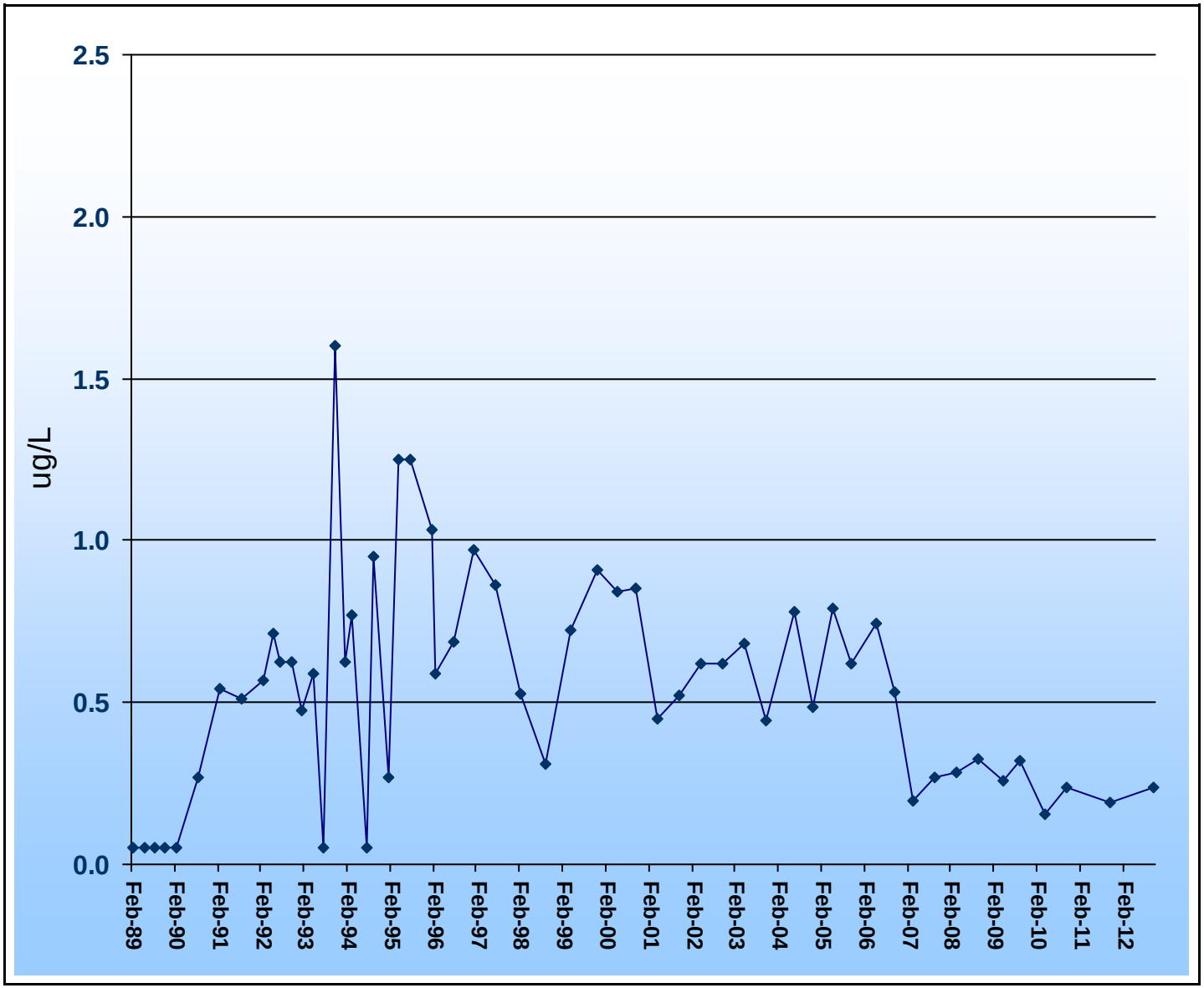
Cleanup Level 5.0 ug/L MCL



Well ID 200-B-240

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

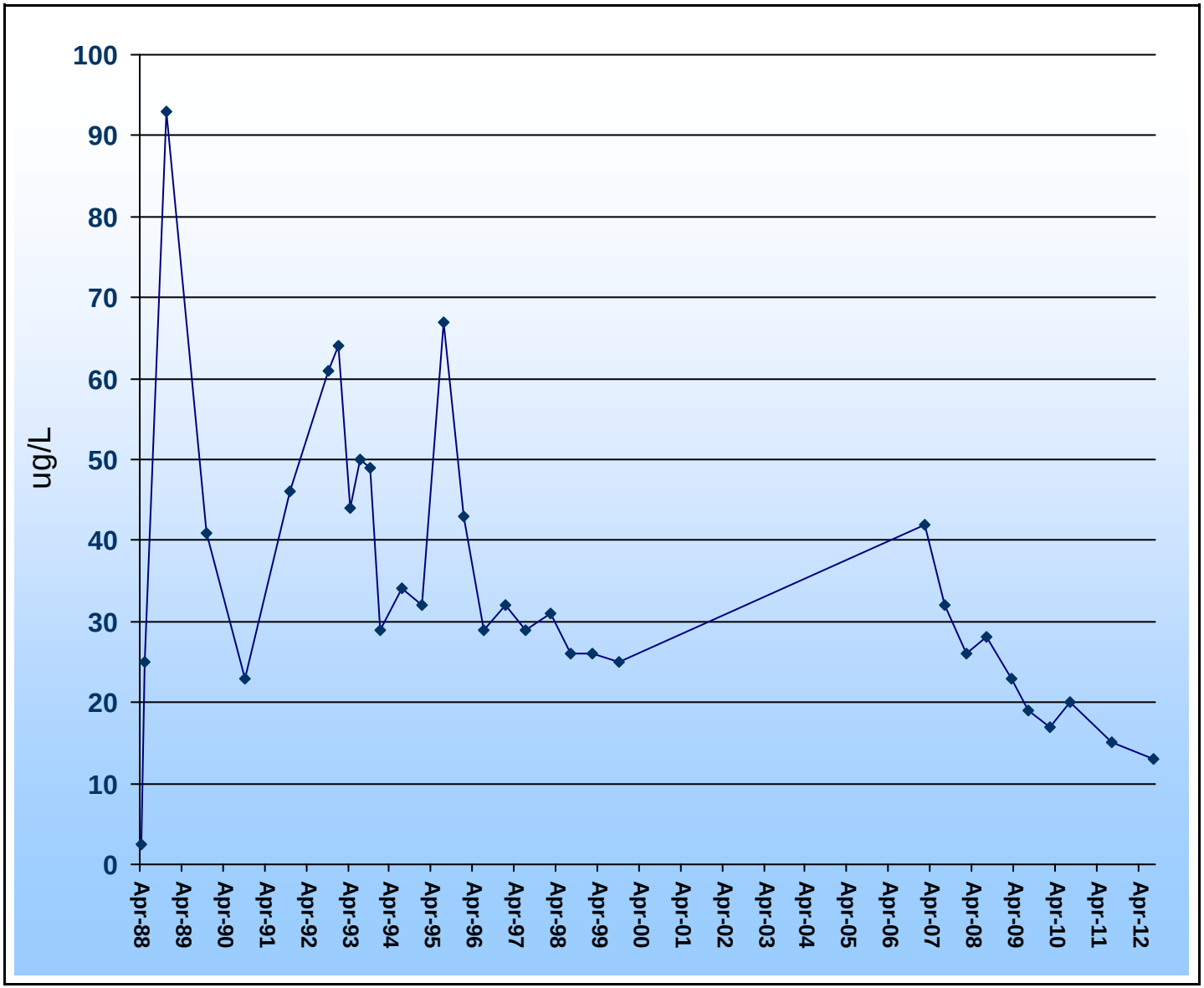
Cleanup Level 0.0042 ug/L EPA RSL



Well ID 200-D-109

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

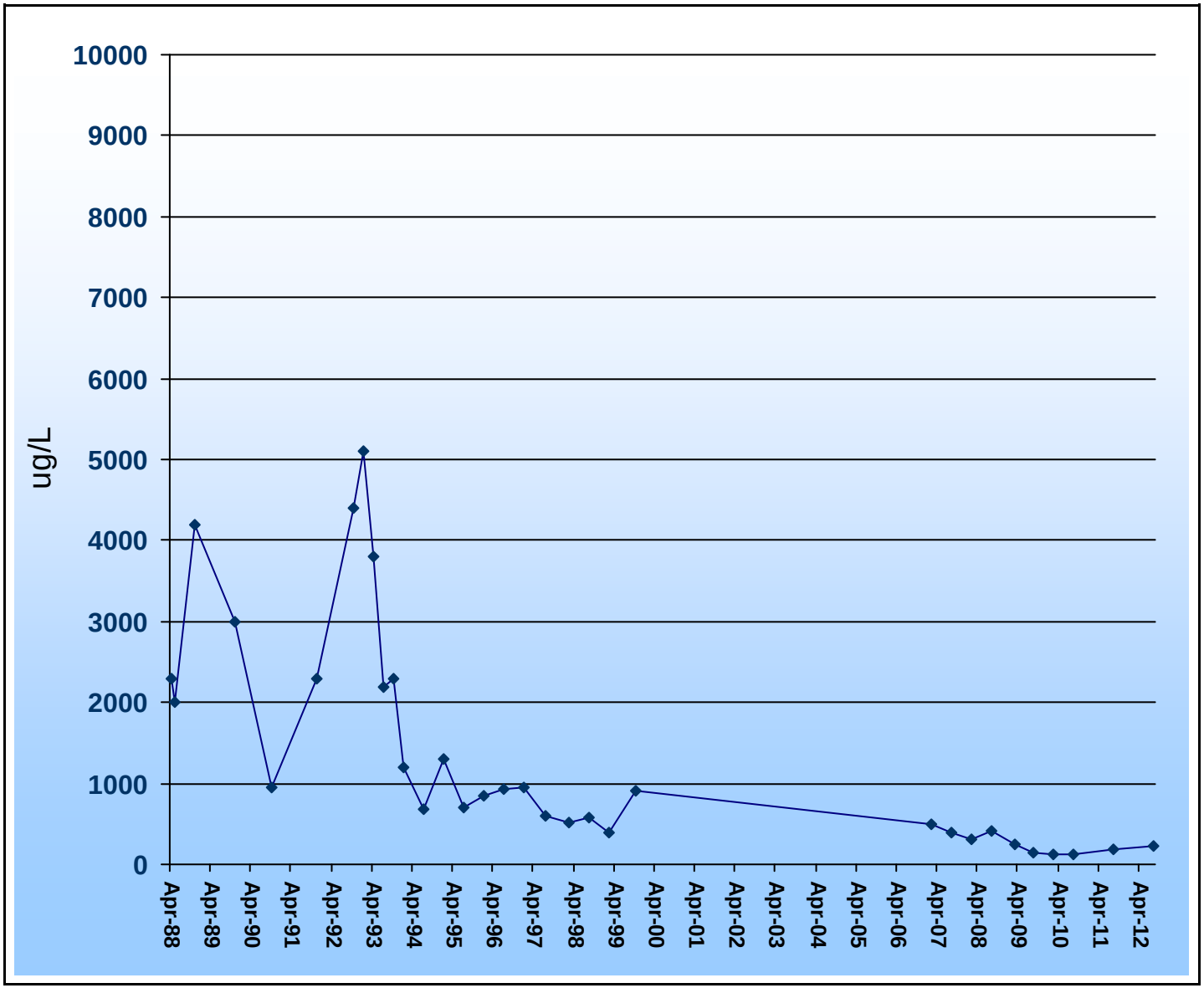
Cleanup Level 1,100 ug/L EPA RSL



Well ID 200-D-109

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

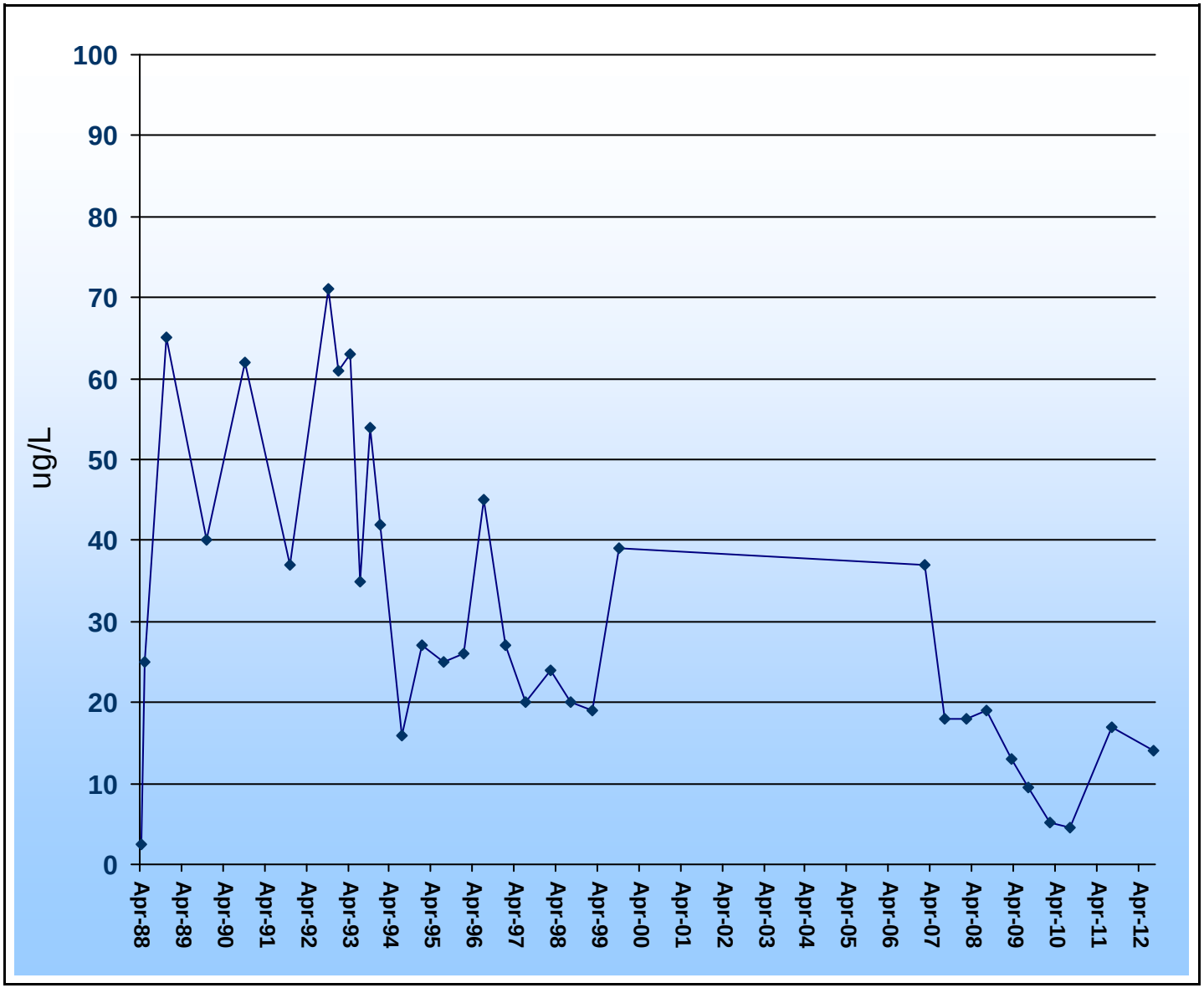
Cleanup Level 53,000 ug/L EPA RSL



Well ID 200-D-109

Casno 127-18-4 Analyte Tetrachloroethene

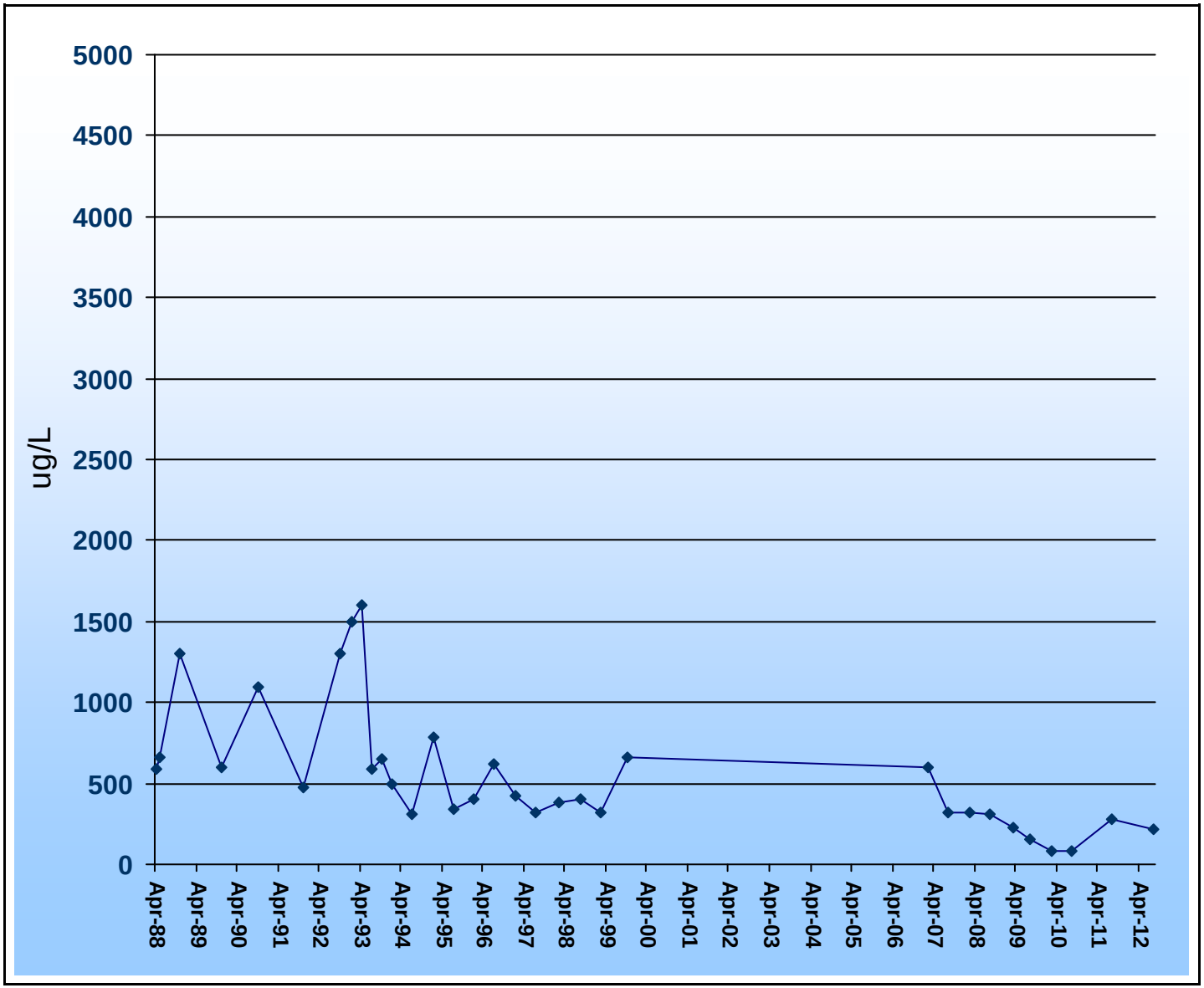
Cleanup Level 1.1 ug/L EPA RSL



Well ID 200-D-109

Casno 79-01-6 Analyte Trichloroethene

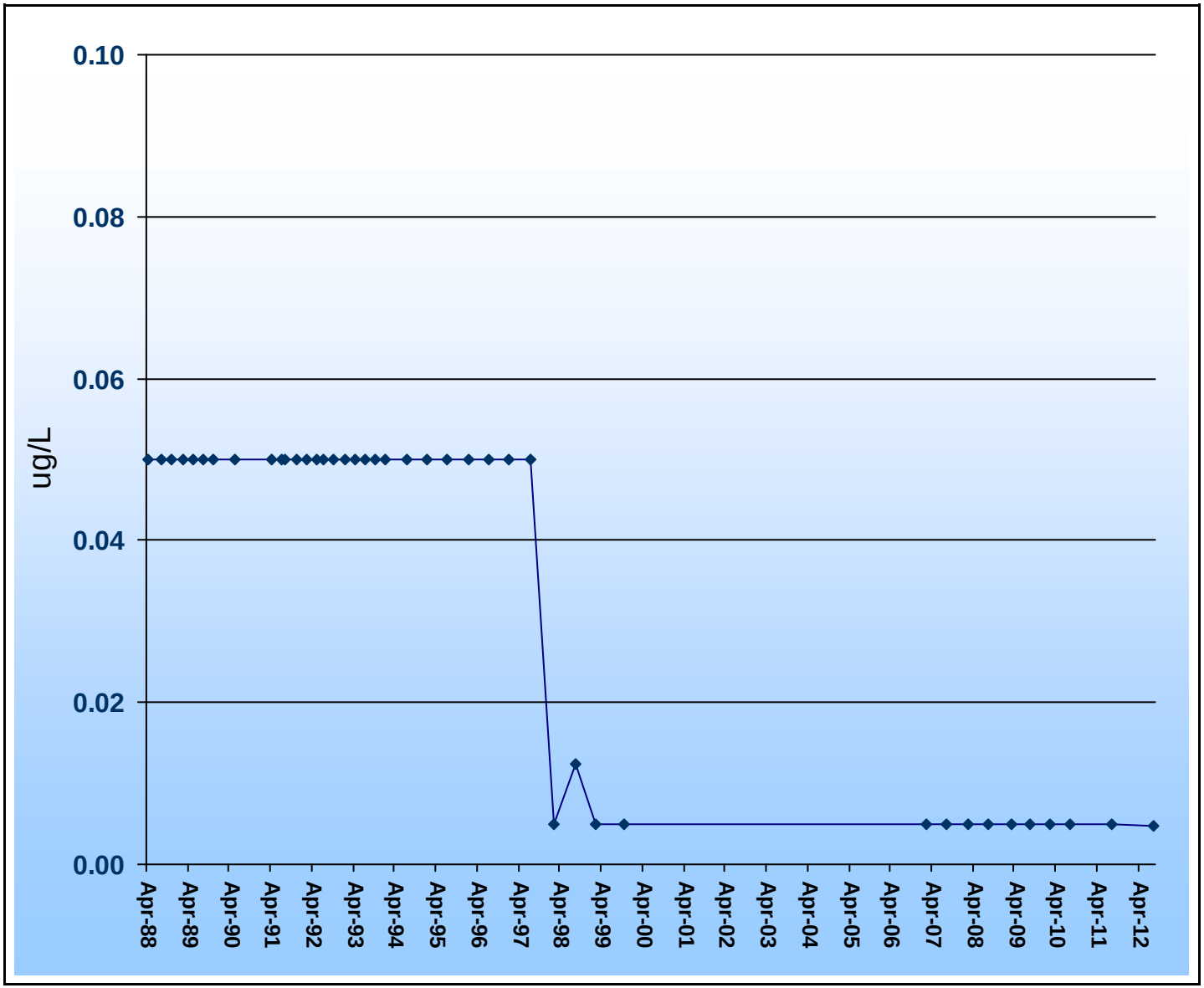
Cleanup Level 5.0 ug/L MCL



Well ID 200-D-109

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

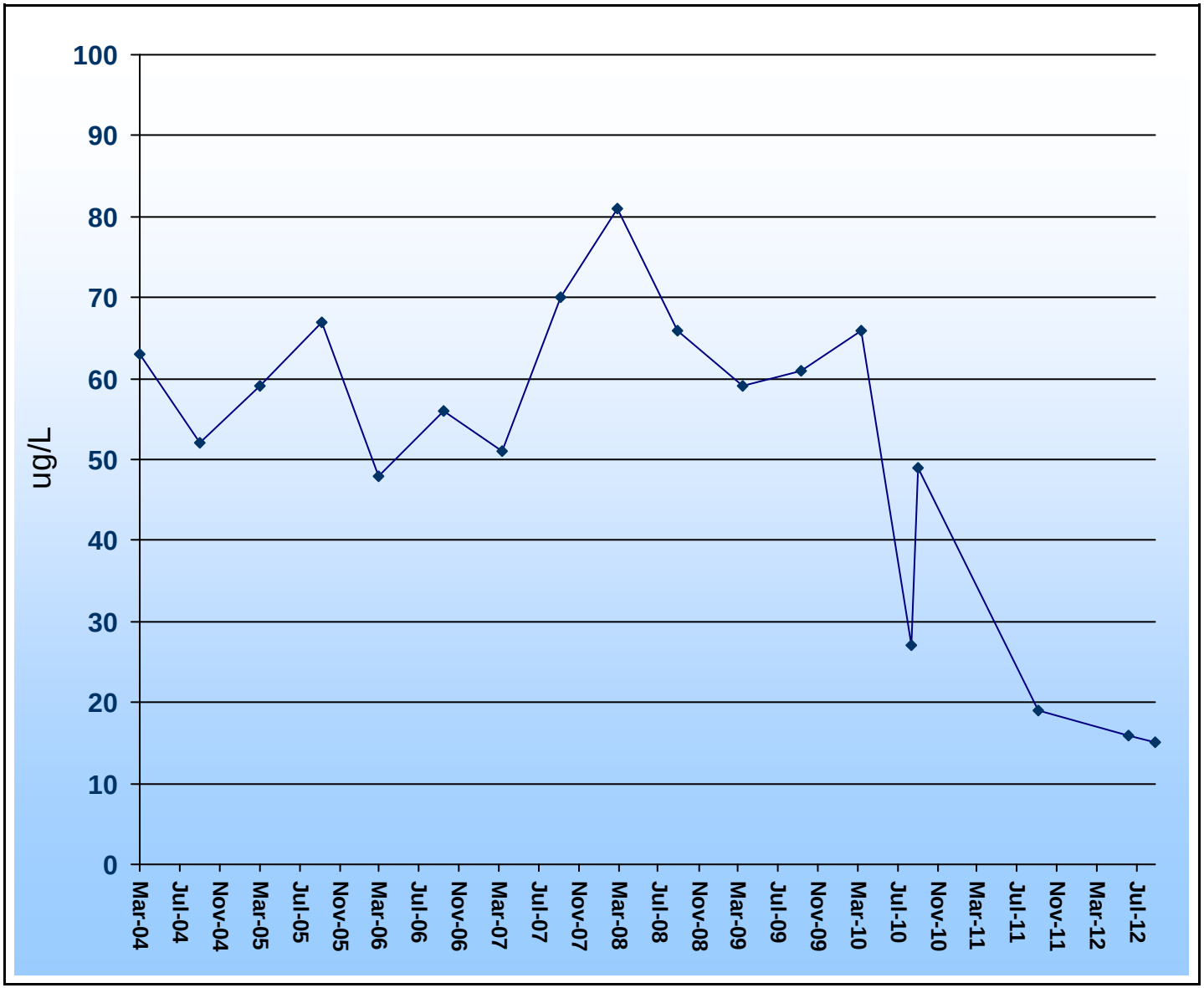
Cleanup Level 0.0042 ug/L EPA RSL



Well ID 200-SG-1

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

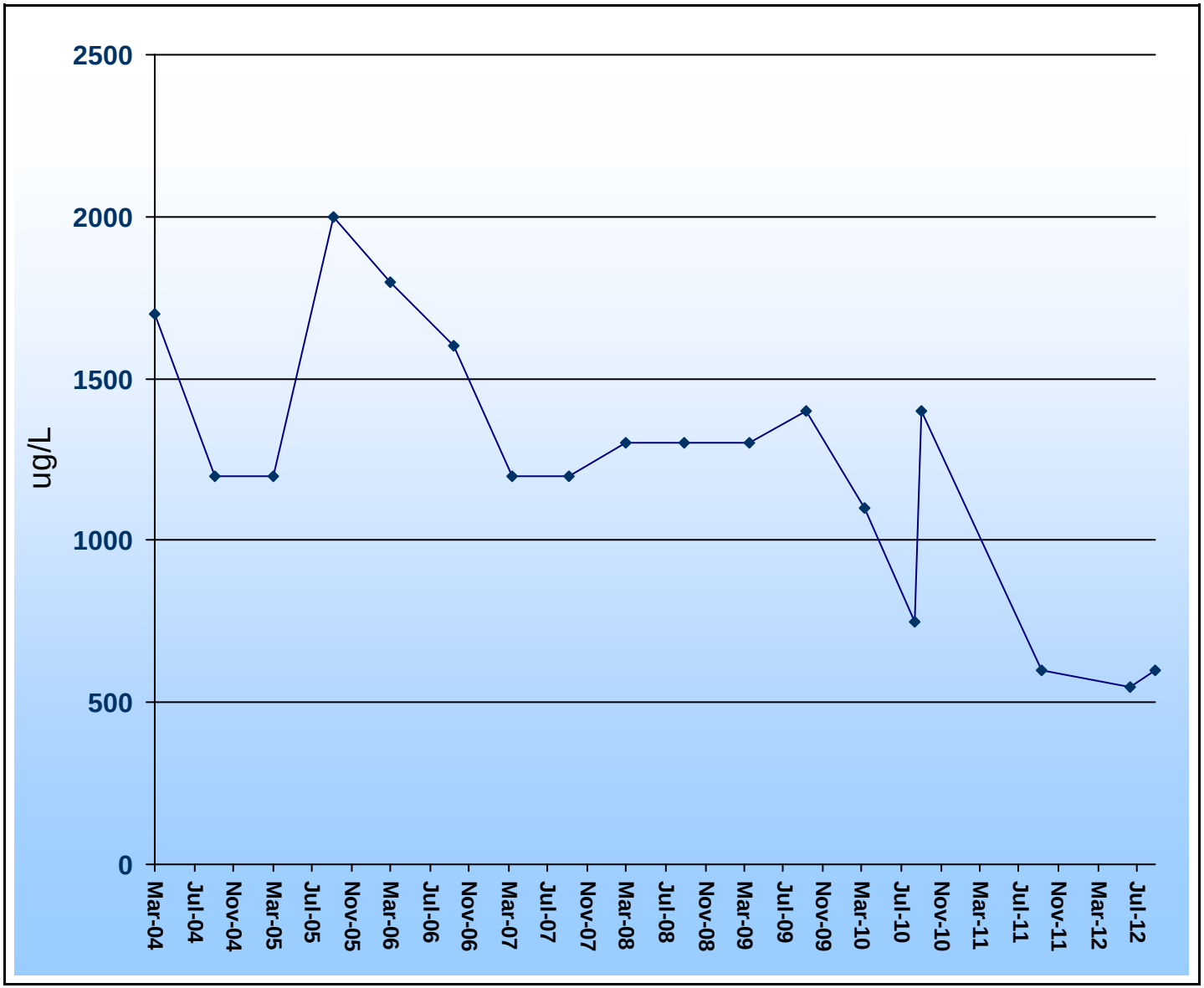
Cleanup Level 1,100 ug/L EPA RSL



Well ID 200-SG-1

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

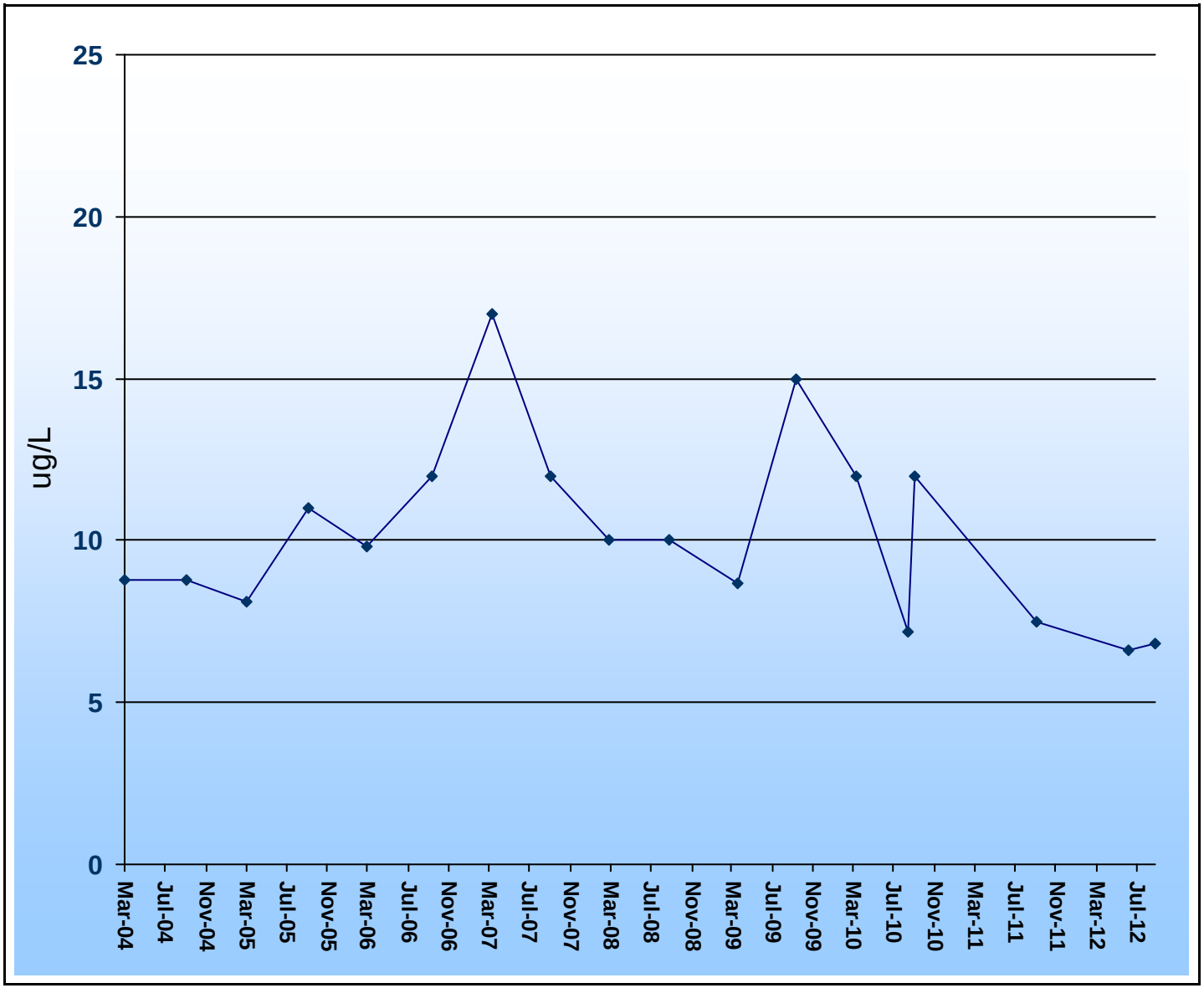
Cleanup Level 53,000 ug/L EPA RSL



Well ID 200-SG-1

Casno 127-18-4 Analyte Tetrachloroethene

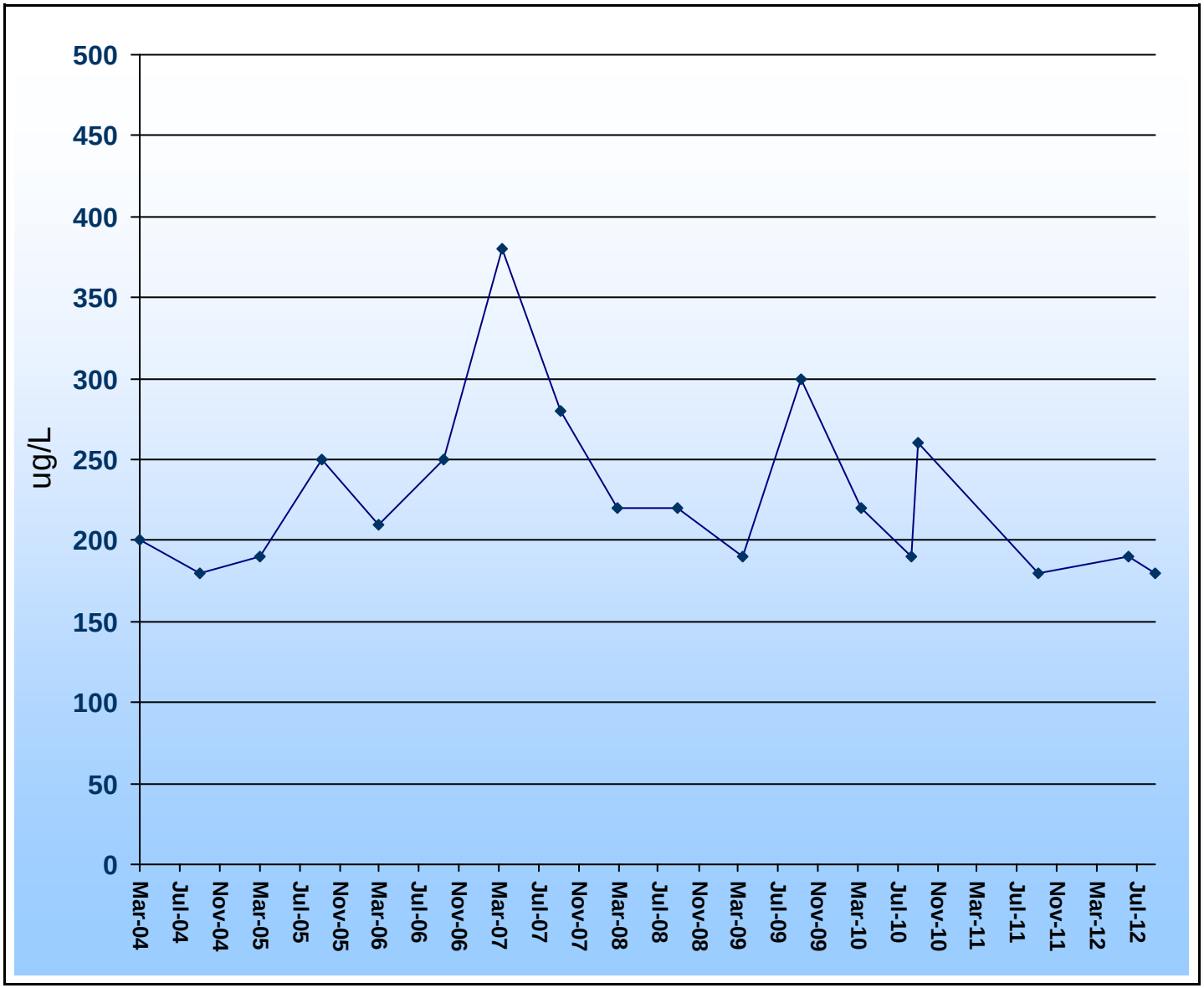
Cleanup Level 1.1 ug/L EPA RSL



Well ID 200-SG-1

Casno 79-01-6 Analyte Trichloroethene

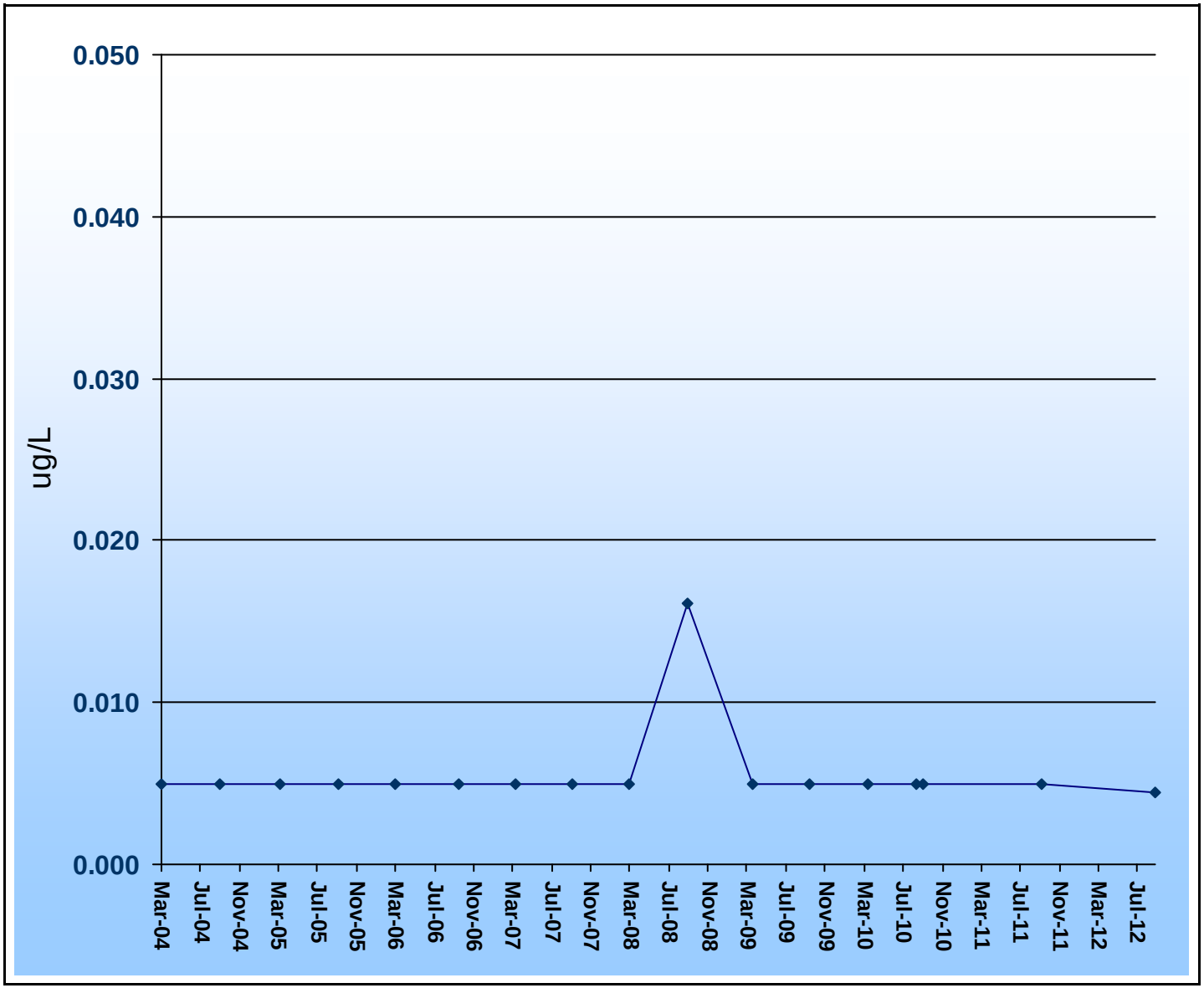
Cleanup Level 5.0 ug/L MCL



Well ID 200-SG-1

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

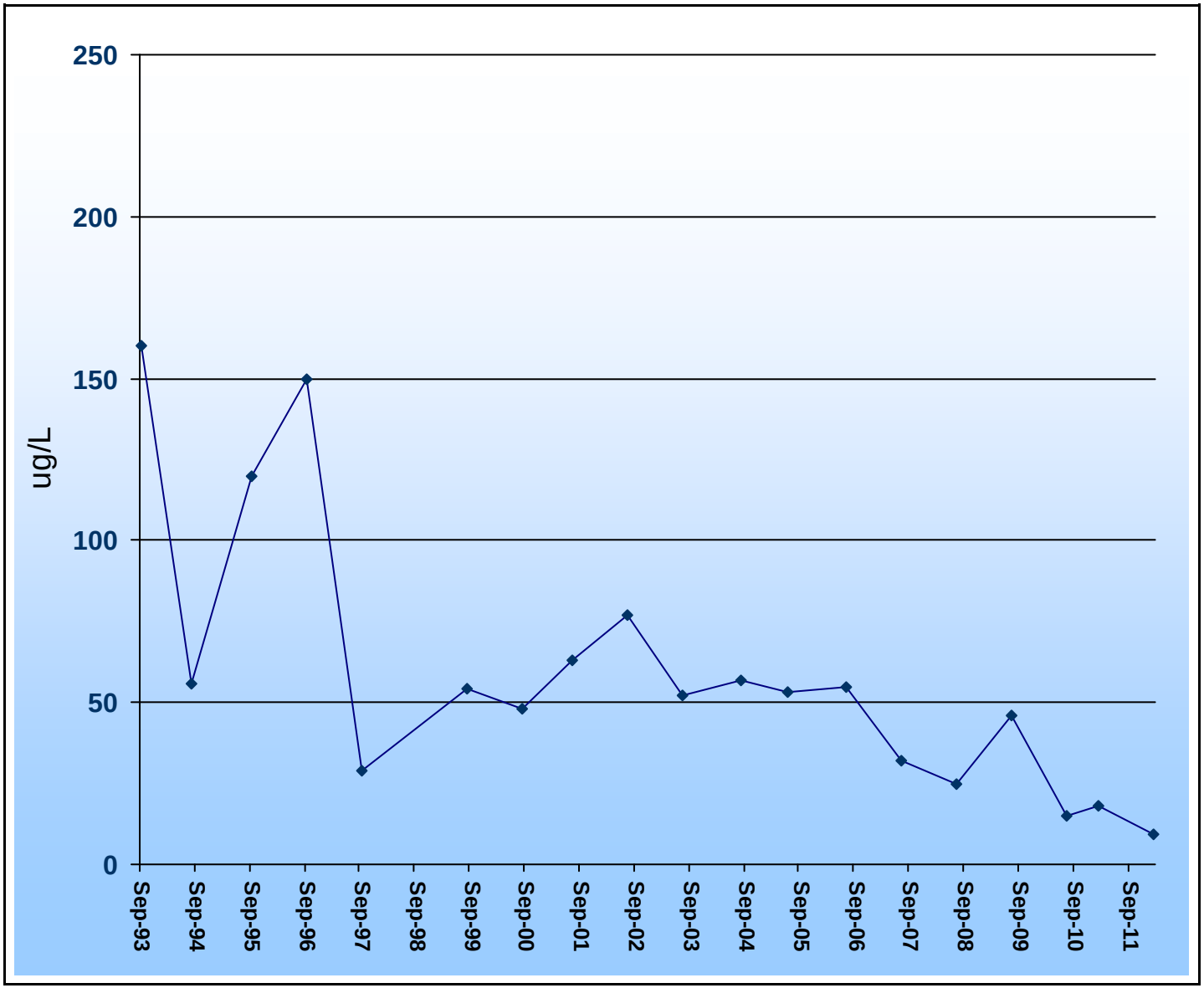
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BW-4-270

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

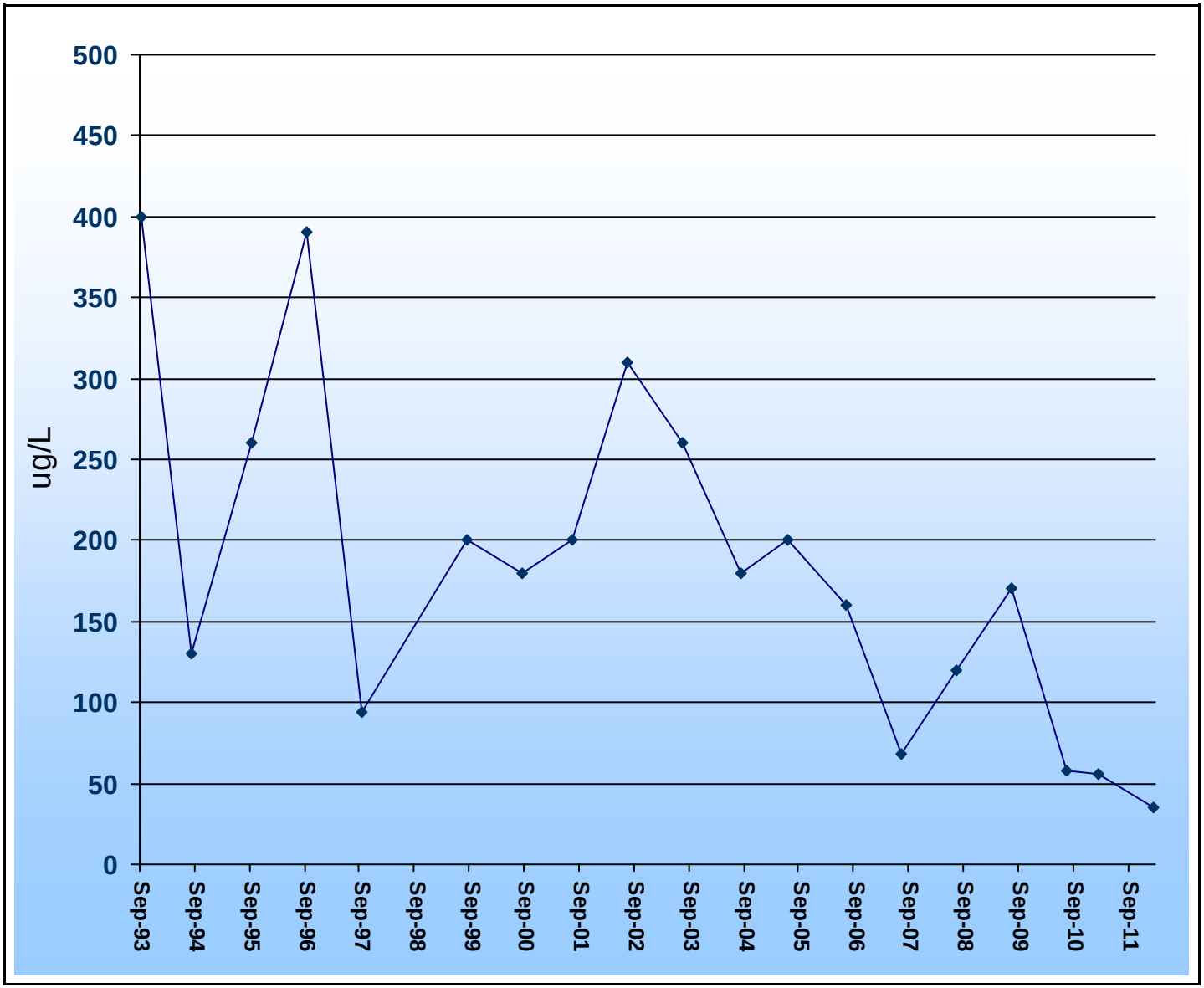
Cleanup Level 1,100 ug/L EPA RSL



Well ID BW-4-270

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

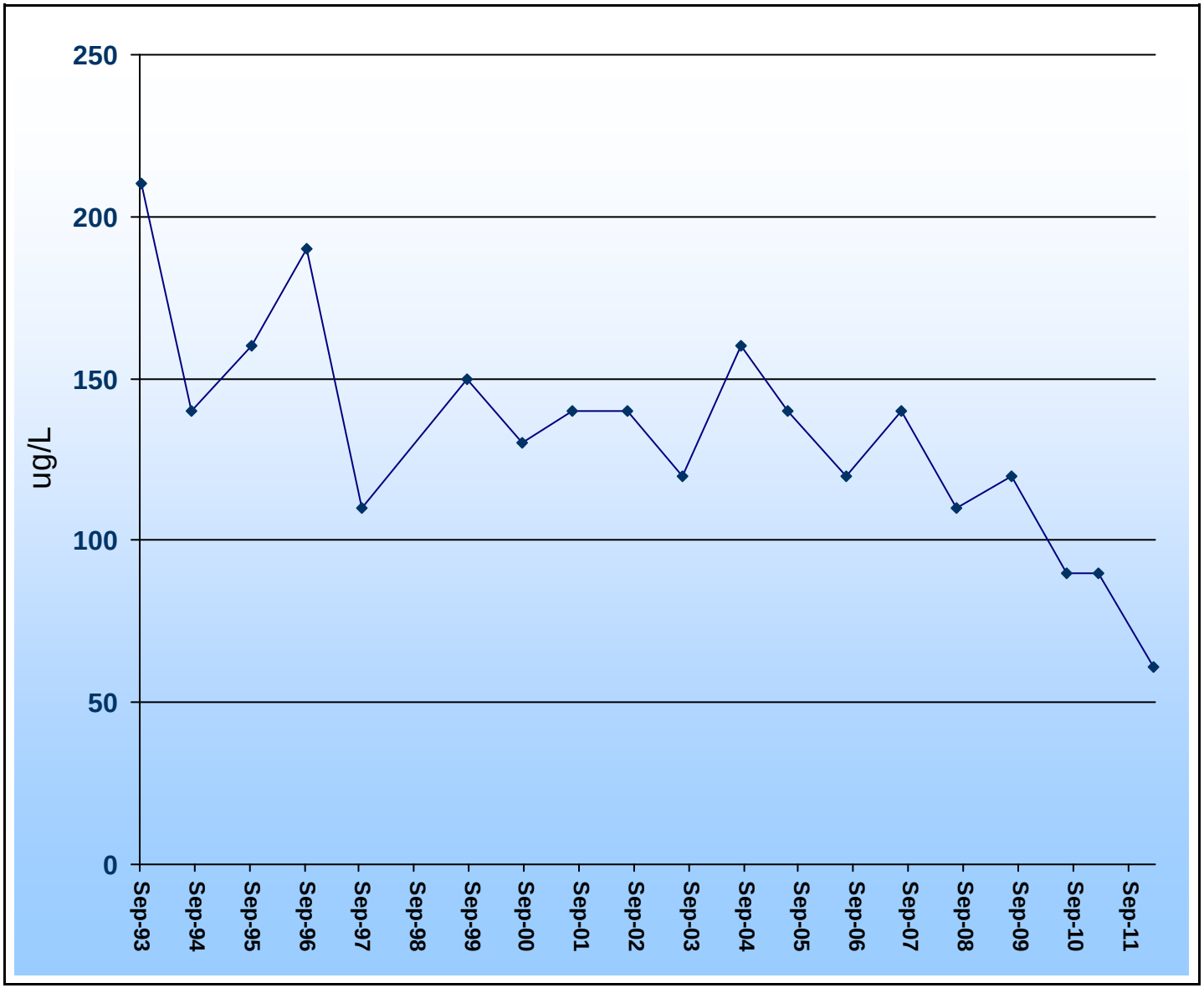
Cleanup Level 53,000 ug/L EPA RSL



Well ID BW-4-270

Casno 79-01-6 Analyte Trichloroethene

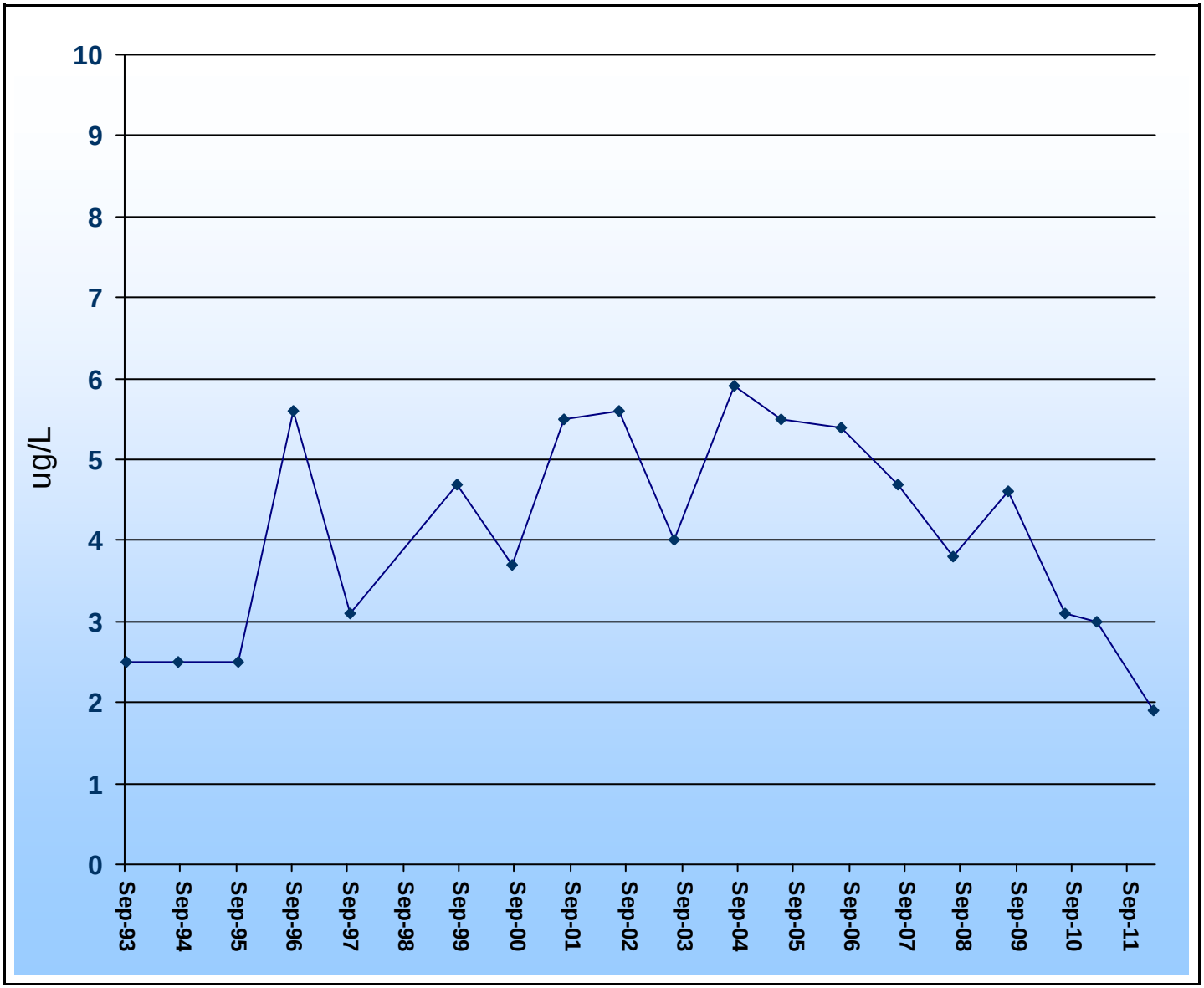
Cleanup Level 5.0 ug/L MCL



Well ID BW-4-270

Casno 127-18-4 Analyte Tetrachloroethene

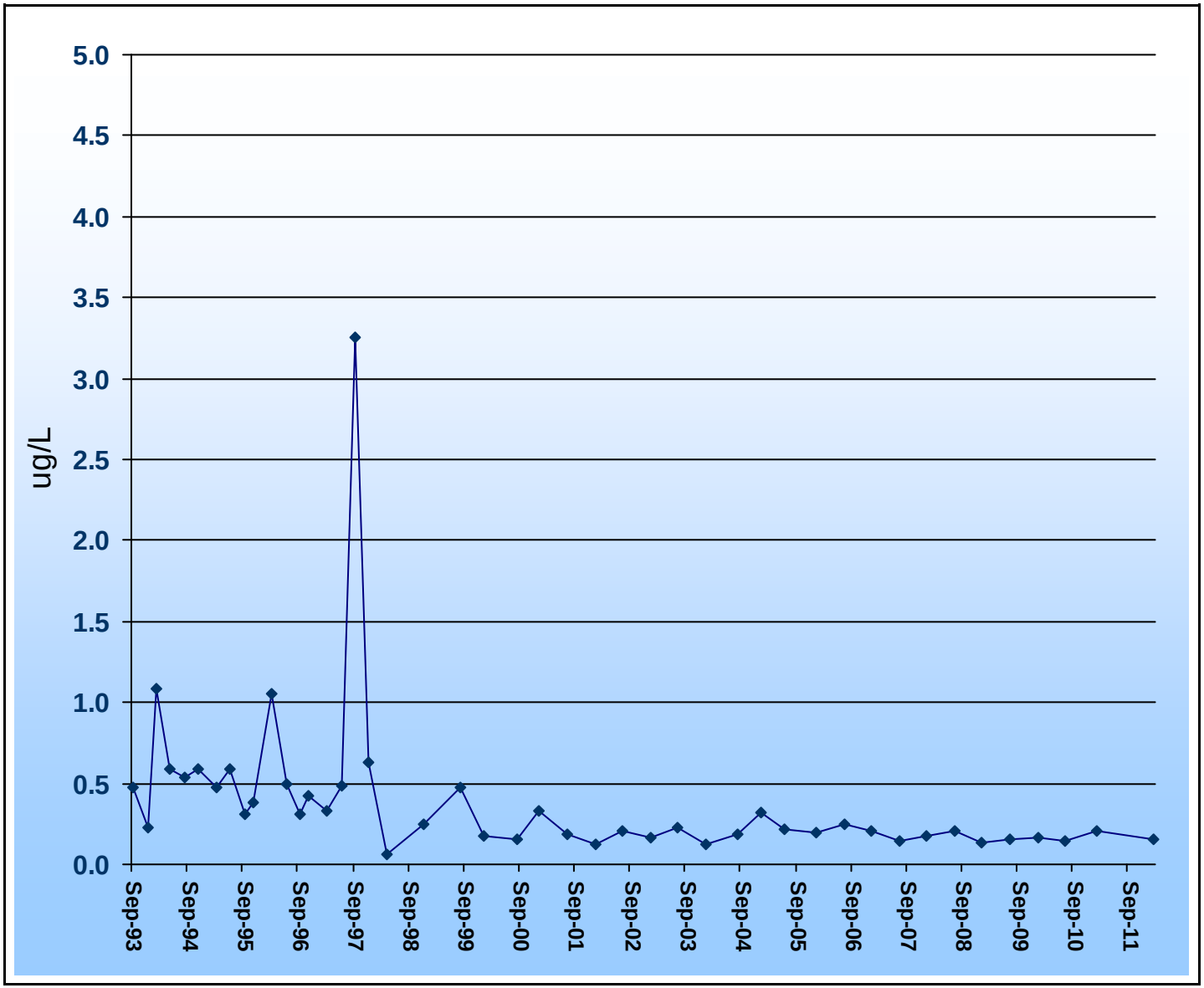
Cleanup Level 1.1 ug/L EPA RSL



Well ID BW-4-270

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



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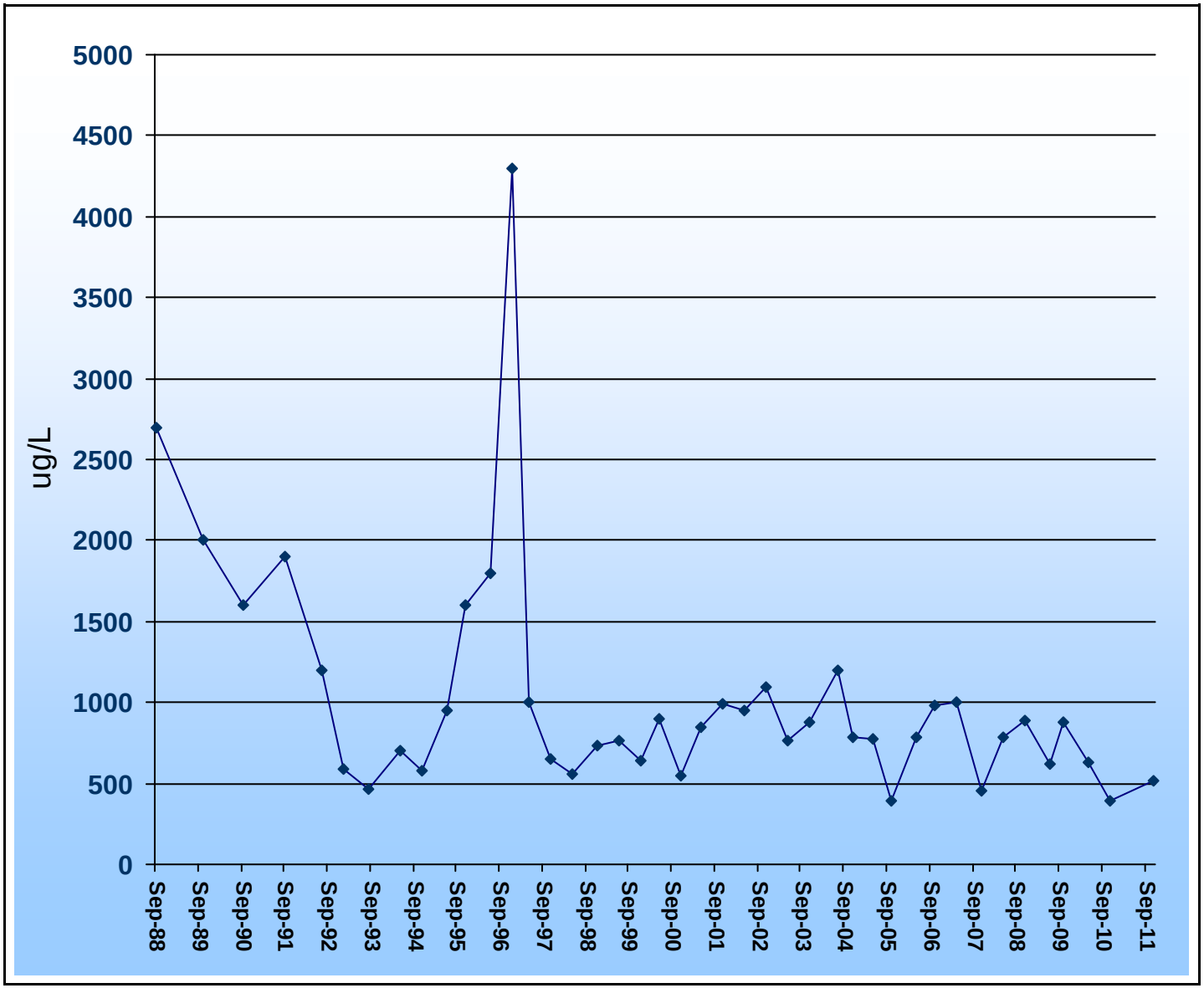
Appendix E
Time Concentration Plots

300/400 Area Well Group

Well ID 300-A-120

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

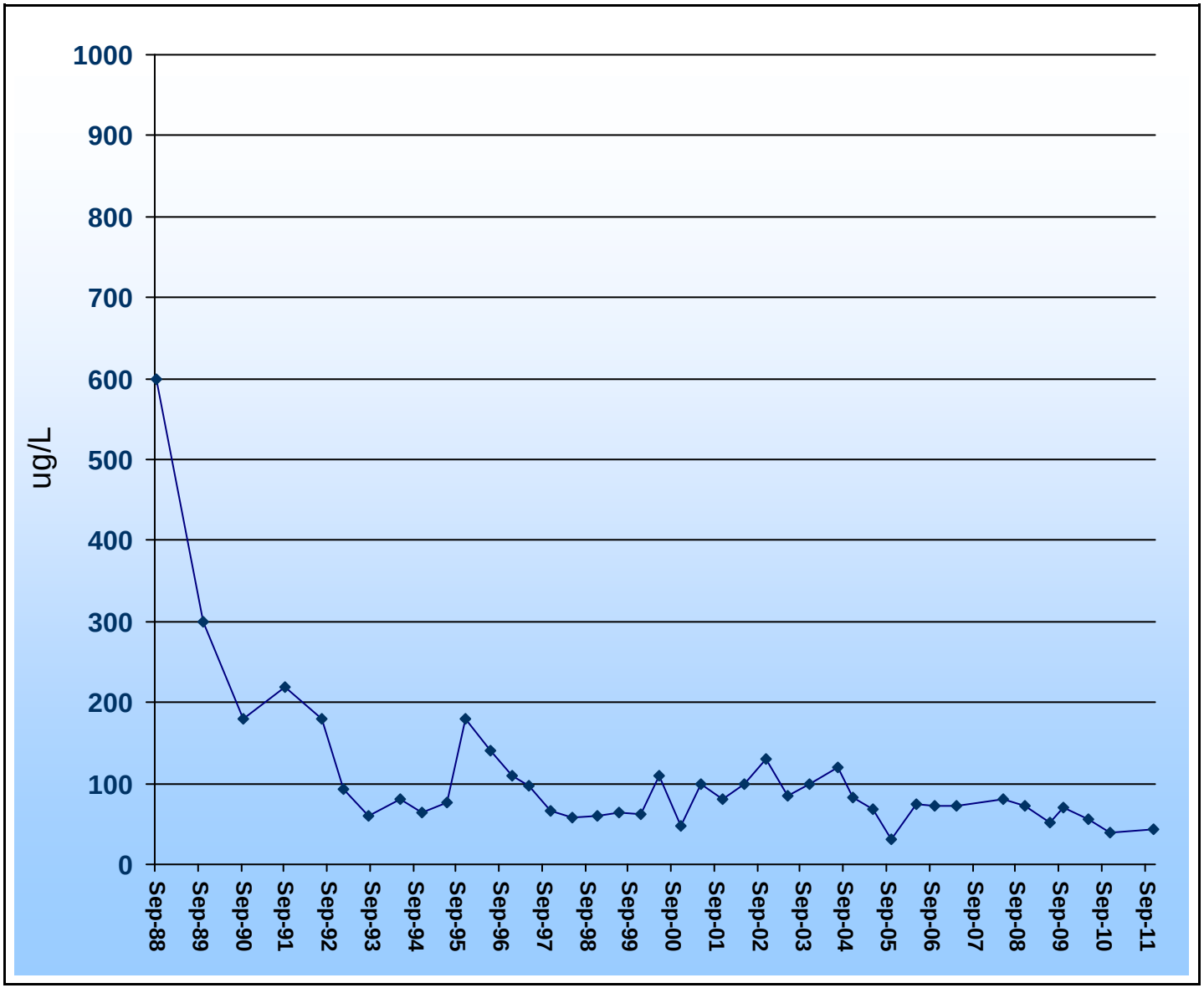
Cleanup Level 1,100 ug/L EPA RSL



Well ID 300-A-120

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

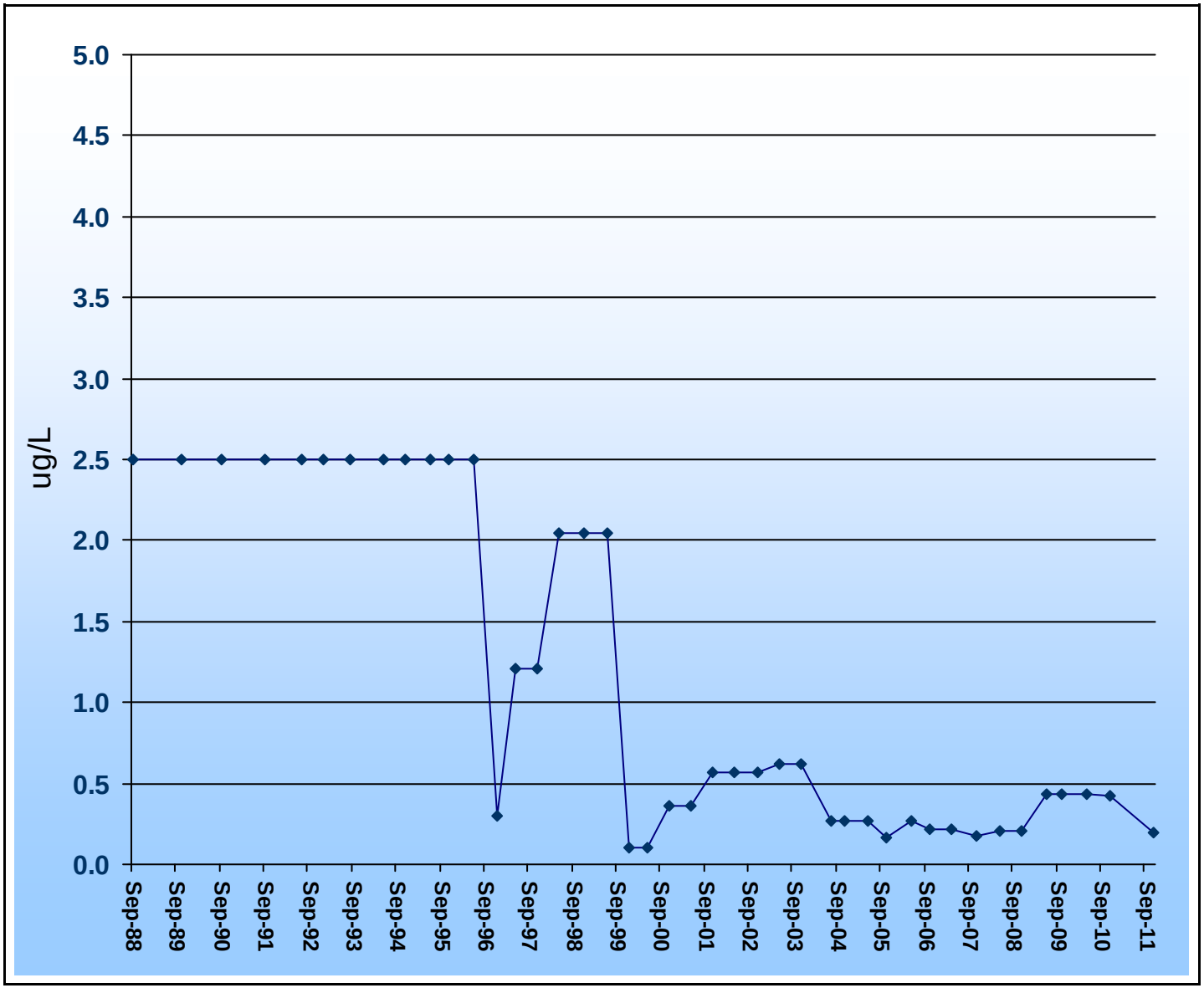
Cleanup Level 53,000 ug/L EPA RSL



Well ID 300-A-120

Casno 127-18-4 Analyte Tetrachloroethene

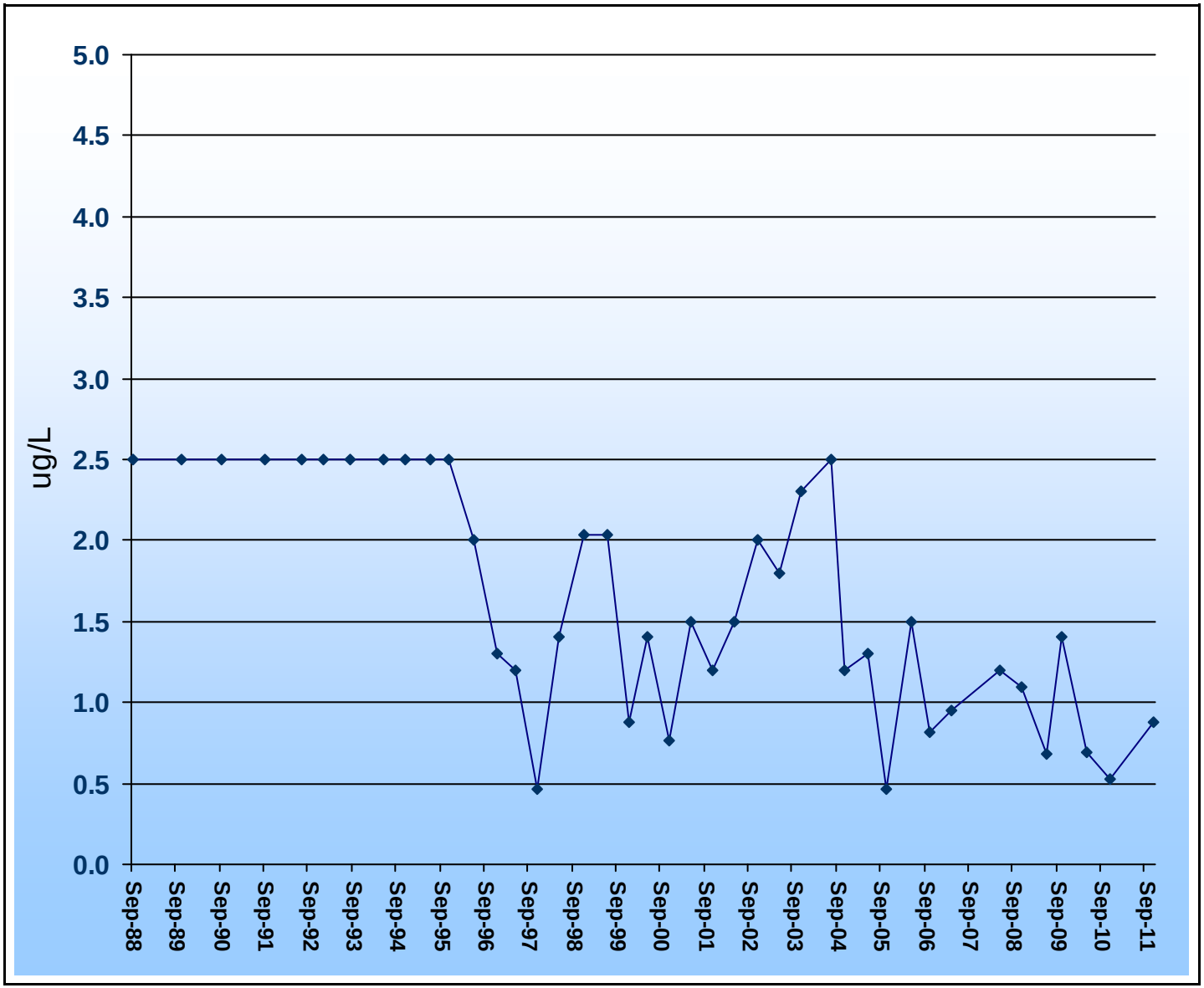
Cleanup Level 1.1 ug/L EPA RSL



Well ID 300-A-120

Casno 79-01-6 Analyte Trichloroethene

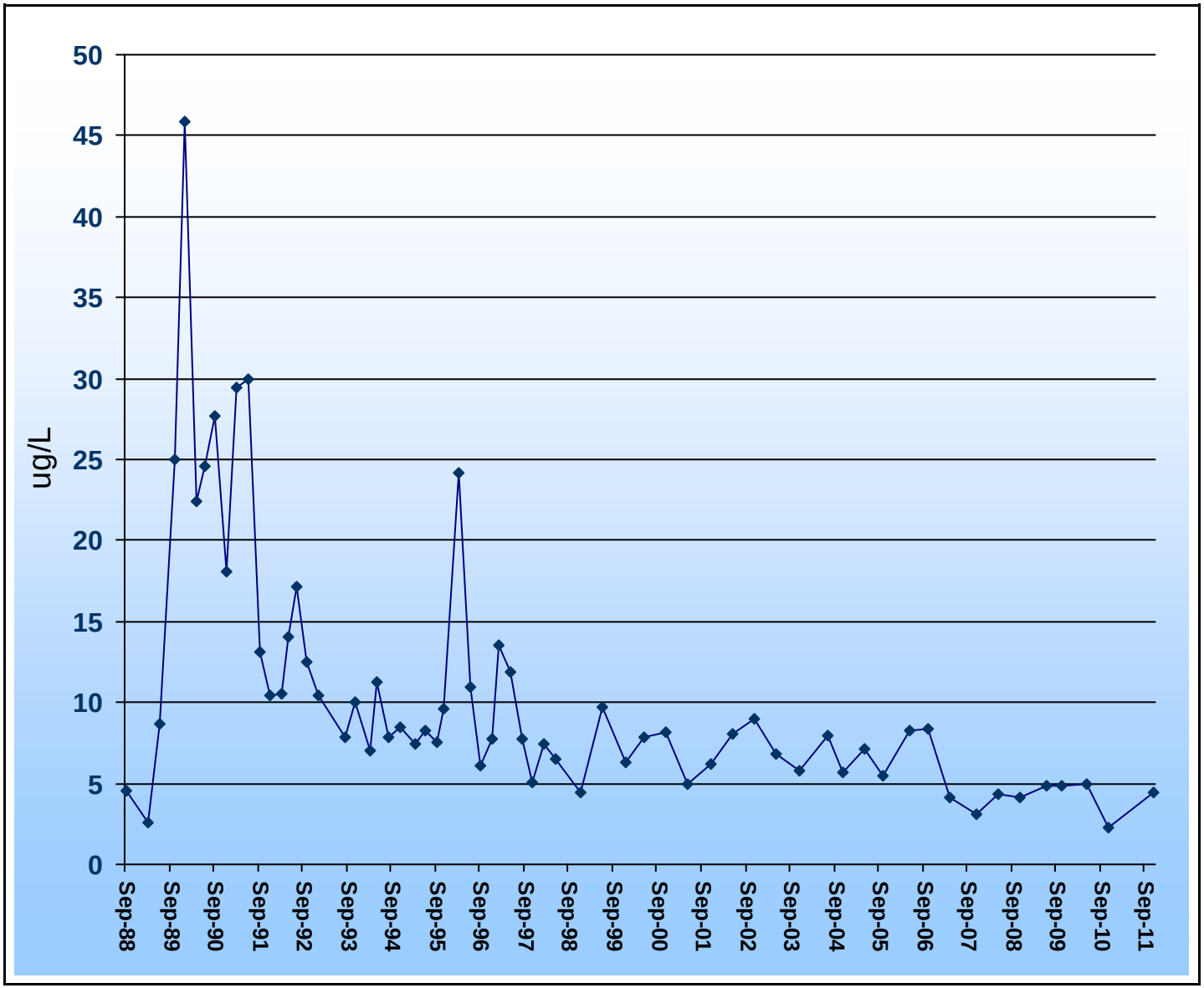
Cleanup Level 5.0 ug/L MCL



Well ID 300-A-120

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

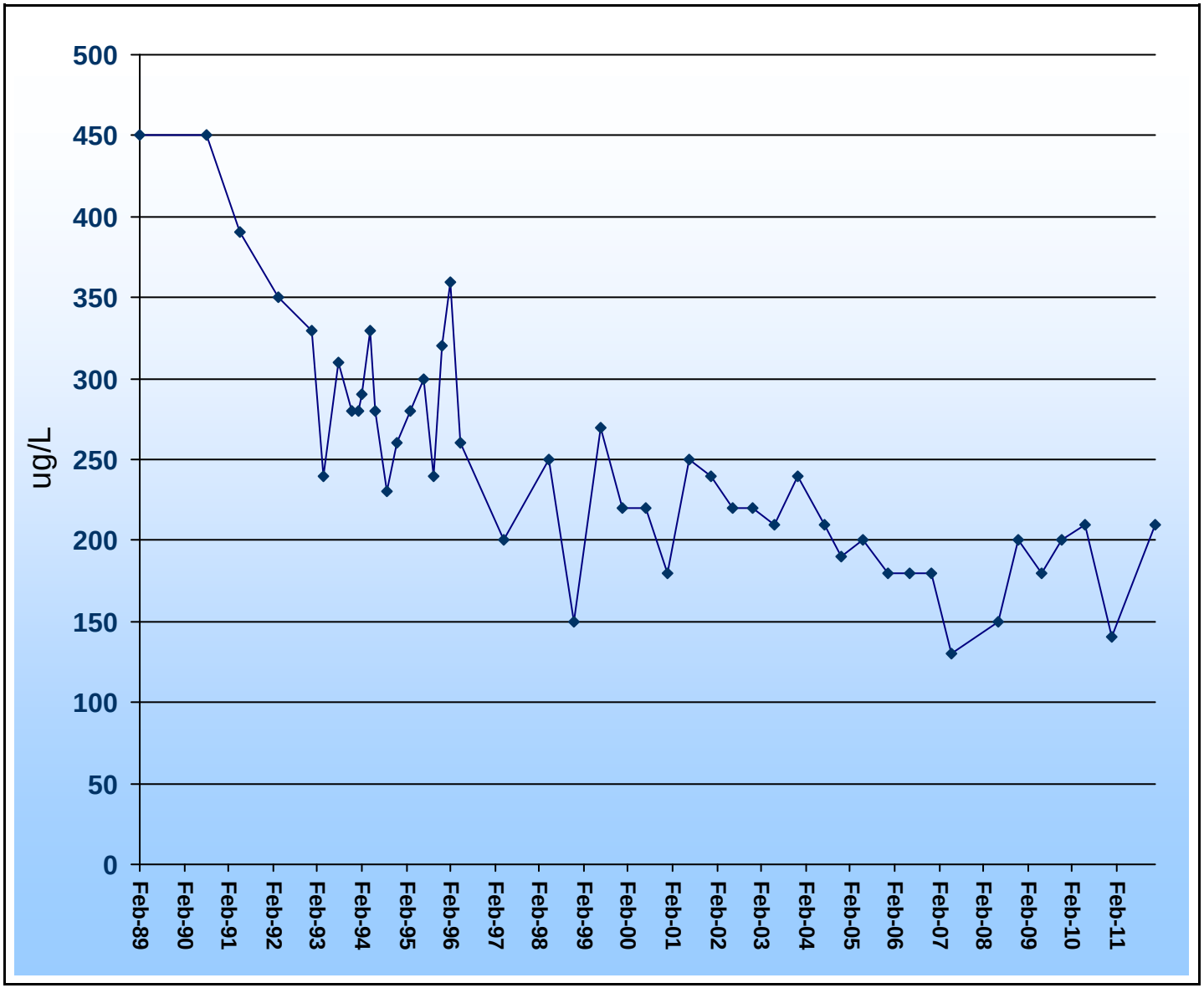
Cleanup Level 0.0042 ug/L EPA RSL



Well ID 400-A-151

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

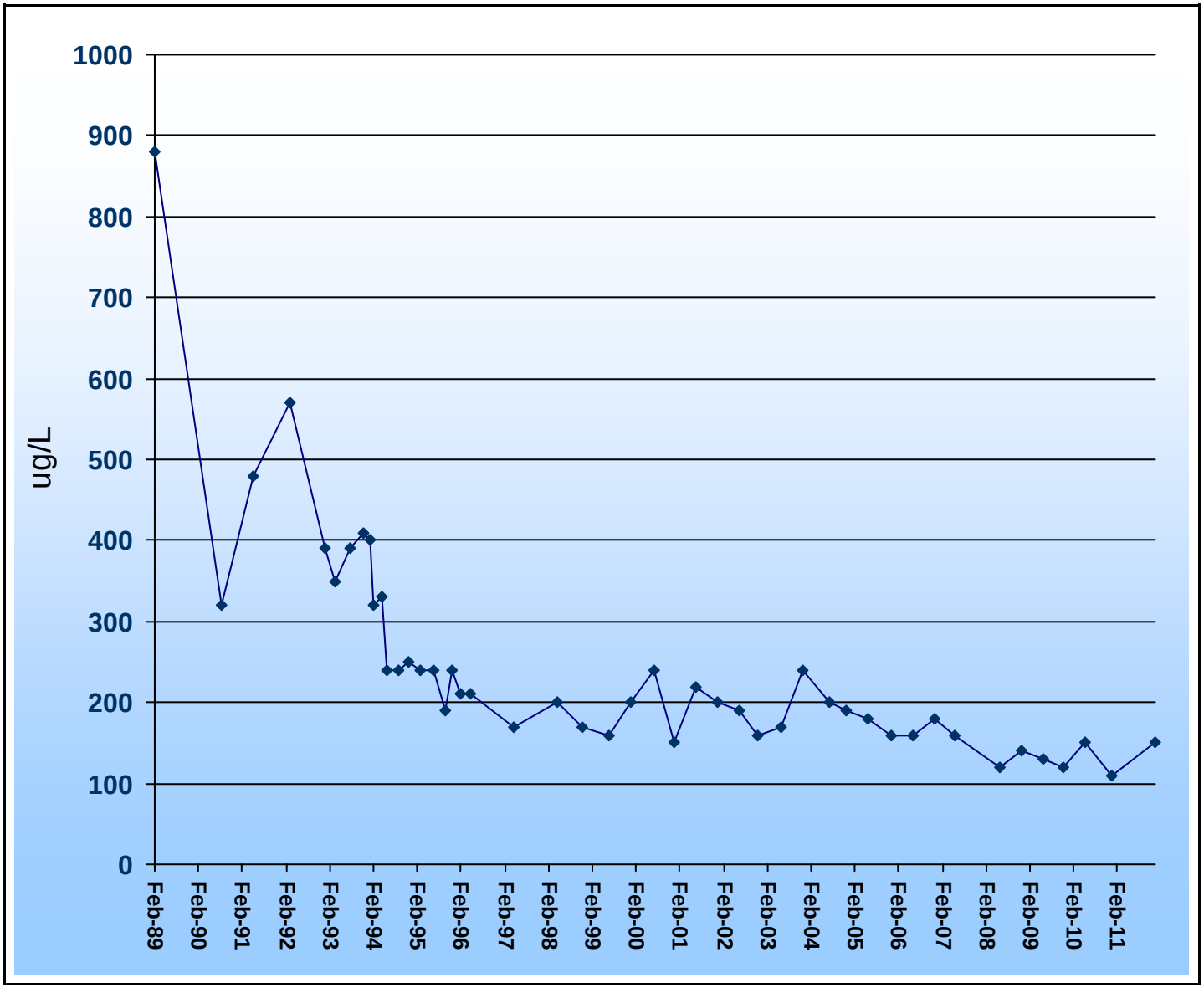
Cleanup Level 1,100 ug/L EPA RSL



Well ID 400-A-151

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

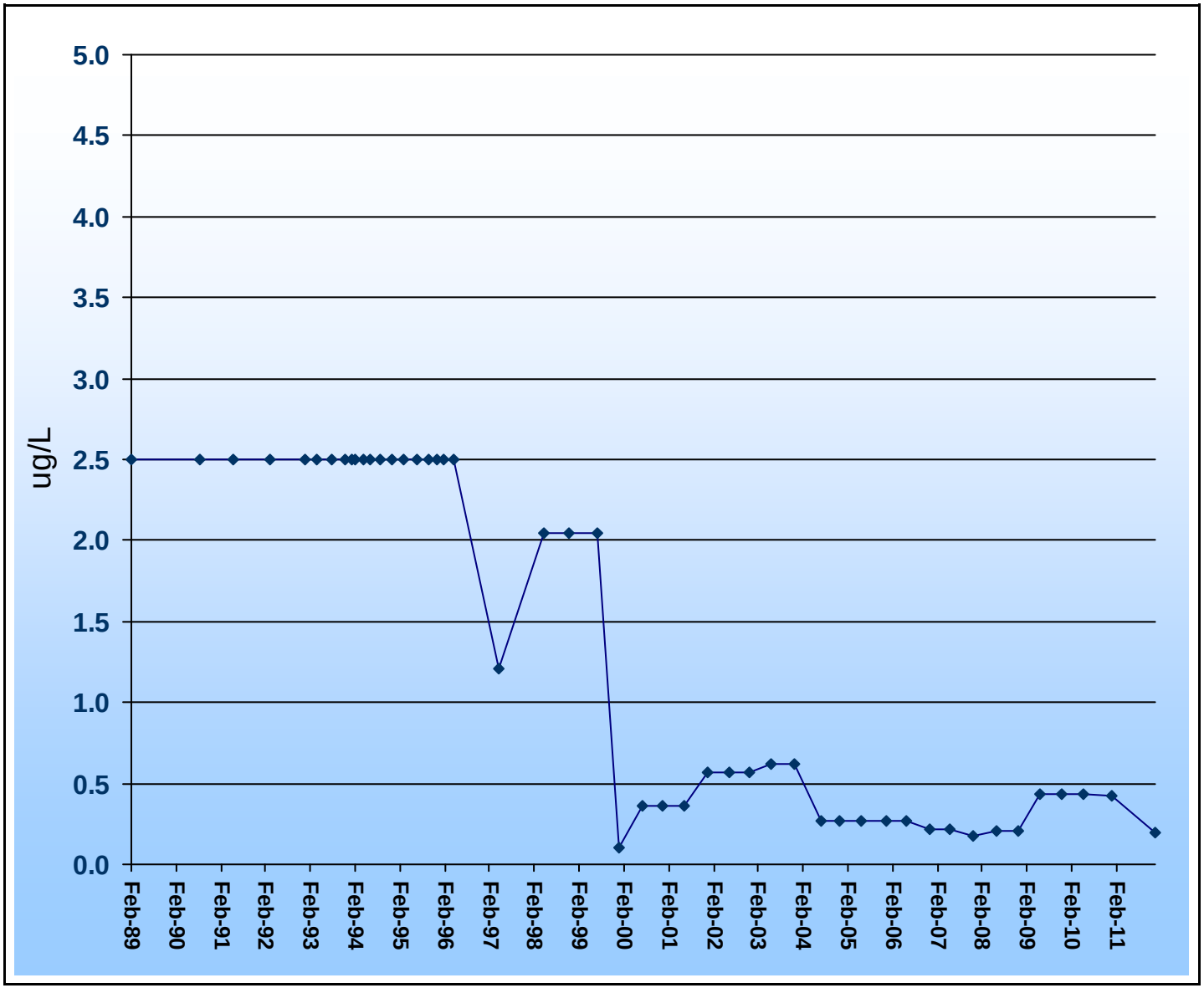
Cleanup Level 53,000 ug/L EPA RSL



Well ID 400-A-151

Casno 127-18-4 Analyte Tetrachloroethene

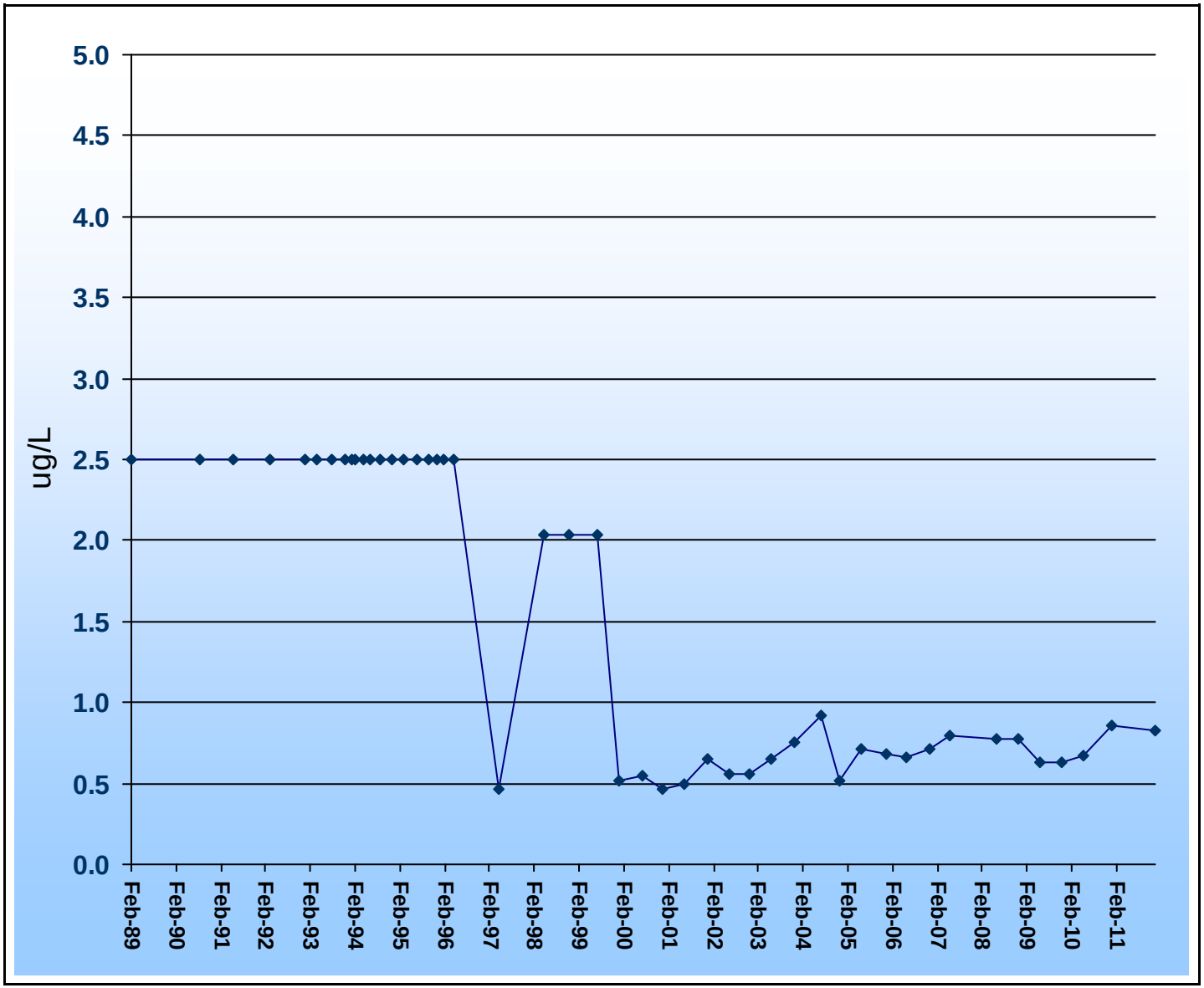
Cleanup Level 1.1 ug/L EPA RSL



Well ID 400-A-151

Casno 79-01-6 Analyte Trichloroethene

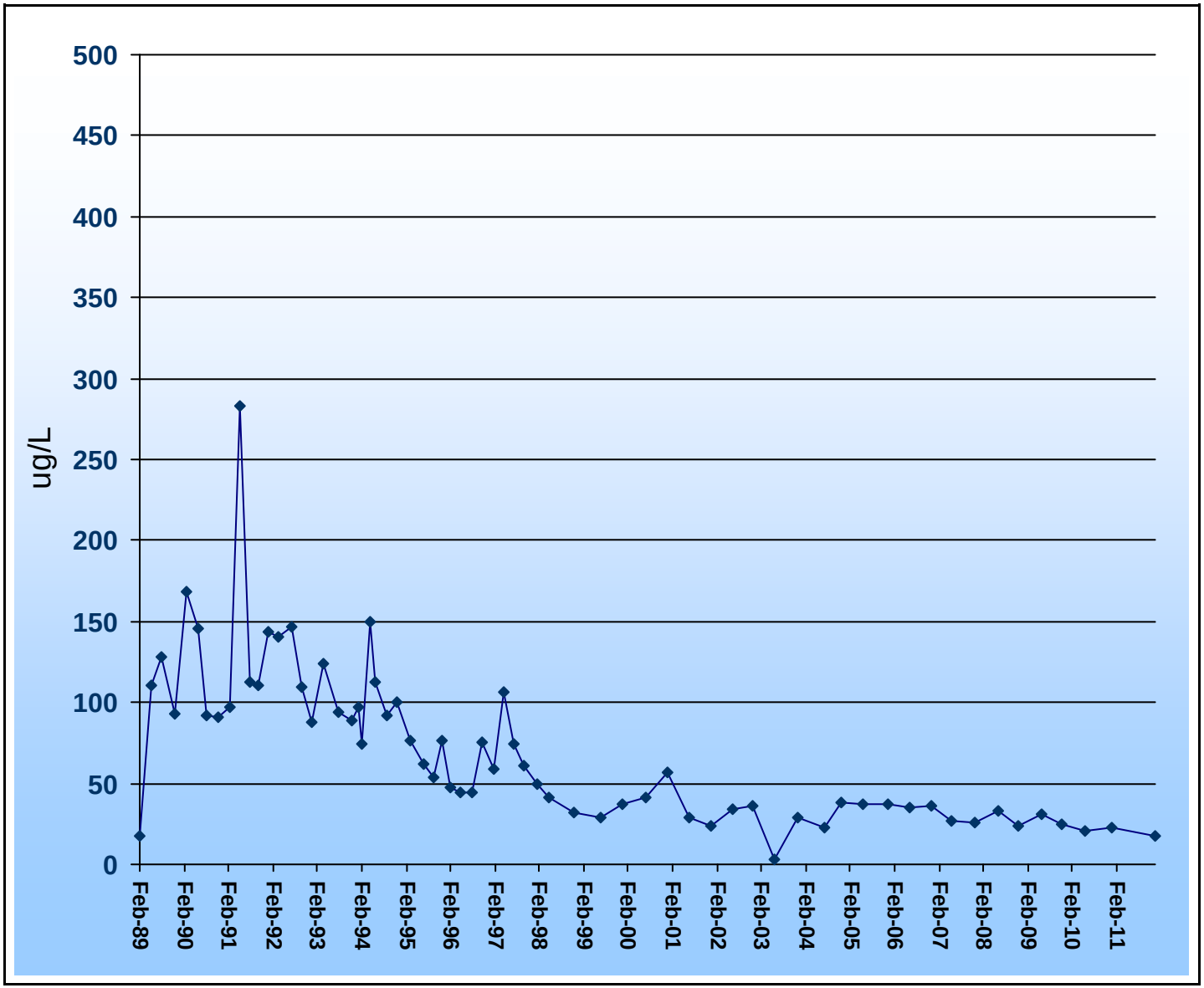
Cleanup Level 5.0 ug/L MCL



Well ID 400-A-151

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

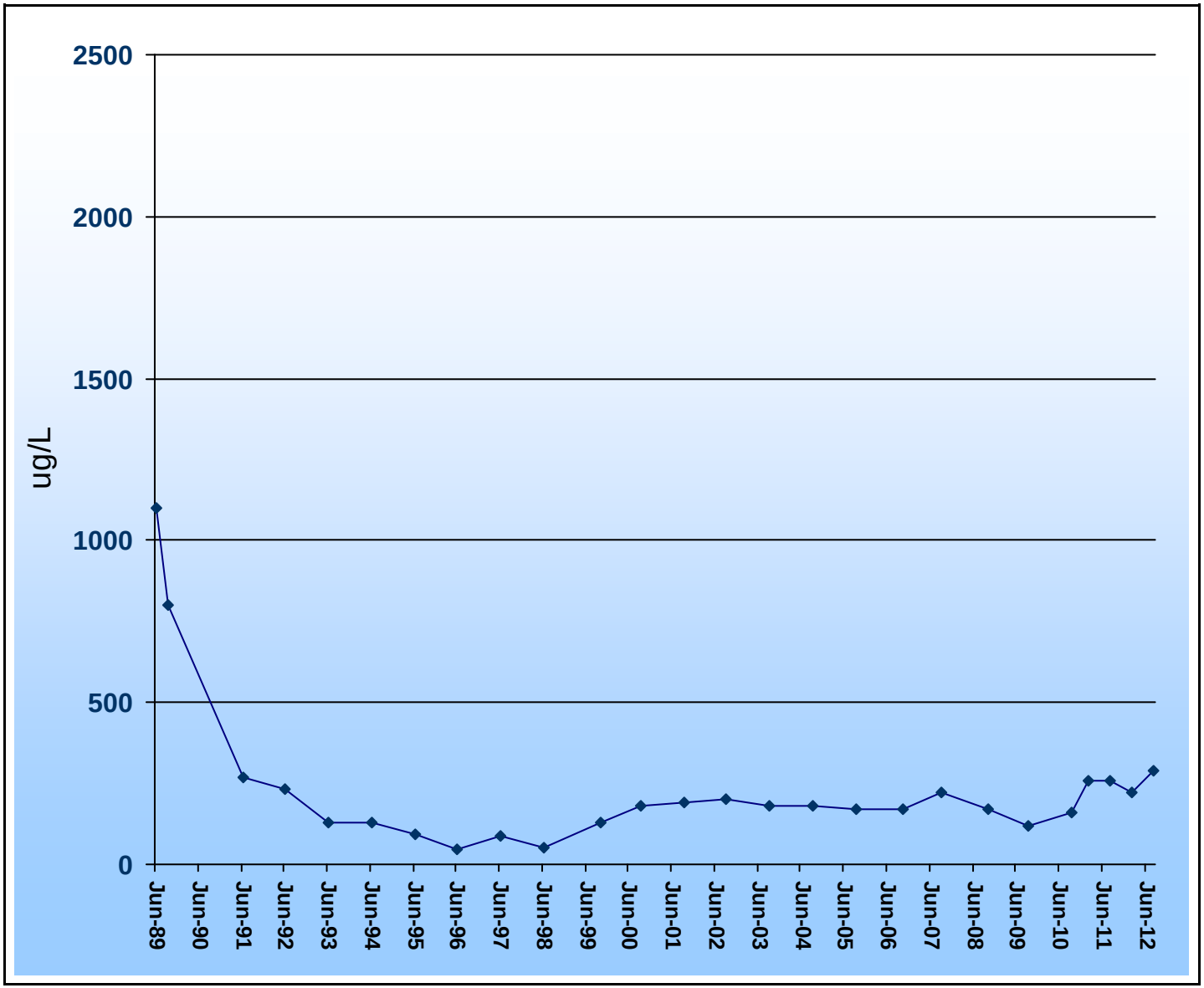
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BW-1-268

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

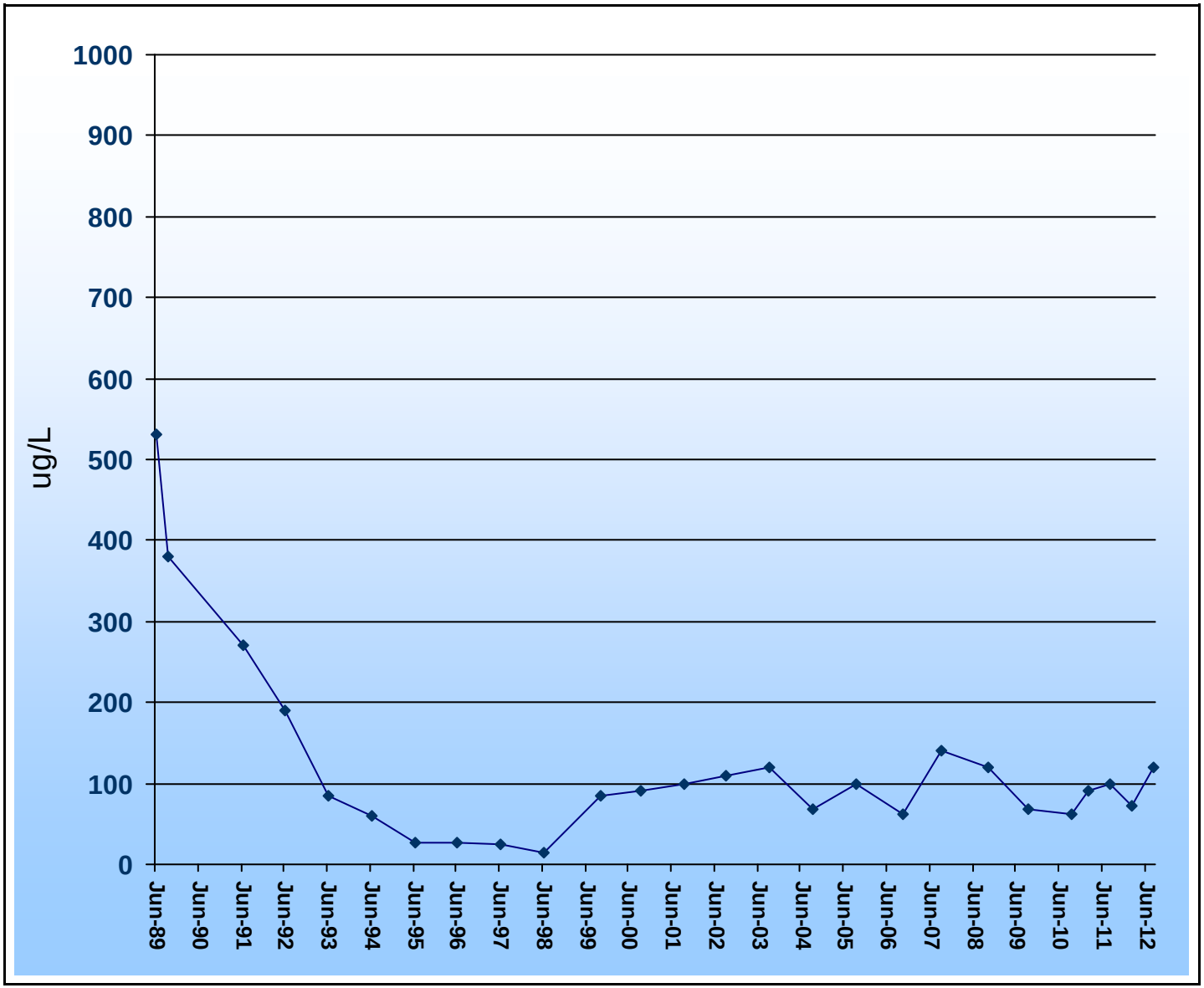
Cleanup Level 1,100 ug/L EPA RSL



Well ID BW-1-268

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

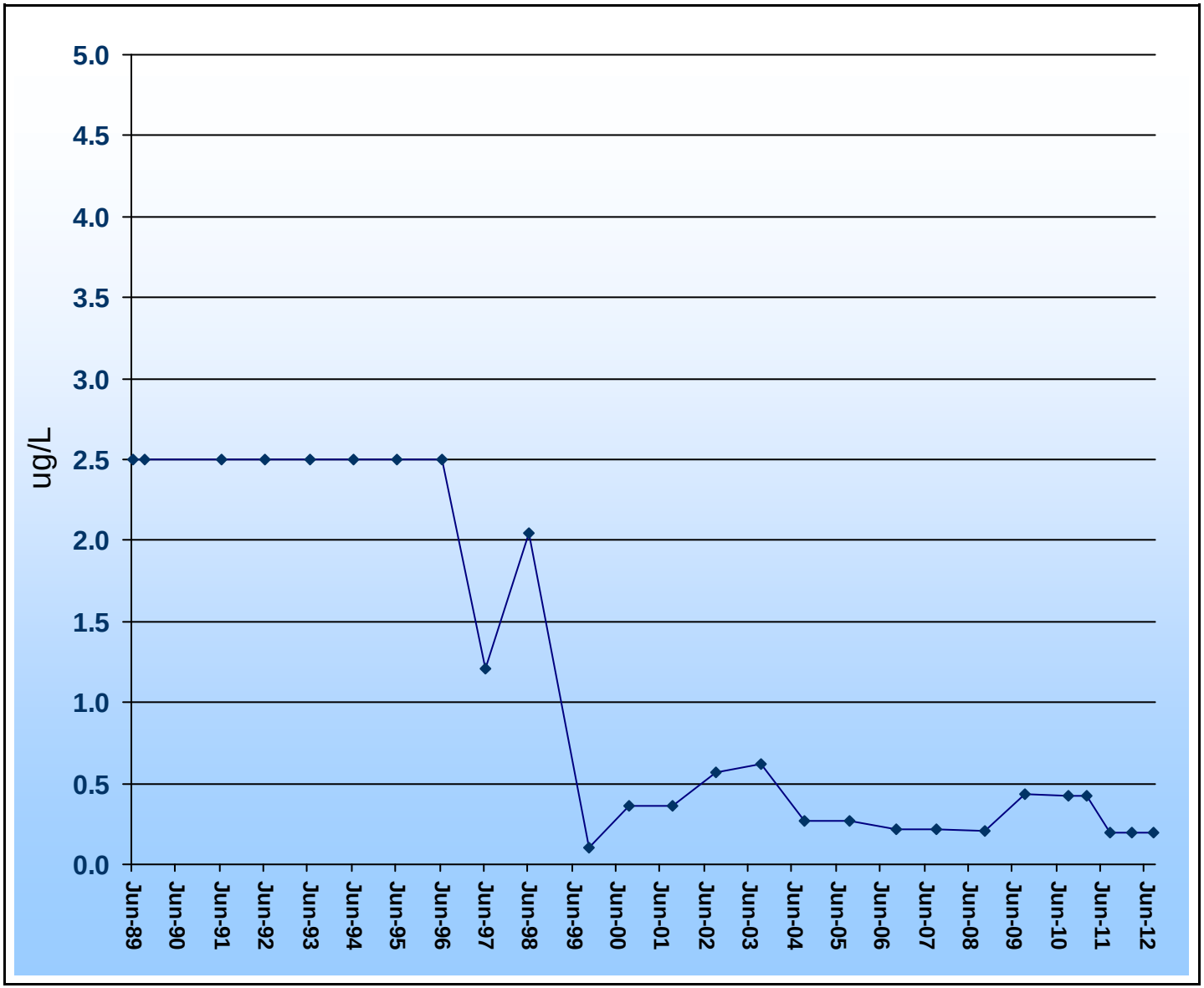
Cleanup Level 53,000 ug/L EPA RSL



Well ID BW-1-268

Casno 127-18-4 Analyte Tetrachloroethene

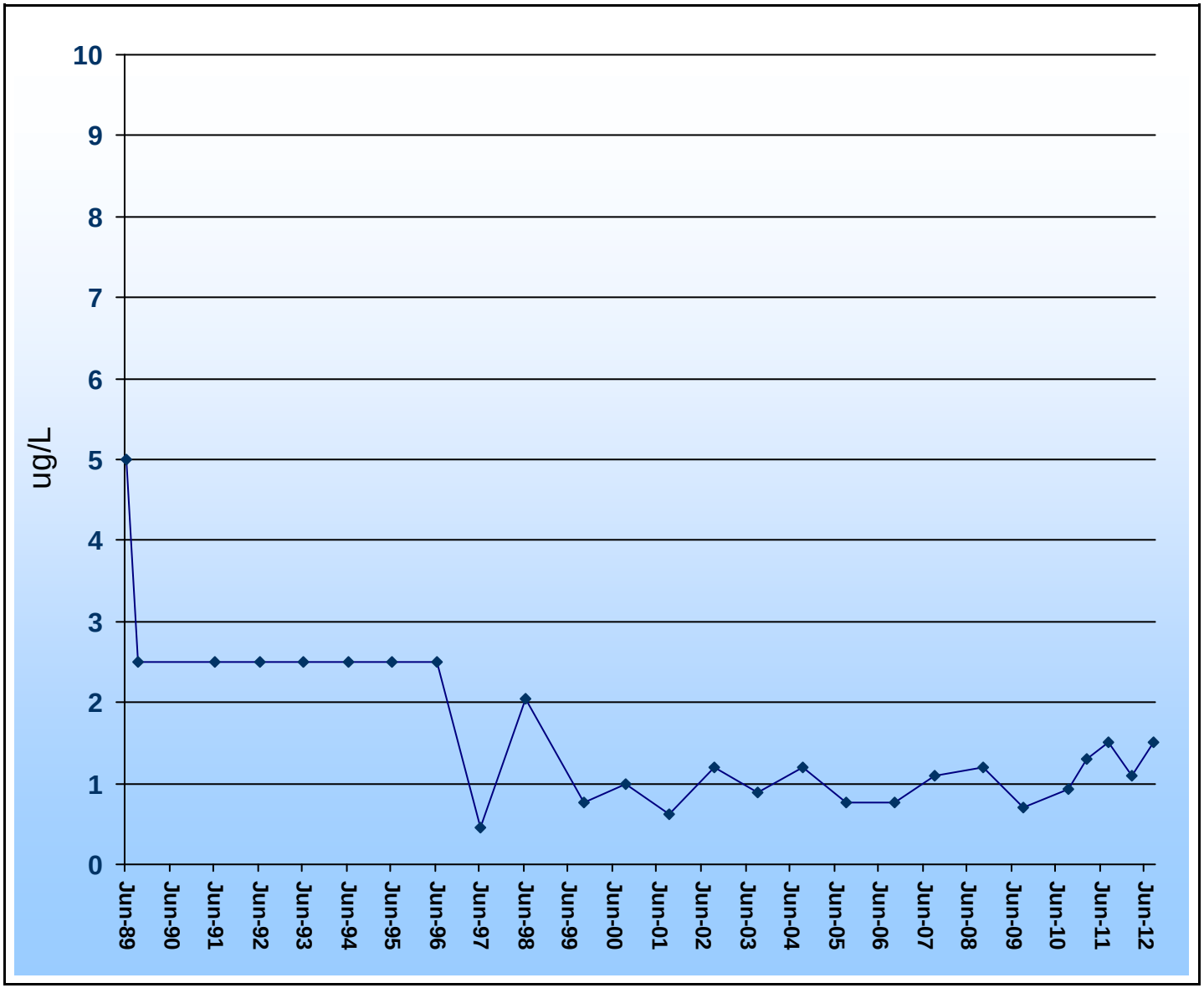
Cleanup Level 1.1 ug/L EPA RSL



Well ID BW-1-268

Casno 79-01-6 Analyte Trichloroethene

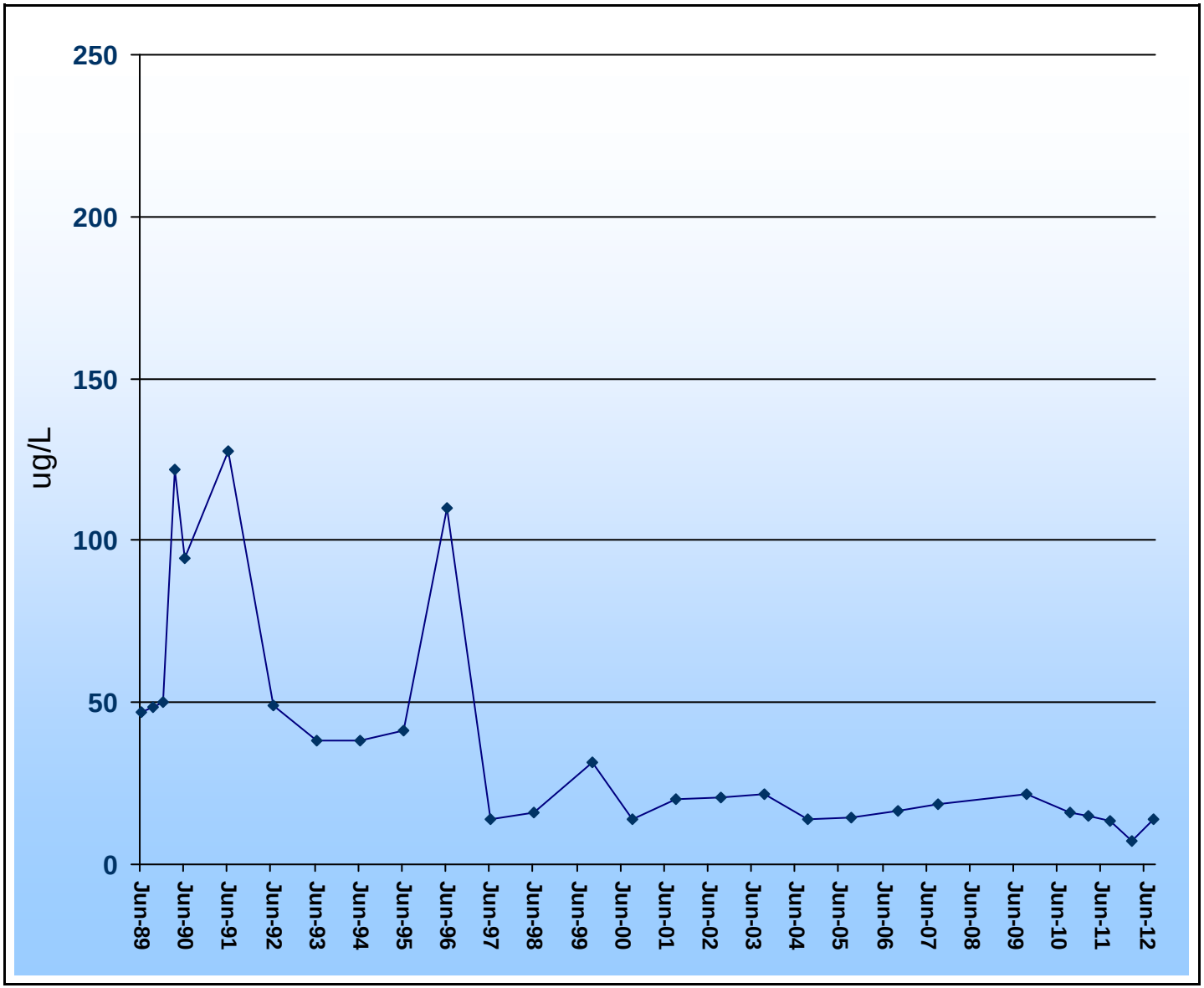
Cleanup Level 5.0 ug/L MCL



Well ID BW-1-268

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



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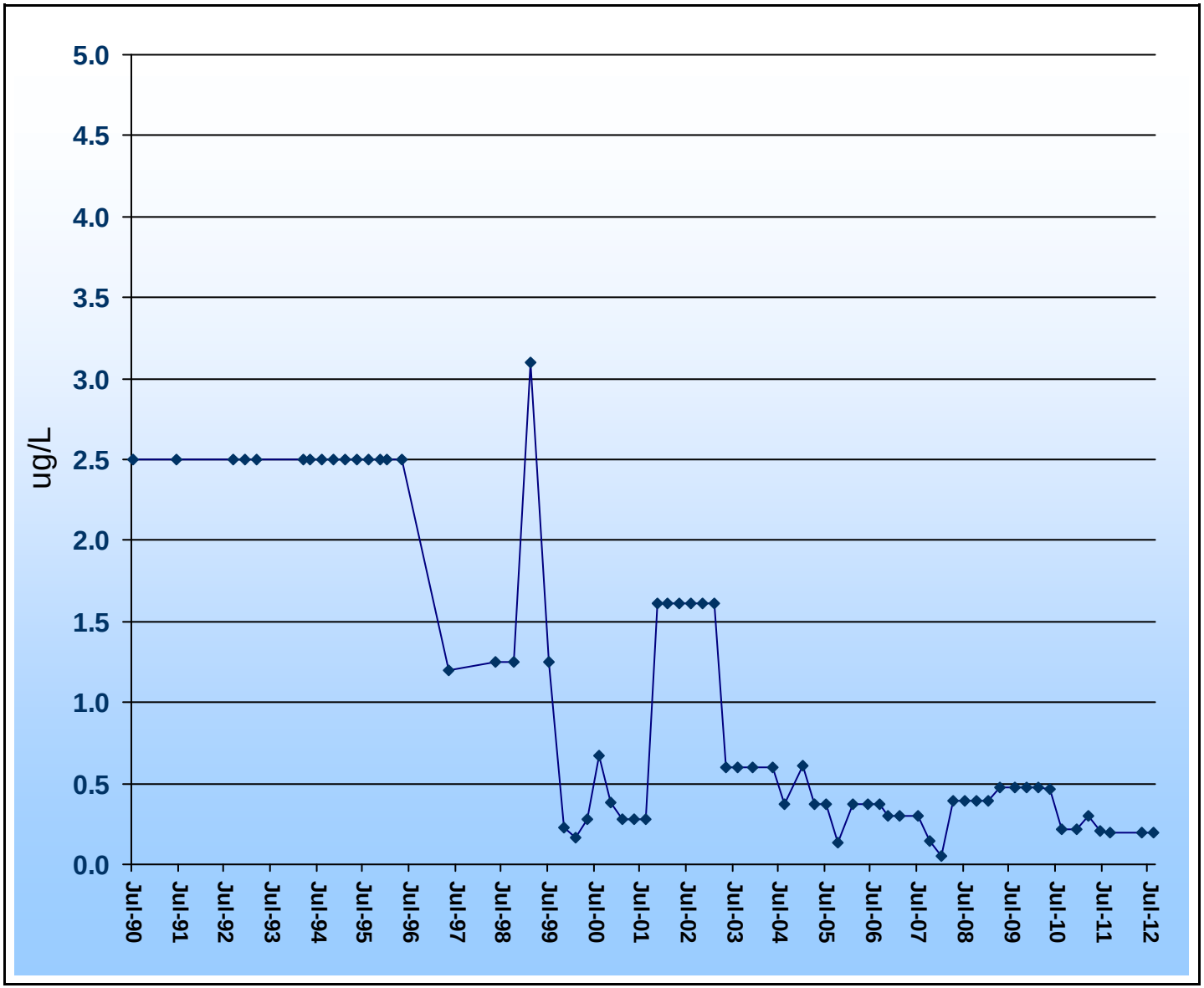
Appendix E
Time Concentration Plots

Southern Boundary Well Group

Well ID BLM-6-488

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

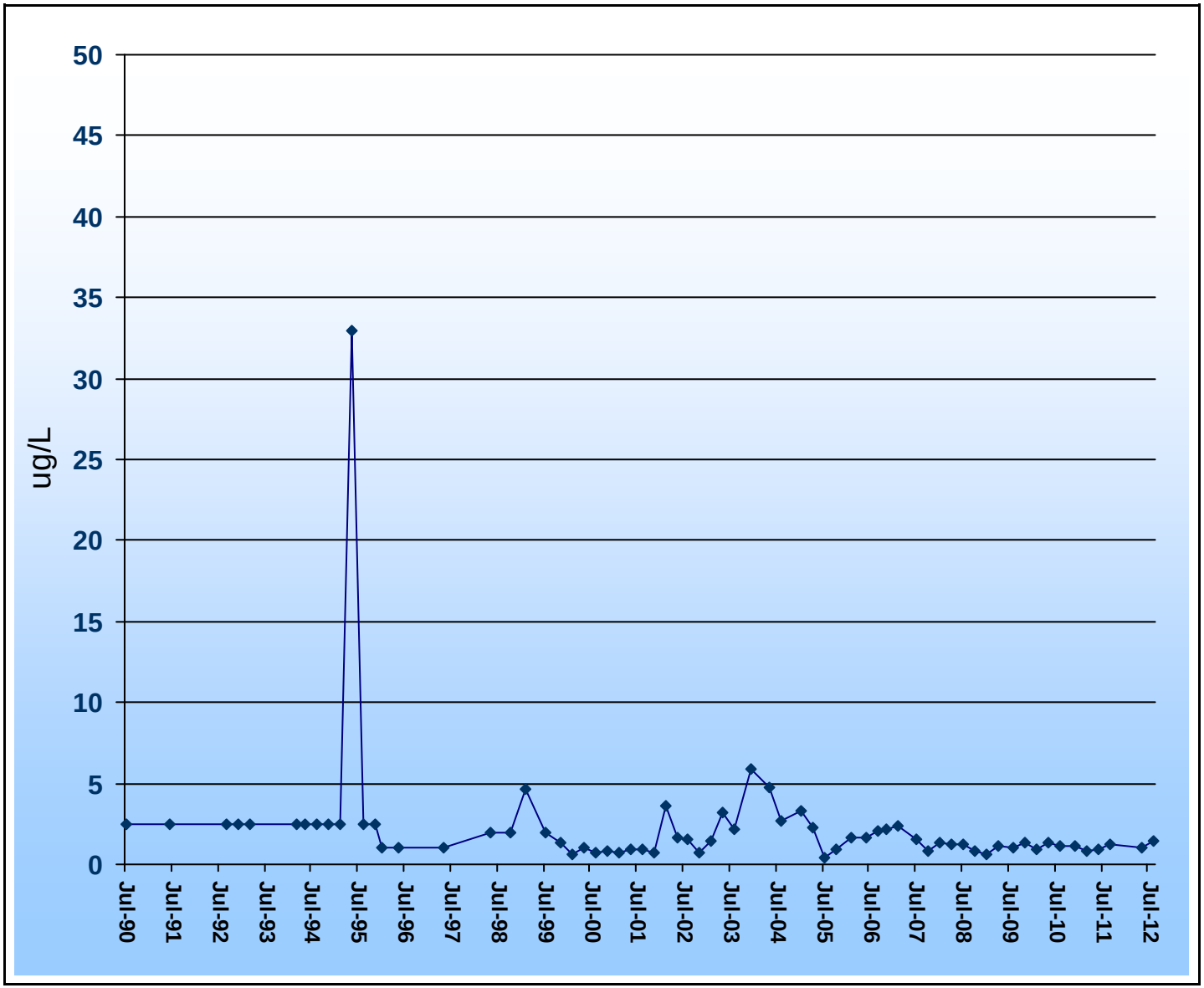
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-6-488

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

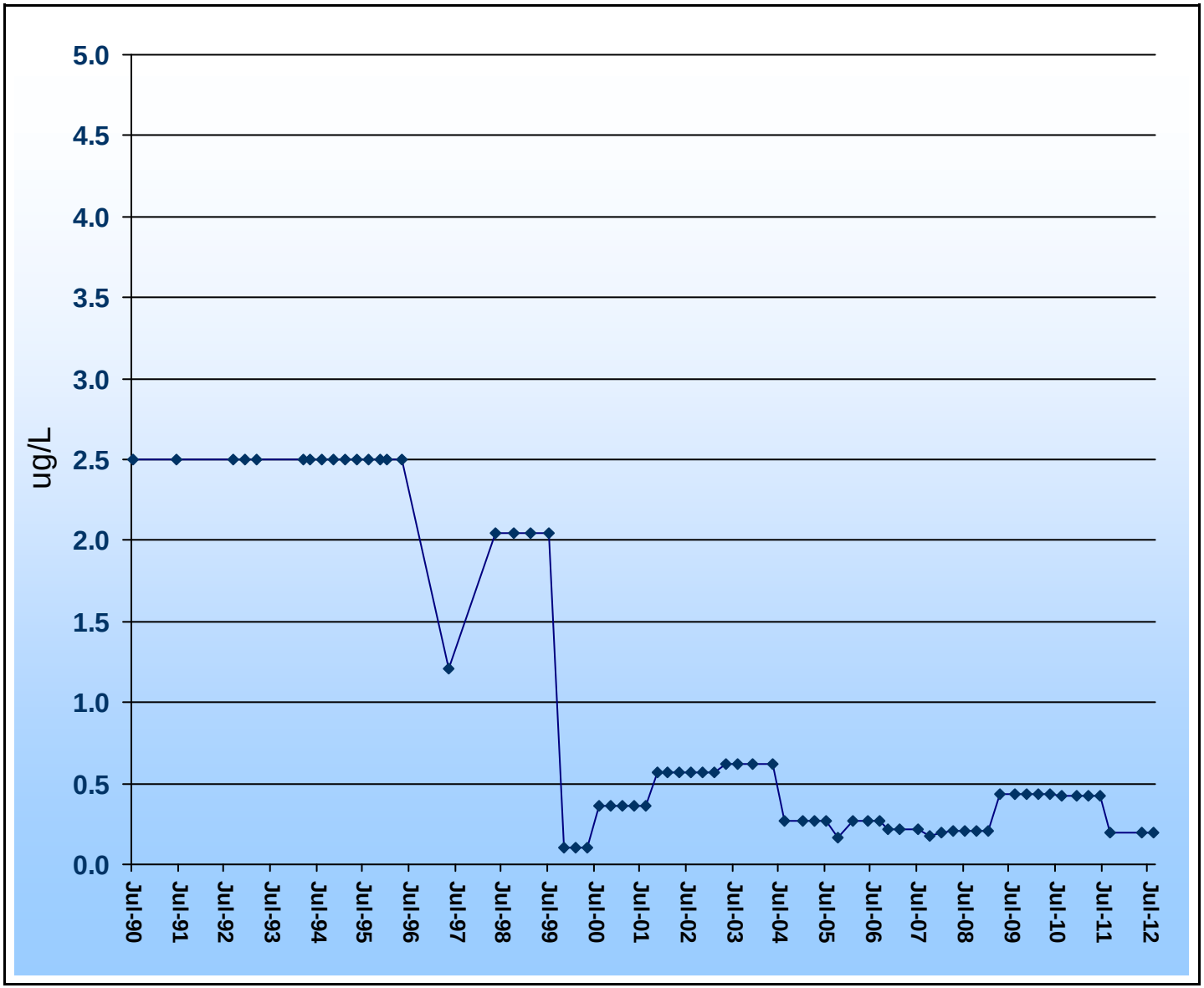
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-6-488

Casno 127-18-4 Analyte Tetrachloroethene

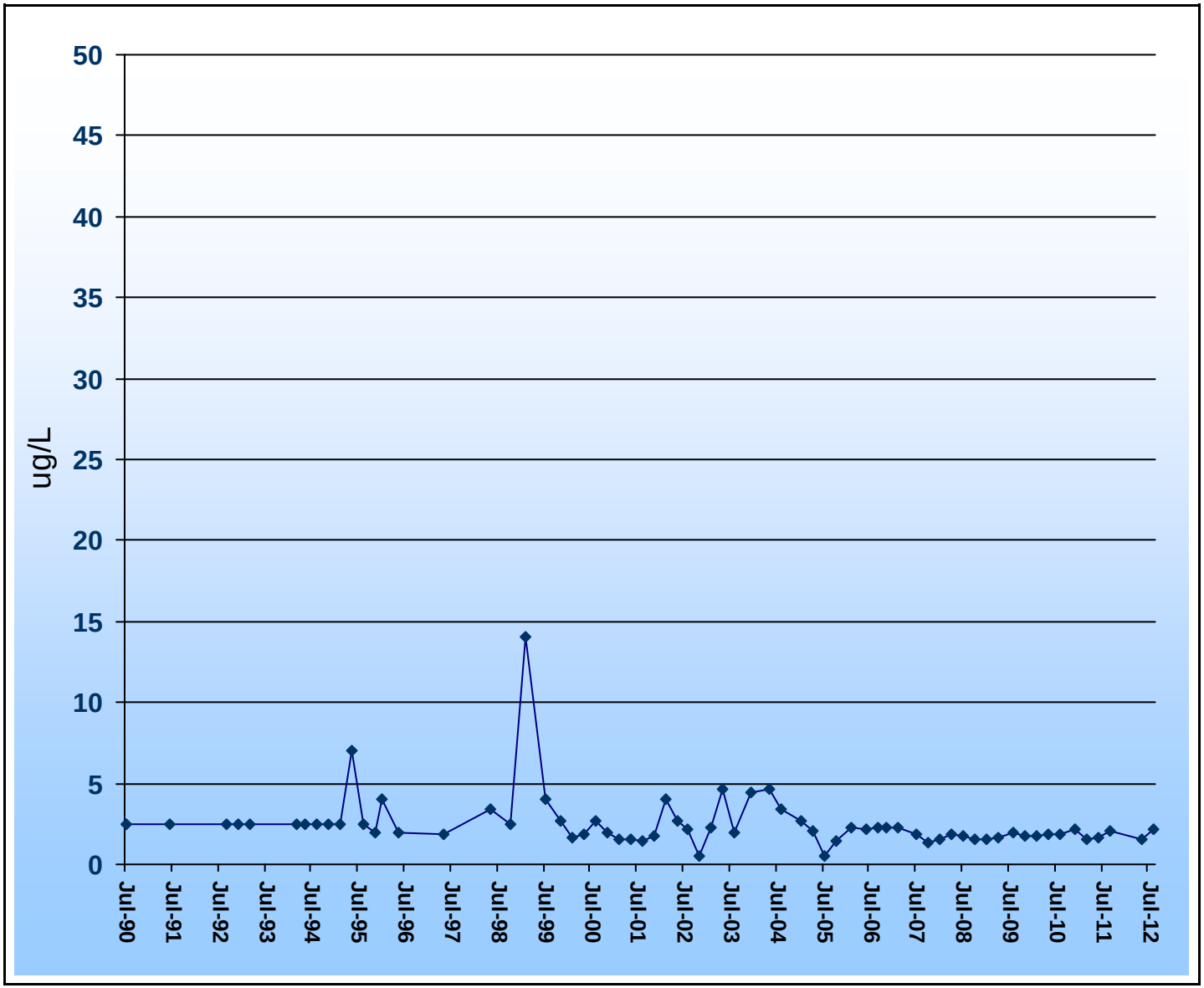
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-6-488

Casno 79-01-6 Analyte Trichloroethene

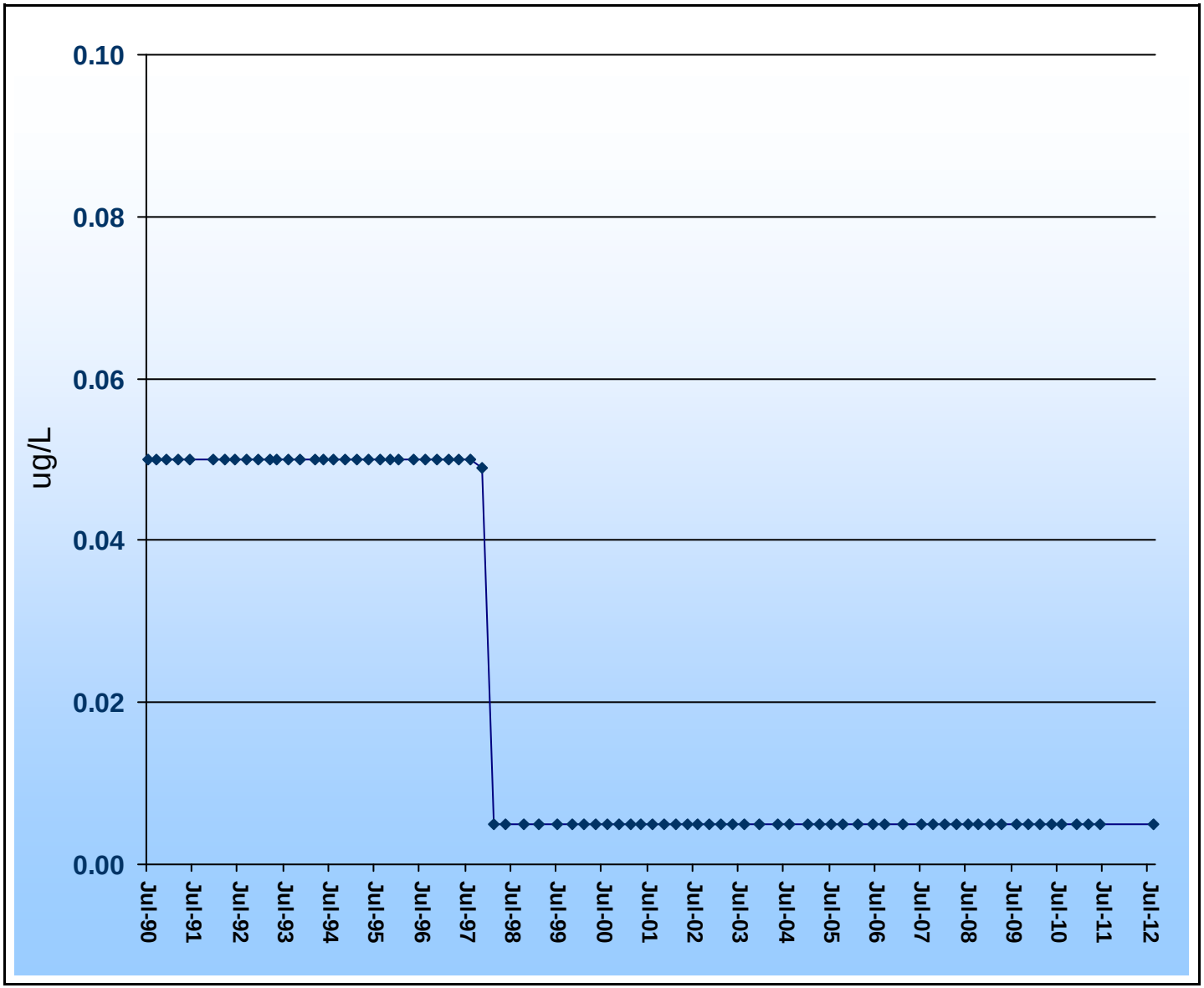
Cleanup Level 5.0 ug/L MCL



Well ID BLM-6-488

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



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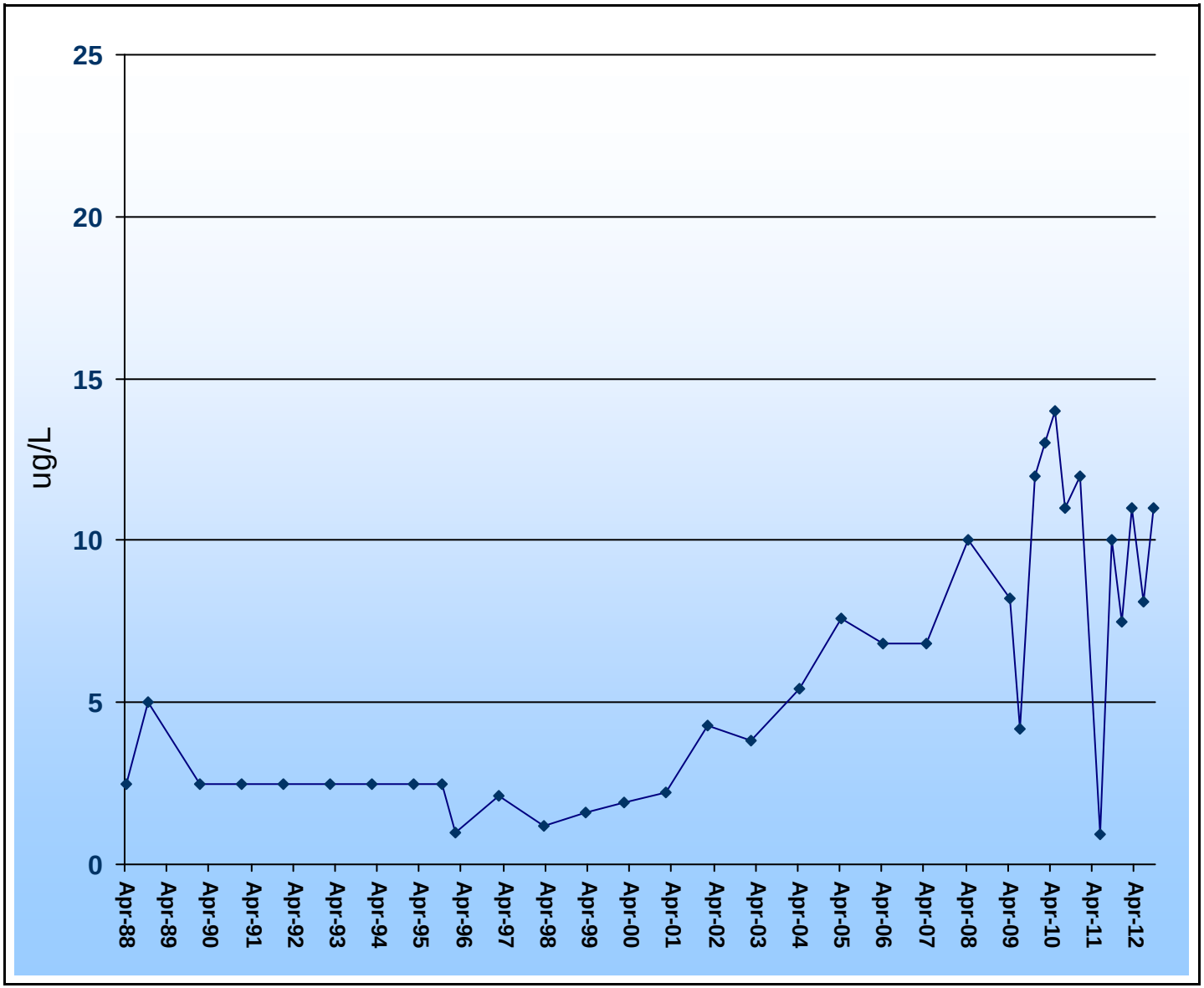
Appendix E
Time Concentration Plots

MPCA Well Group

Well ID BLM-5-527

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

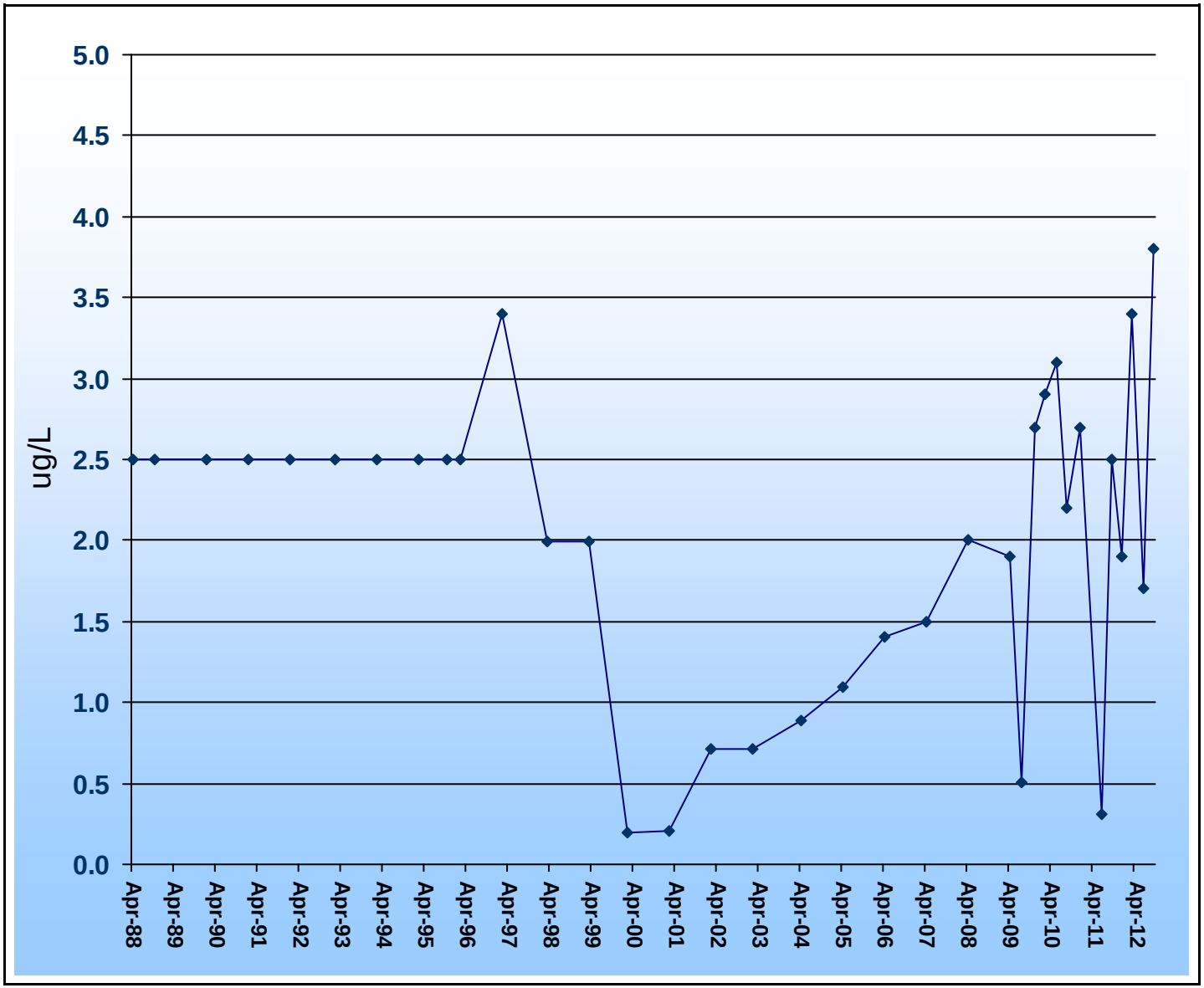
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-5-527

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

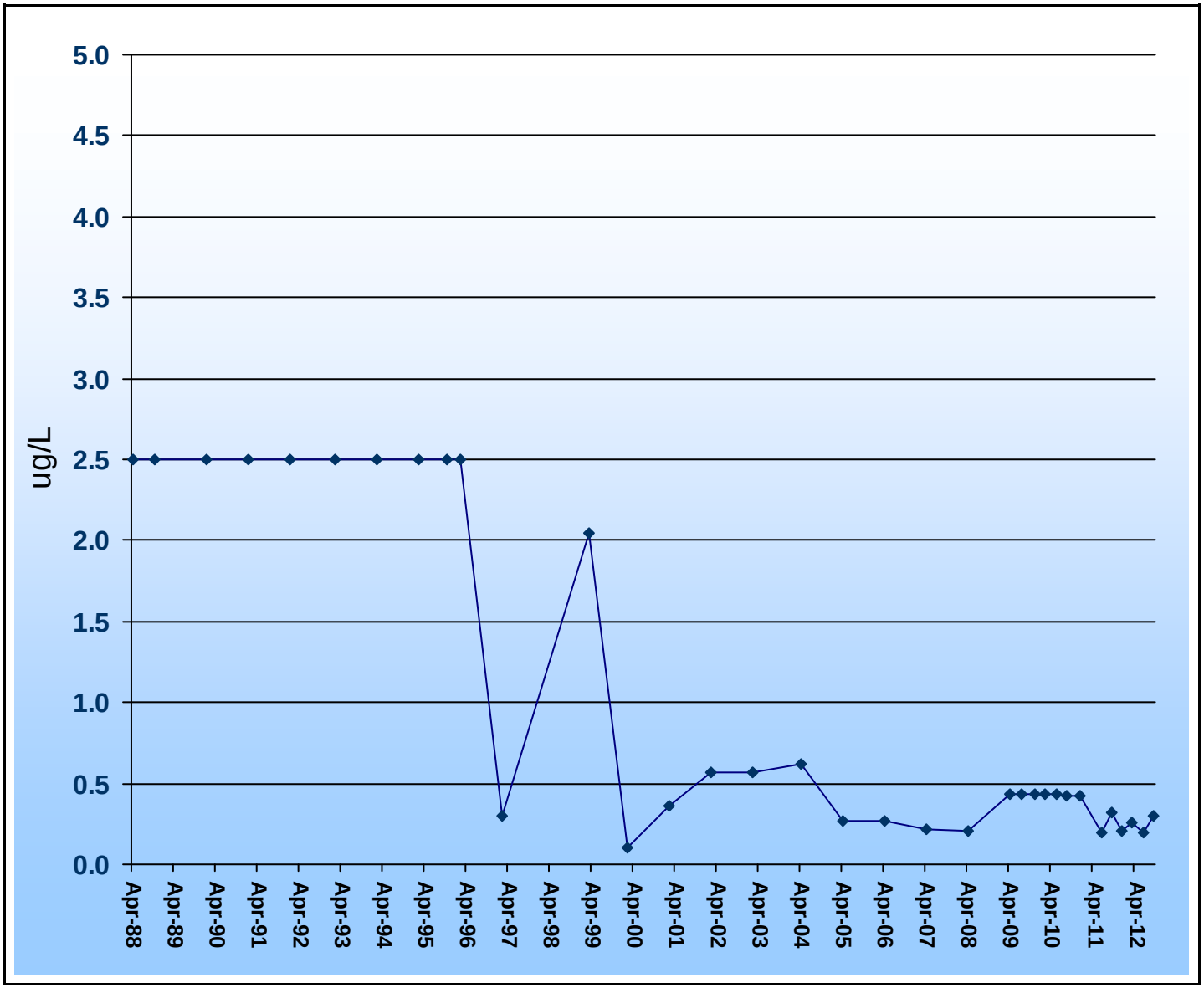
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-5-527

Casno 127-18-4 Analyte Tetrachloroethene

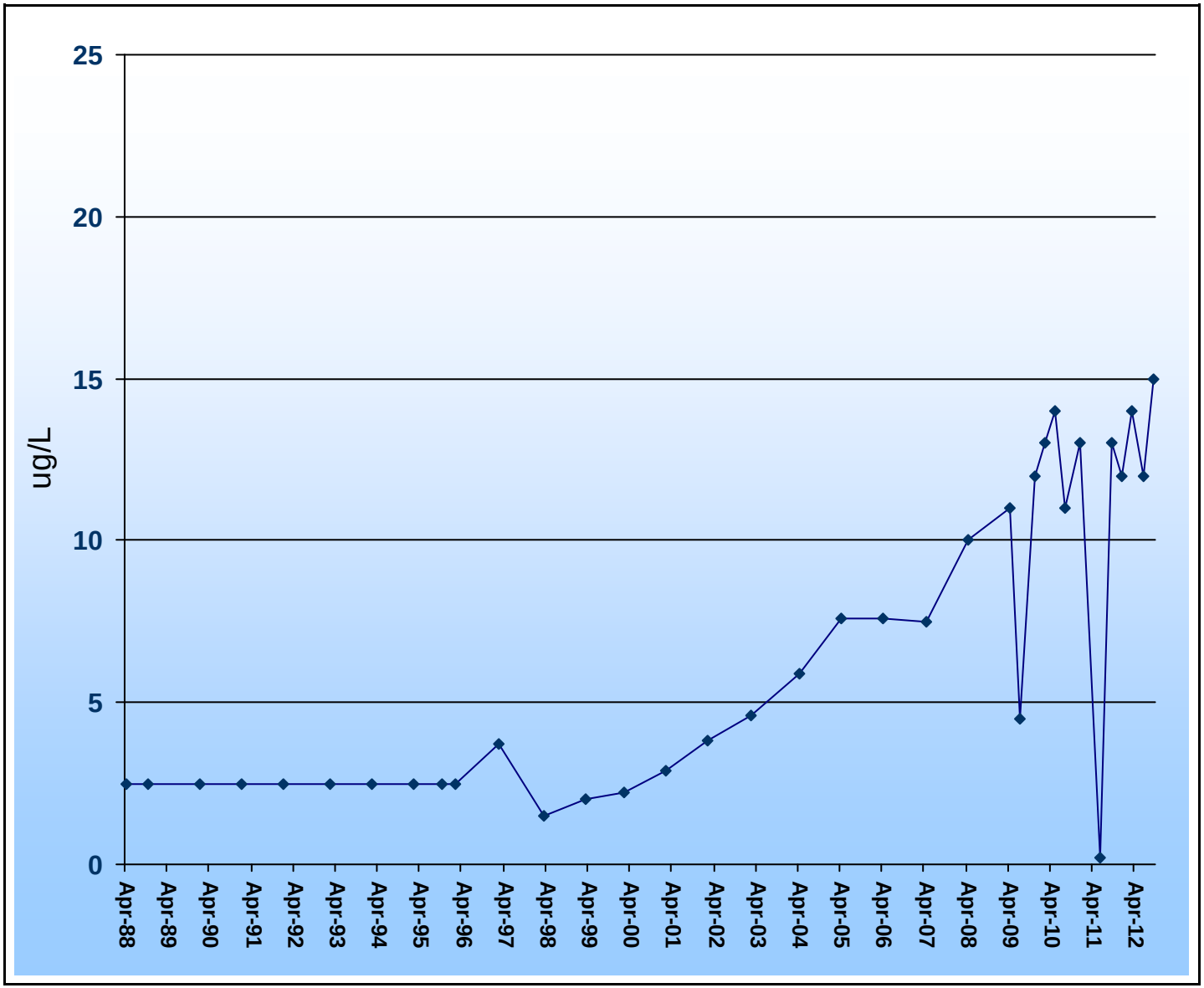
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-5-527

Casno 79-01-6 Analyte Trichloroethene

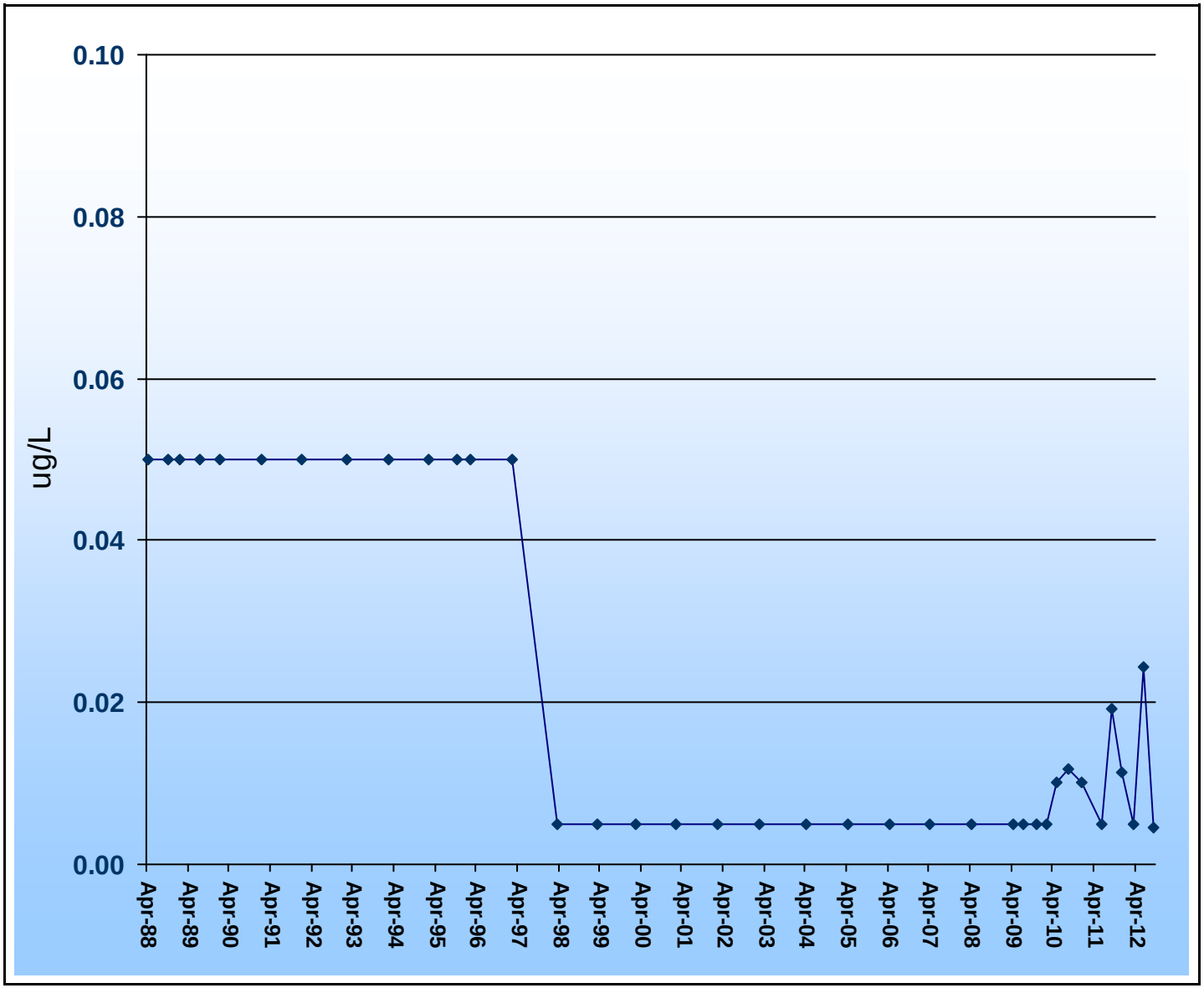
Cleanup Level 5.0 ug/L MCL



Well ID BLM-5-527

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

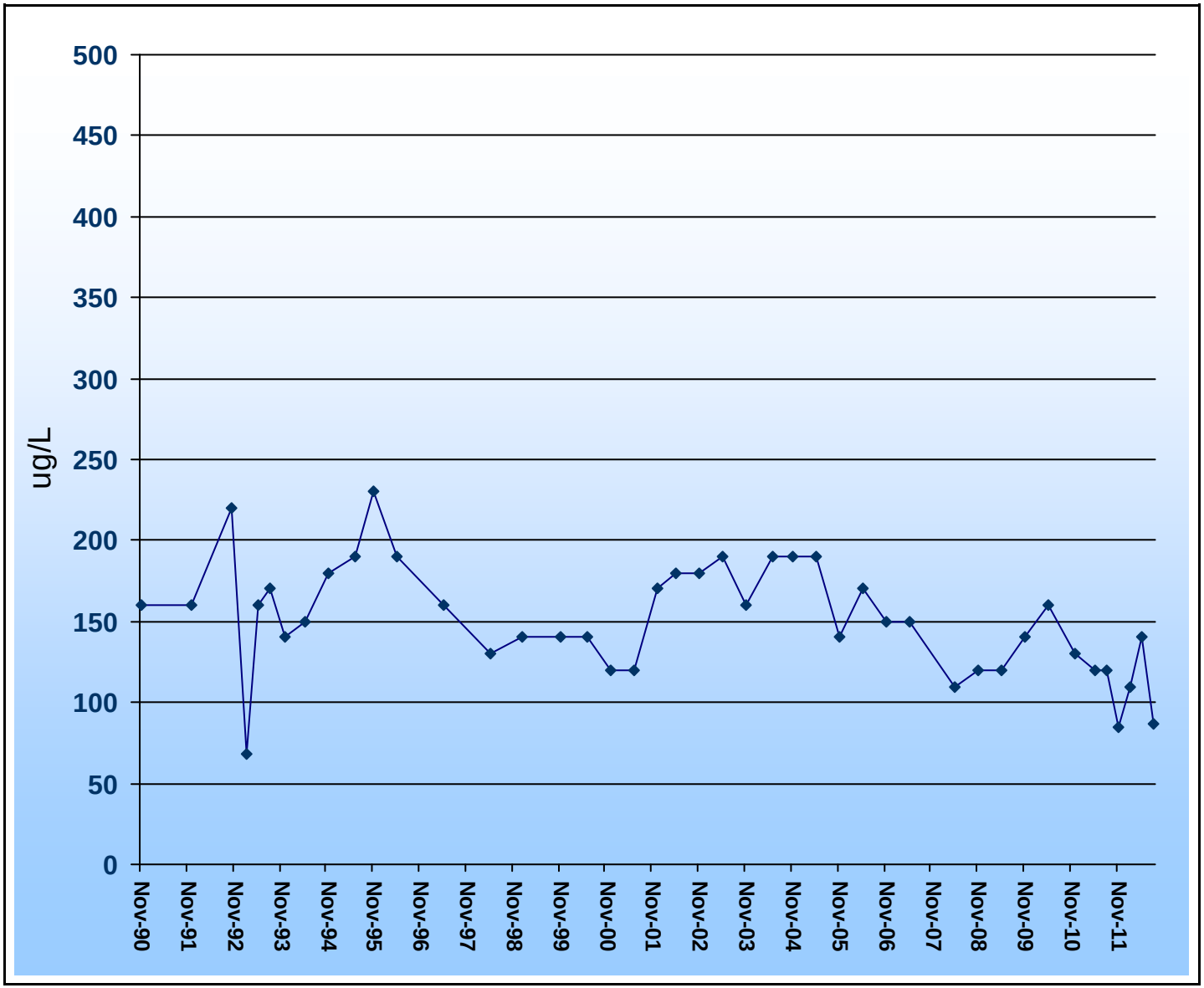
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BLM-14-327

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

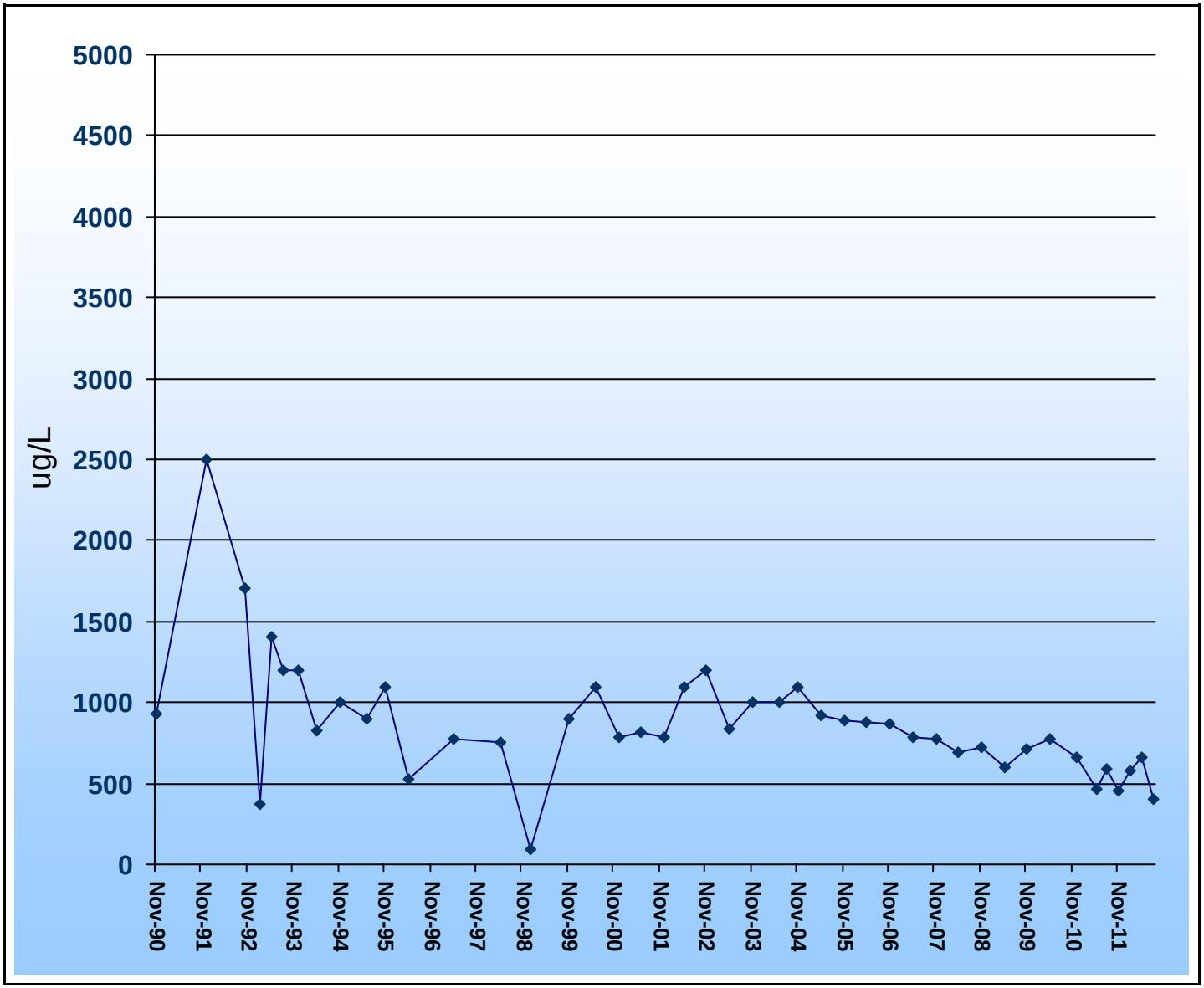
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-14-327

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

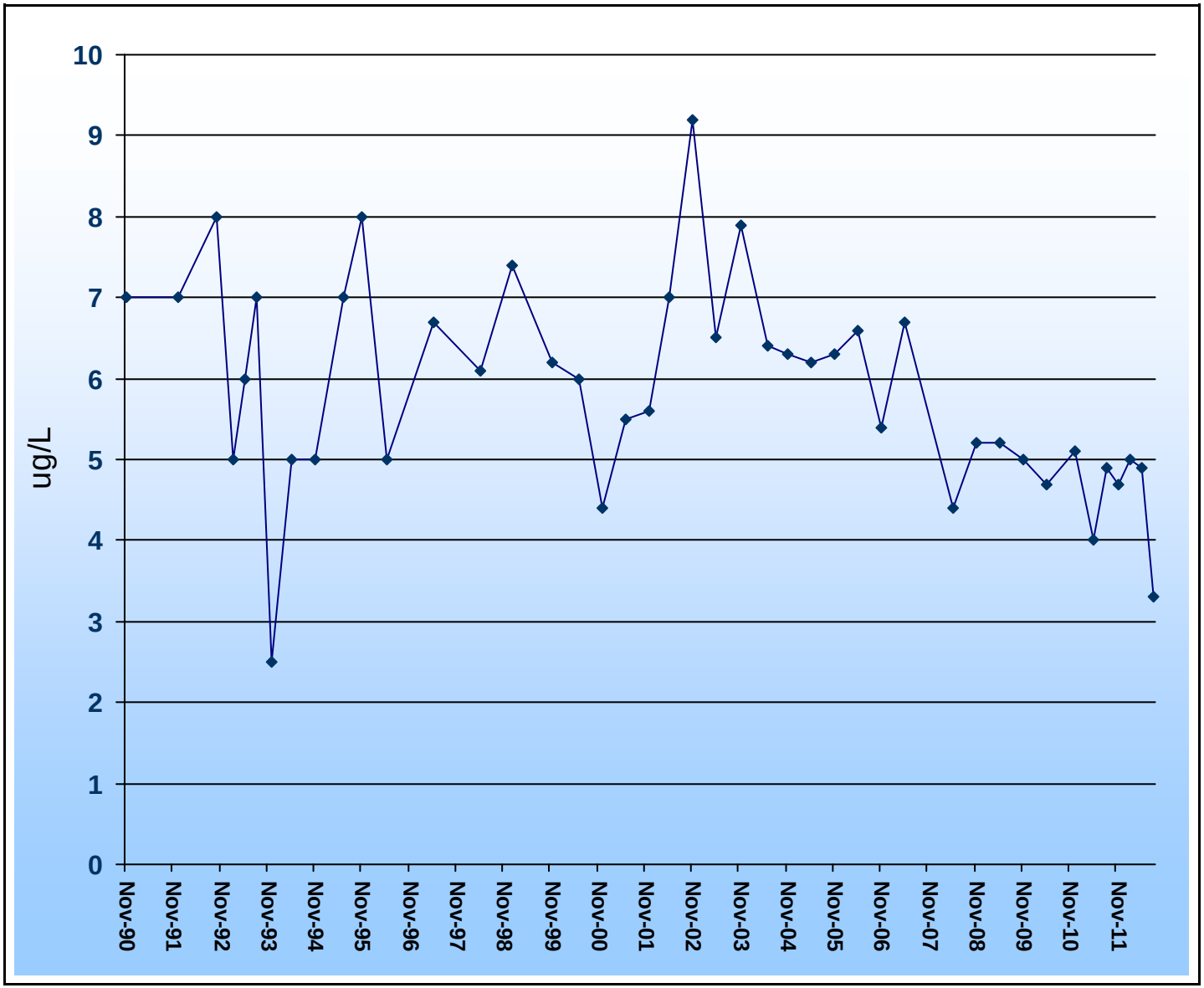
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-14-327

Casno 127-18-4 Analyte Tetrachloroethene

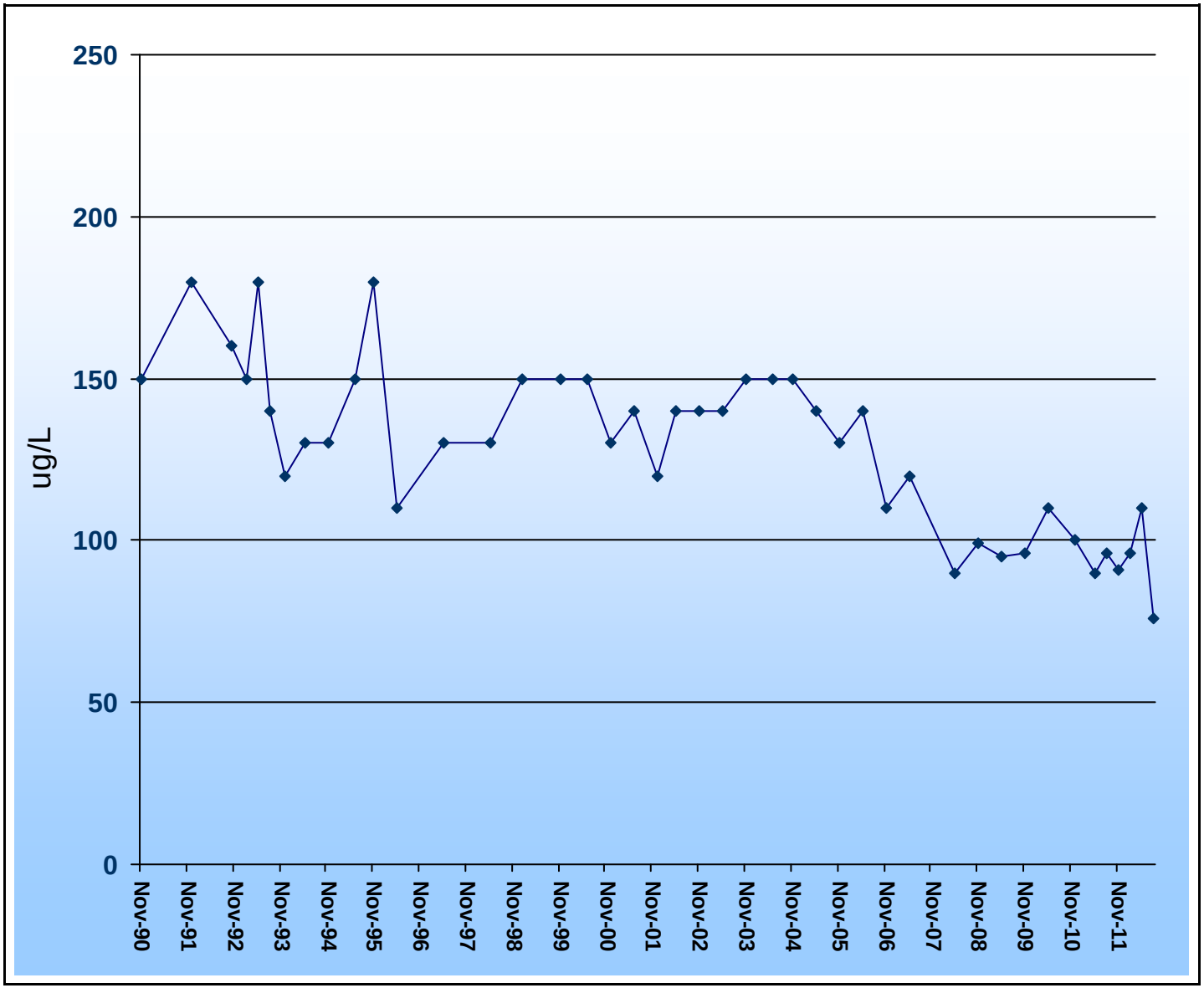
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-14-327

Casno 79-01-6 Analyte Trichloroethene

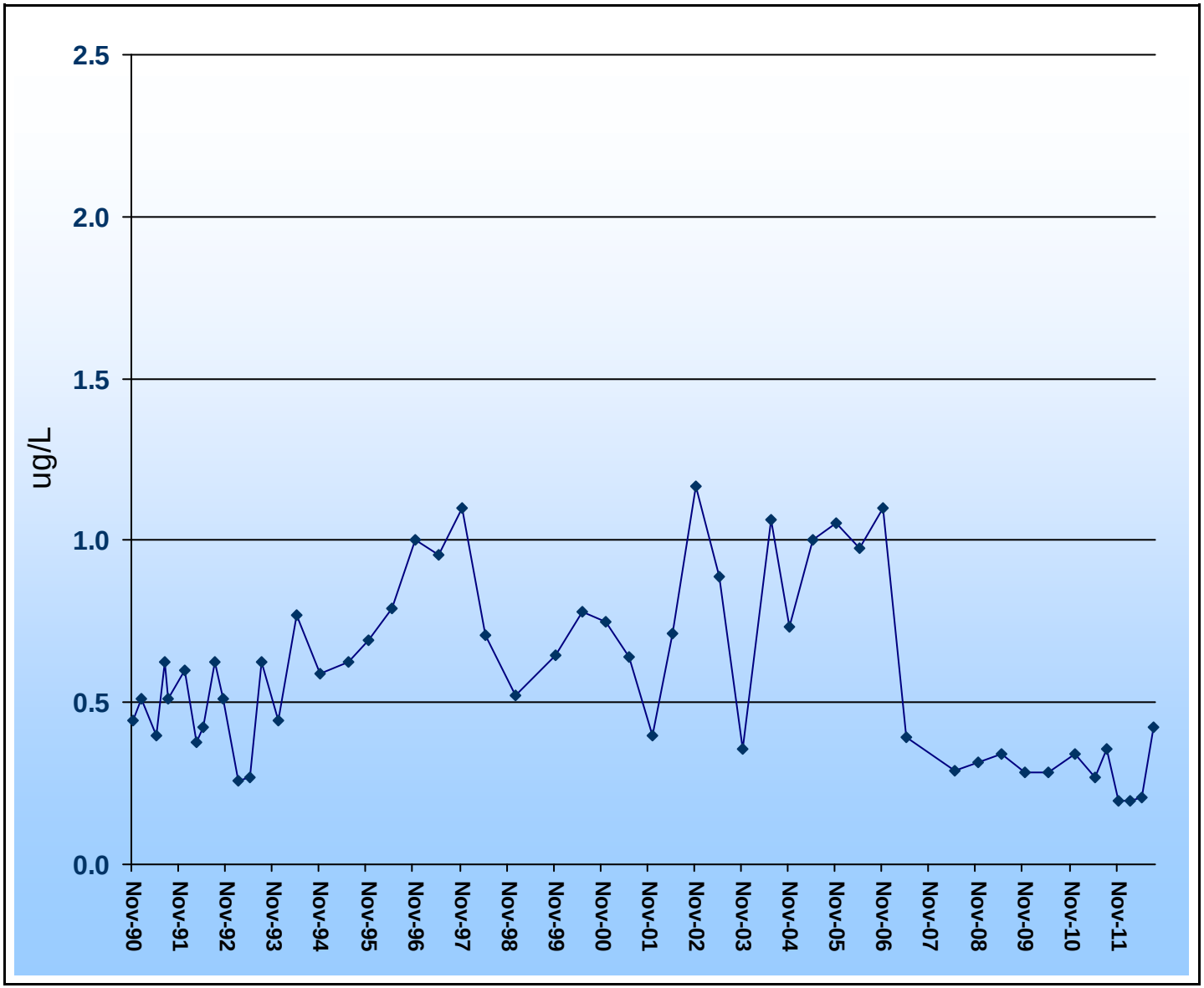
Cleanup Level 5.0 ug/L MCL



Well ID BLM-14-327

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

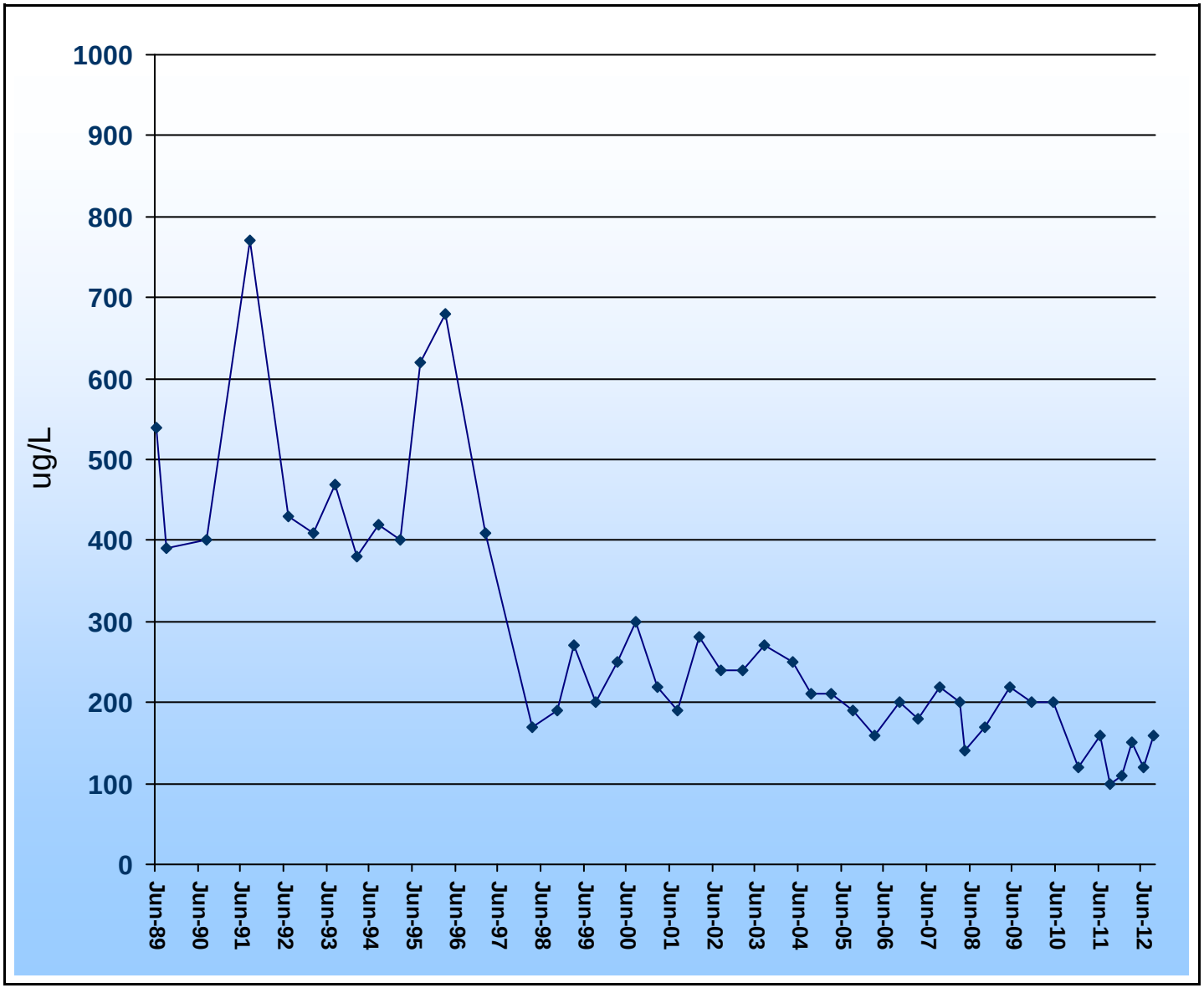
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BLM-15-305

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

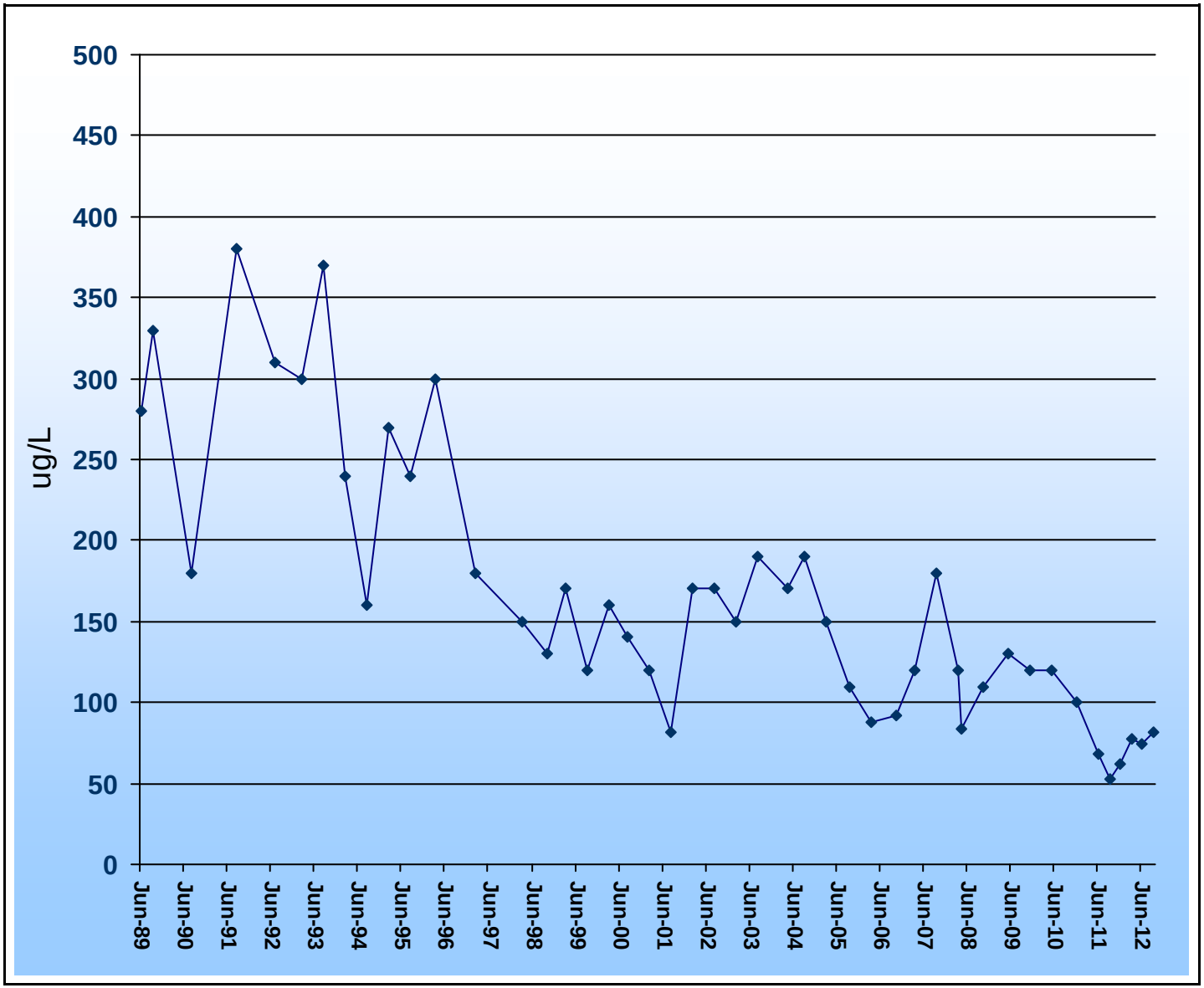
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-15-305

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

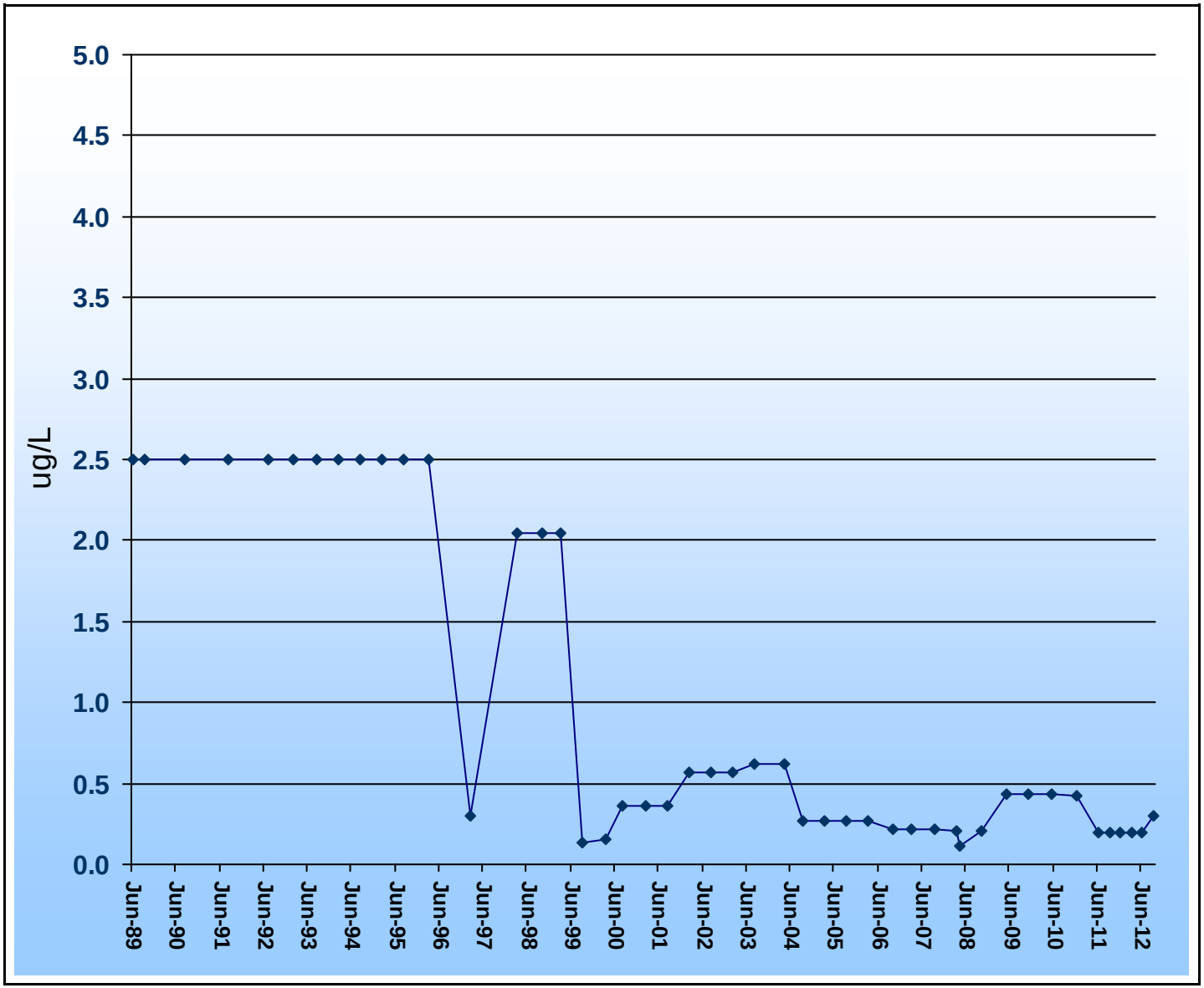
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-15-305

Casno 127-18-4 Analyte Tetrachloroethene

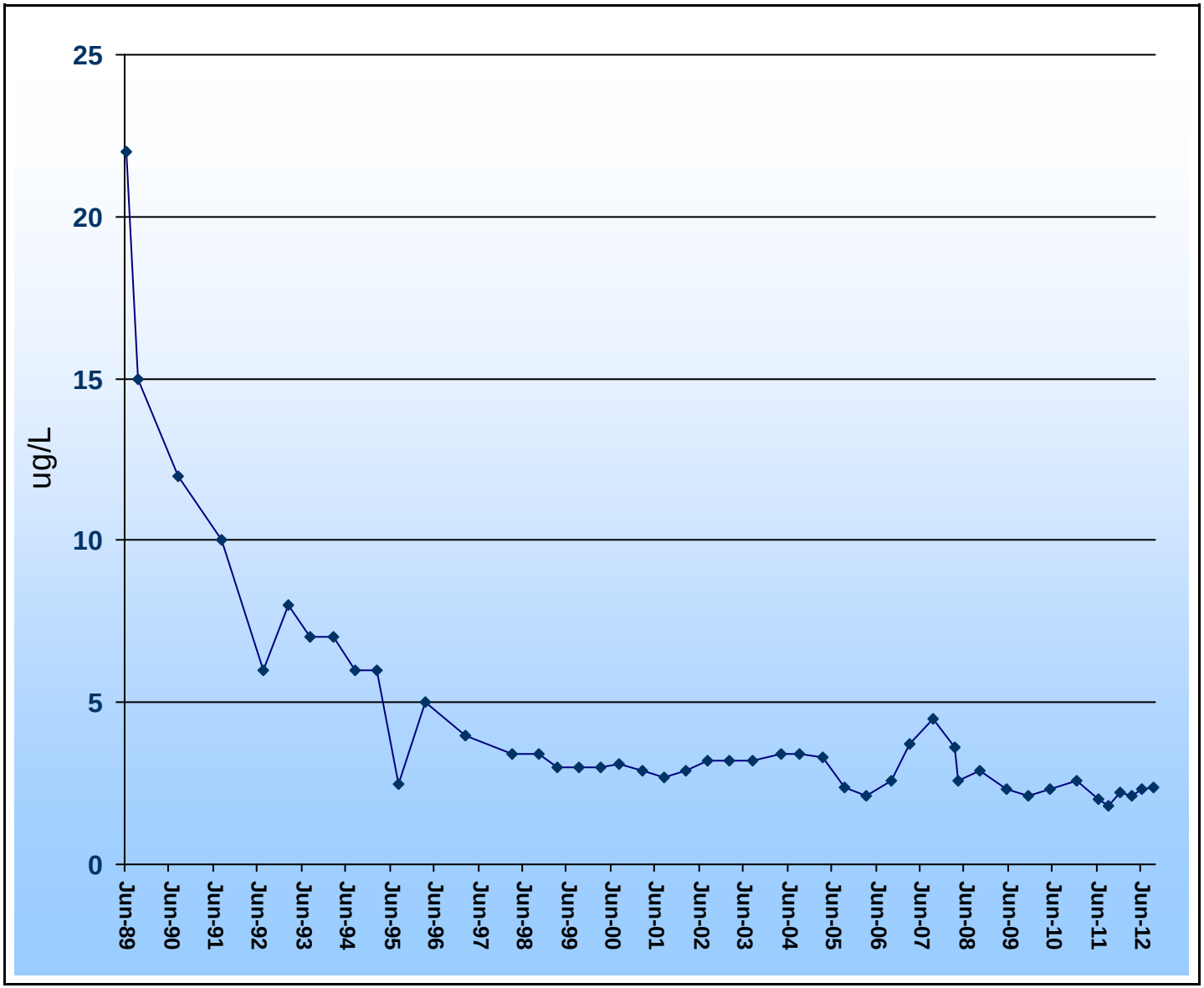
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-15-305

Casno 79-01-6 Analyte Trichloroethene

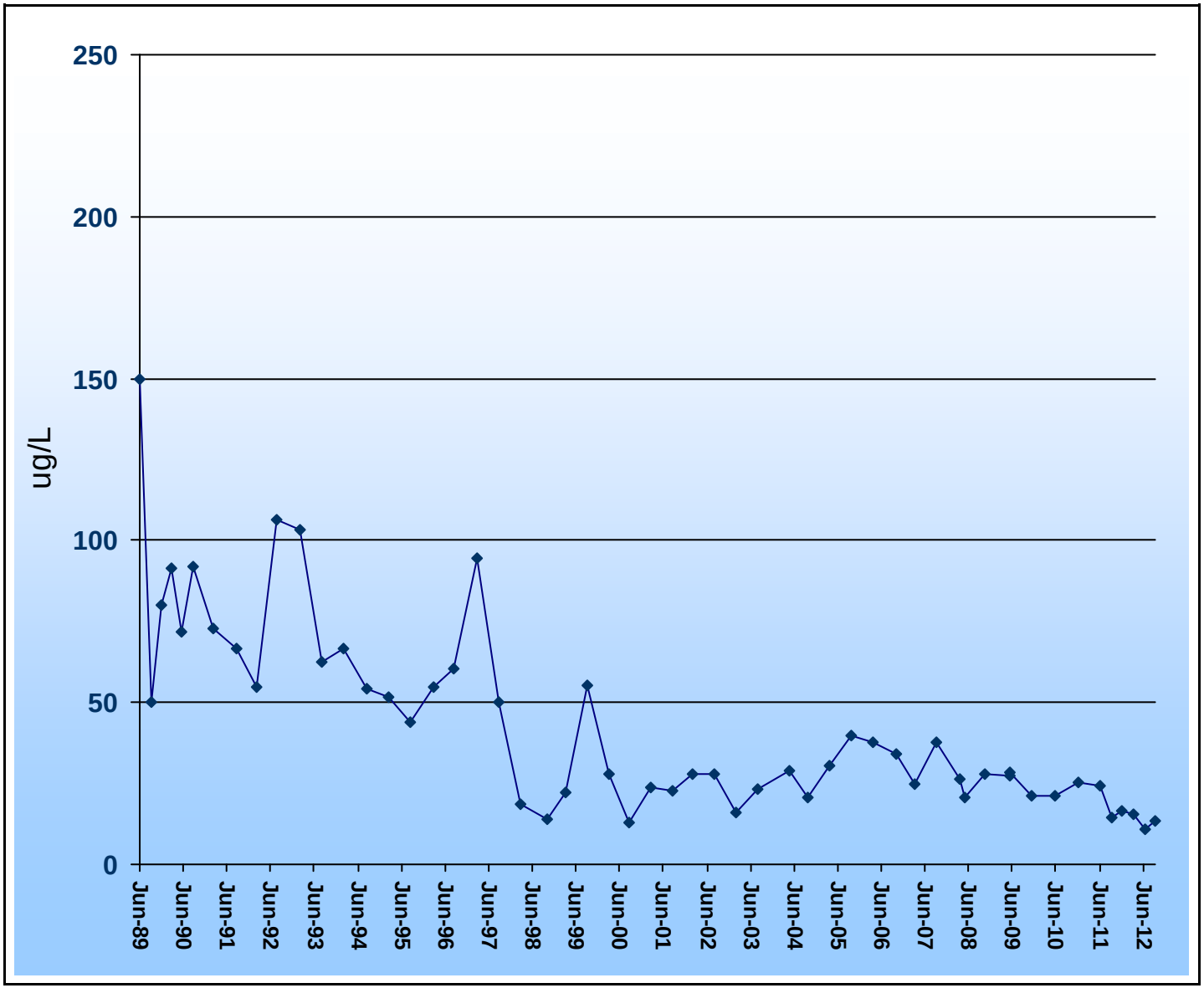
Cleanup Level 5.0 ug/L MCL



Well ID BLM-15-305

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

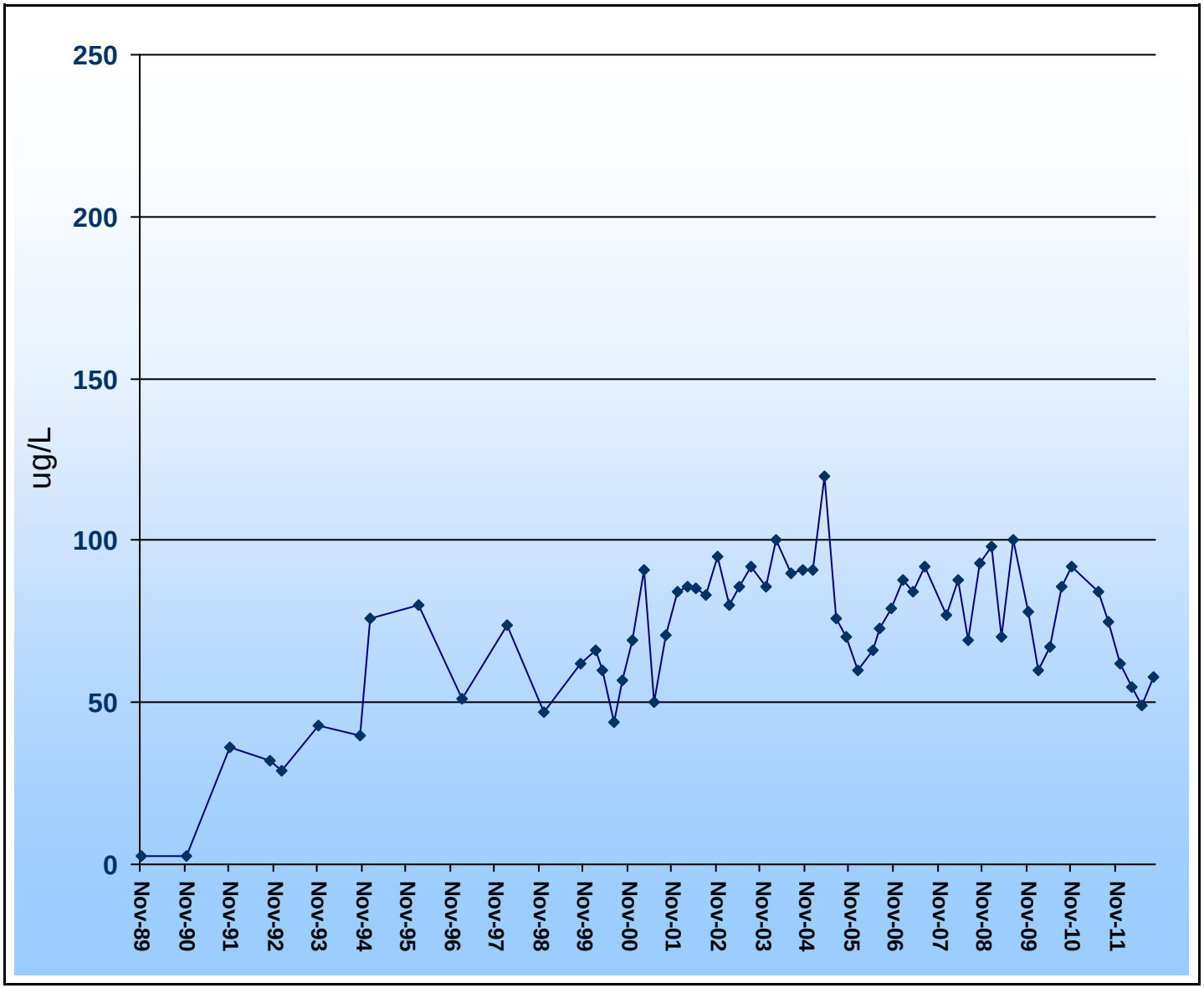
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BLM-18-430

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

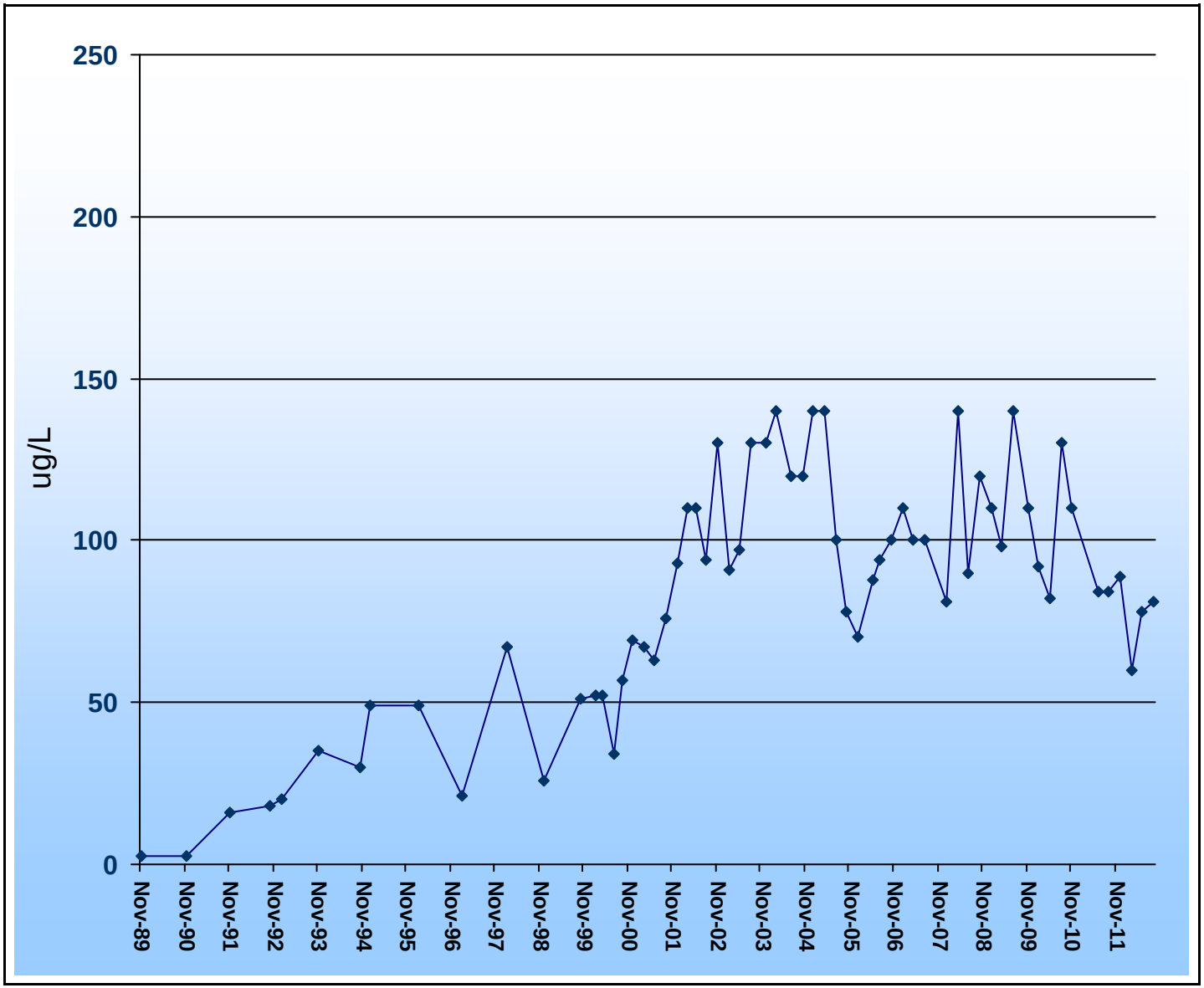
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-18-430

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

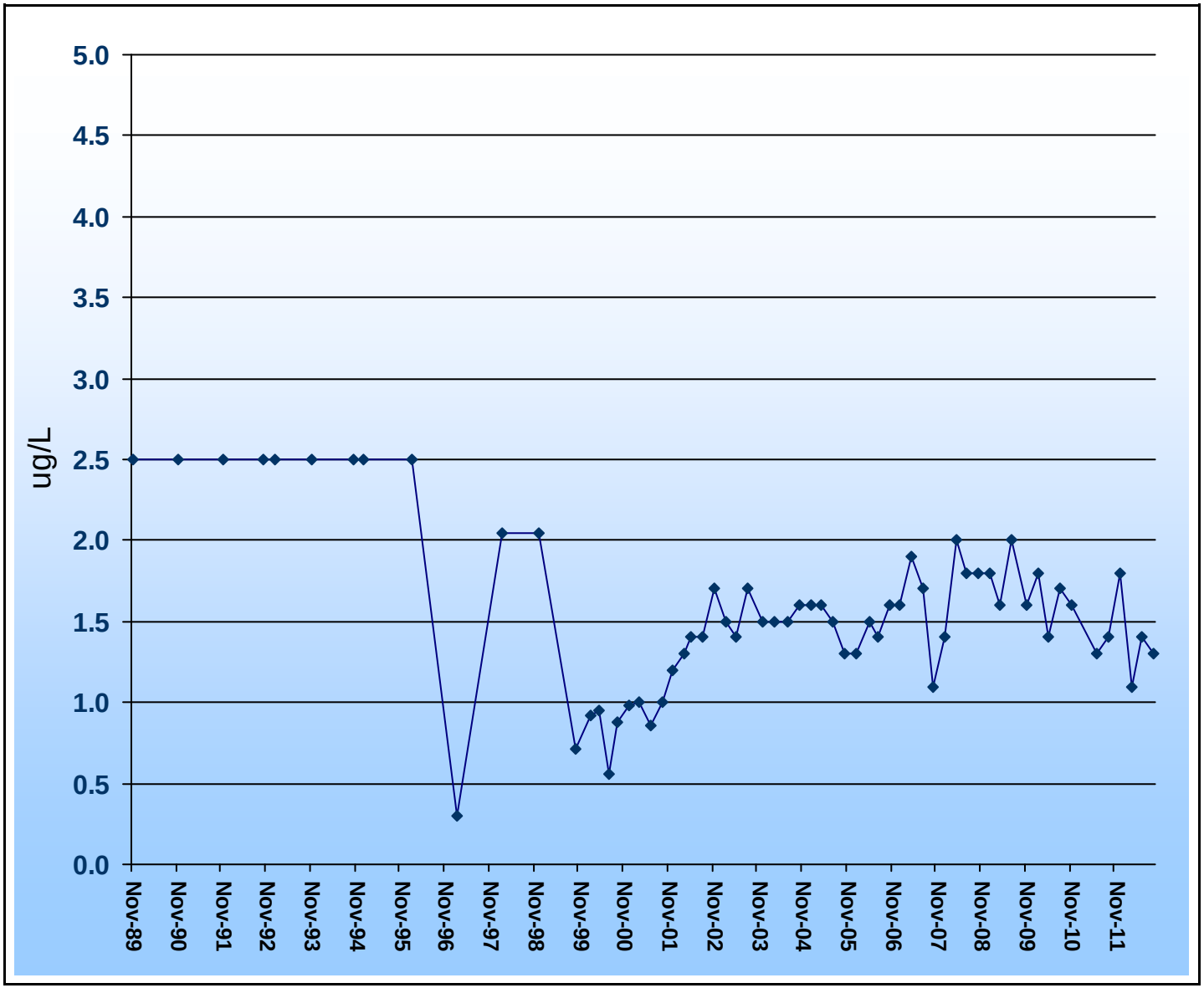
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-18-430

Casno 127-18-4 Analyte Tetrachloroethene

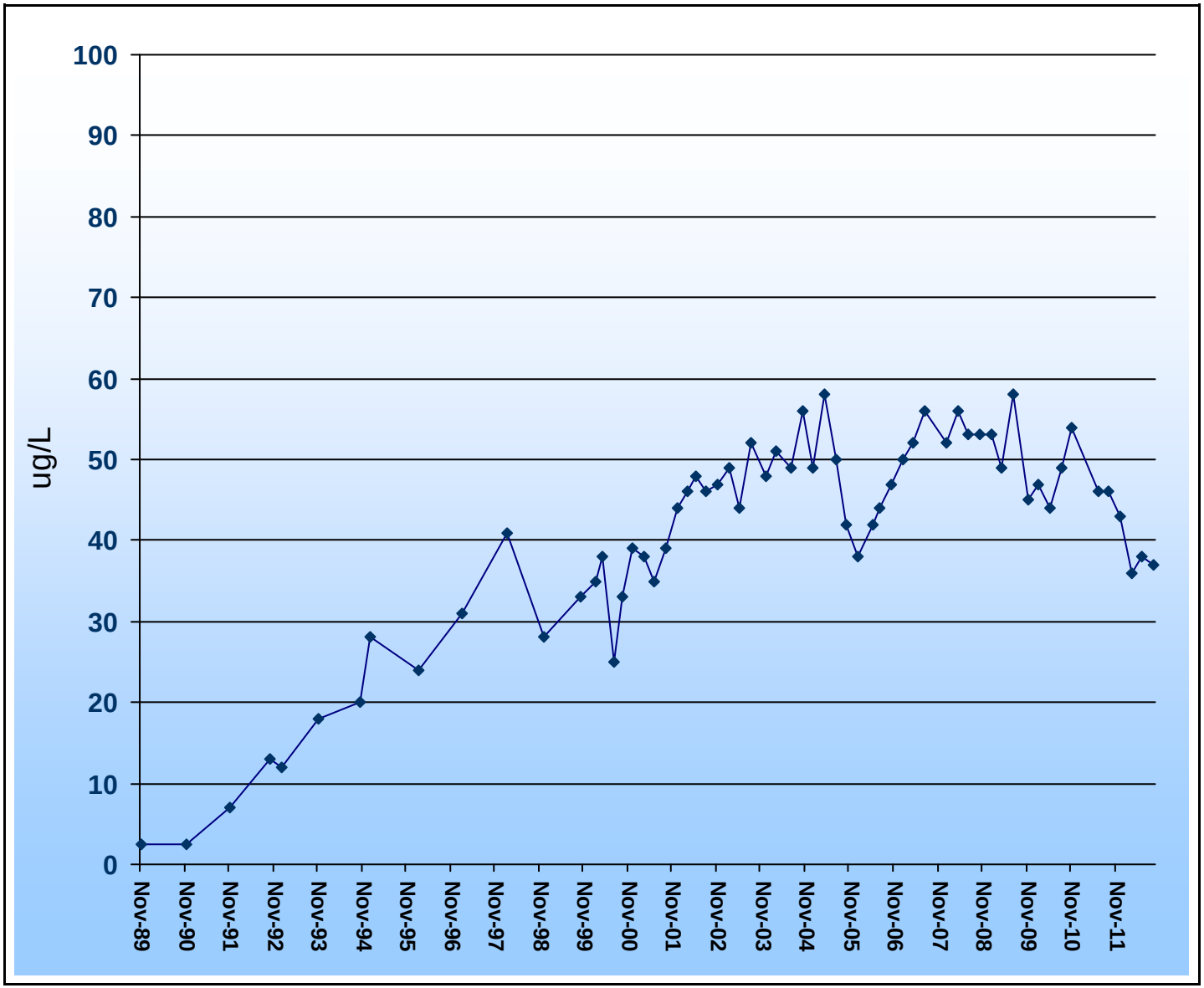
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-18-430

Casno 79-01-6 Analyte Trichloroethene

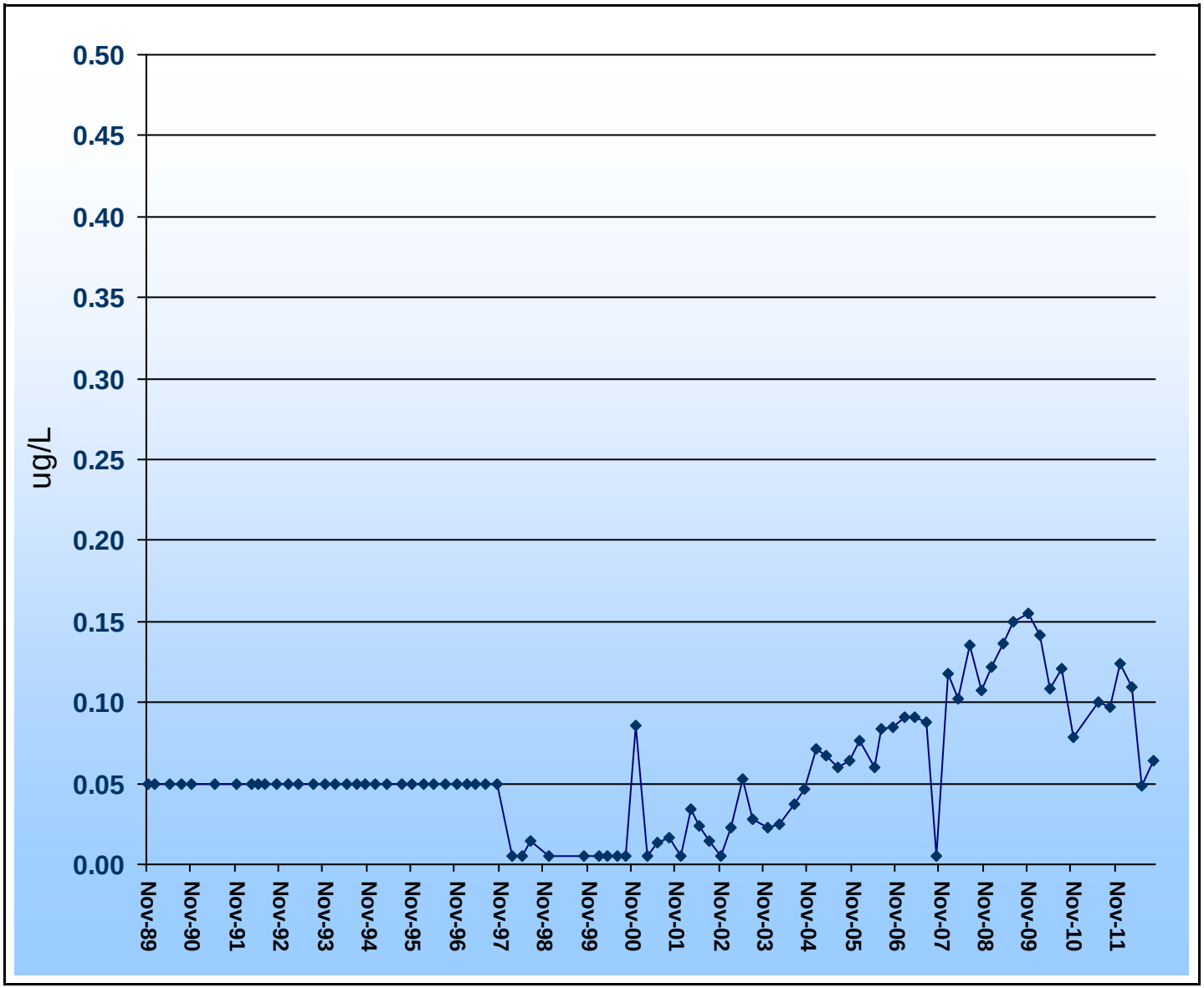
Cleanup Level 5.0 ug/L MCL



Well ID BLM-18-430

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

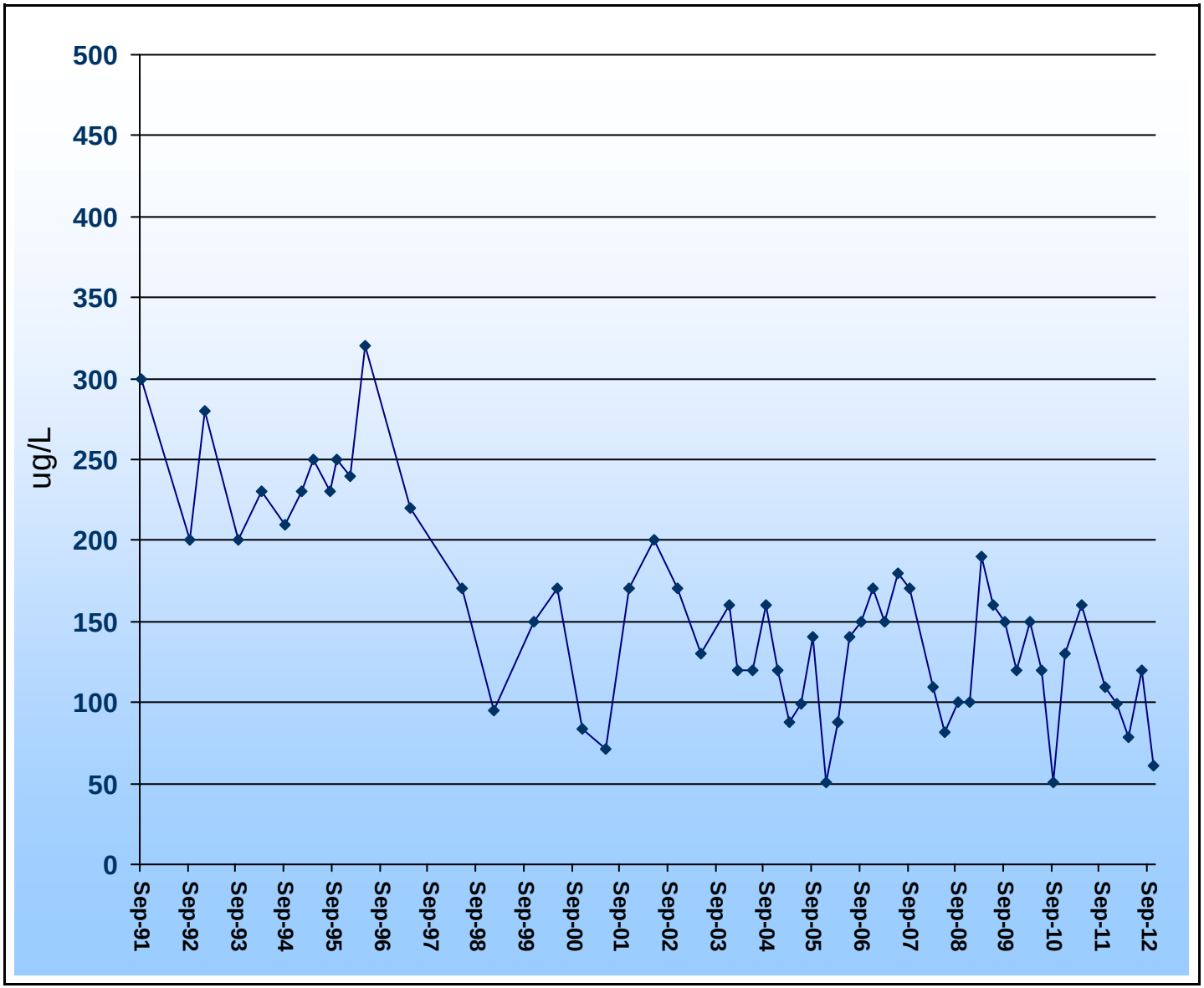
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BLM-21-400

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

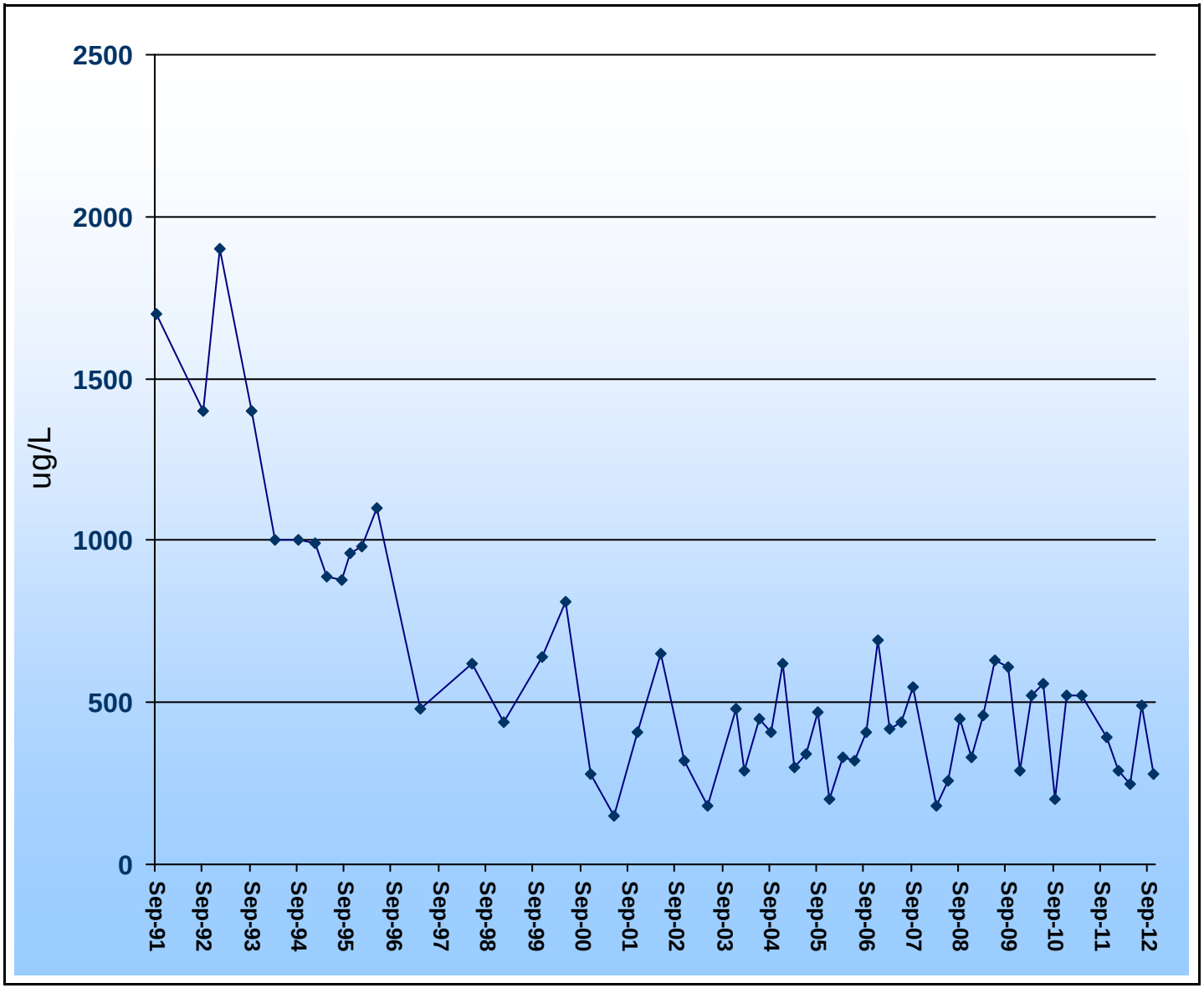
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-21-400

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

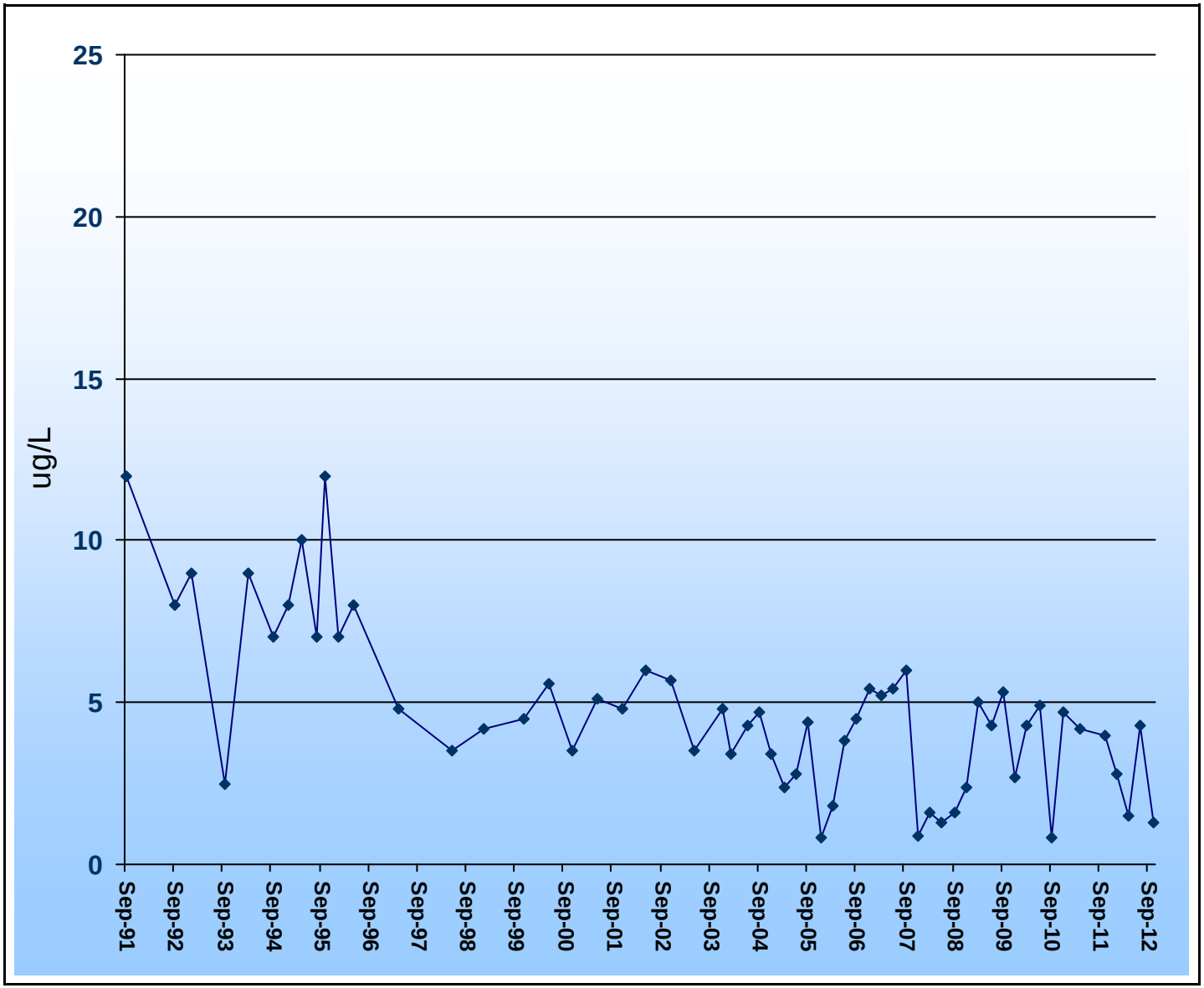
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-21-400

Casno 127-18-4 Analyte Tetrachloroethene

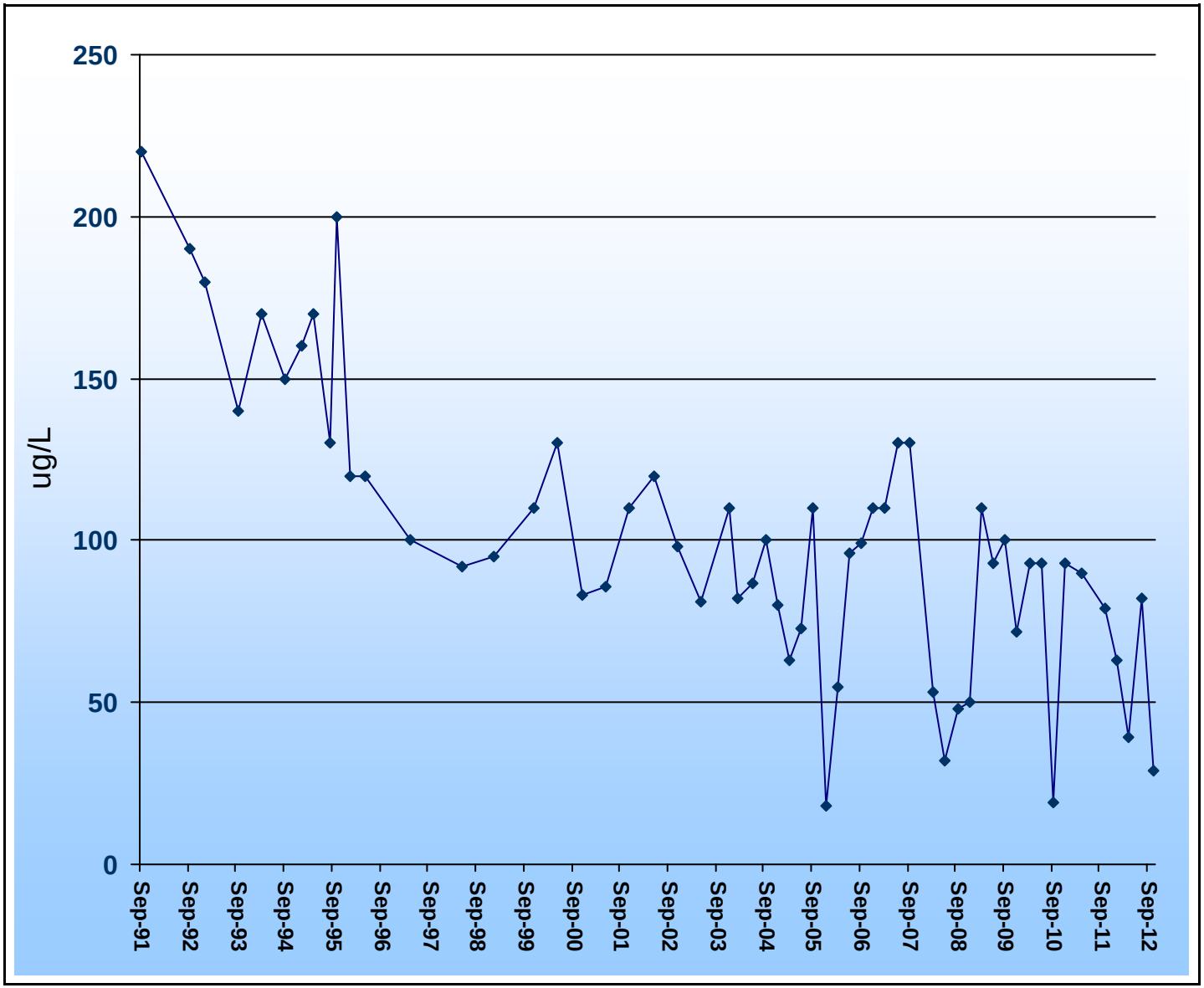
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-21-400

Casno 79-01-6 Analyte Trichloroethene

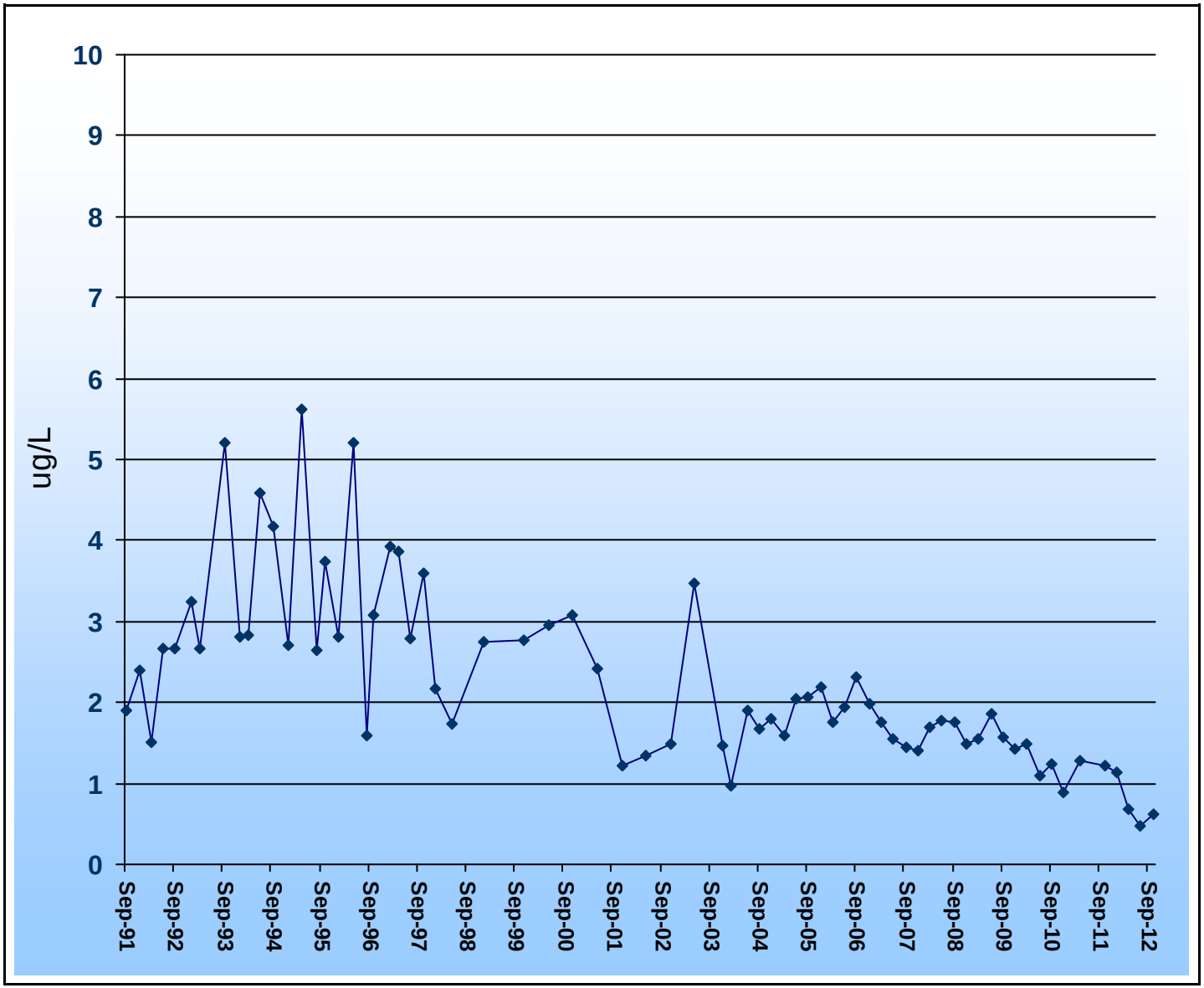
Cleanup Level 5.0 ug/L MCL



Well ID BLM-21-400

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

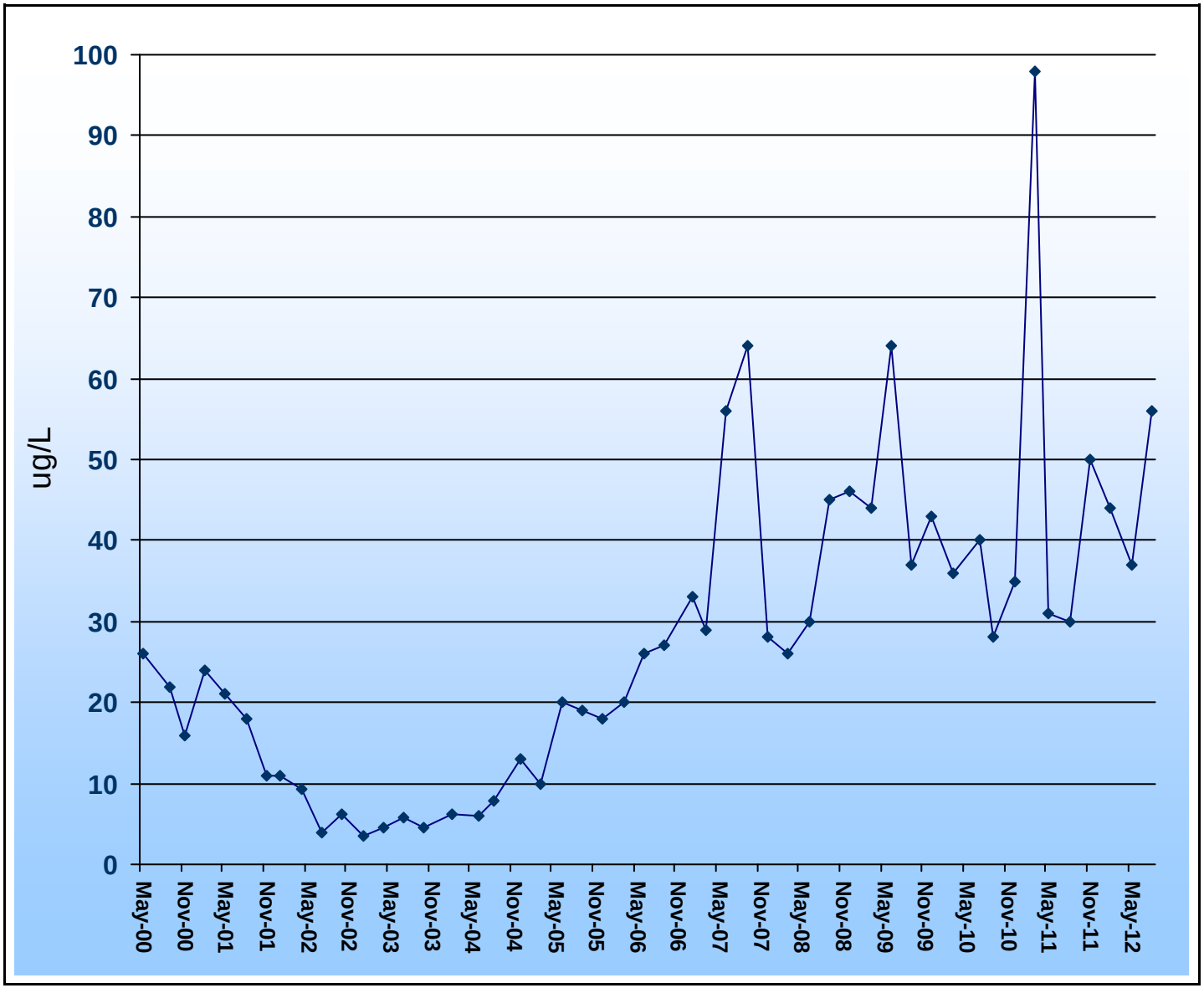
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BLM-36-350

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

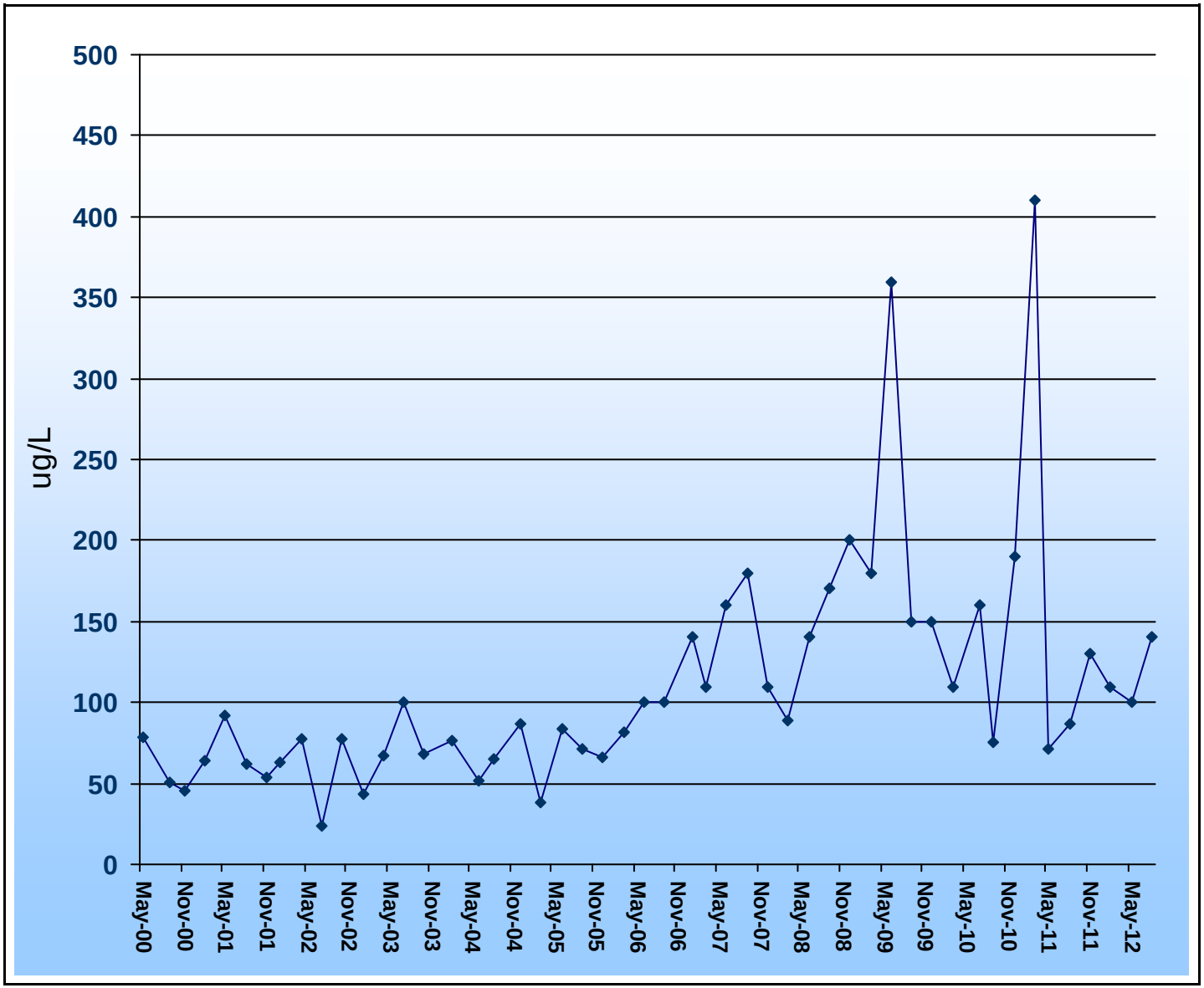
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-36-350

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

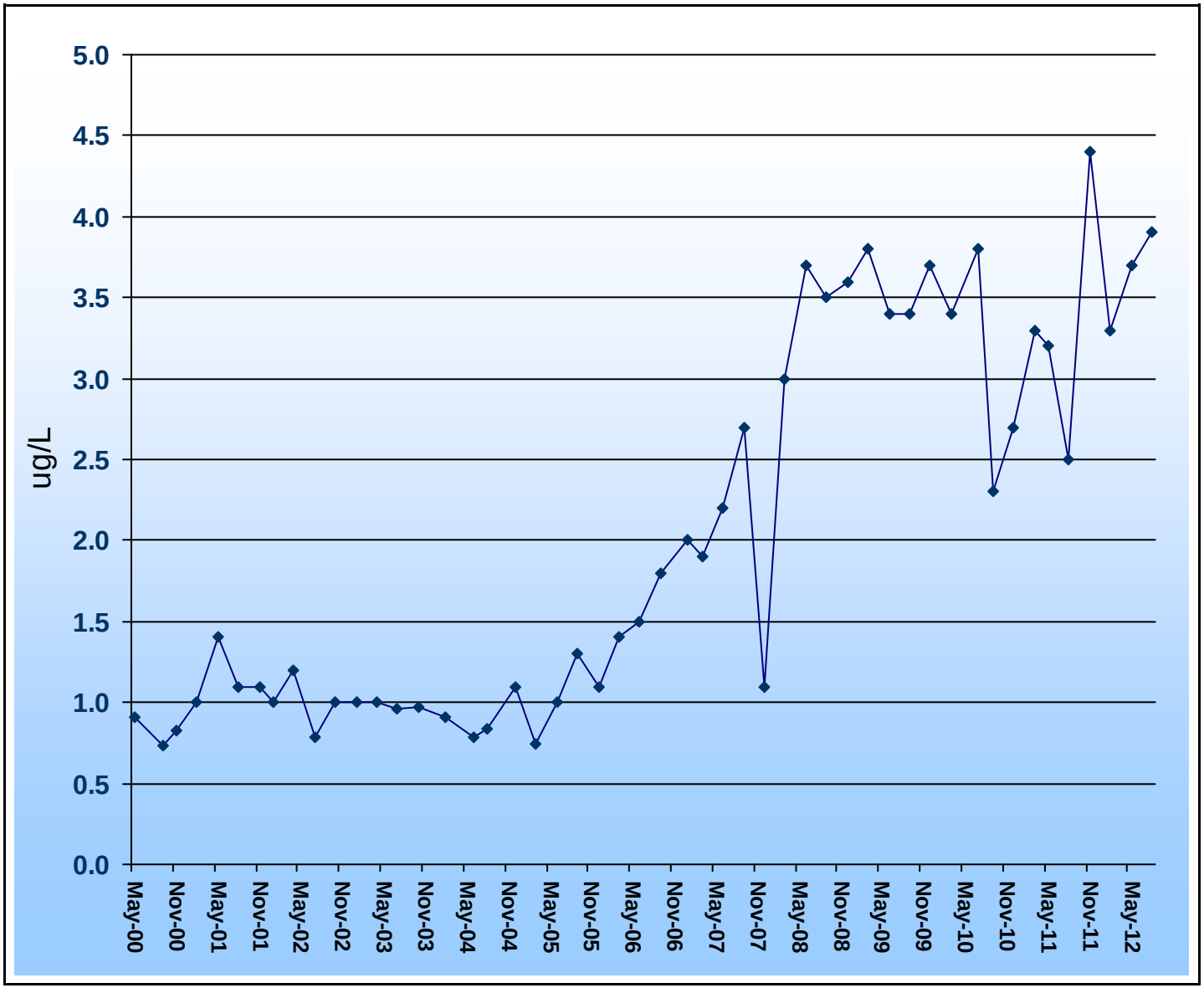
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-36-350

Casno 127-18-4 Analyte Tetrachloroethene

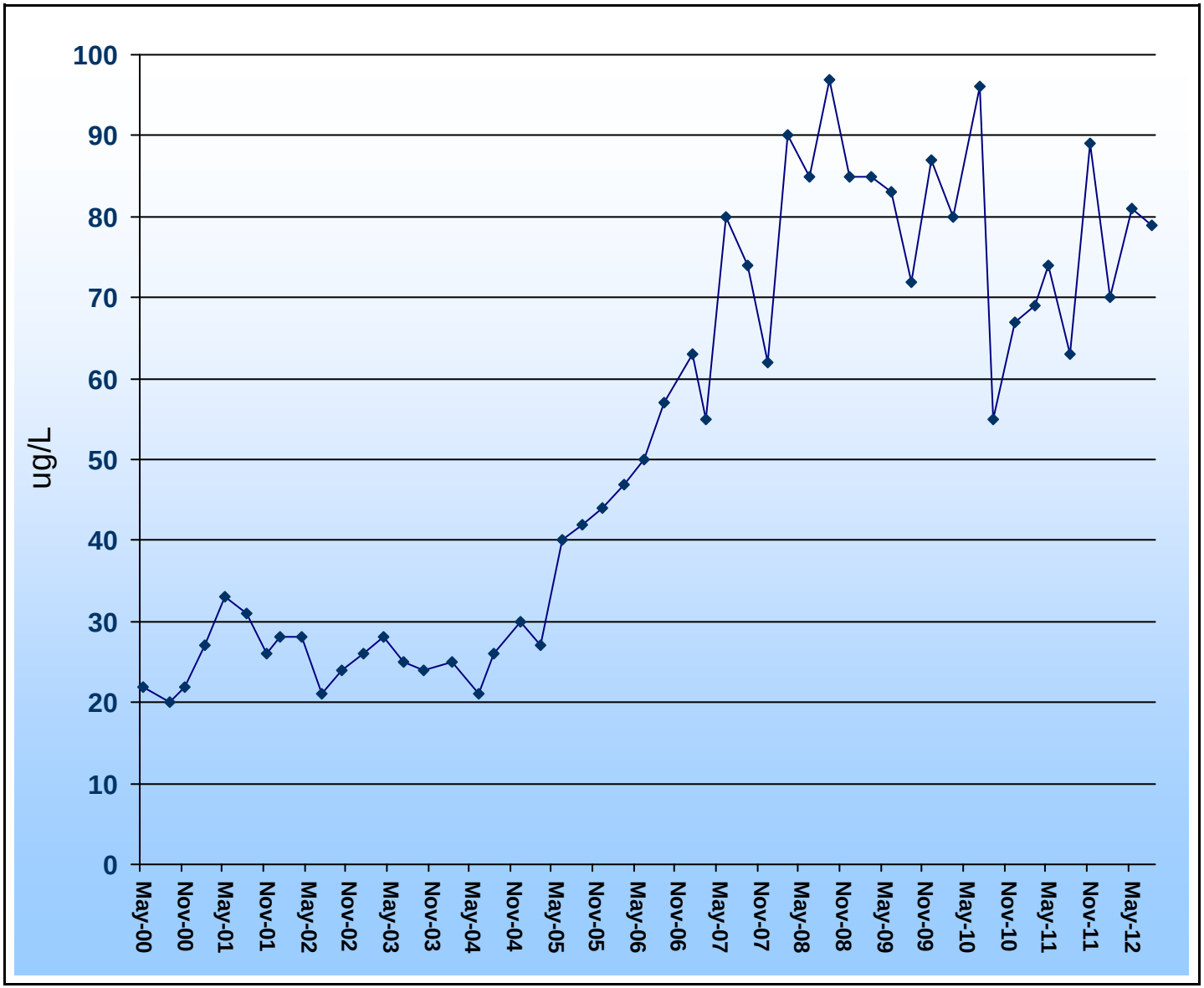
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-36-350

Casno 79-01-6 Analyte Trichloroethene

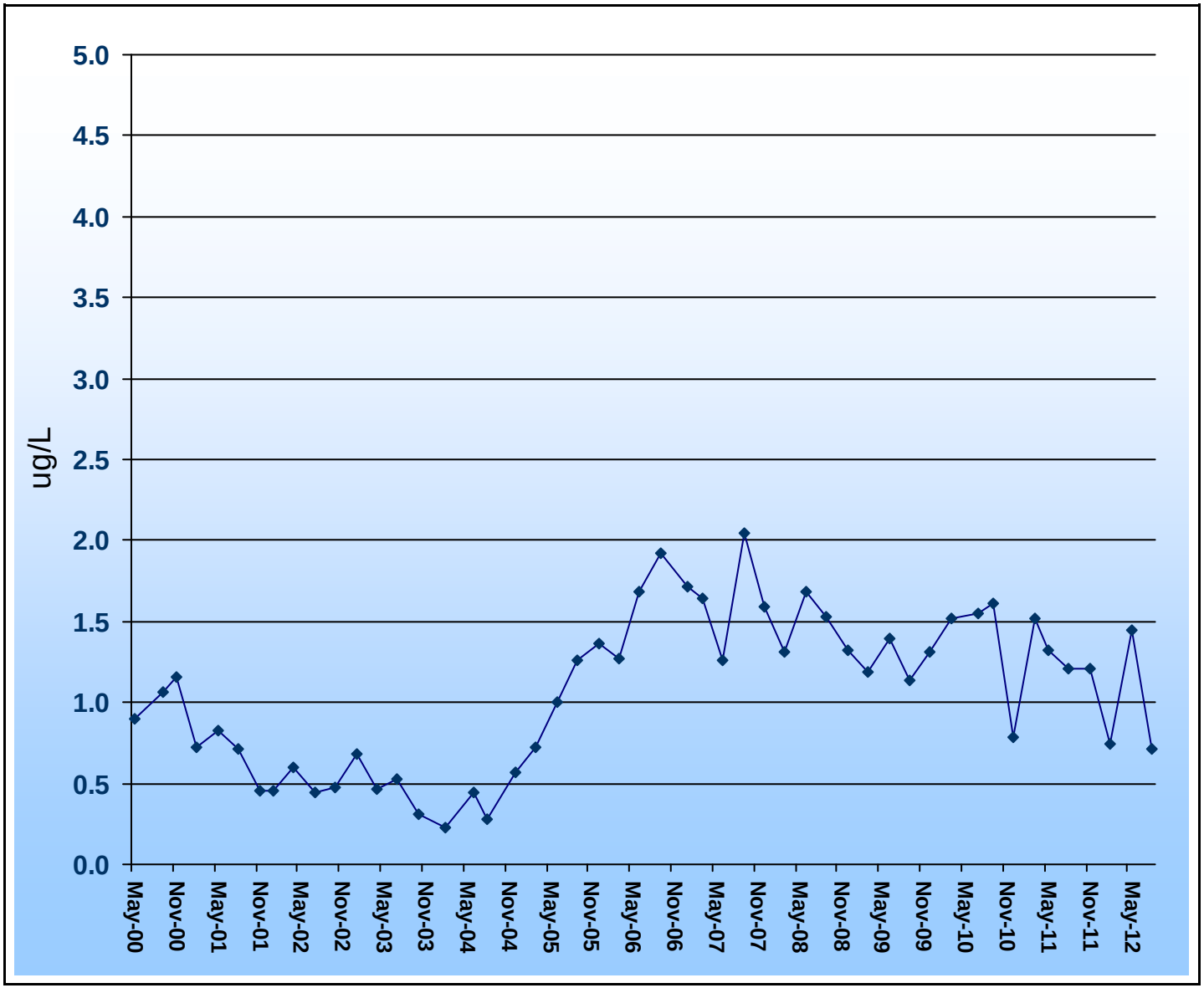
Cleanup Level 5.0 ug/L MCL



Well ID BLM-36-350

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



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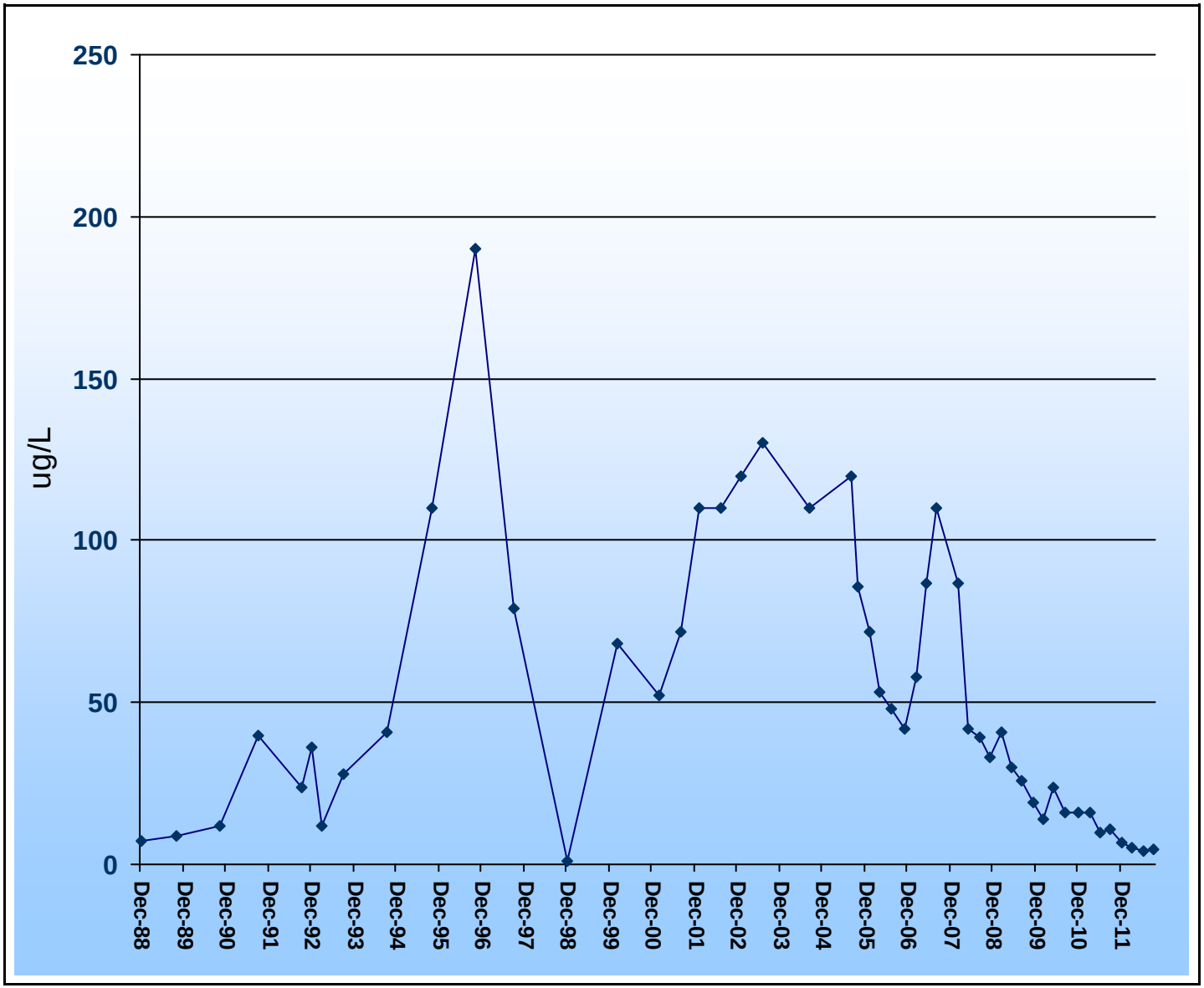
Appendix E
Time Concentration Plots

Main Plume Well Group

Well ID PL-1-486

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

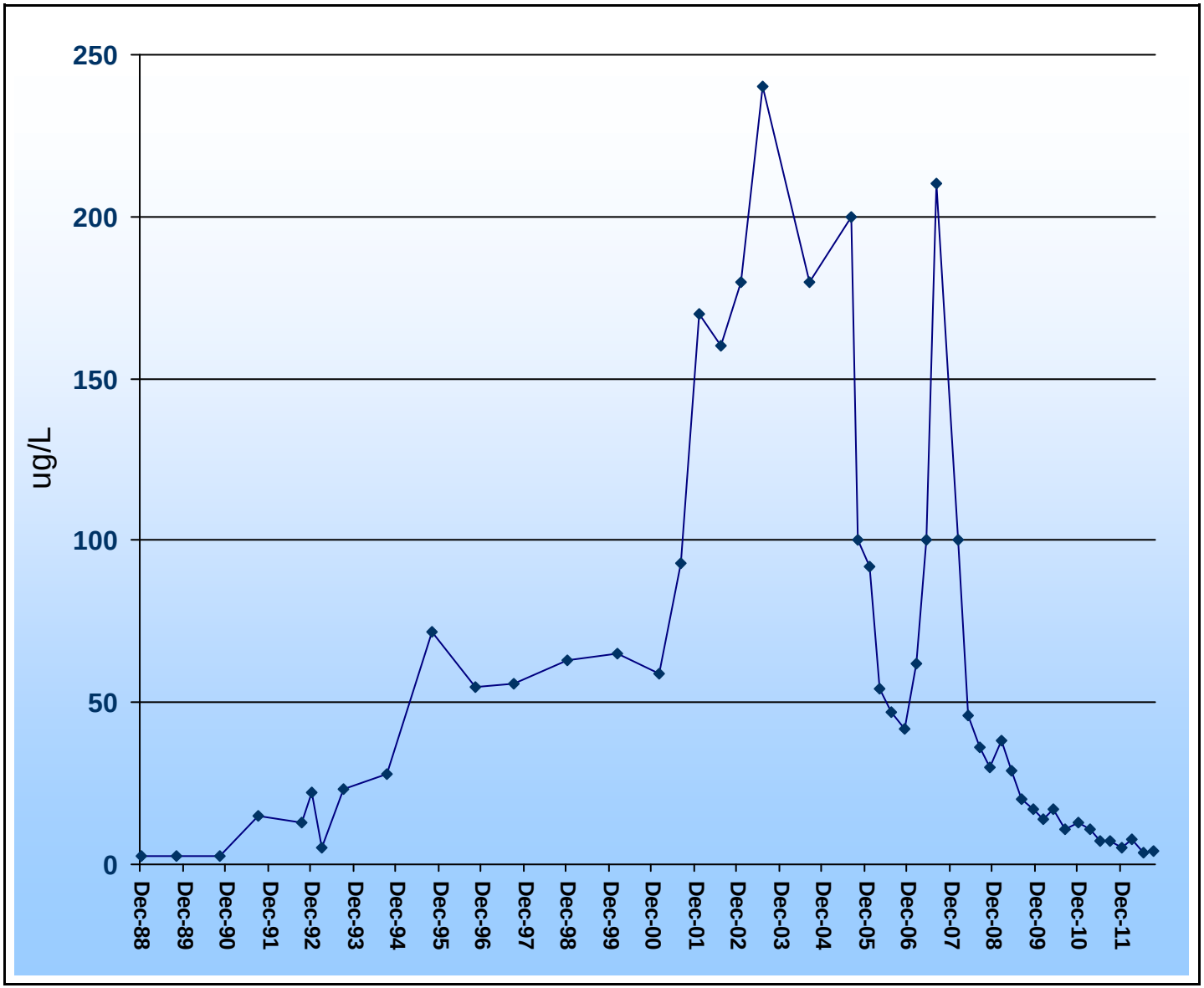
Cleanup Level 1,100 ug/L EPA RSL



Well ID PL-1-486

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

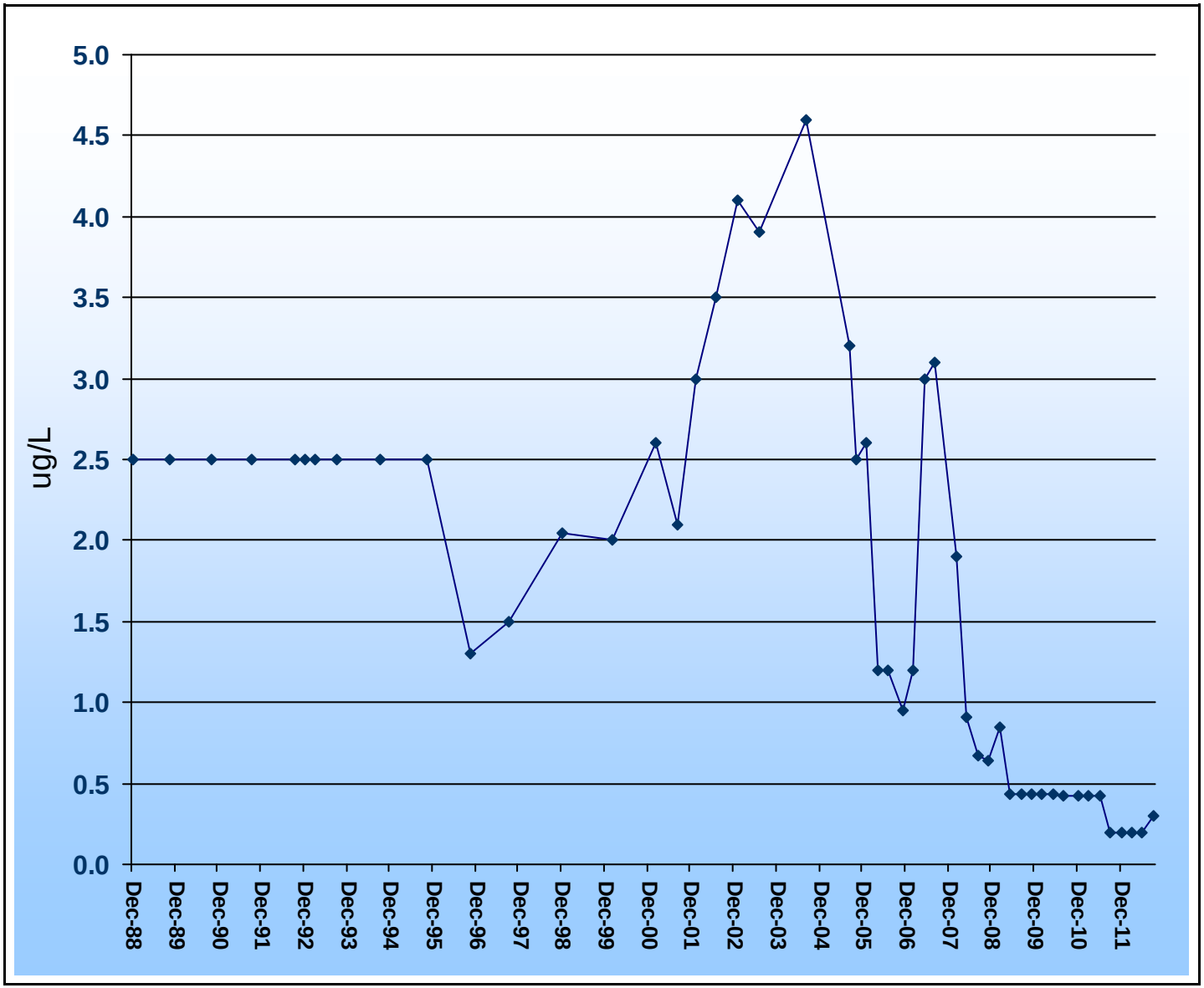
Cleanup Level 53,000 ug/L EPA RSL



Well ID PL-1-486

Casno 127-18-4 Analyte Tetrachloroethene

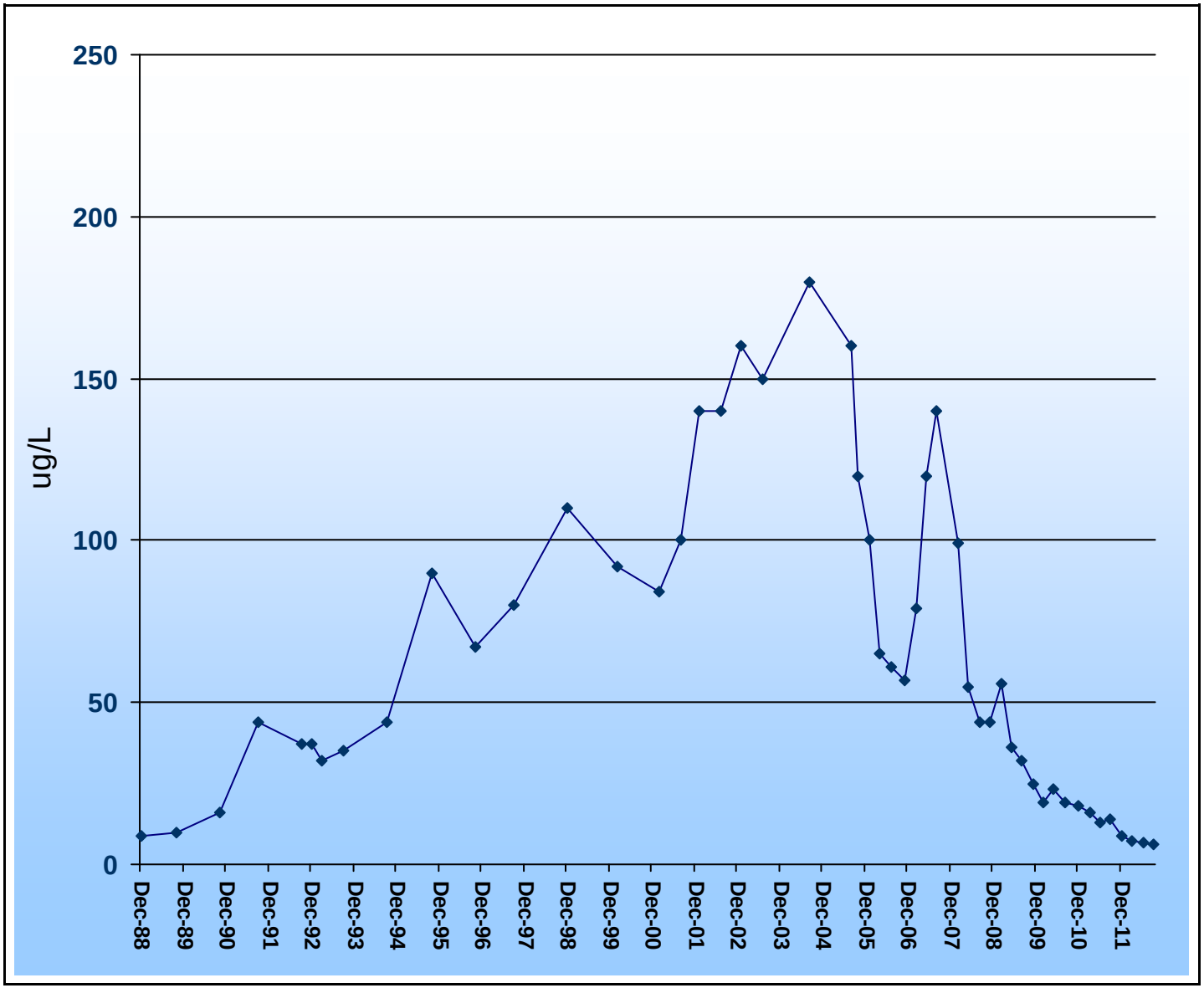
Cleanup Level 1.1 ug/L EPA RSL



Well ID PL-1-486

Casno 79-01-6 Analyte Trichloroethene

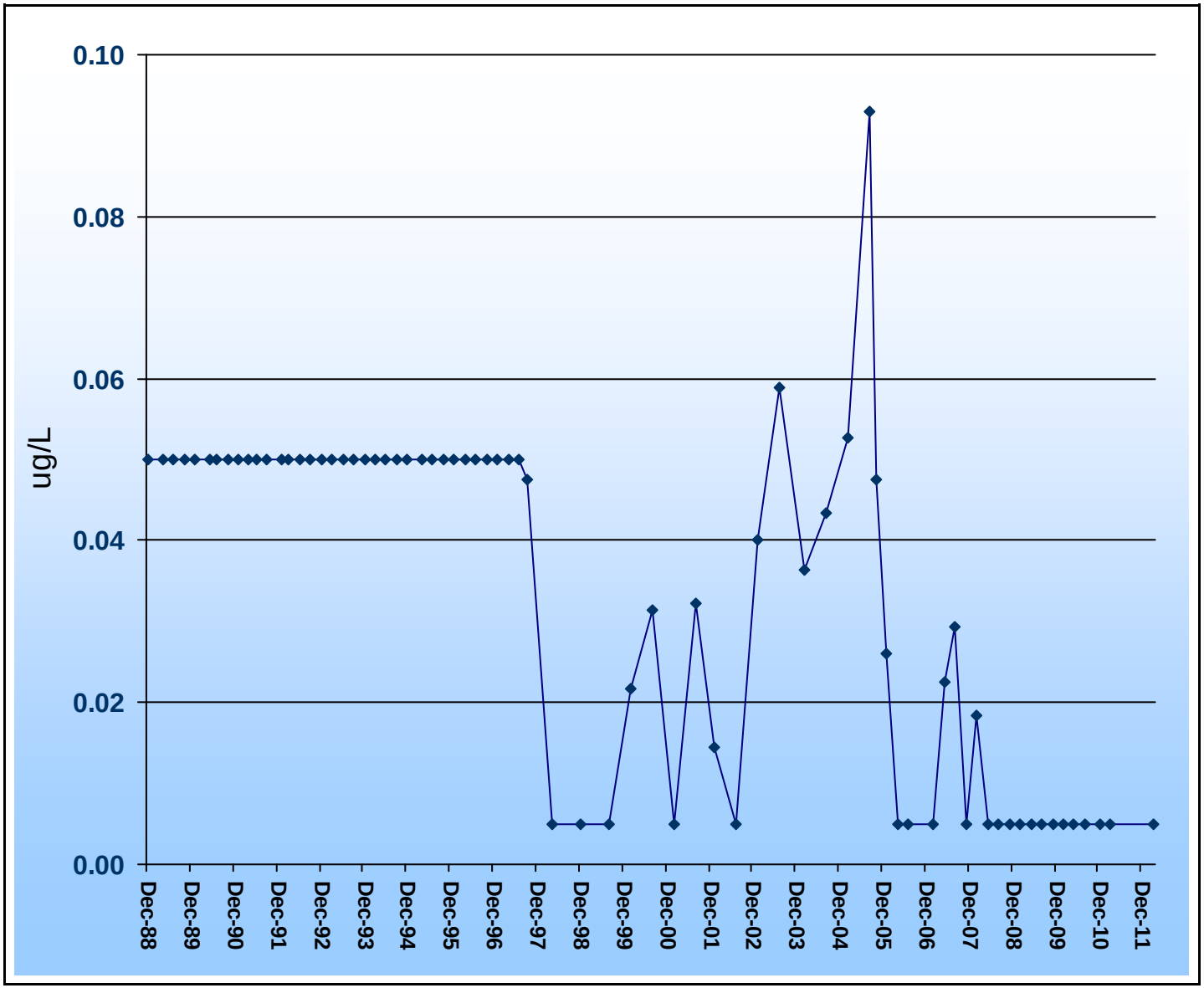
Cleanup Level 5.0 ug/L MCL



Well ID PL-1-486

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

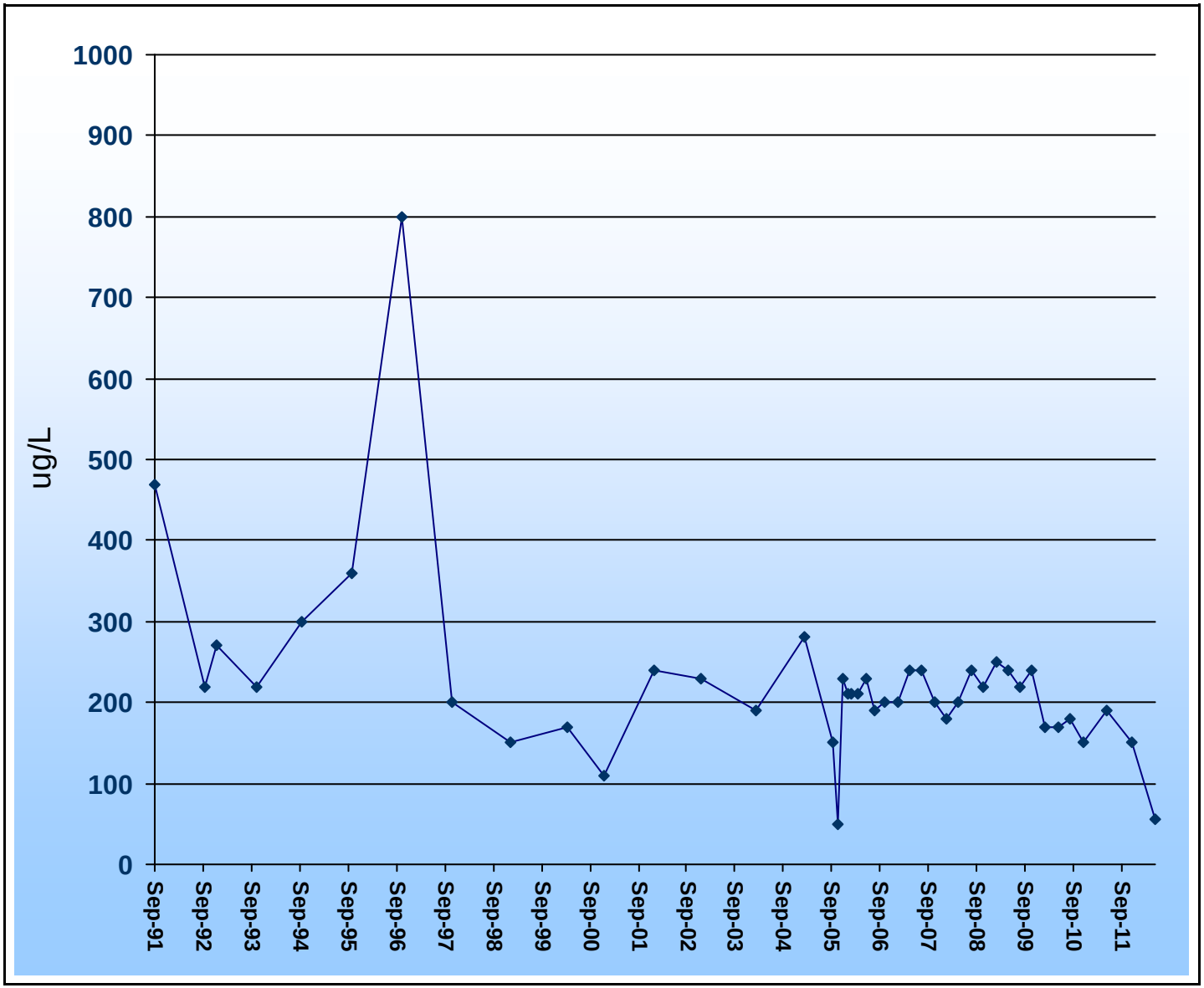
Cleanup Level 0.0042 ug/L EPA RSL



Well ID ST-3-486

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

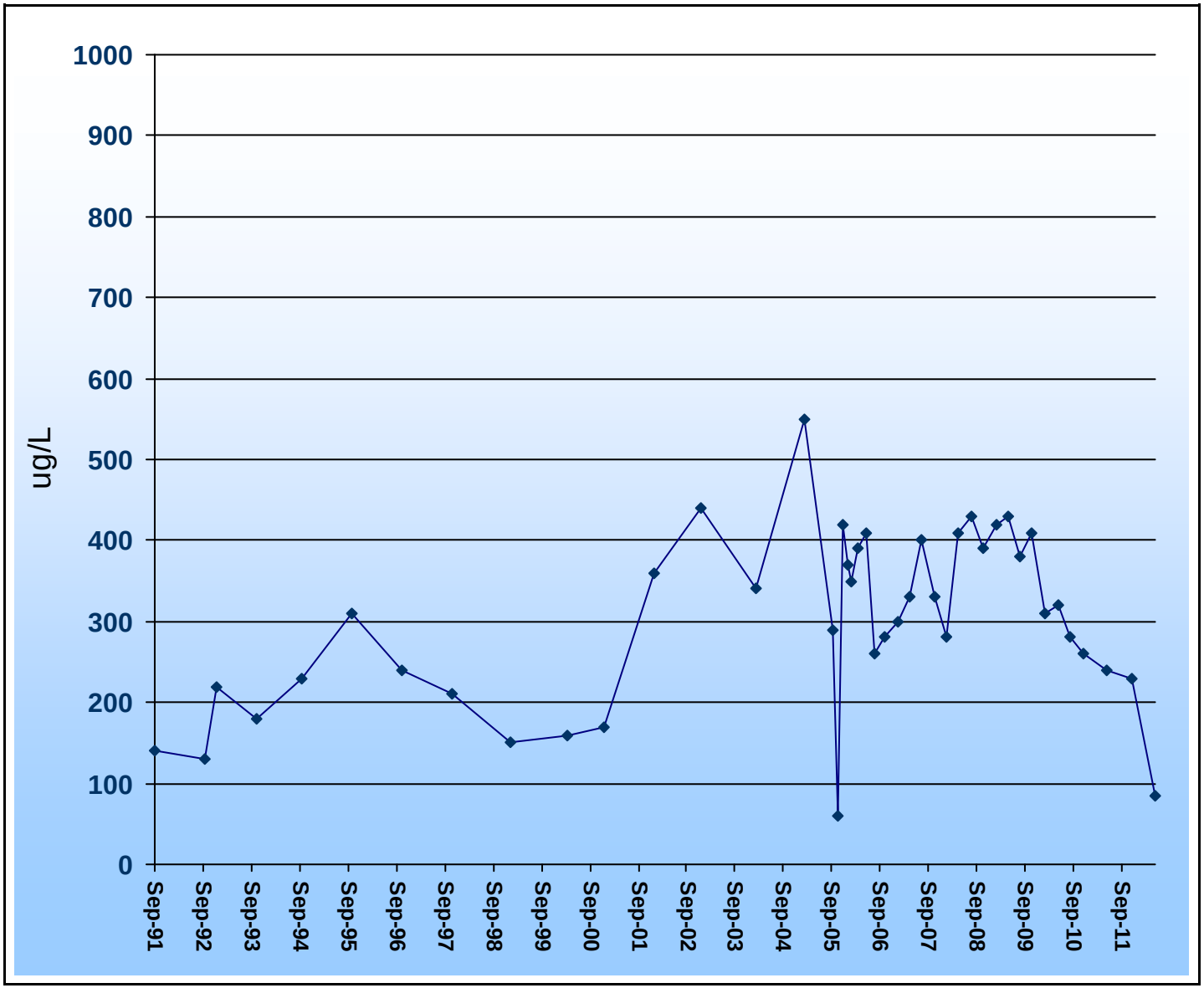
Cleanup Level 1,100 ug/L EPA RSL



Well ID ST-3-486

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

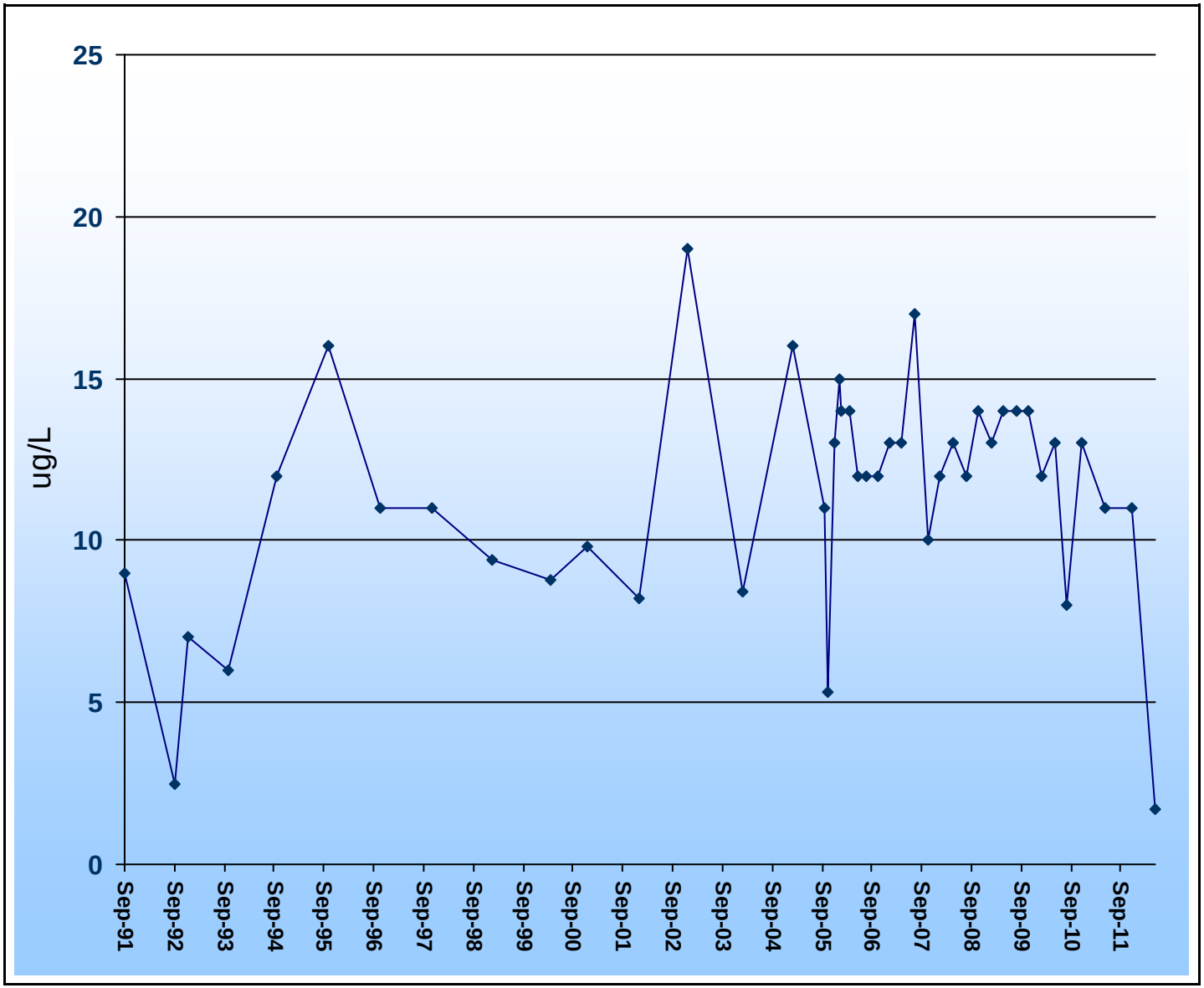
Cleanup Level 53,000 ug/L EPA RSL



Well ID ST-3-486

Casno 127-18-4 Analyte Tetrachloroethene

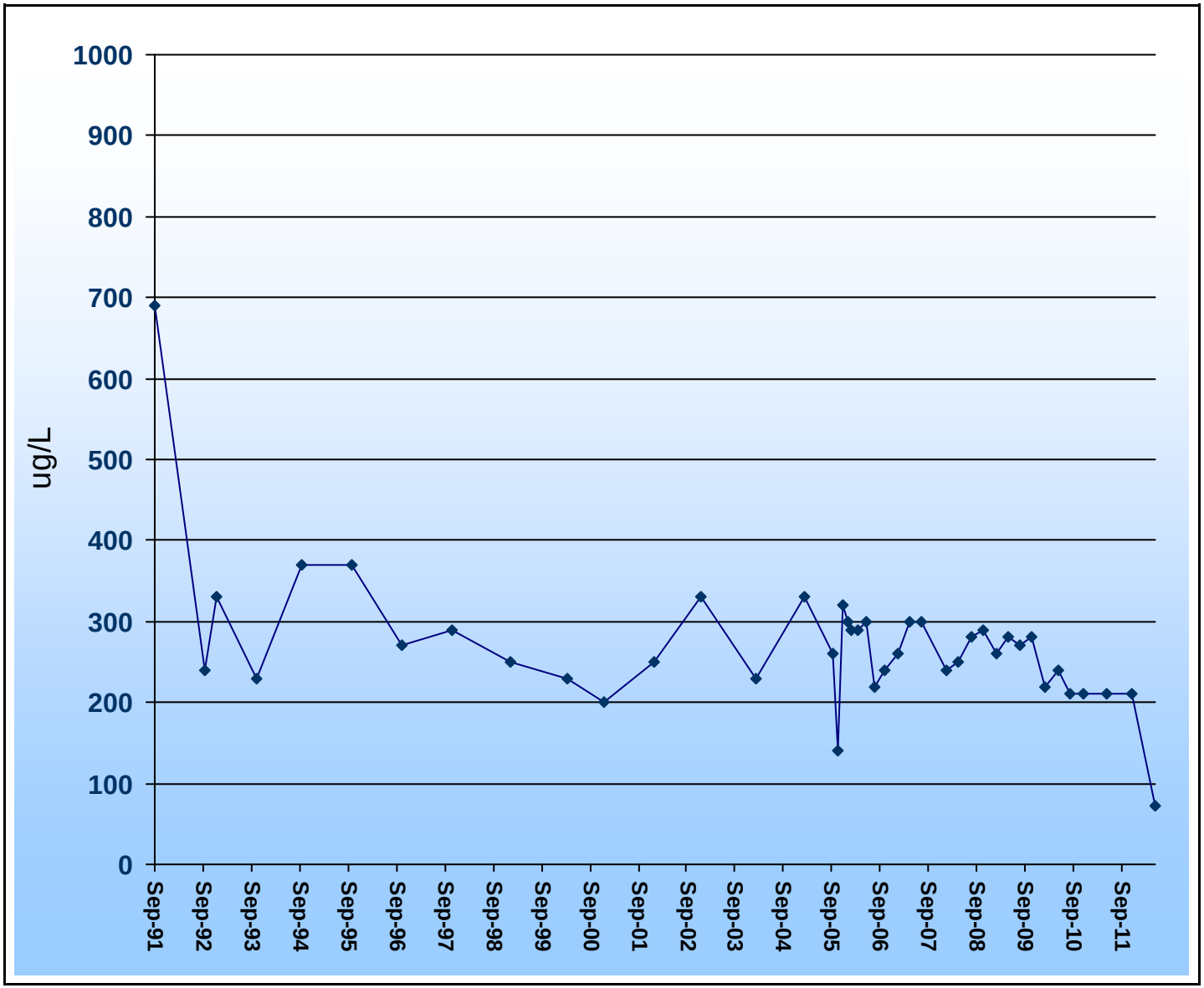
Cleanup Level 1.1 ug/L EPA RSL



Well ID ST-3-486

Casno 79-01-6 Analyte Trichloroethene

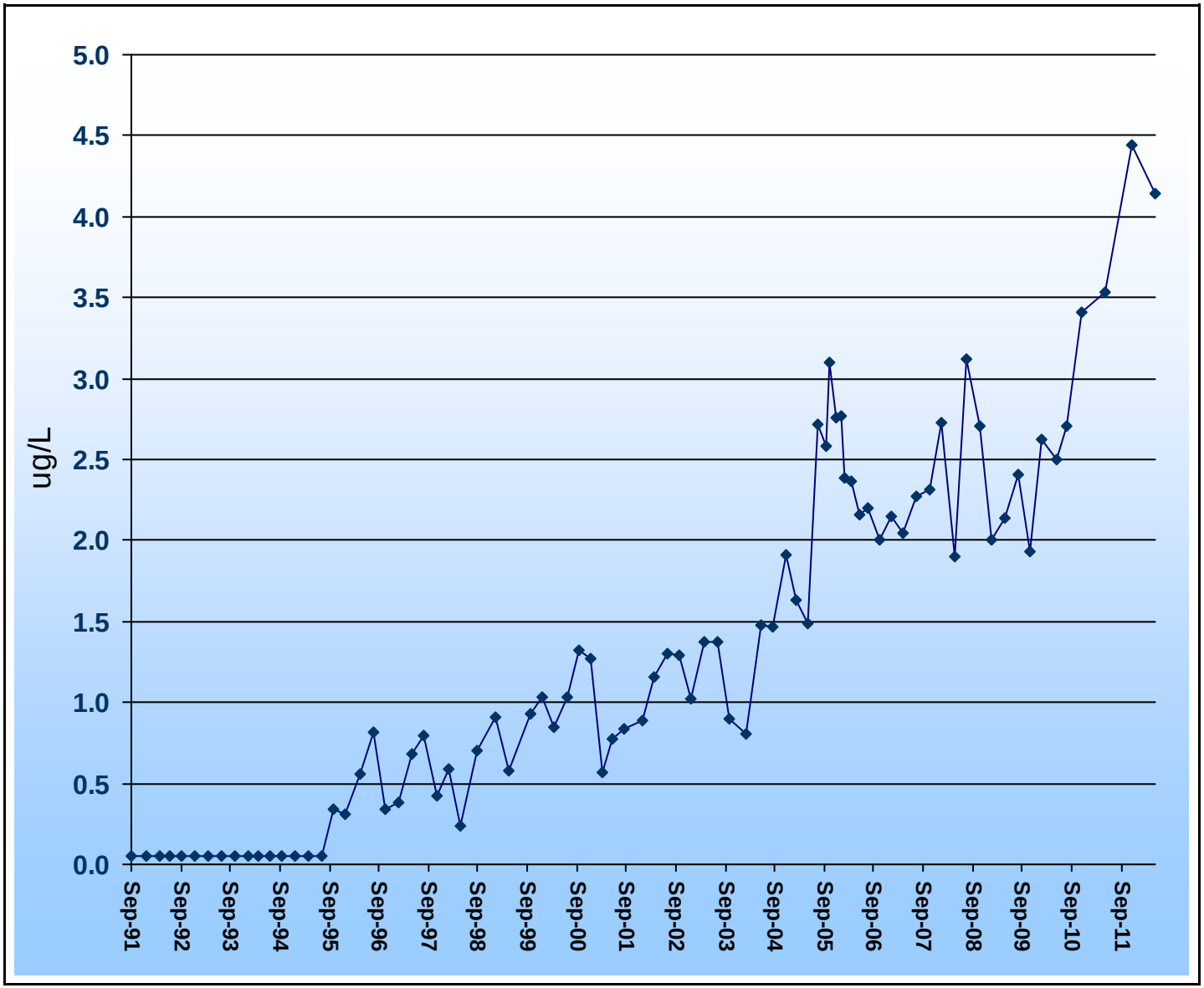
Cleanup Level 5.0 ug/L MCL



Well ID ST-3-486

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

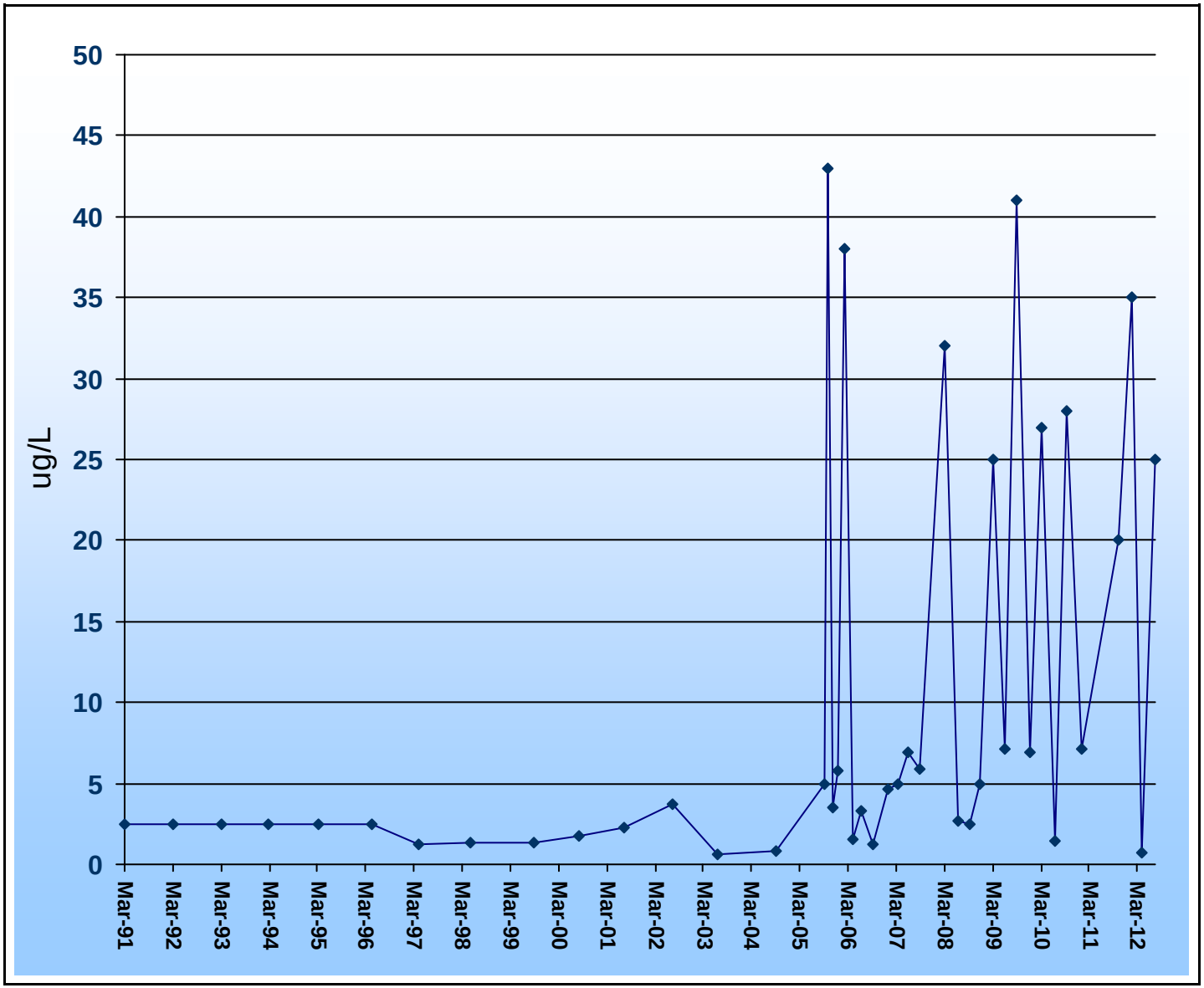
Cleanup Level 0.0042 ug/L EPA RSL



Well ID PL-5-595

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

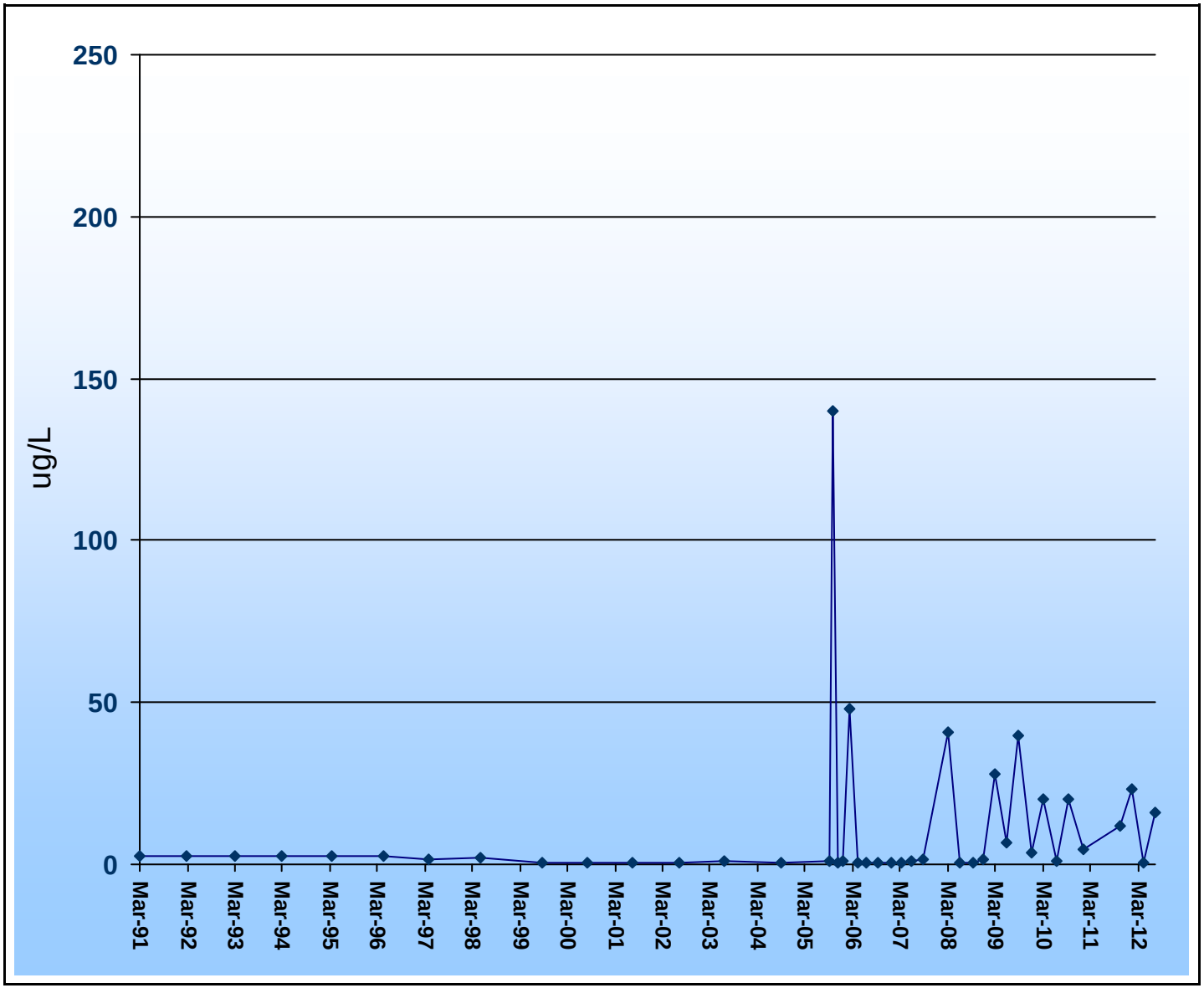
Cleanup Level 1,100 ug/L EPA RSL



Well ID PL-5-595

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

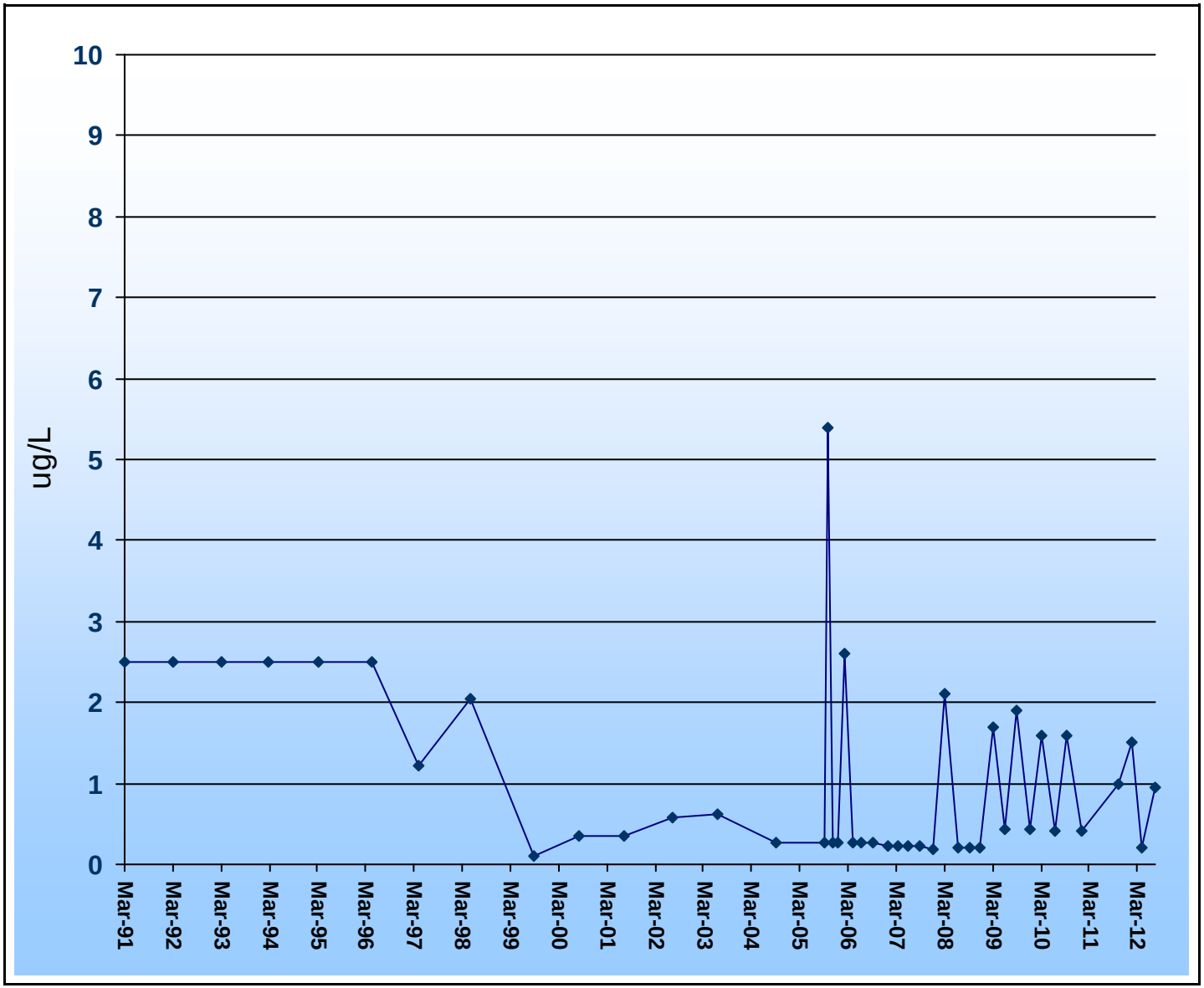
Cleanup Level 53,000 ug/L EPA RSL



Well ID PL-5-595

Casno 127-18-4 Analyte Tetrachloroethene

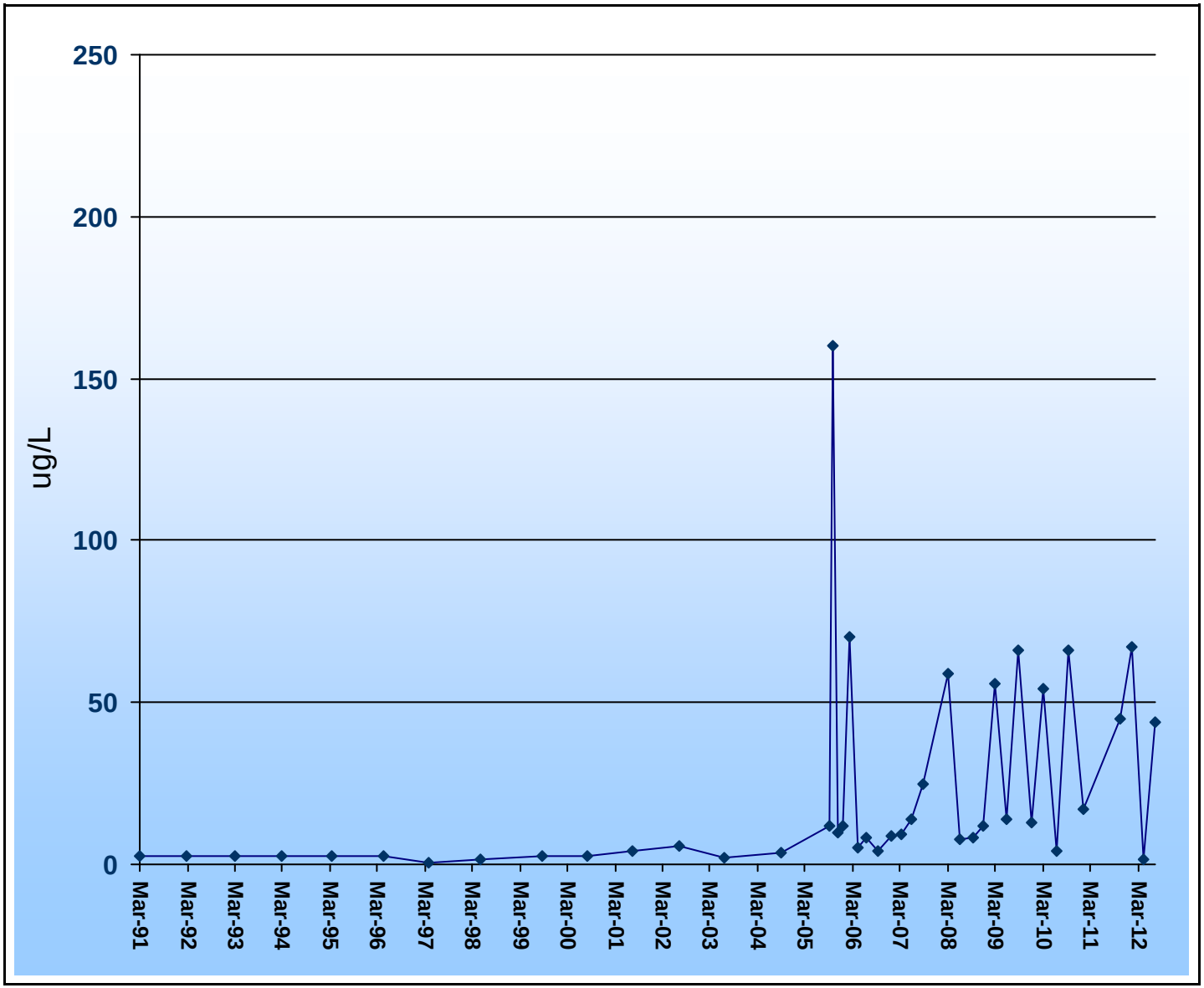
Cleanup Level 1.1 ug/L EPA RSL



Well ID PL-5-595

Casno 79-01-6 Analyte Trichloroethene

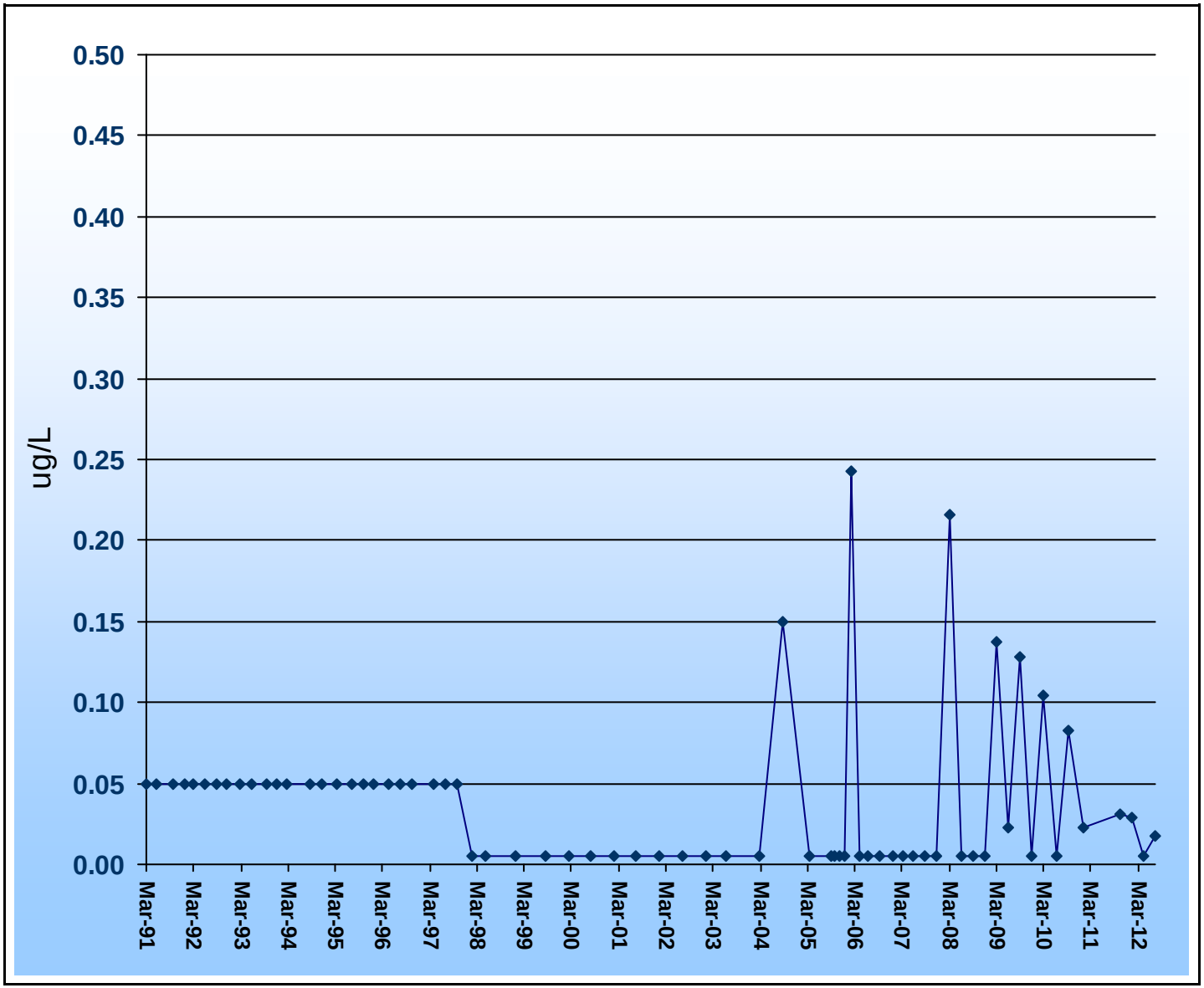
Cleanup Level 5.0 ug/L MCL



Well ID PL-5-595

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



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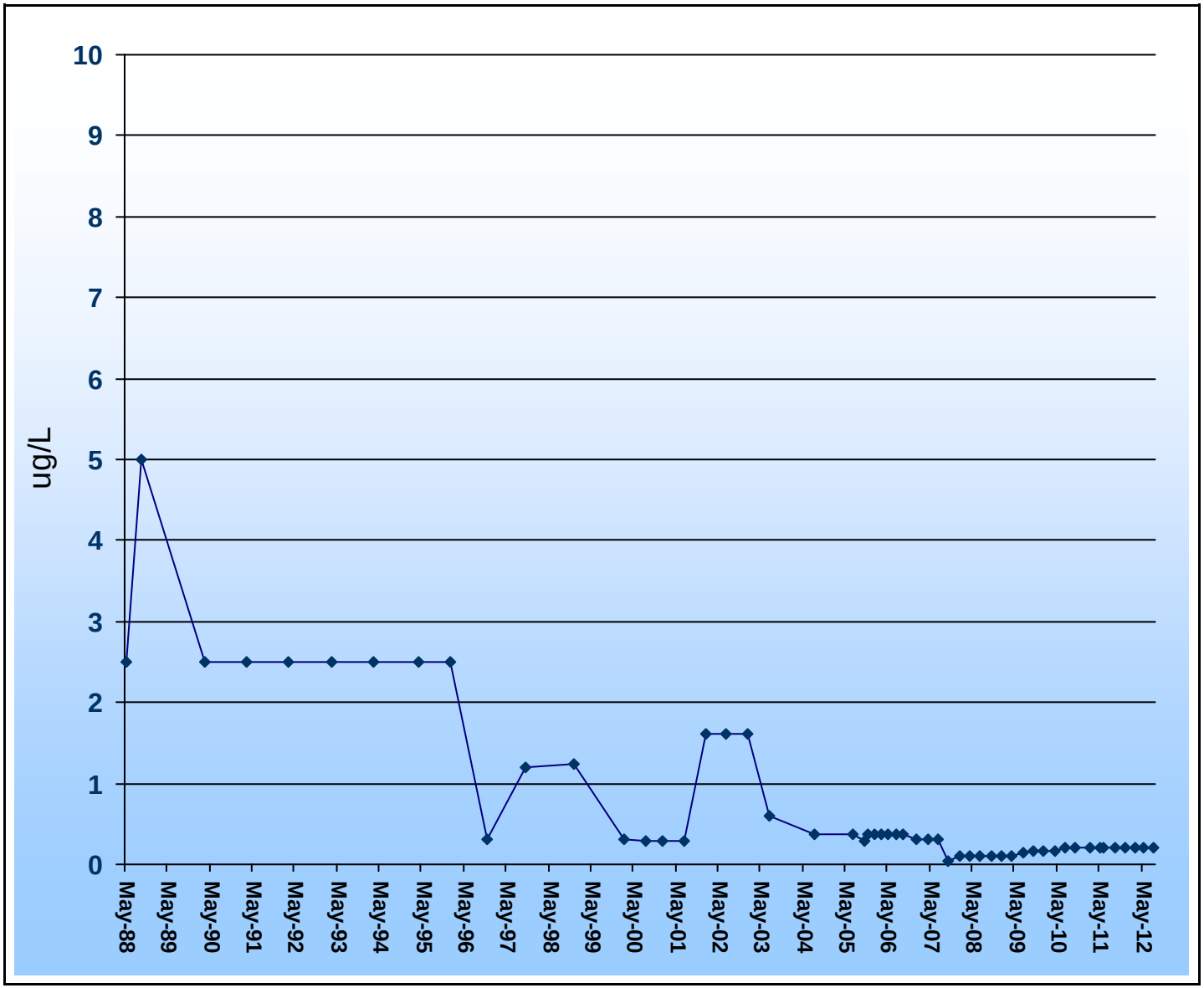
Appendix E
Time Concentration Plots

Plume Front Well Group

Well ID BLM-7-509

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

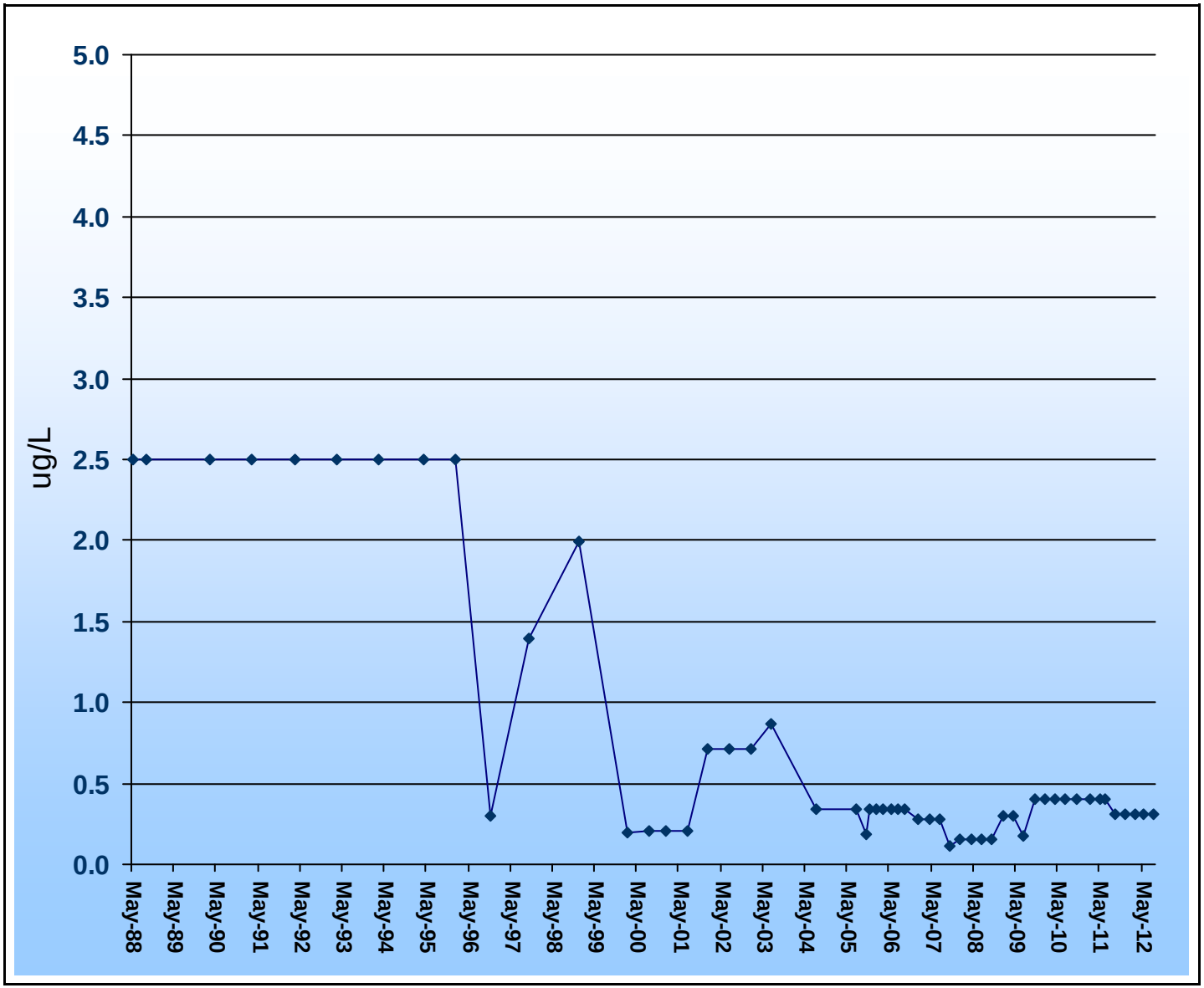
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-7-509

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

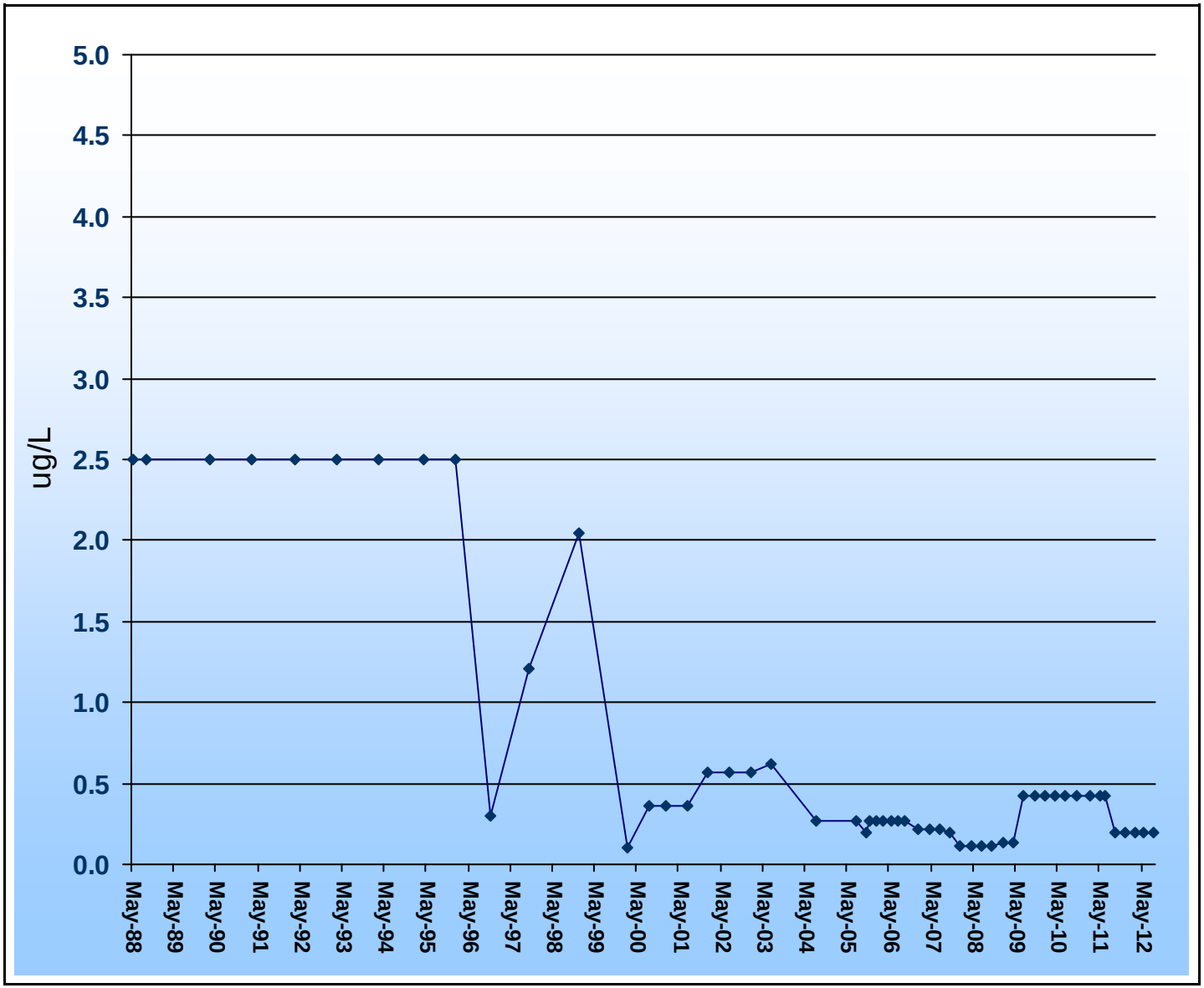
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-7-509

Casno 127-18-4 Analyte Tetrachloroethene

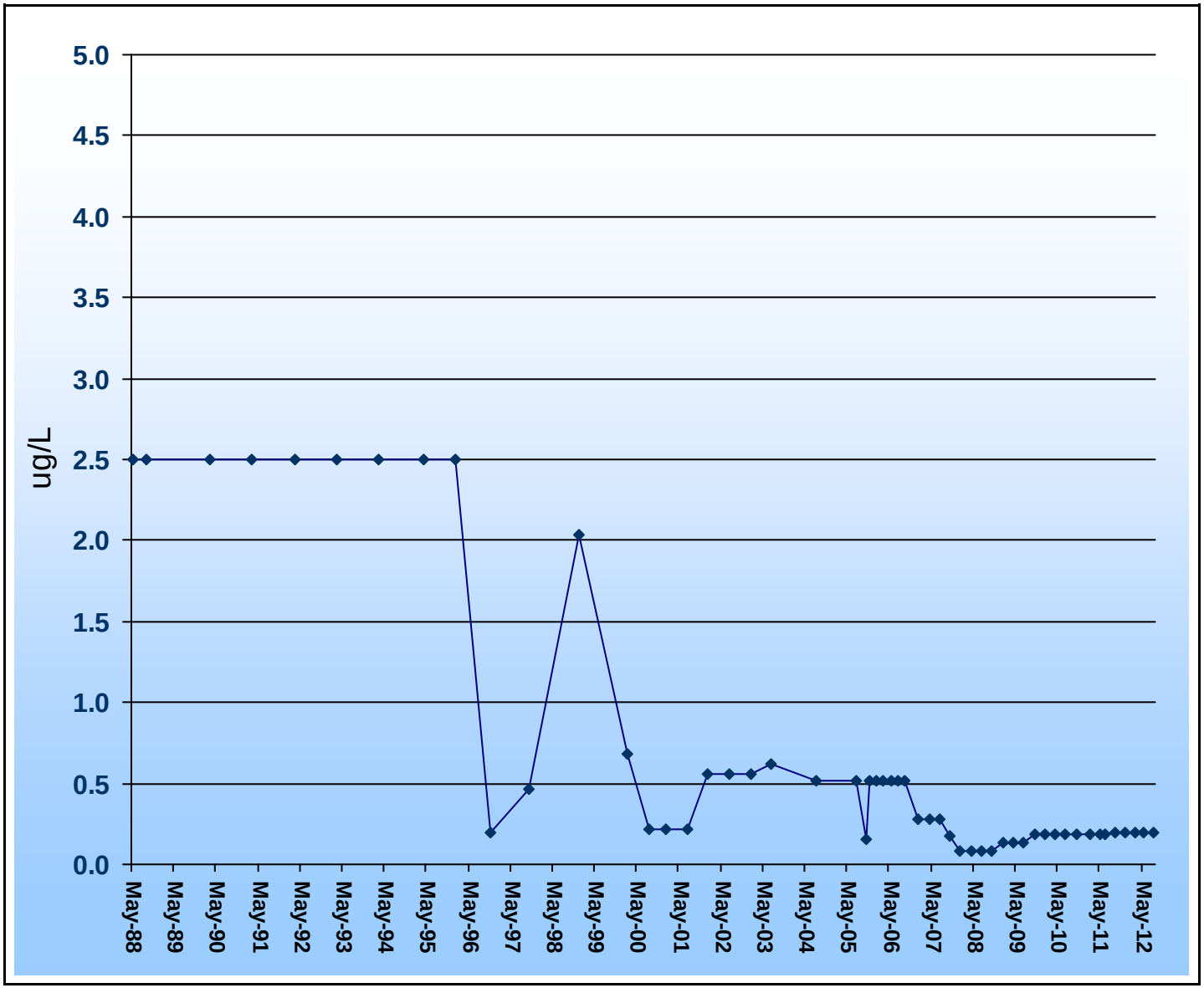
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-7-509

Casno 79-01-6 Analyte Trichloroethene

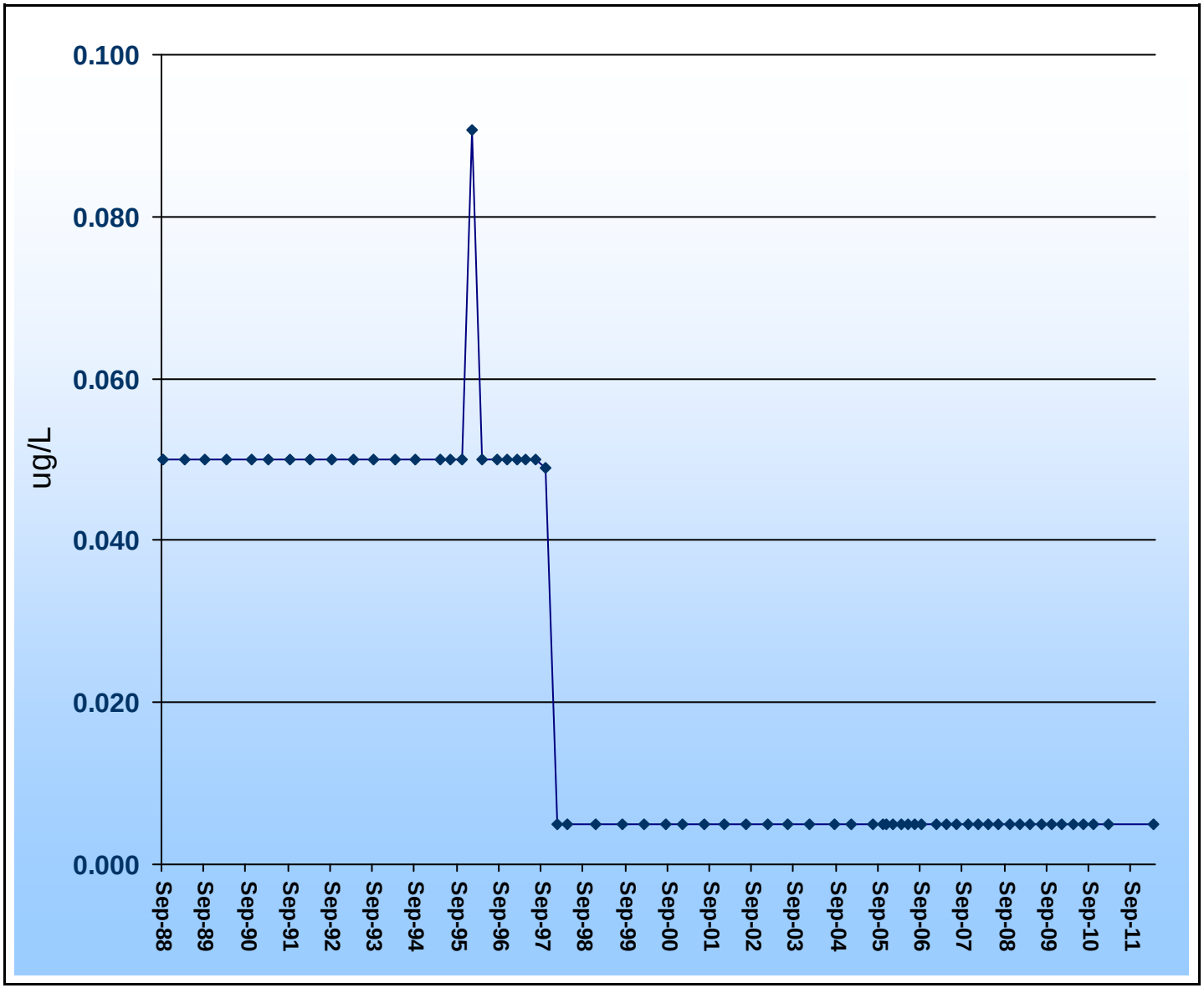
Cleanup Level 5.0 ug/L MCL



Well ID BLM-7-509

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

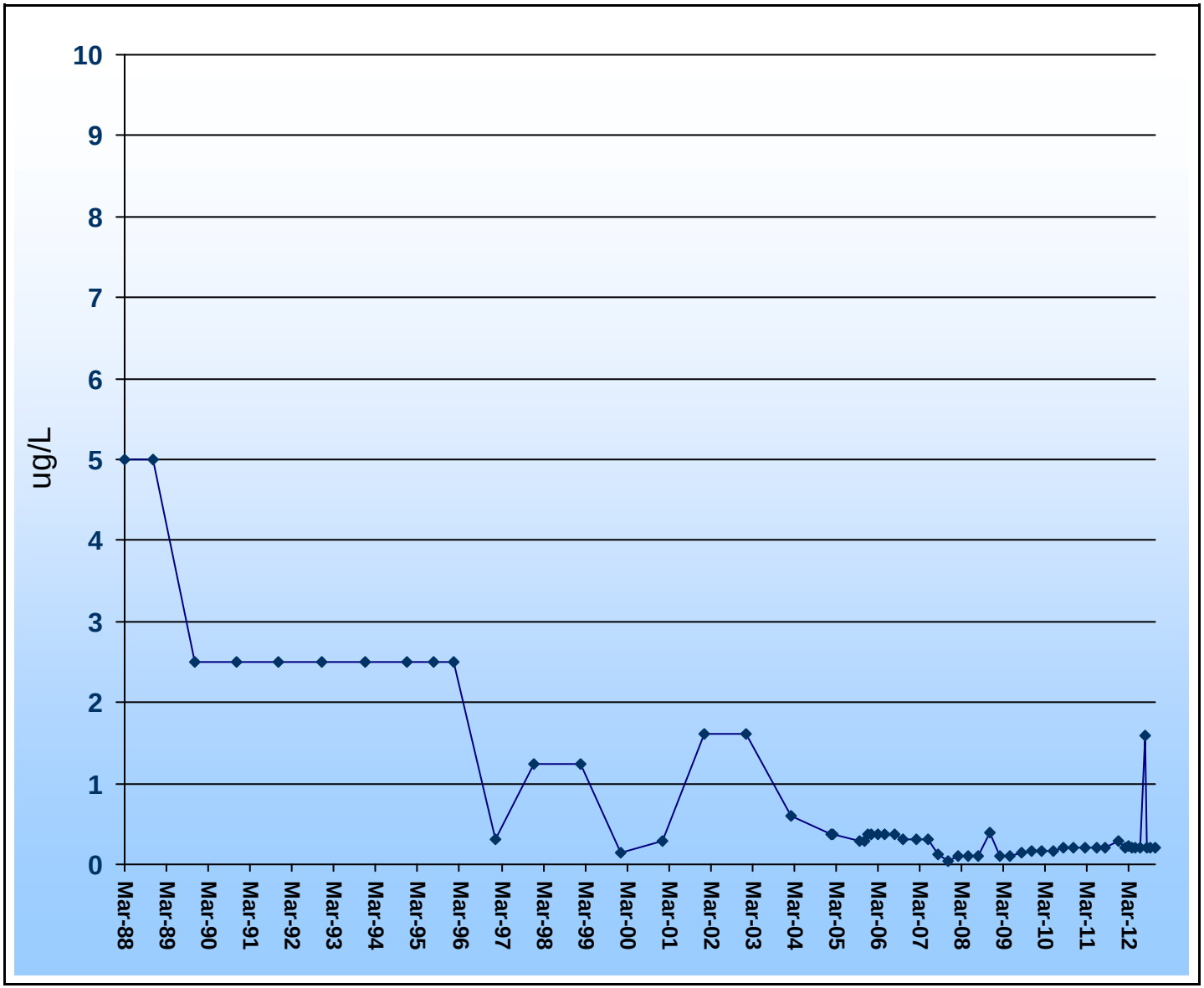
Cleanup Level 0.0042 ug/L EPA RSL



Well ID BLM-10-517

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

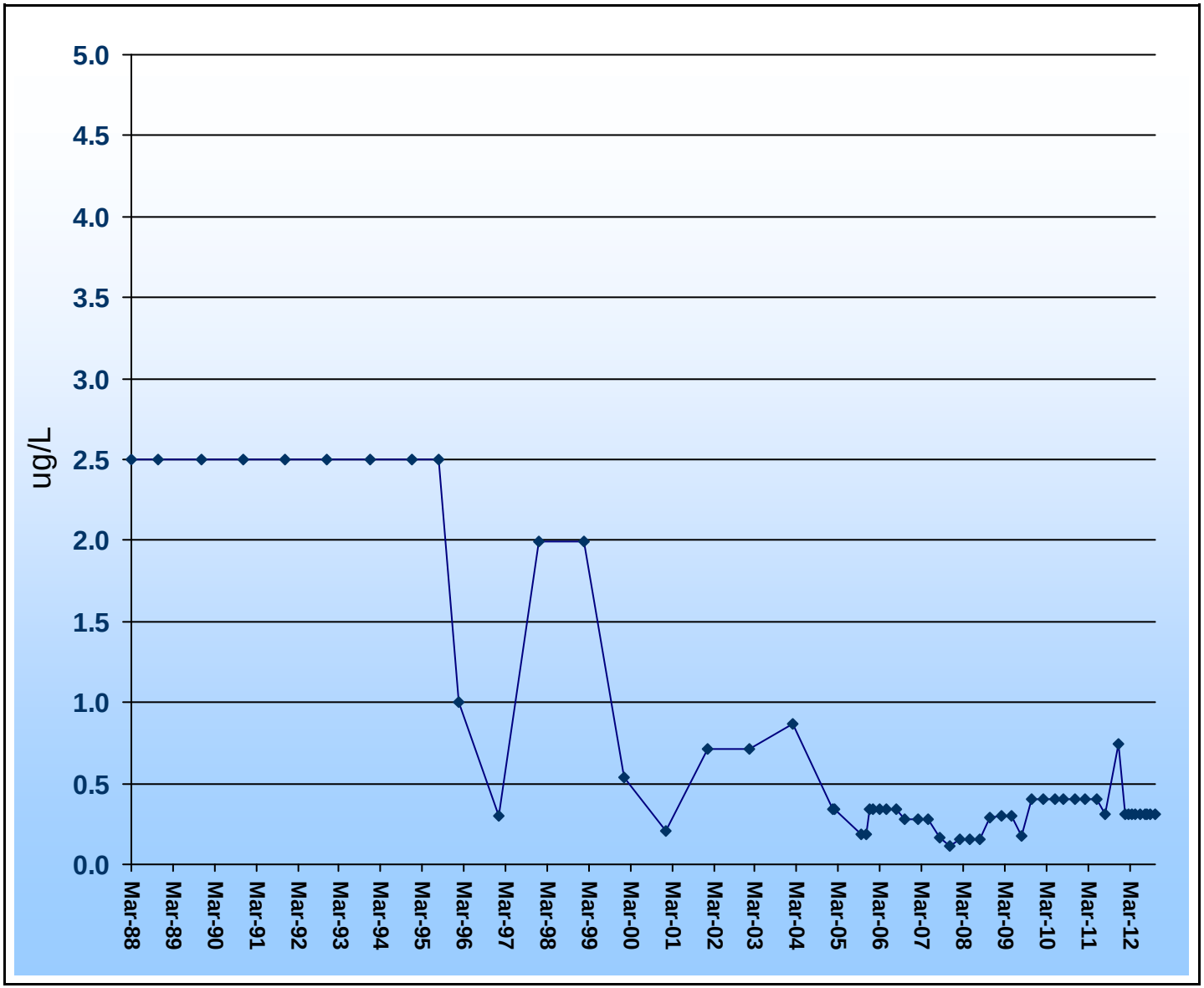
Cleanup Level 1,100 ug/L EPA RSL



Well ID BLM-10-517

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

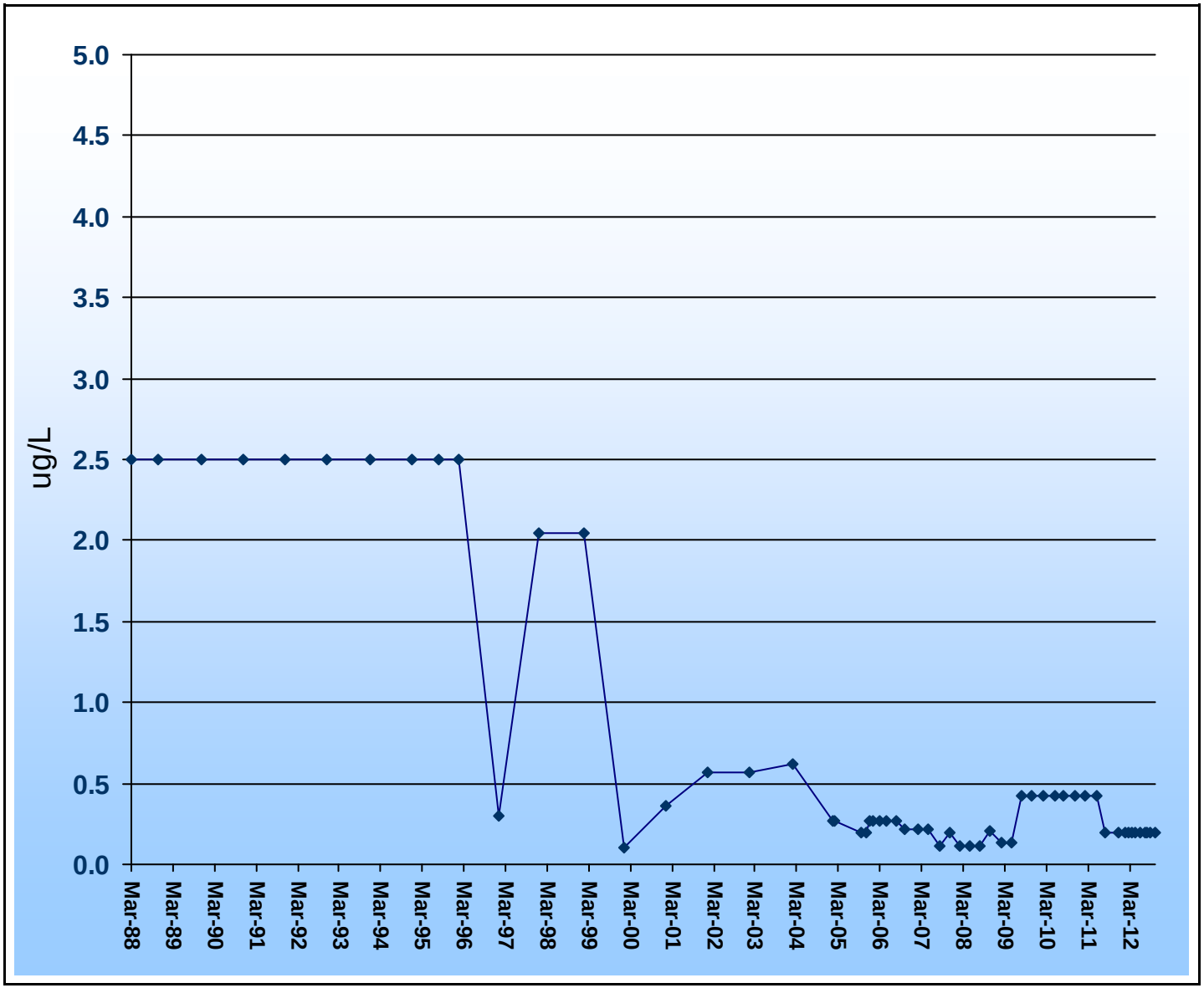
Cleanup Level 53,000 ug/L EPA RSL



Well ID BLM-10-517

Casno 127-18-4 Analyte Tetrachloroethene

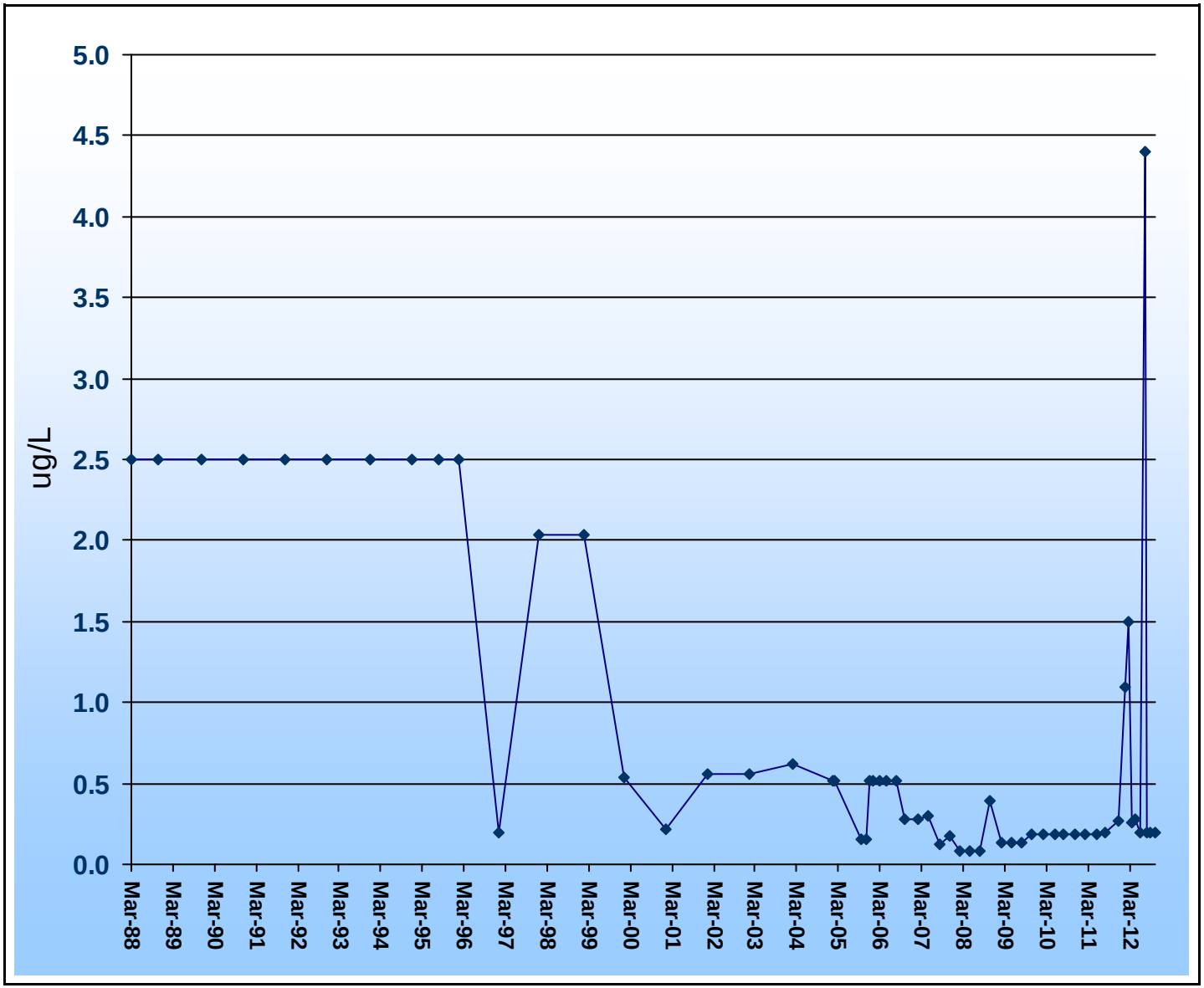
Cleanup Level 1.1 ug/L EPA RSL



Well ID BLM-10-517

Casno 79-01-6 Analyte Trichloroethene

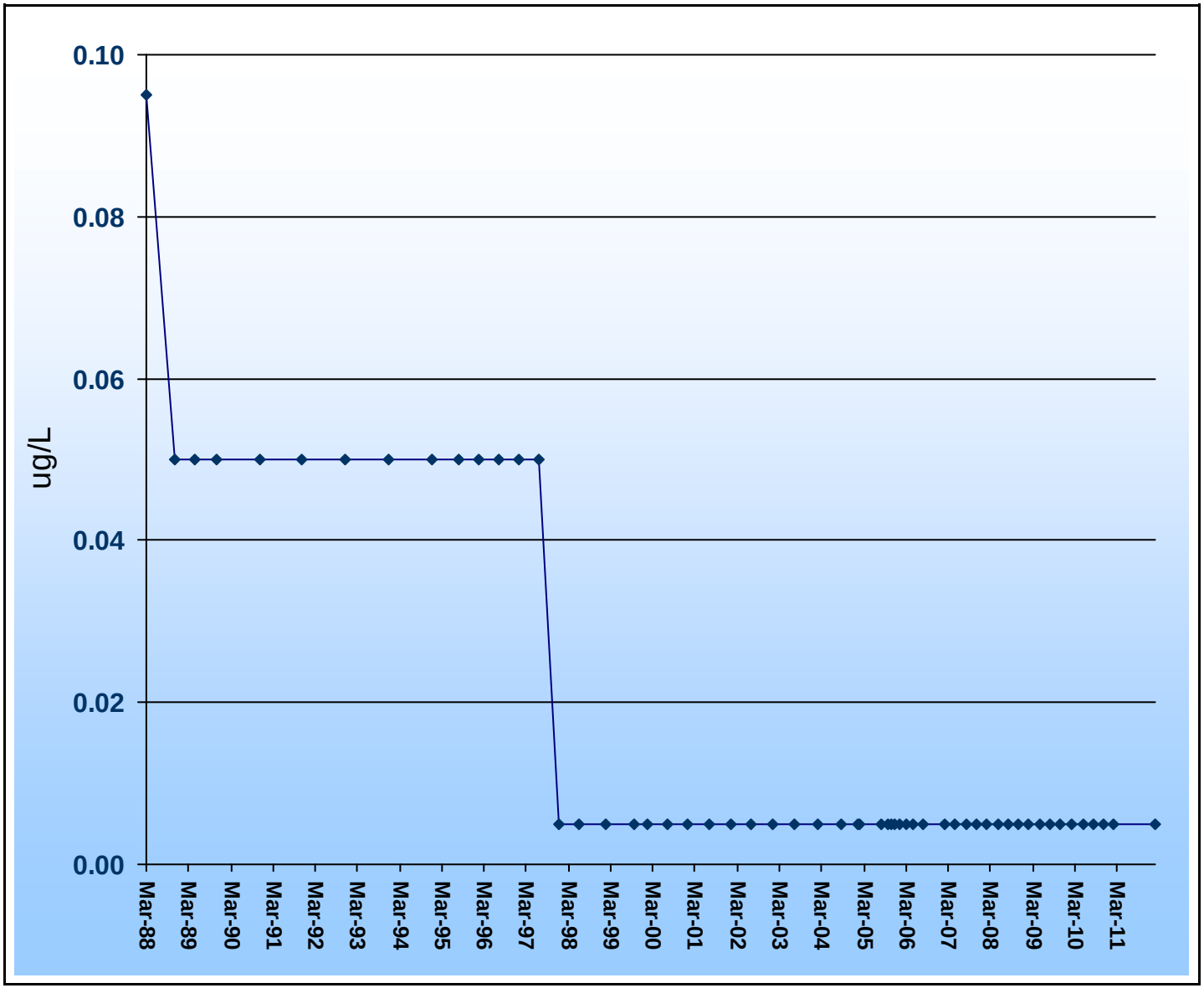
Cleanup Level 5.0 ug/L MCL



Well ID BLM-10-517

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

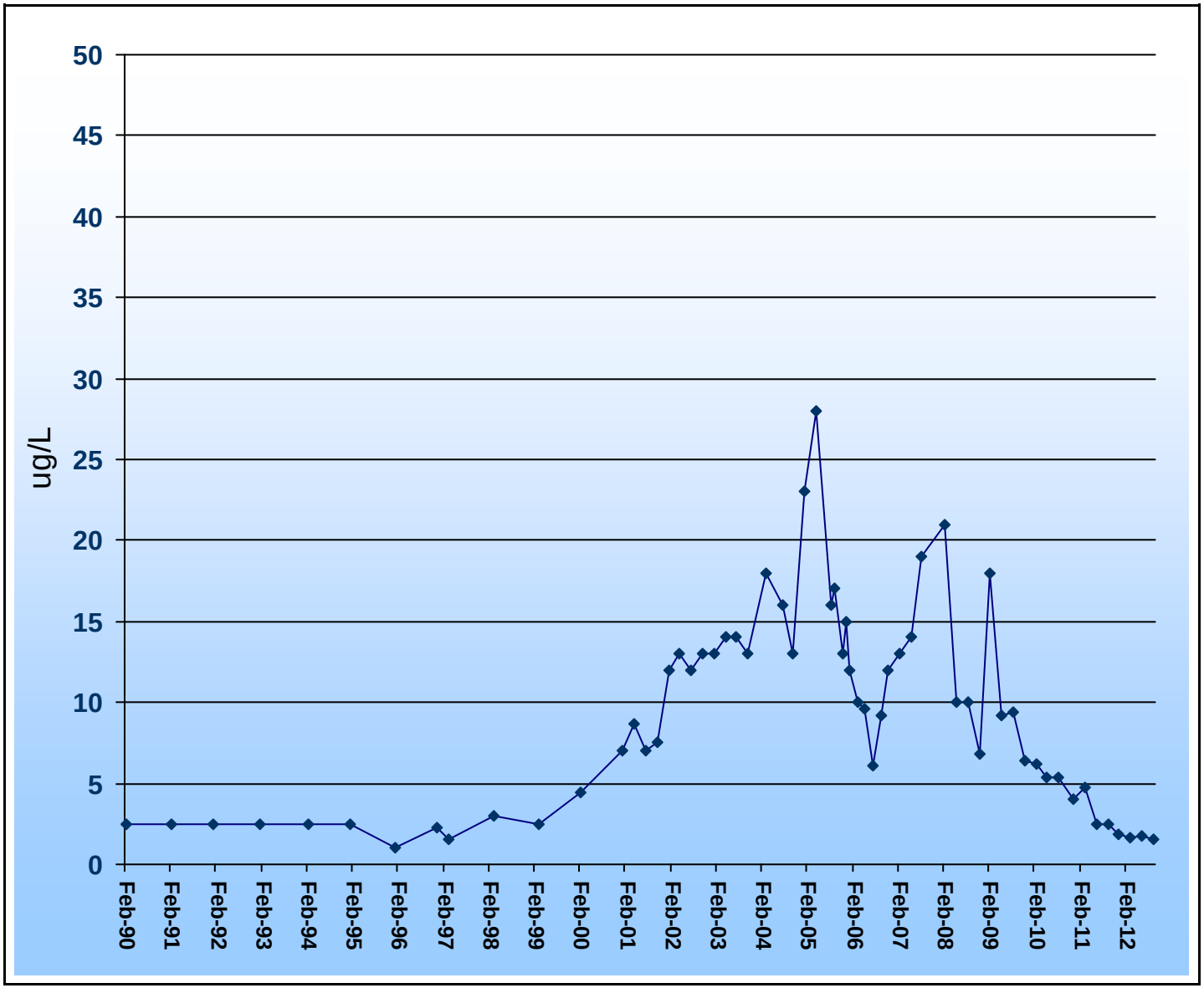
Cleanup Level 0.0042 ug/L EPA RSL



Well ID PL-4-464

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

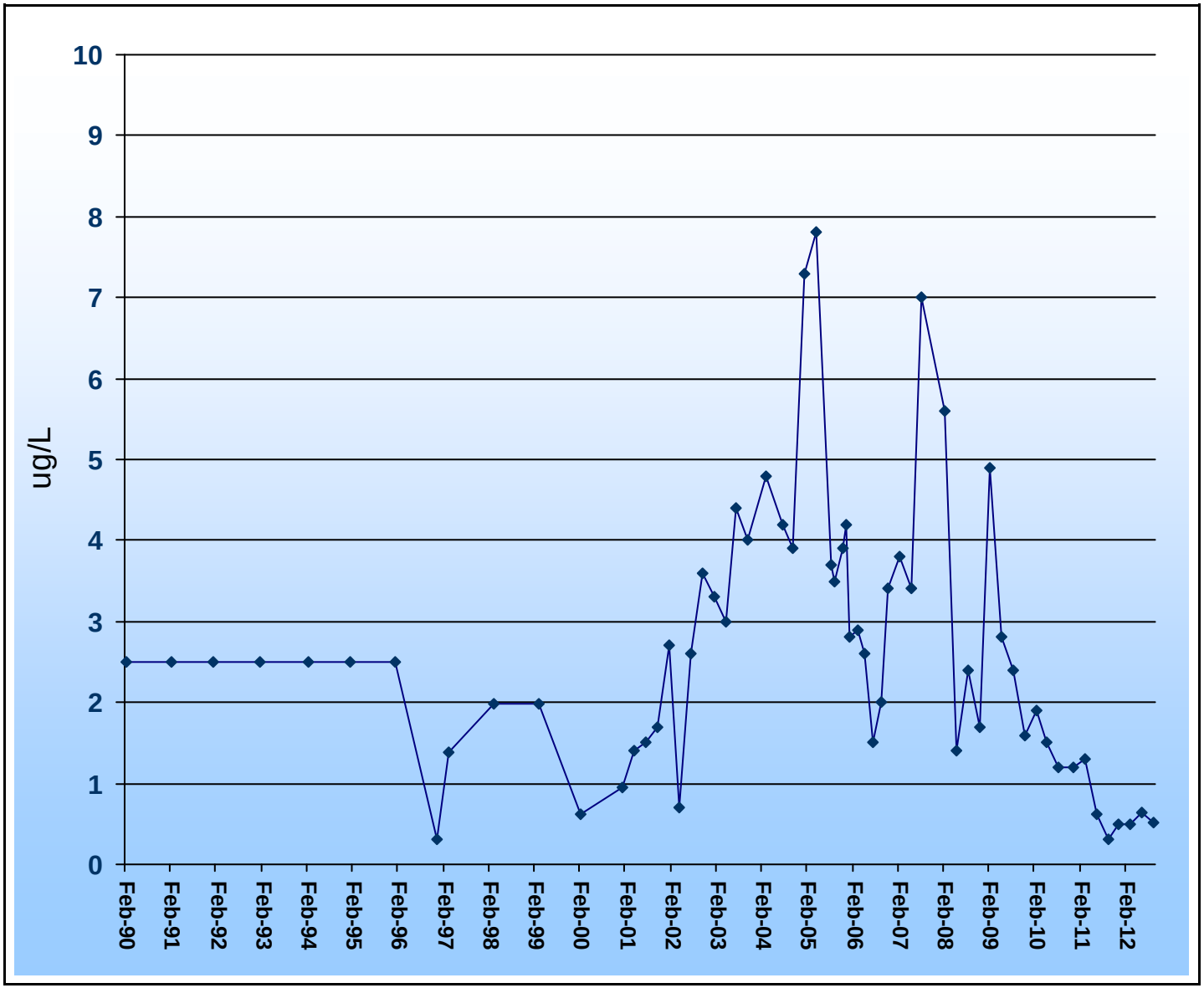
Cleanup Level 1,100 ug/L EPA RSL



Well ID PL-4-464

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

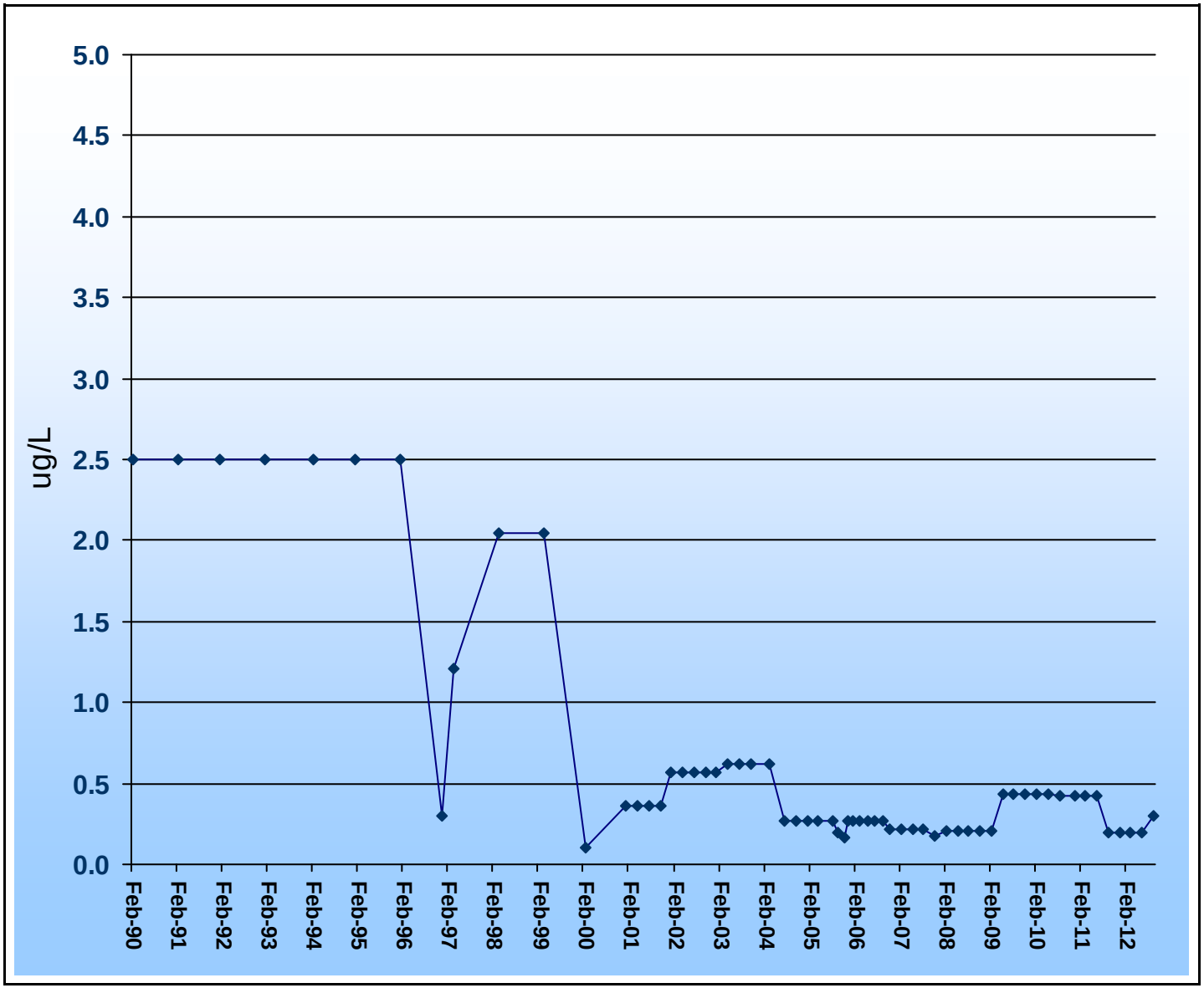
Cleanup Level 53,000 ug/L EPA RSL



Well ID PL-4-464

Casno 127-18-4 Analyte Tetrachloroethene

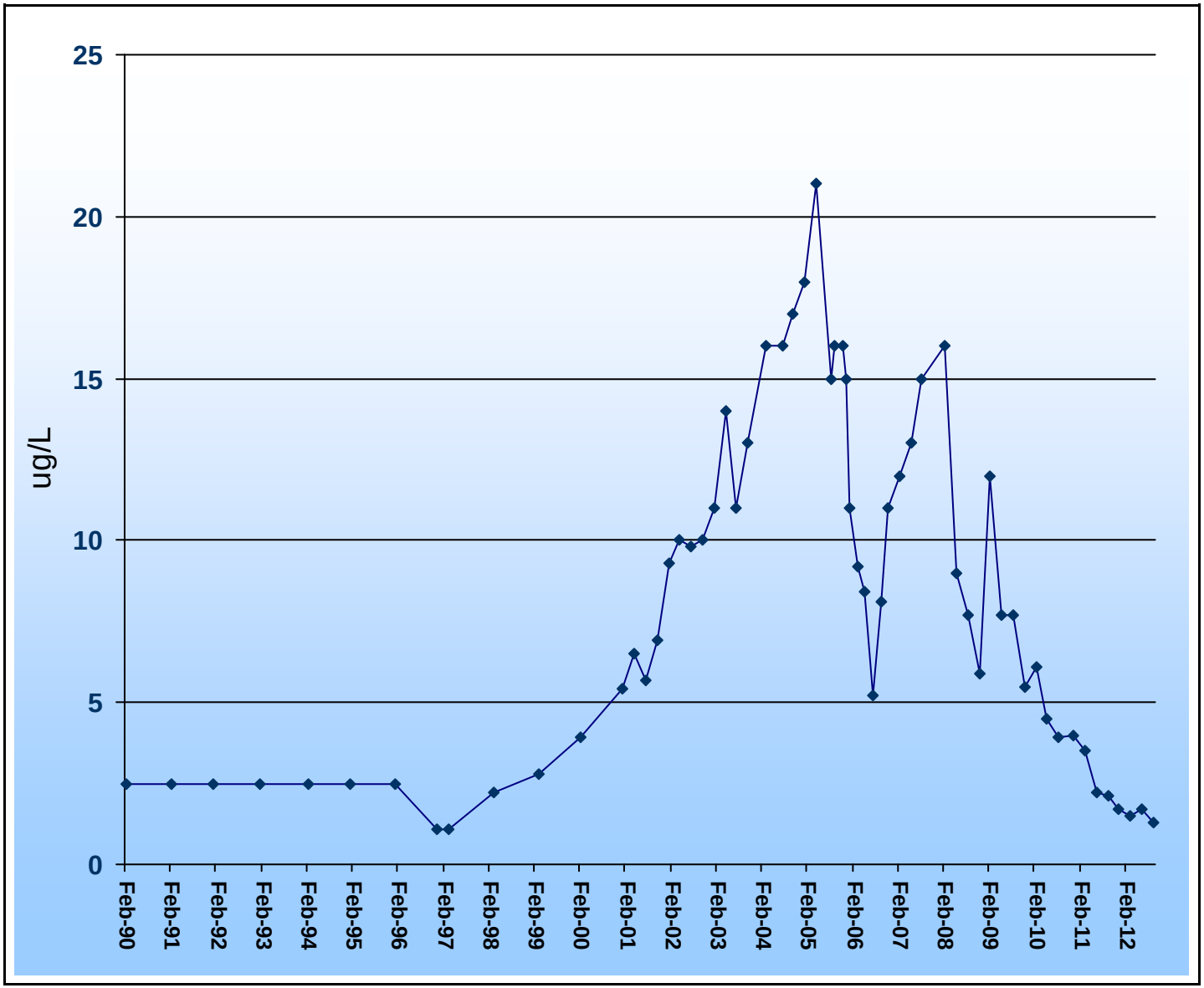
Cleanup Level 1.1 ug/L EPA RSL



Well ID PL-4-464

Casno 79-01-6 Analyte Trichloroethene

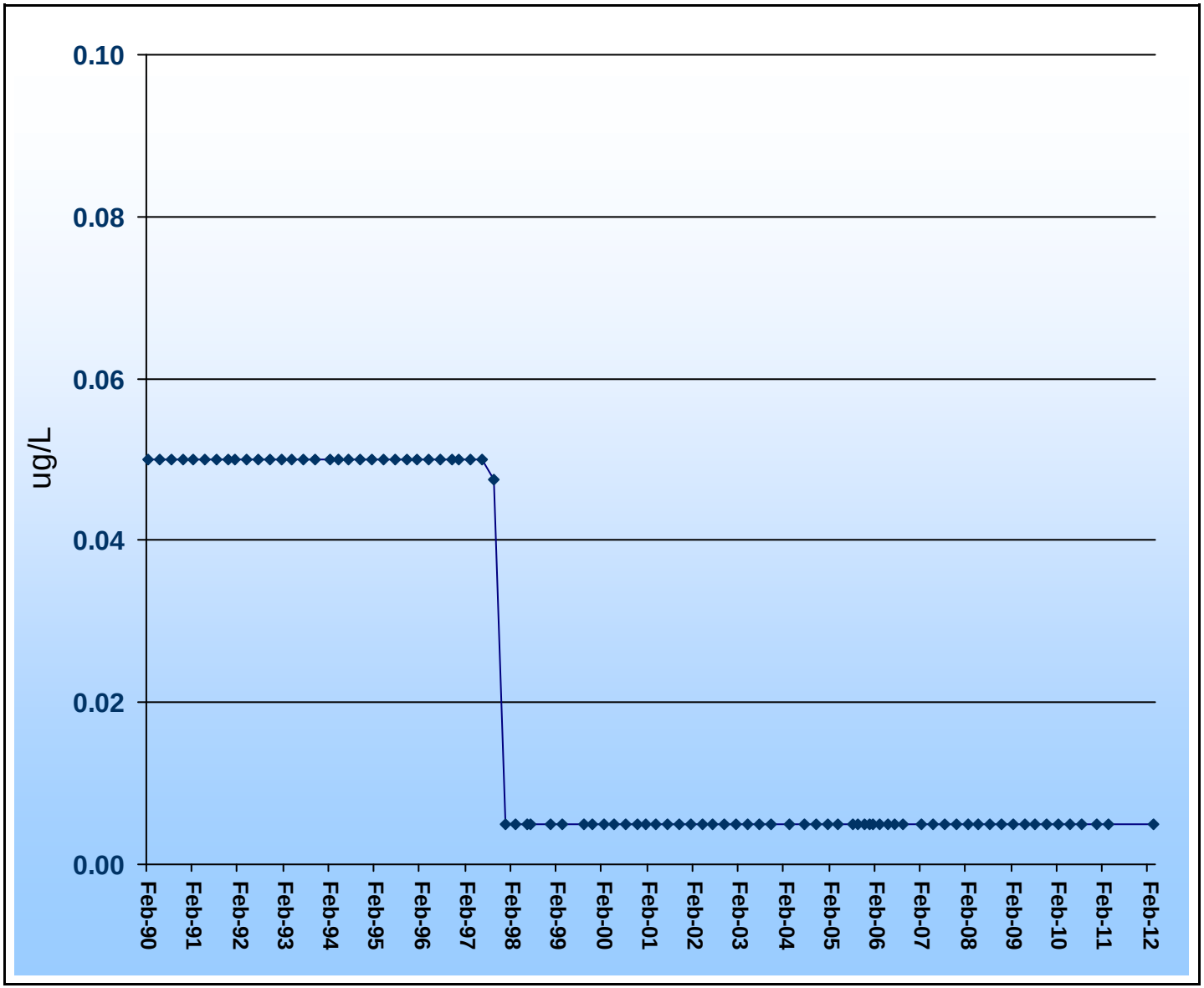
Cleanup Level 5.0 ug/L MCL



Well ID PL-4-464

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

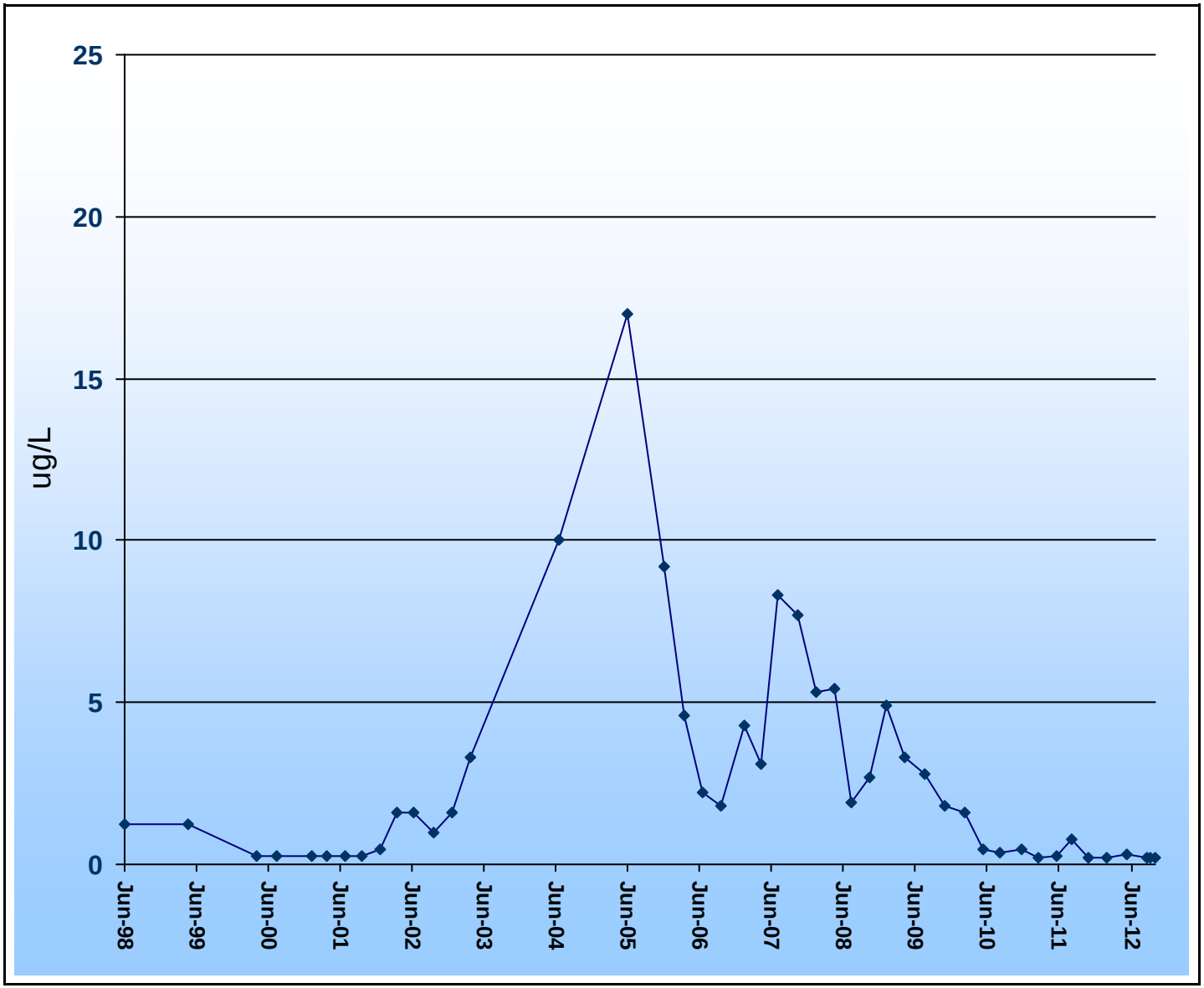
Cleanup Level 0.0042 ug/L EPA RSL



Well ID ST-6-535

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

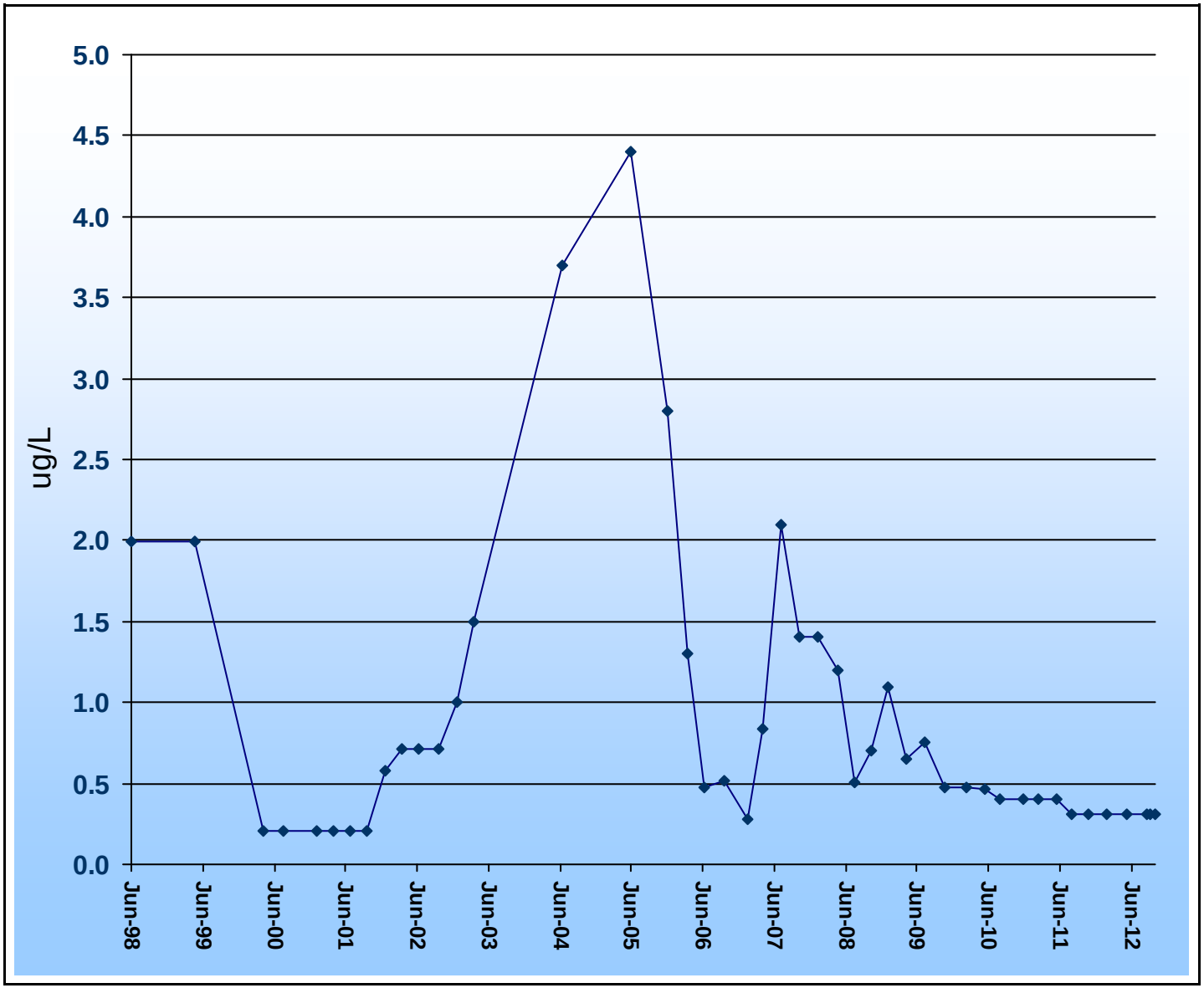
Cleanup Level 1,100 ug/L EPA RSL



Well ID ST-6-535

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

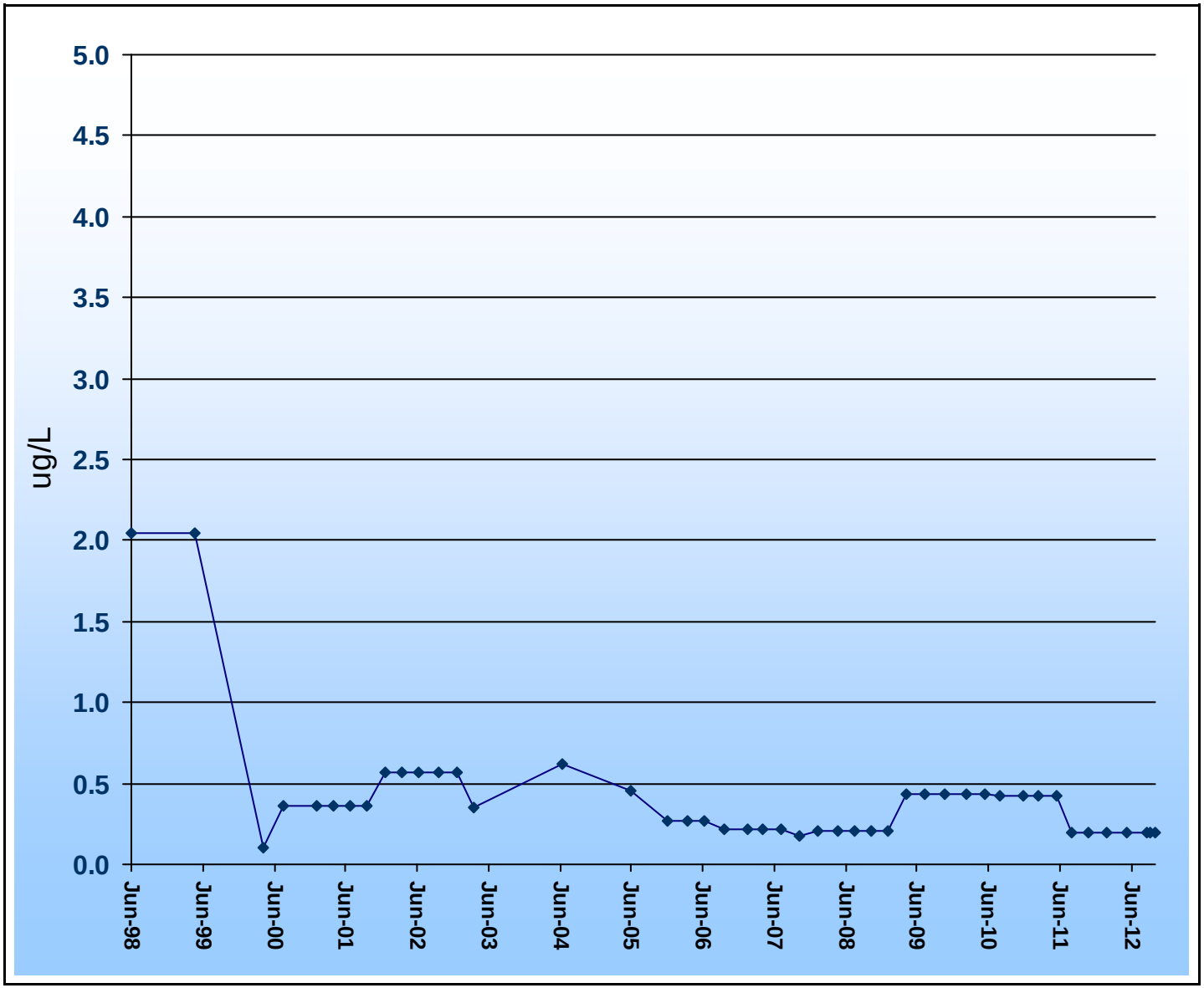
Cleanup Level 53,000 ug/L EPA RSL



Well ID ST-6-535

Casno 127-18-4 Analyte Tetrachloroethene

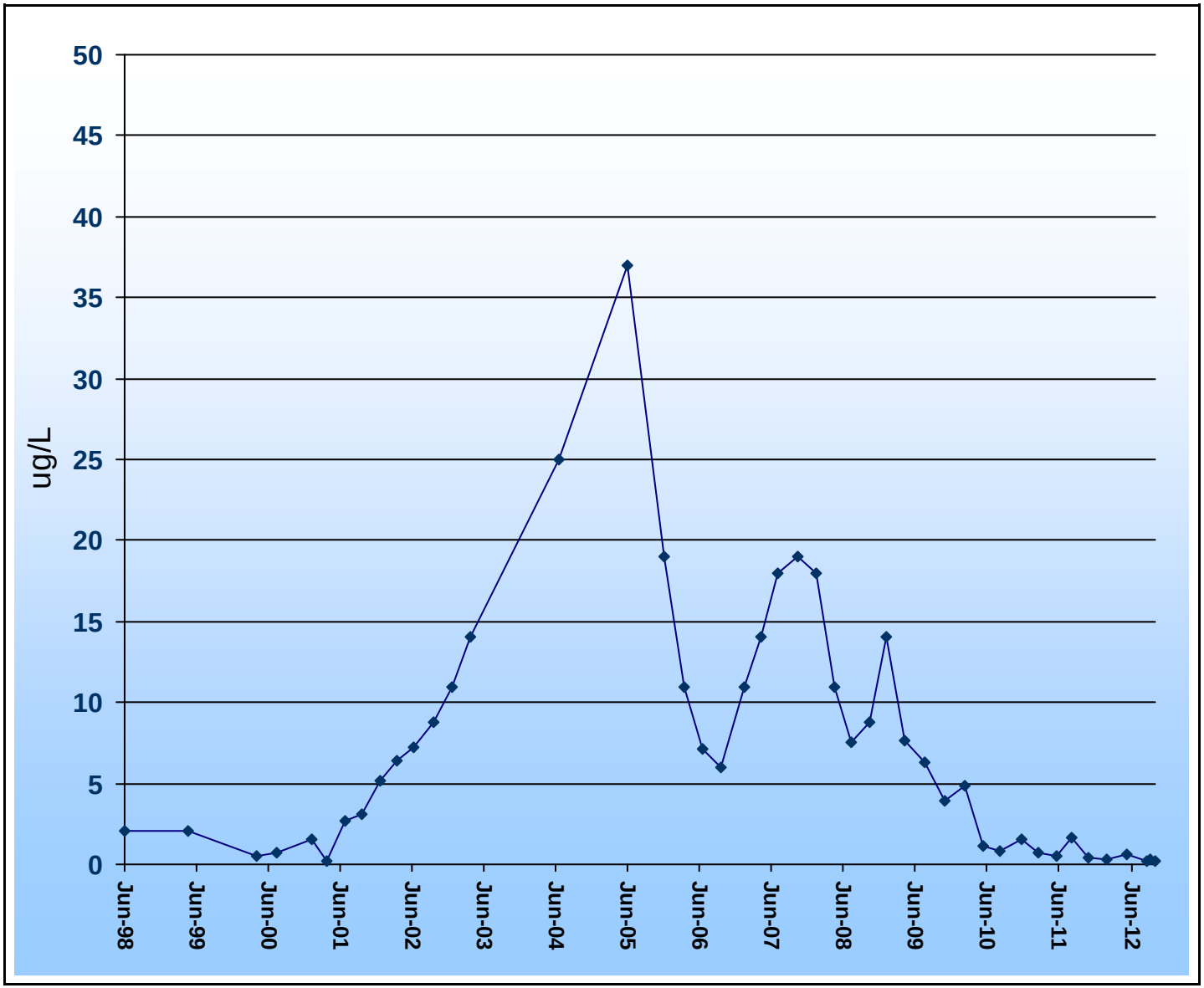
Cleanup Level 1.1 ug/L EPA RSL



Well ID ST-6-535

Casno 79-01-6 Analyte Trichloroethene

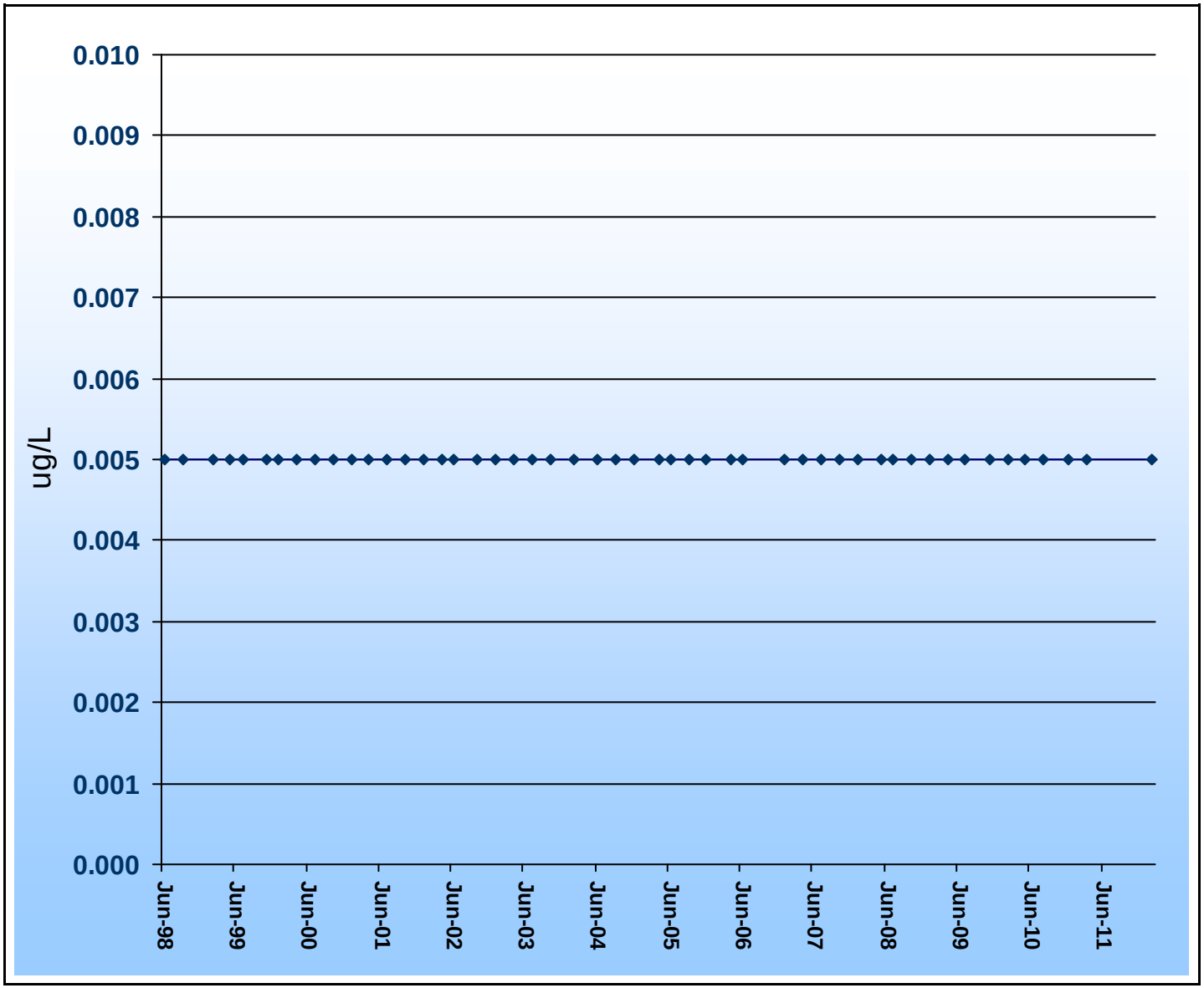
Cleanup Level 5.0 ug/L MCL



Well ID ST-6-535

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

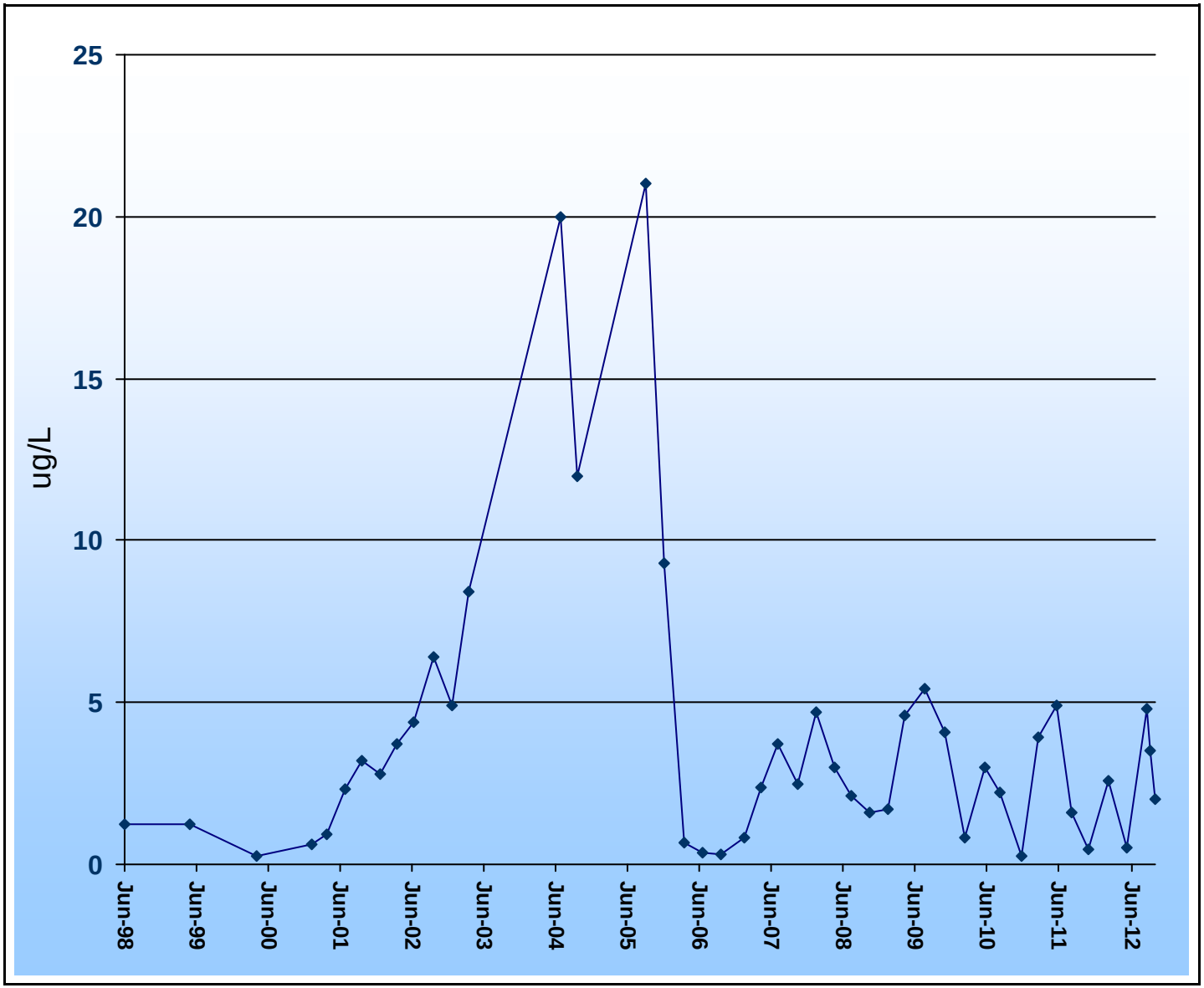
Cleanup Level 0.0042 ug/L EPA RSL



Well ID ST-6-575

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

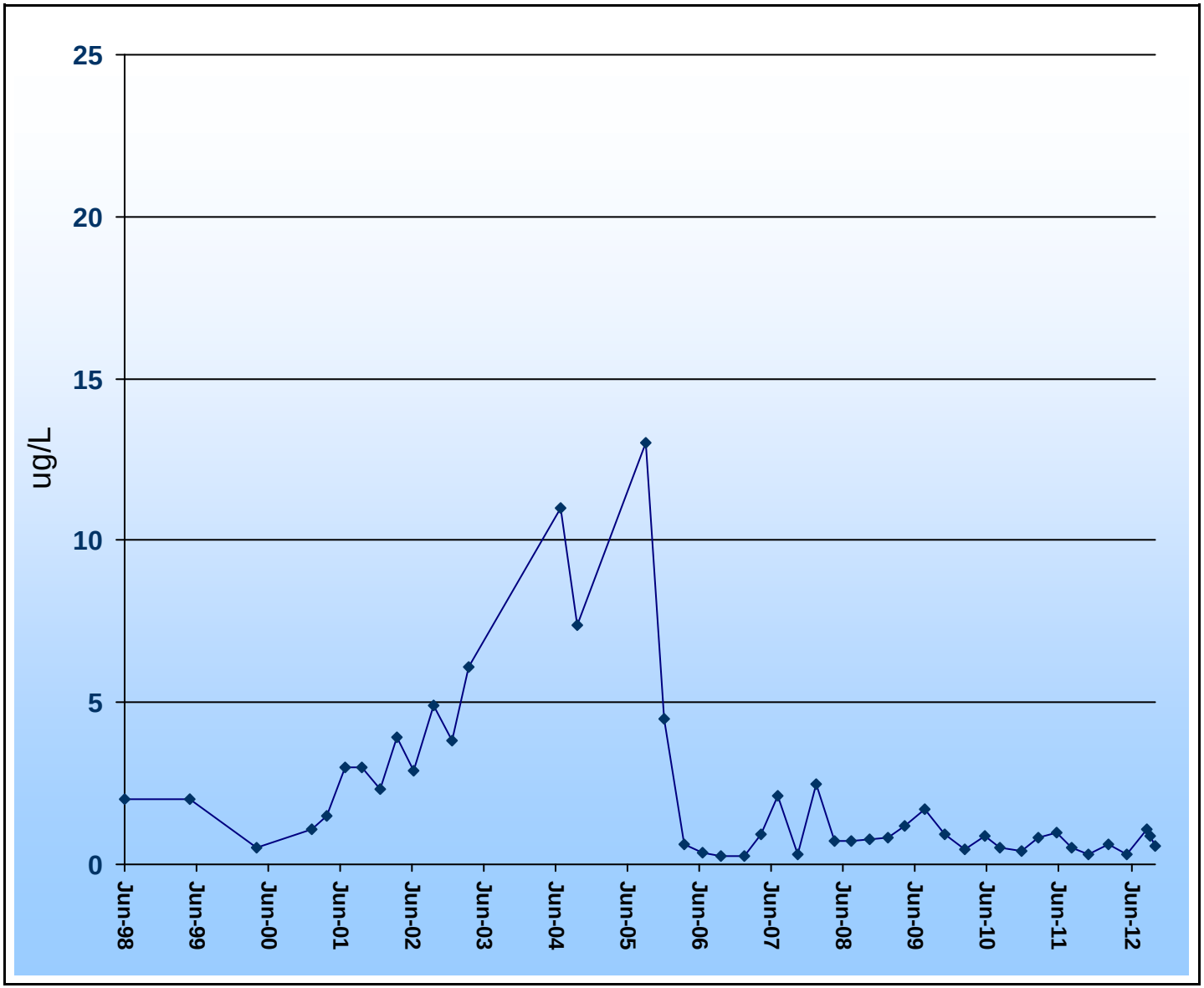
Cleanup Level 1,100 ug/L EPA RSL



Well ID ST-6-575

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

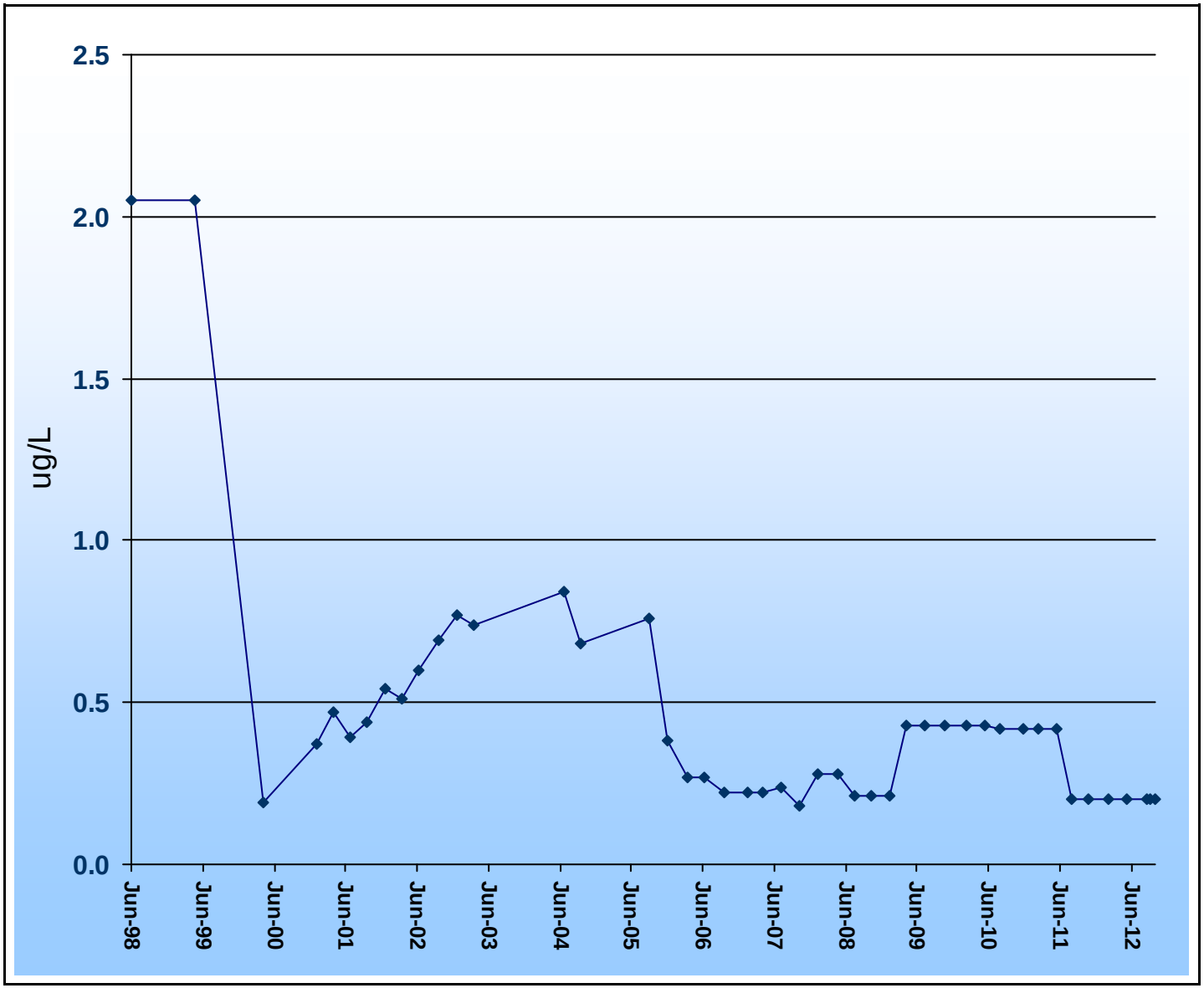
Cleanup Level 53,000 ug/L EPA RSL



Well ID ST-6-575

Casno 127-18-4 Analyte Tetrachloroethene

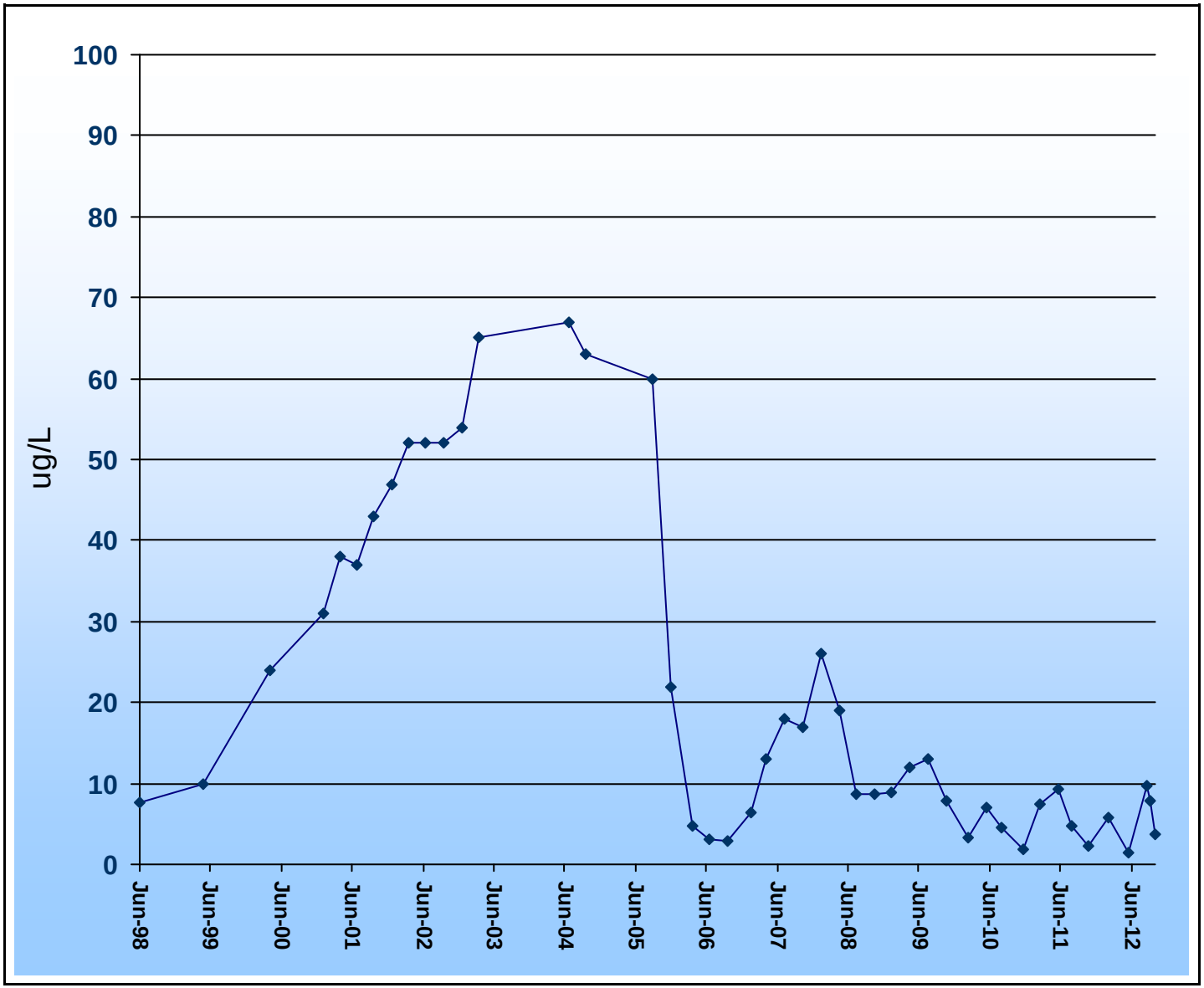
Cleanup Level 1.1 ug/L EPA RSL



Well ID ST-6-575

Casno 79-01-6 Analyte Trichloroethene

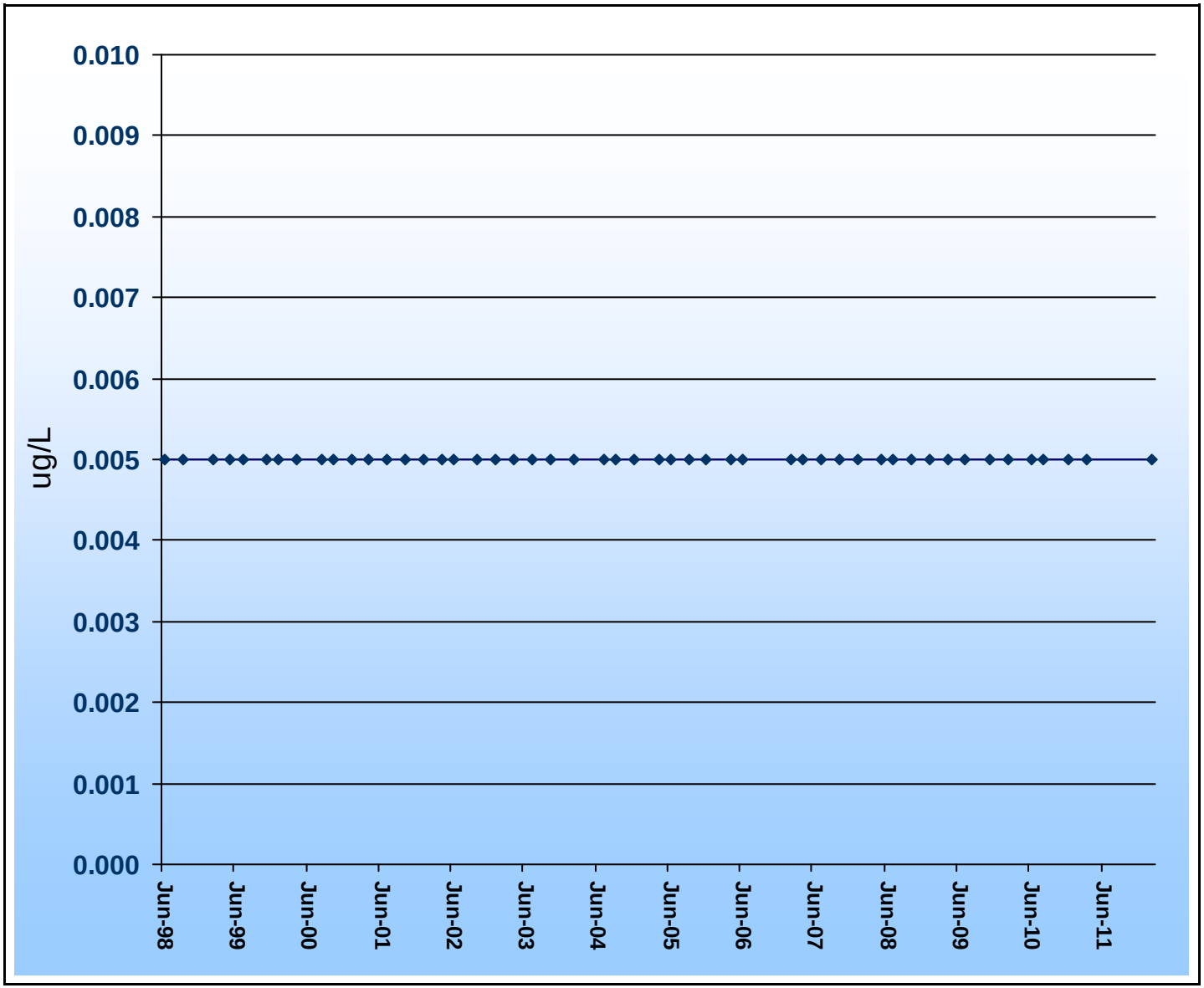
Cleanup Level 5.0 ug/L MCL



Well ID ST-6-575

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

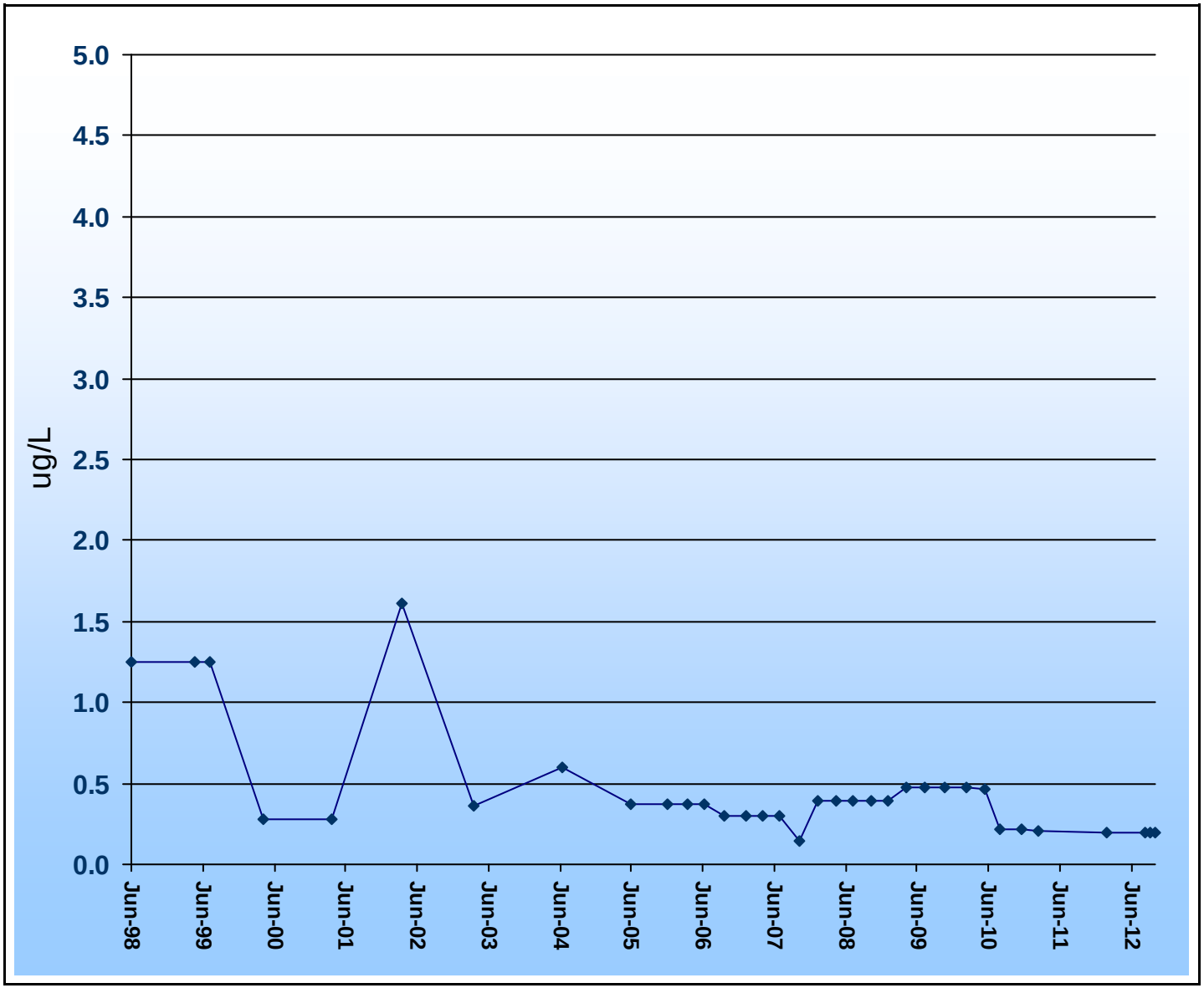
Cleanup Level 0.0042 ug/L EPA RSL



Well ID ST-6-685

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

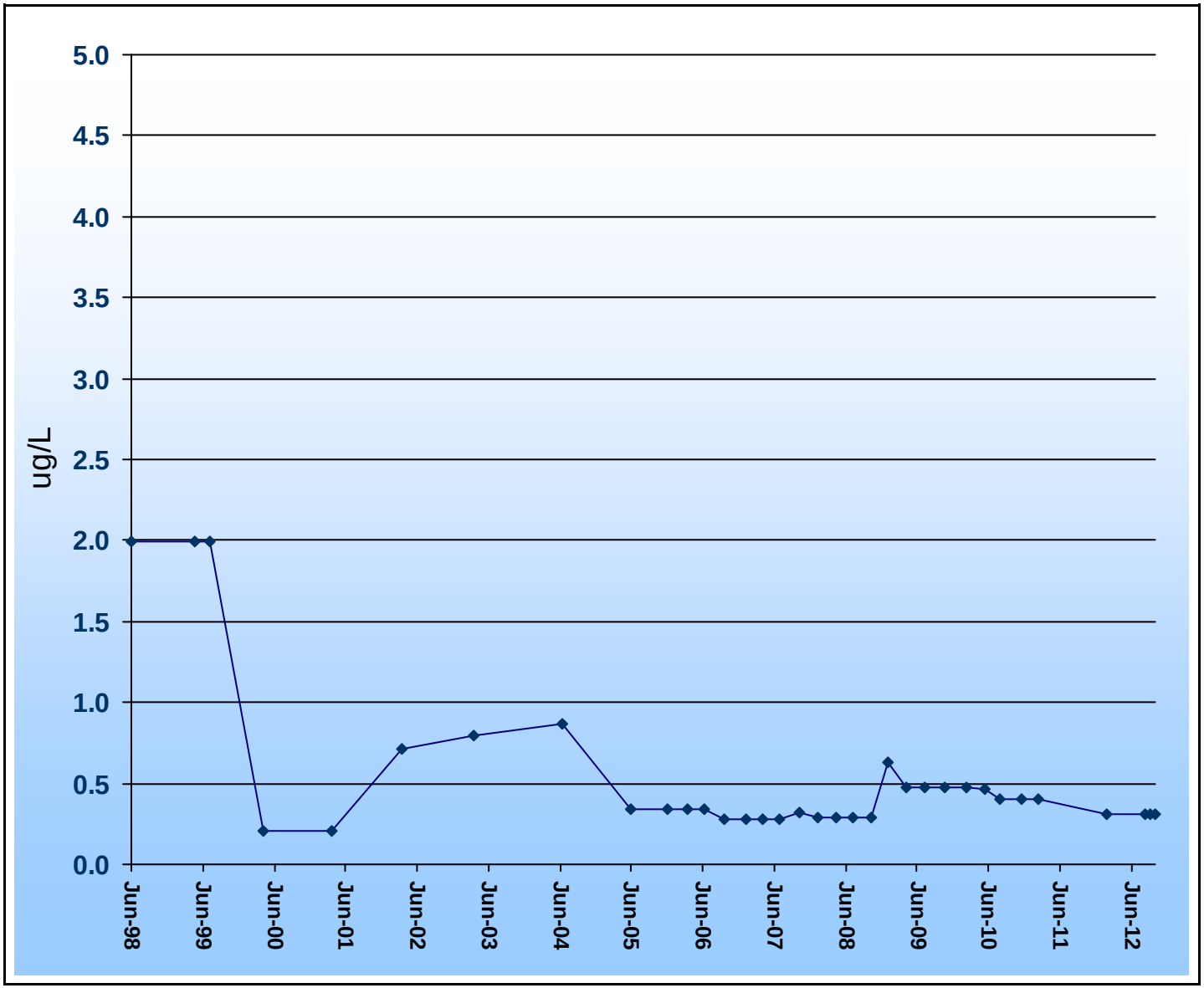
Cleanup Level 1,100 ug/L EPA RSL



Well ID ST-6-685

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

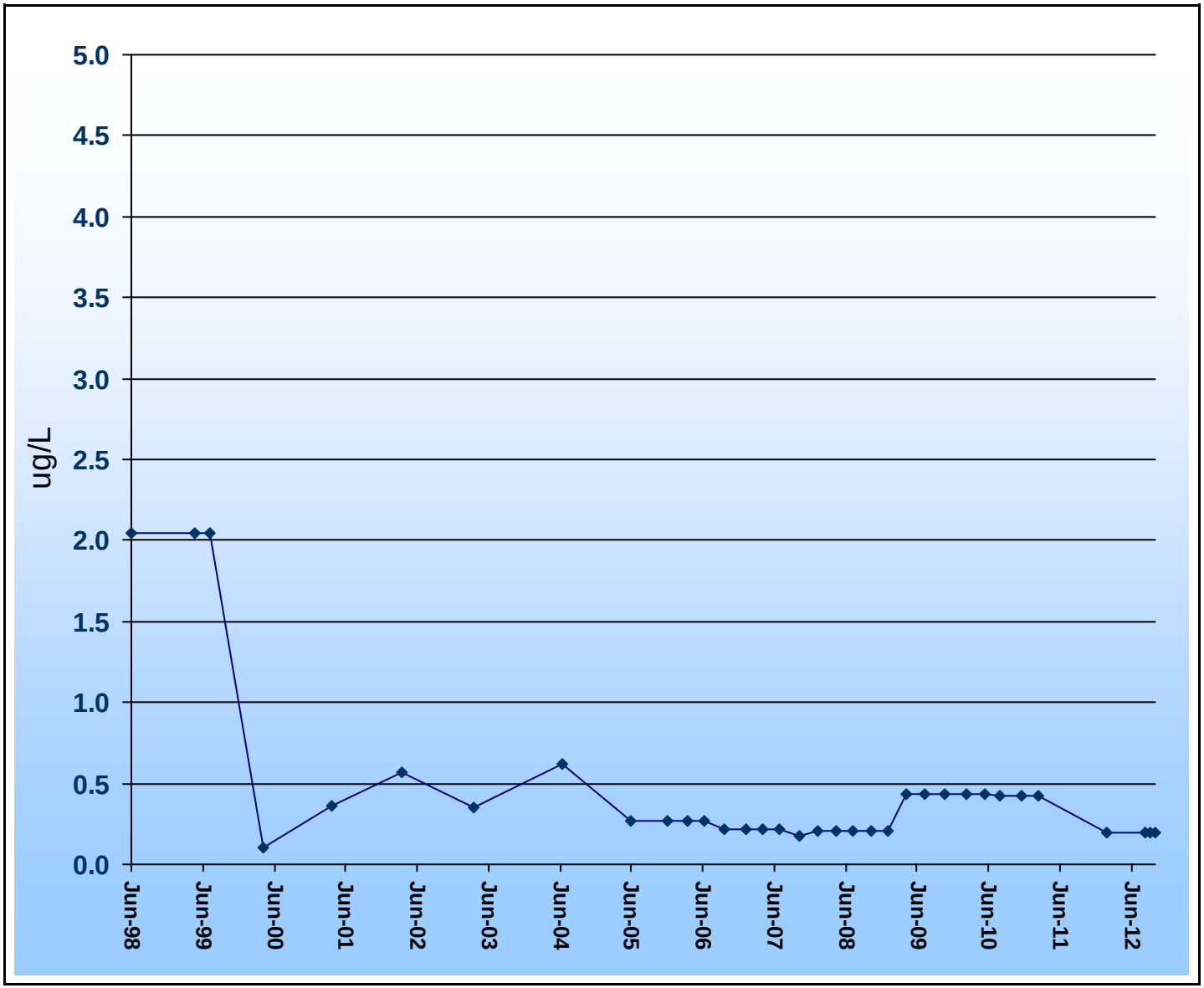
Cleanup Level 53,000 ug/L EPA RSL



Well ID ST-6-685

Casno 127-18-4 Analyte Tetrachloroethene

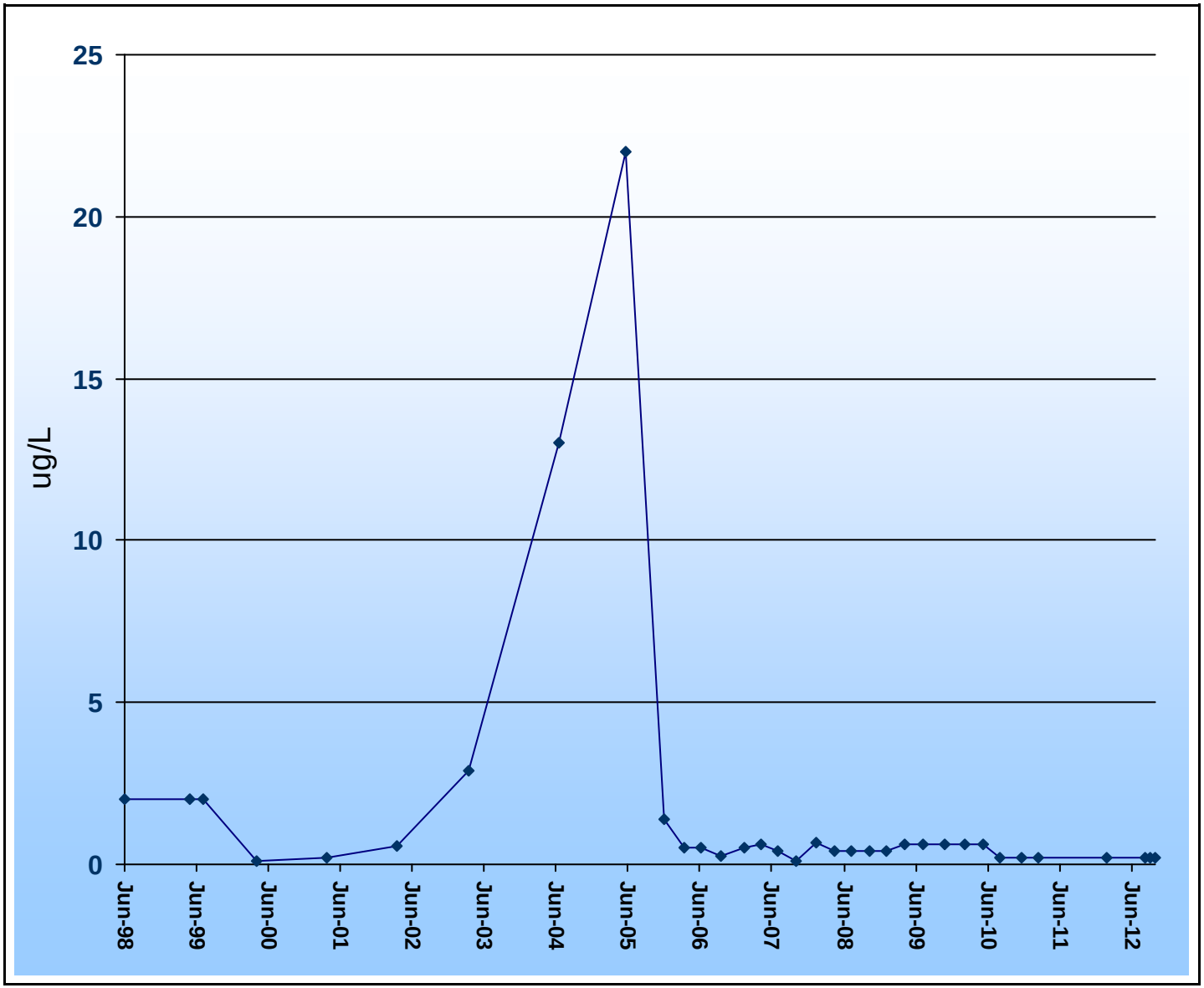
Cleanup Level 1.1 ug/L EPA RSL



Well ID ST-6-685

Casno 79-01-6 Analyte Trichloroethene

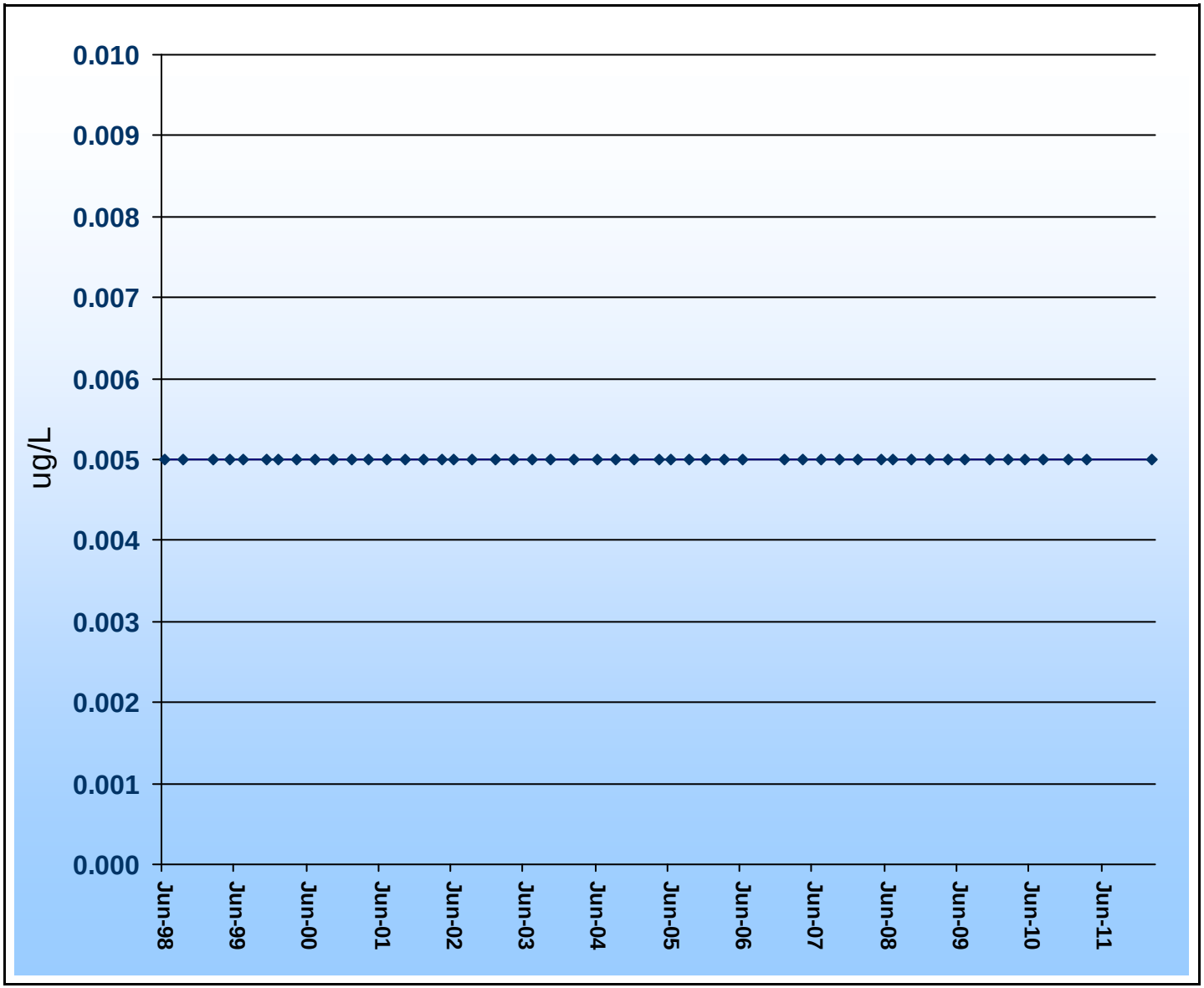
Cleanup Level 5.0 ug/L MCL



Well ID ST-6-685

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



National Aeronautics and
Space Administration

NASA WSTF Periodic Monitoring Report

Annual 2012

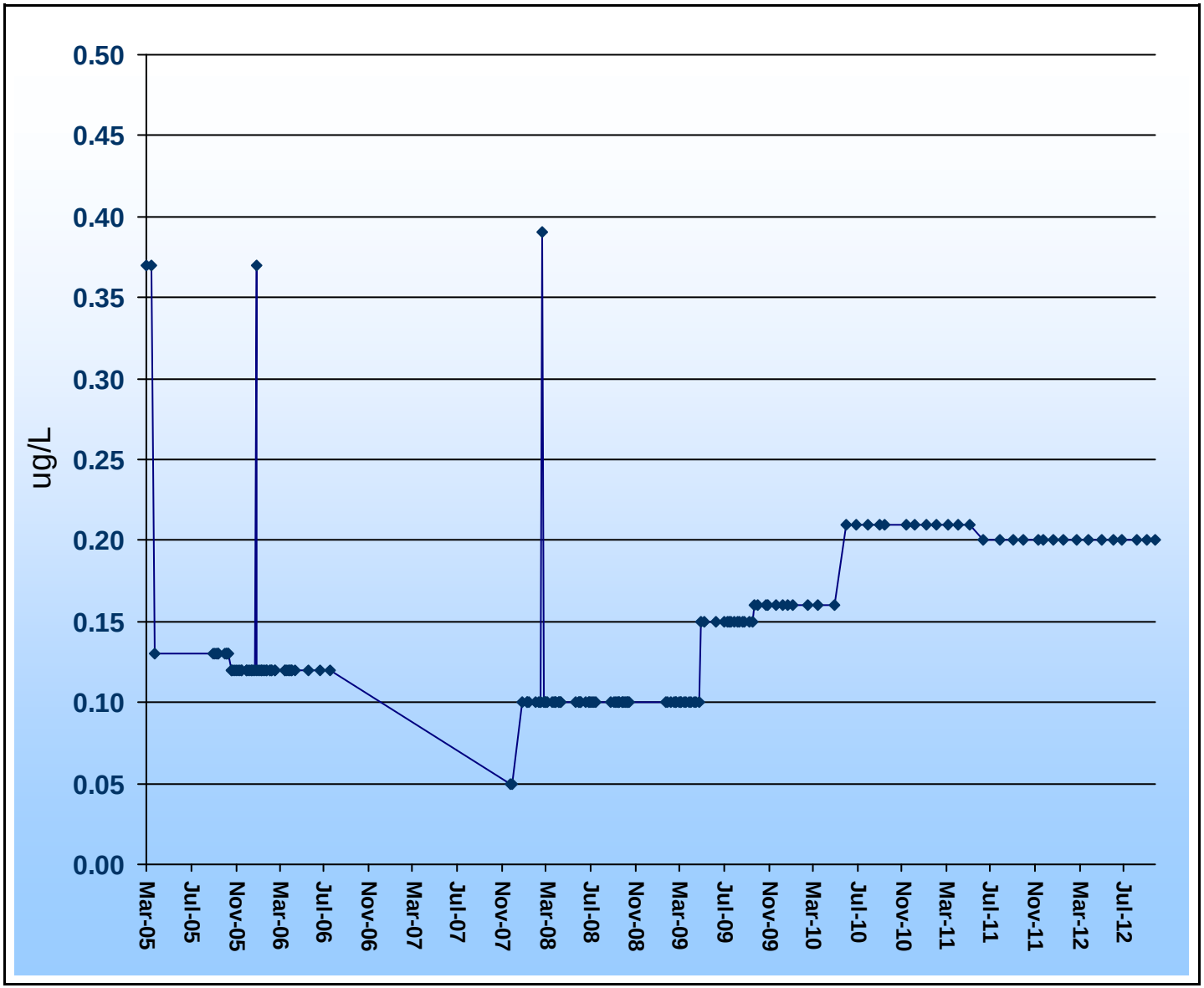
Appendix E
Time Concentration Plots

Other Wells (No GMP Group or Non-Monitoring Wells)

Well ID B650-EFF-1

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

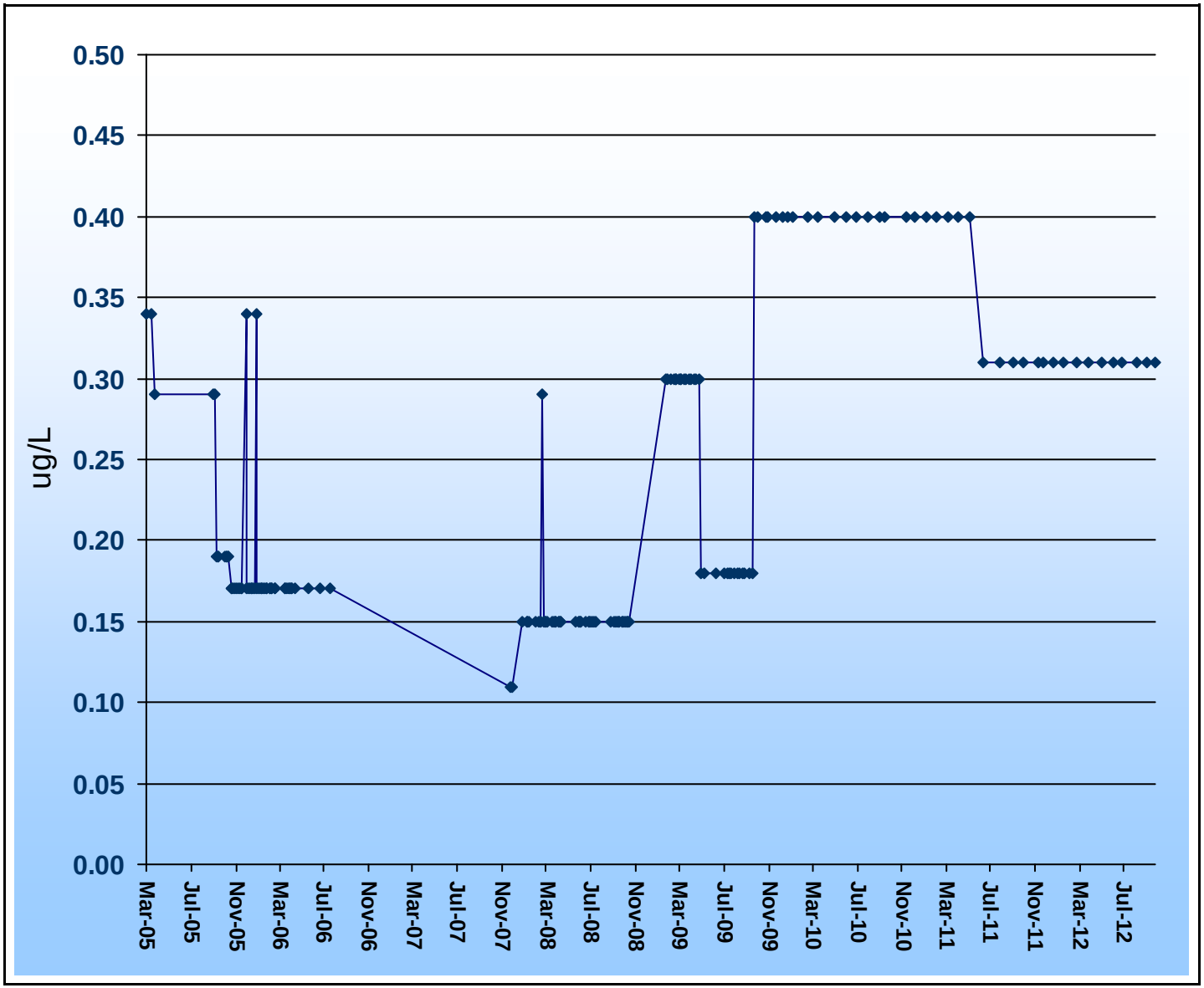
Cleanup Level 1,100 ug/L EPA RSL



Well ID B650-EFF-1

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

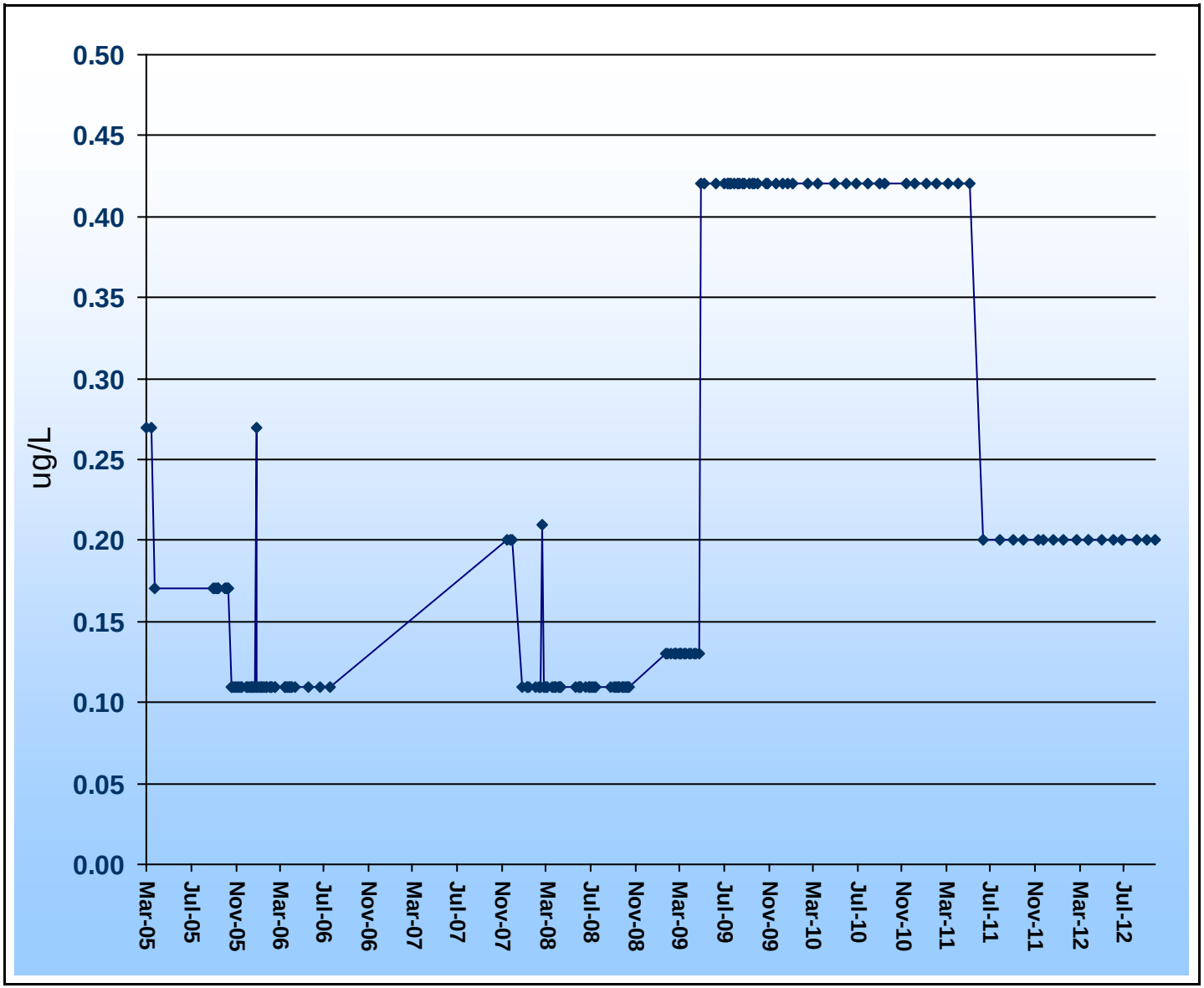
Cleanup Level 53,000 ug/L EPA RSL



Well ID B650-EFF-1

Casno 127-18-4 Analyte Tetrachloroethene

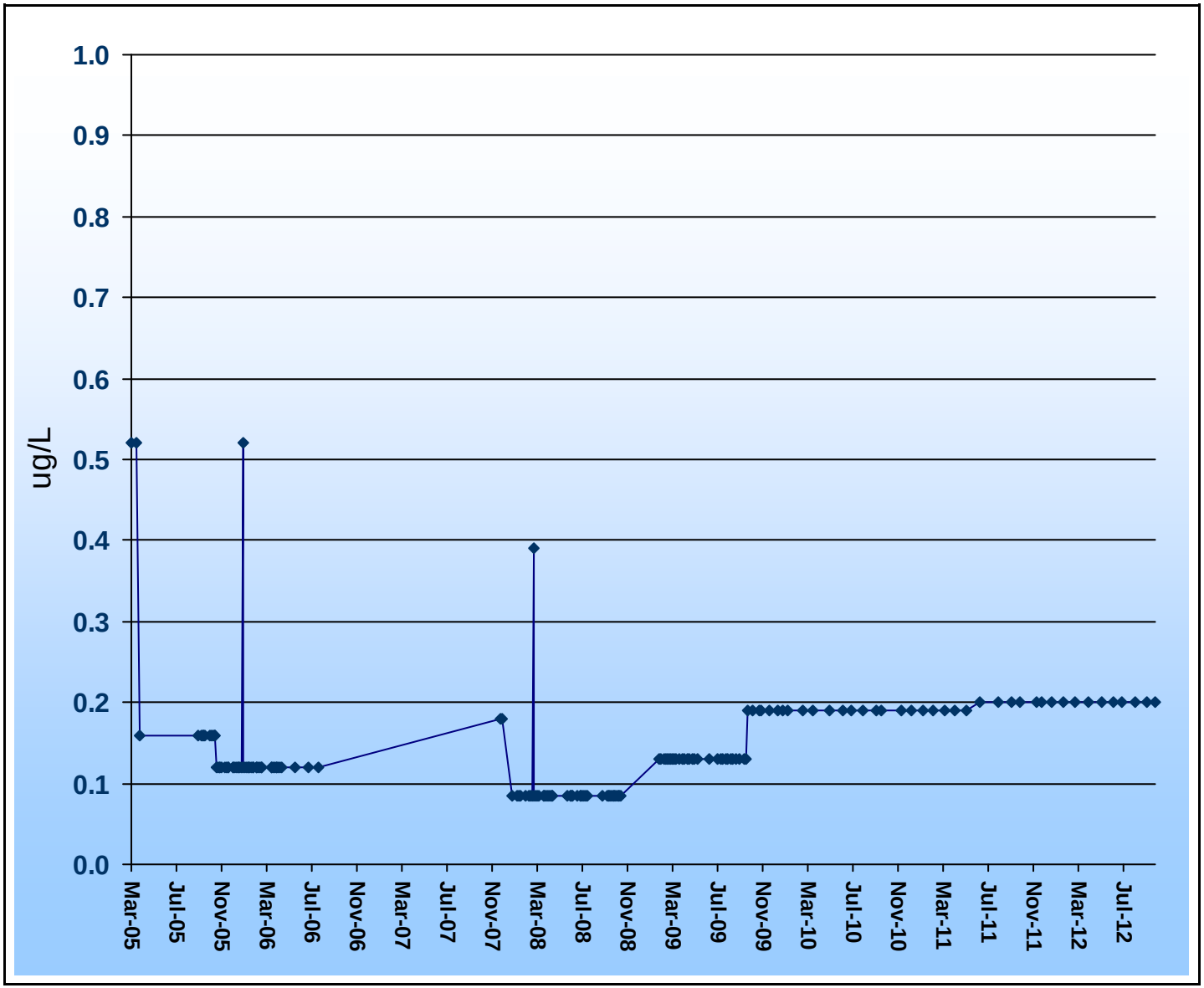
Cleanup Level 1.1 ug/L EPA RSL



Well ID B650-EFF-1

Casno 79-01-6 Analyte Trichloroethene

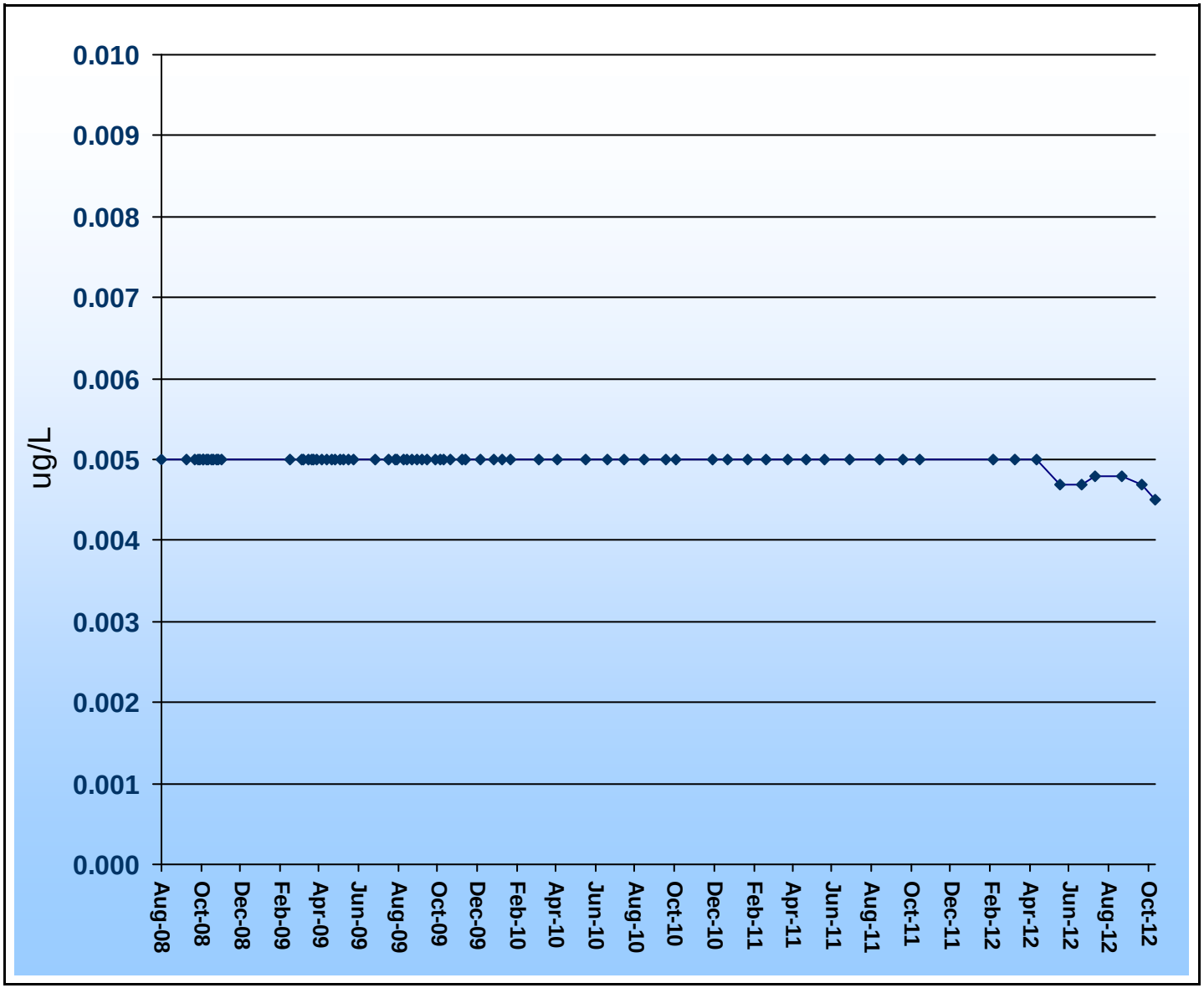
Cleanup Level 5.0 ug/L MCL



Well ID B650-EFF-1

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

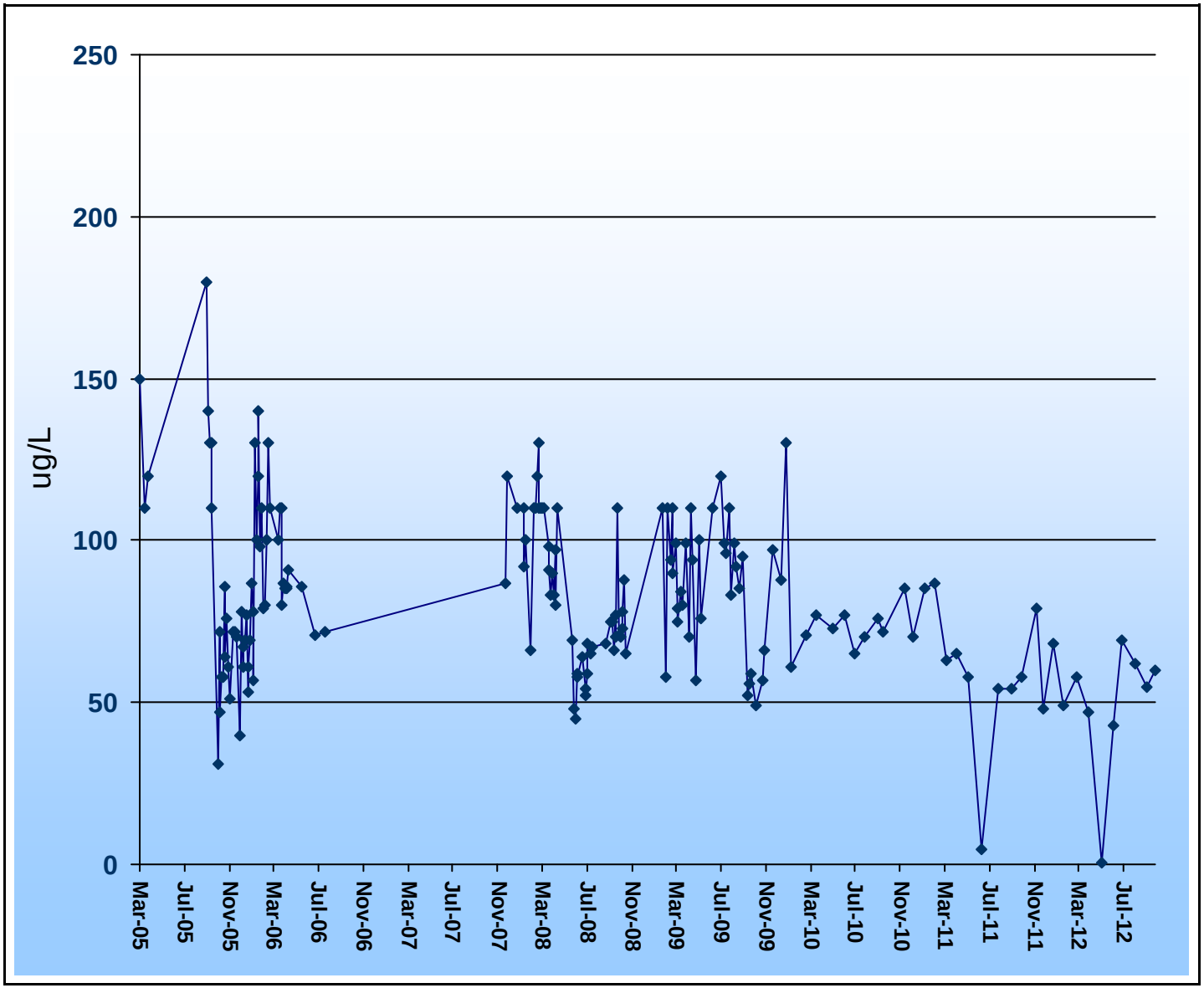
Cleanup Level 0.0042 ug/L EPA RSL



Well ID B650-INF-1

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

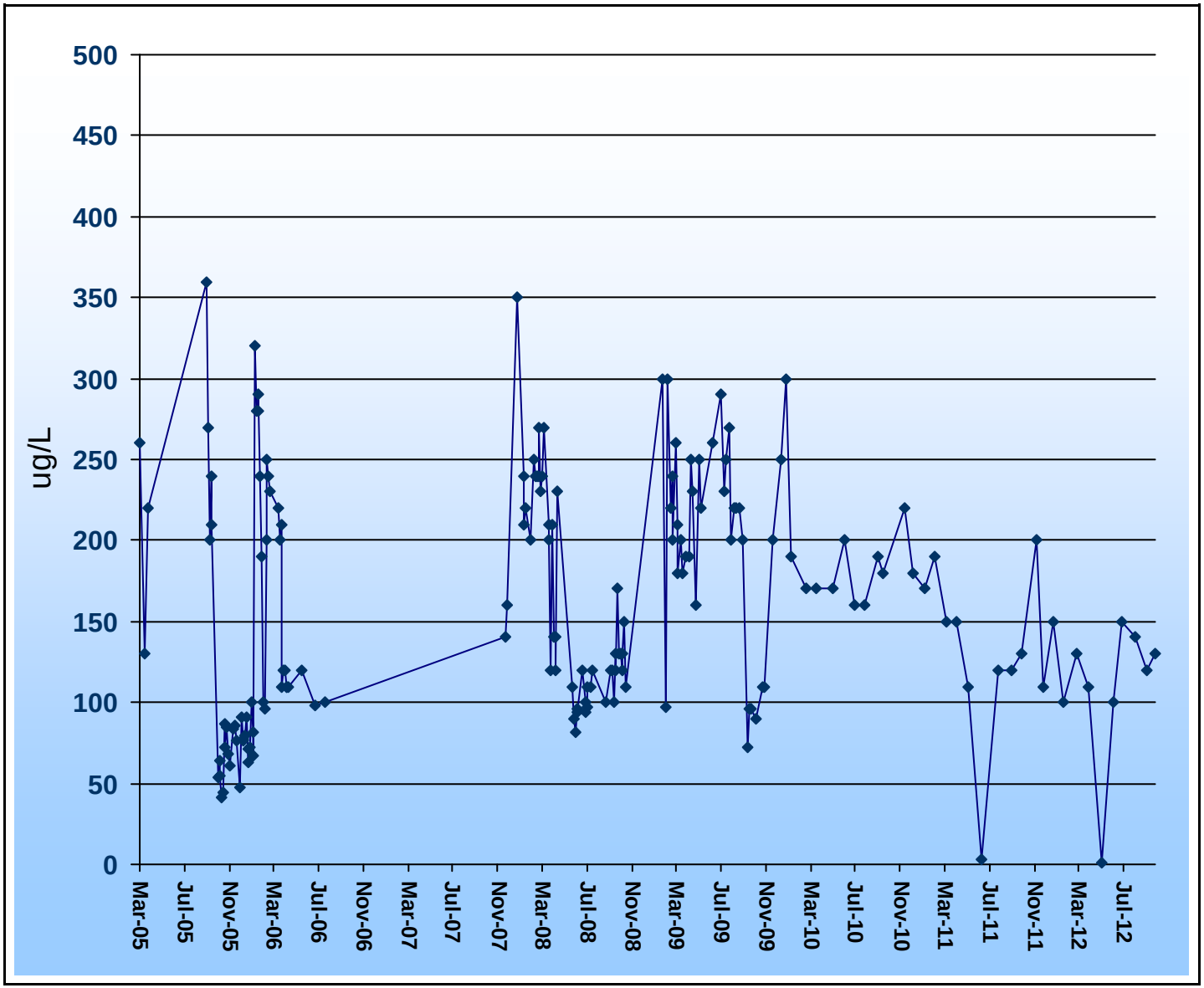
Cleanup Level 1,100 ug/L EPA RSL



Well ID B650-INF-1

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

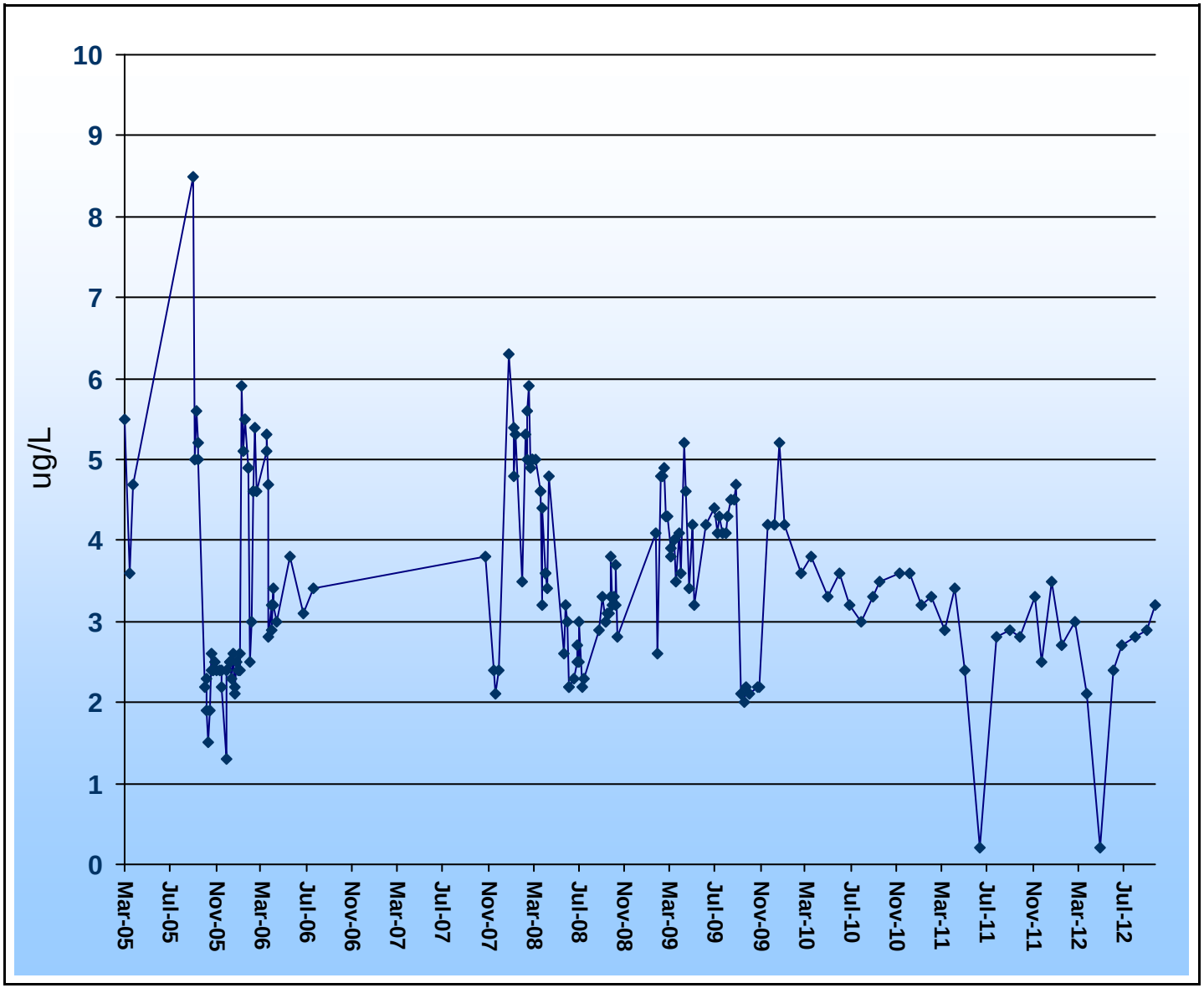
Cleanup Level 53,000 ug/L EPA RSL



Well ID B650-INF-1

Casno 127-18-4 Analyte Tetrachloroethene

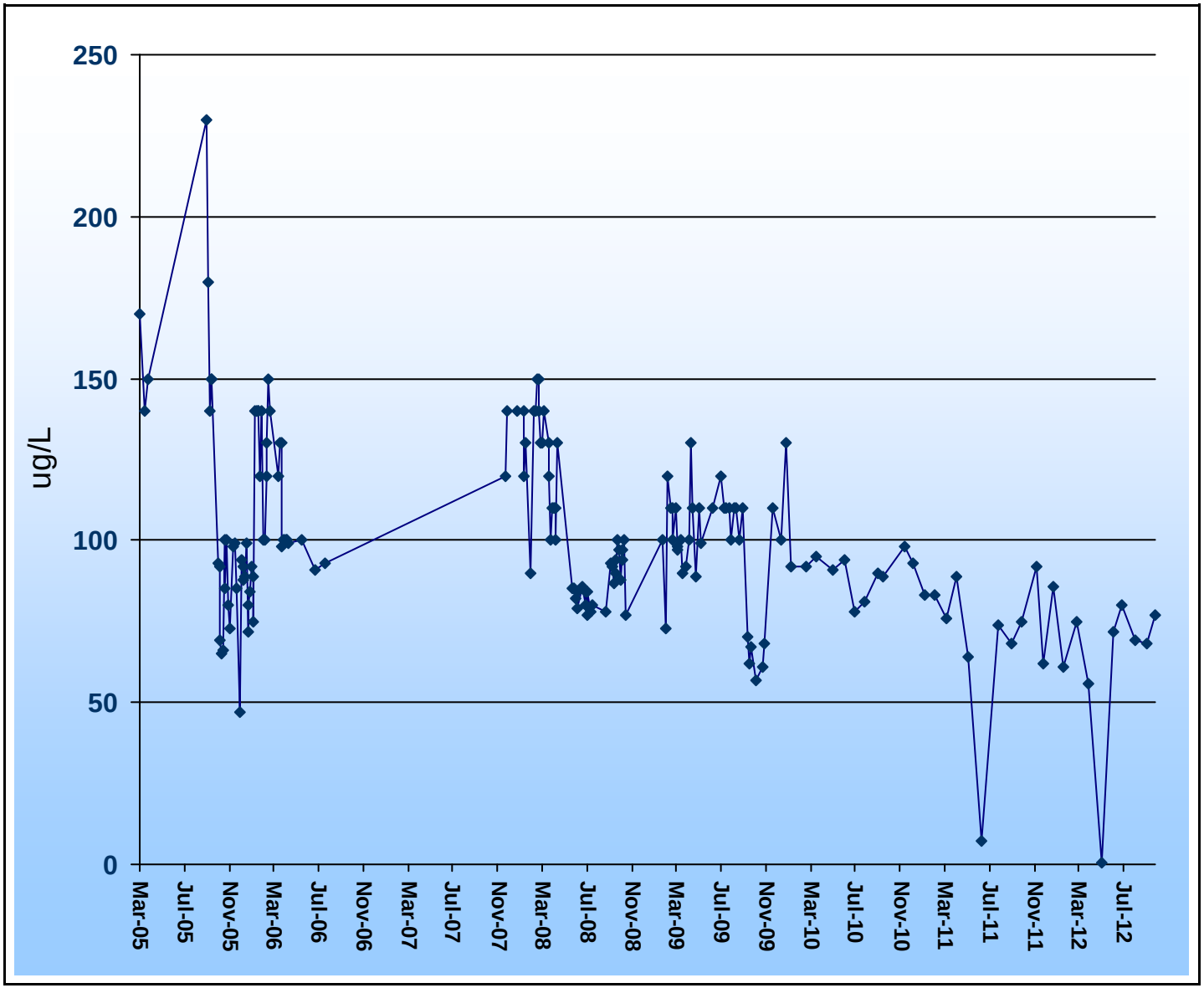
Cleanup Level 1.1 ug/L EPA RSL



Well ID B650-INF-1

Casno 79-01-6 Analyte Trichloroethene

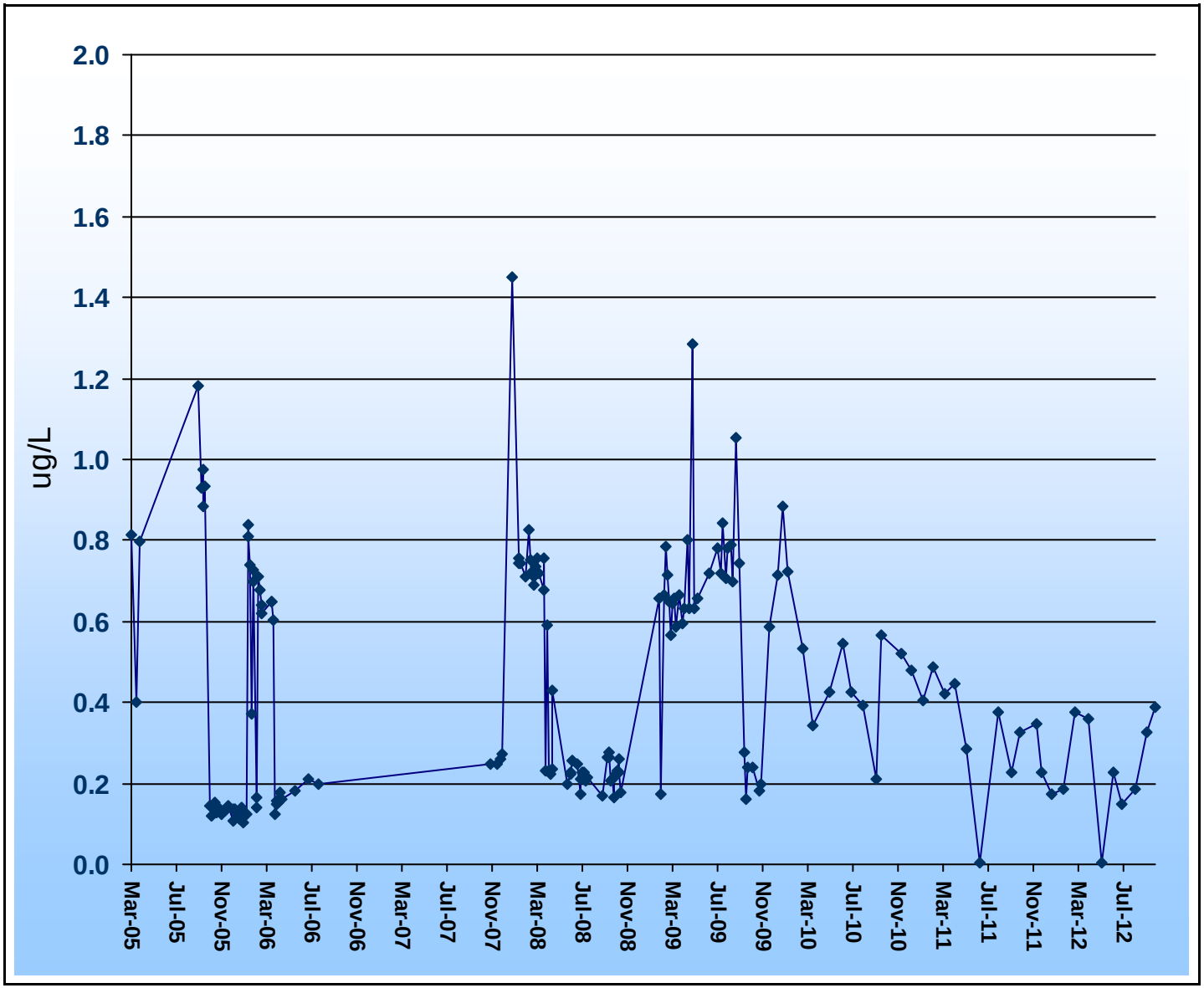
Cleanup Level 5.0 ug/L MCL



Well ID B650-INF-1

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

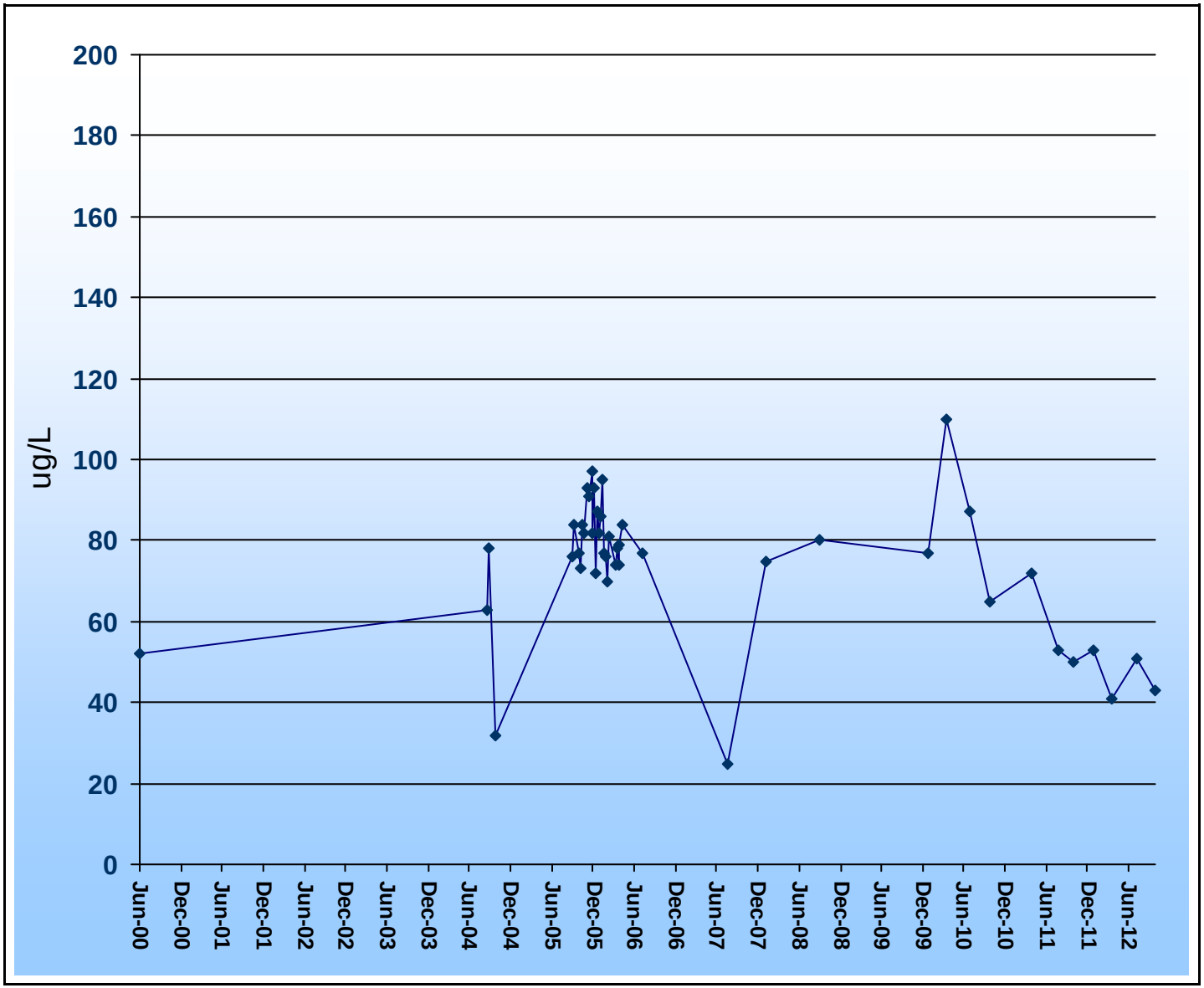
Cleanup Level 0.0042 ug/L EPA RSL



Well ID PFE-1

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

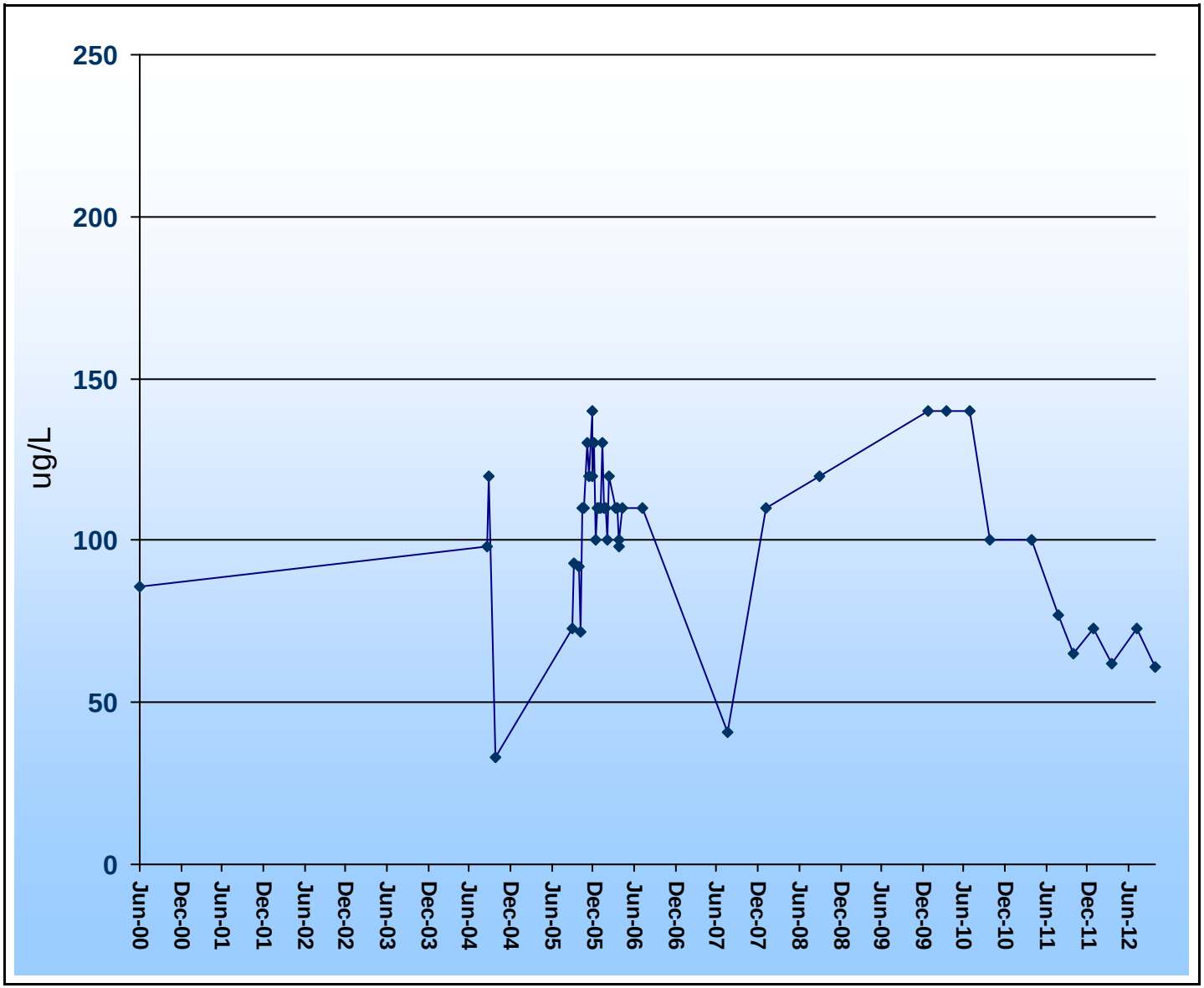
Cleanup Level 1,100 ug/L EPA RSL



Well ID PFE-1

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

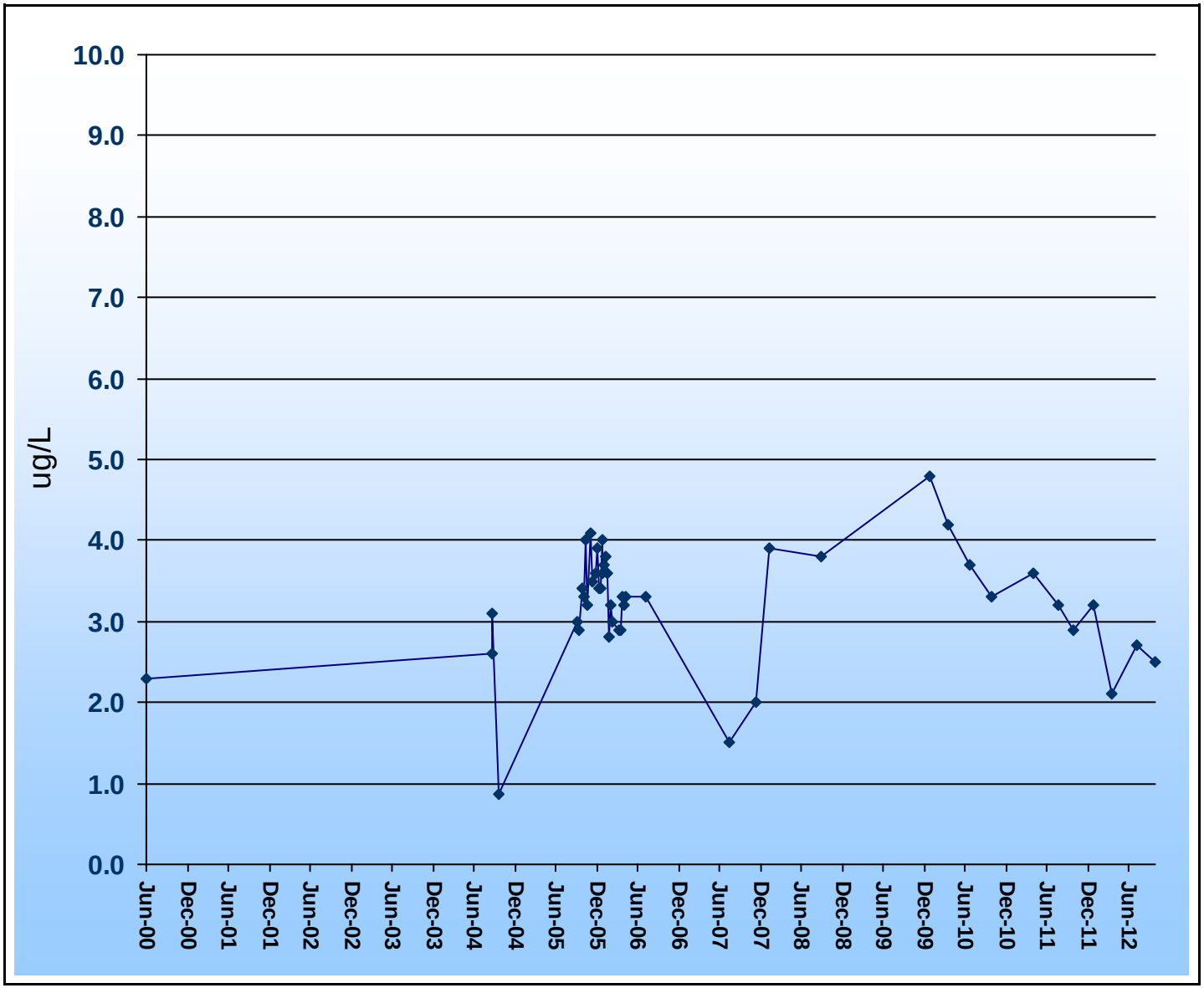
Cleanup Level 53,000 ug/L EPA RSL



Well ID PFE-1

Casno 127-18-4 Analyte Tetrachloroethene

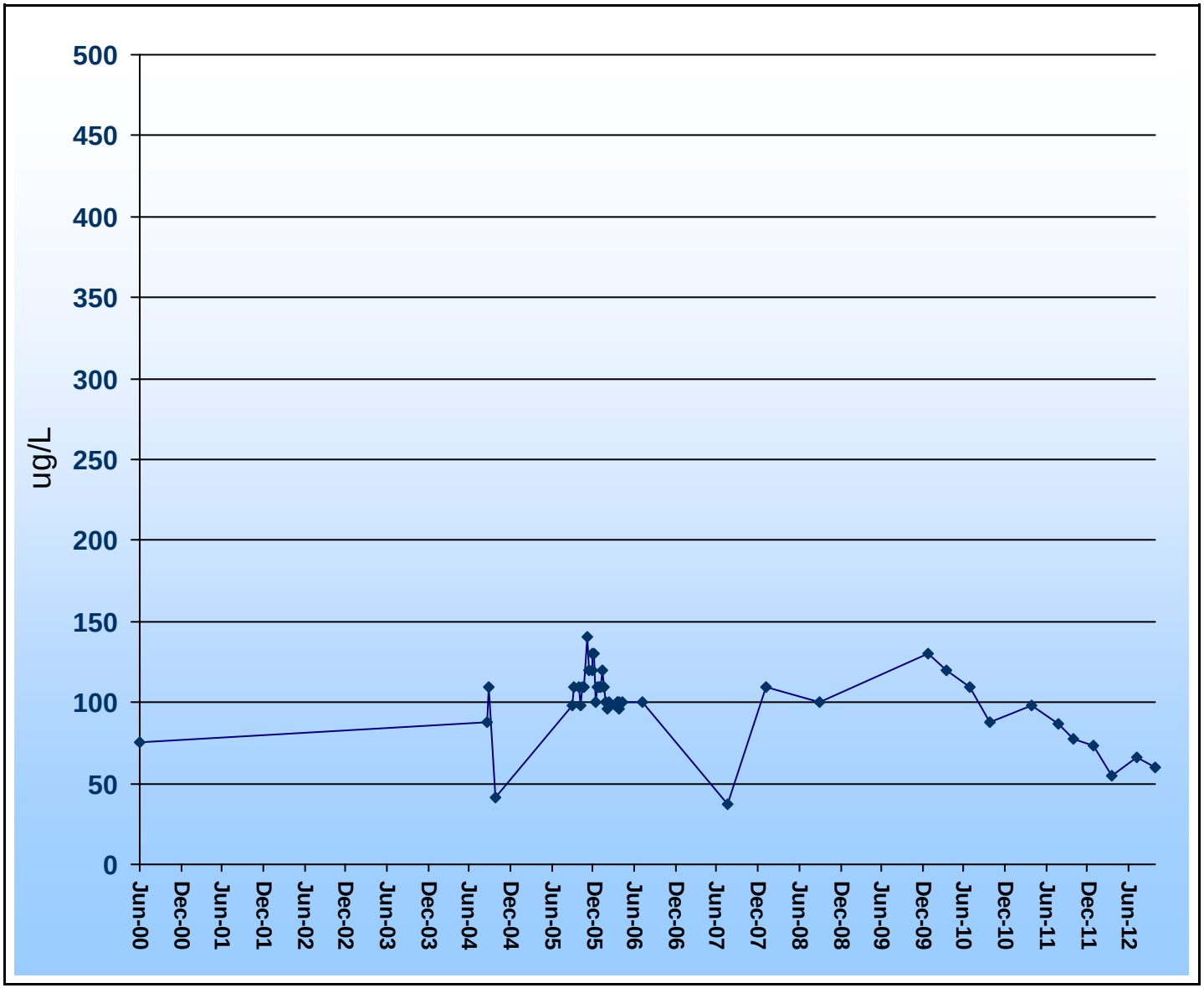
Cleanup Level 1.1 ug/L EPA RSL



Well ID PFE-1

Casno 79-01-6 Analyte Trichloroethene

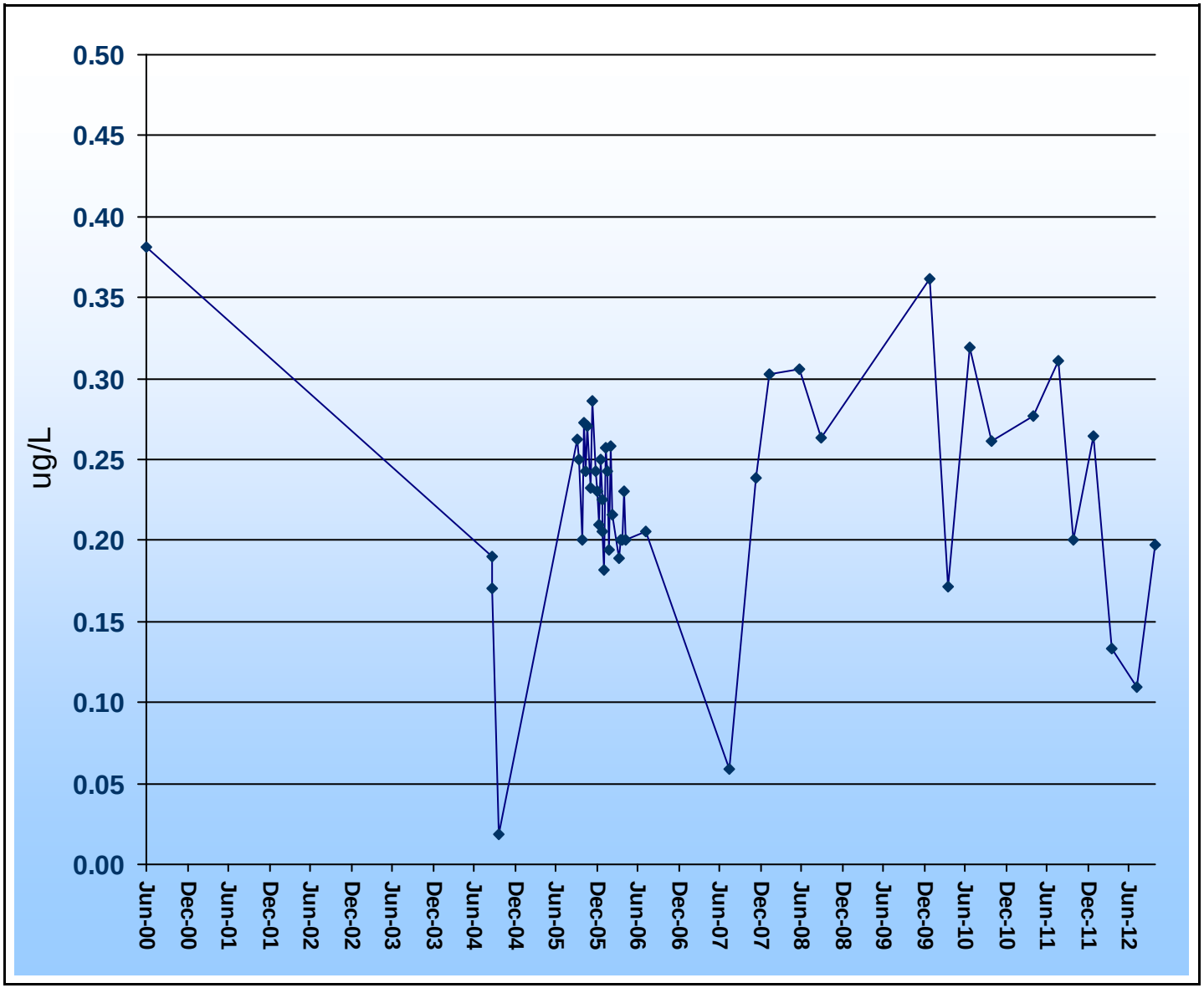
Cleanup Level 5.0 ug/L MCL



Well ID PFE-1

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

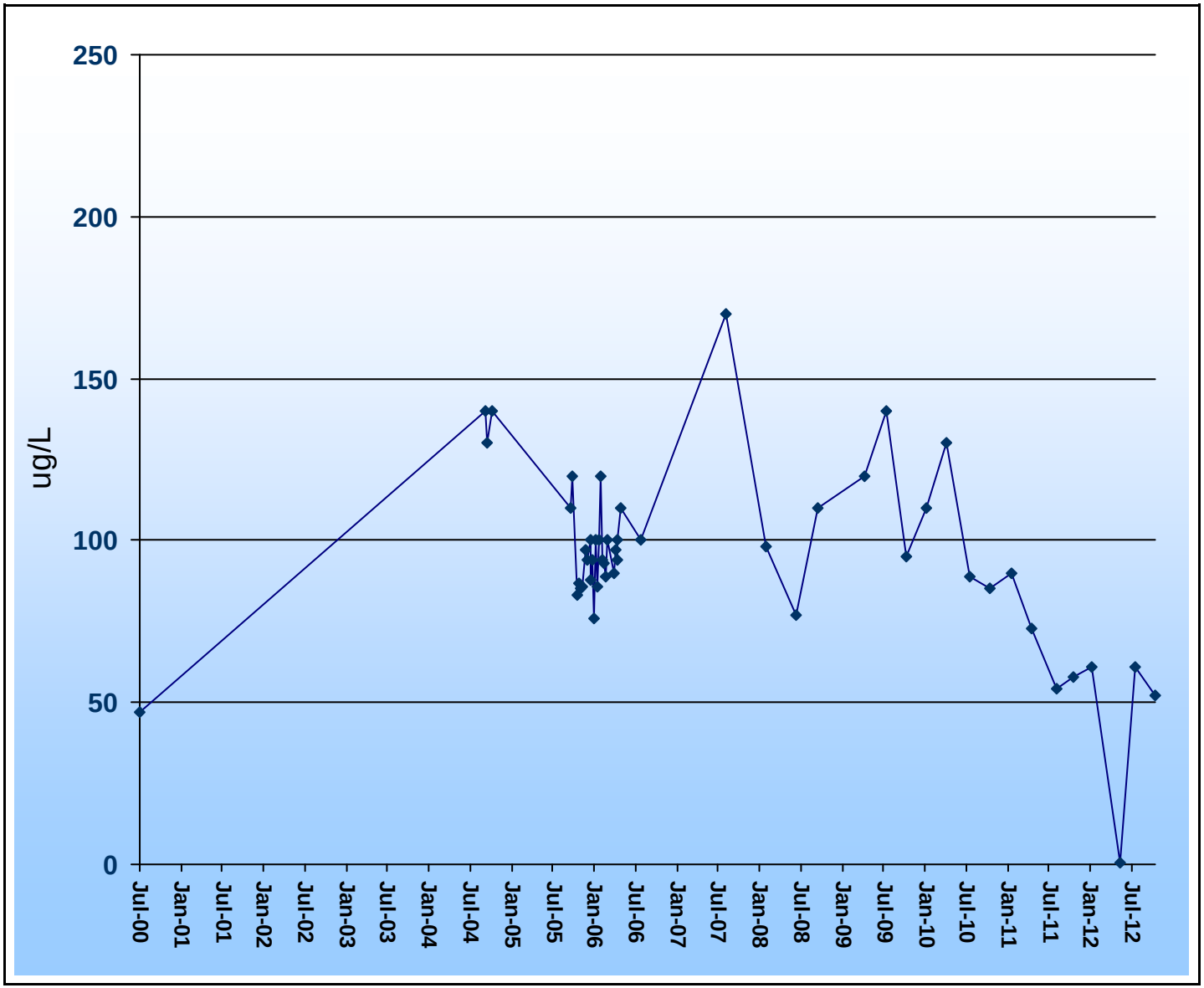
Cleanup Level 0.0042 ug/L EPA RSL



Well ID PFE-2

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

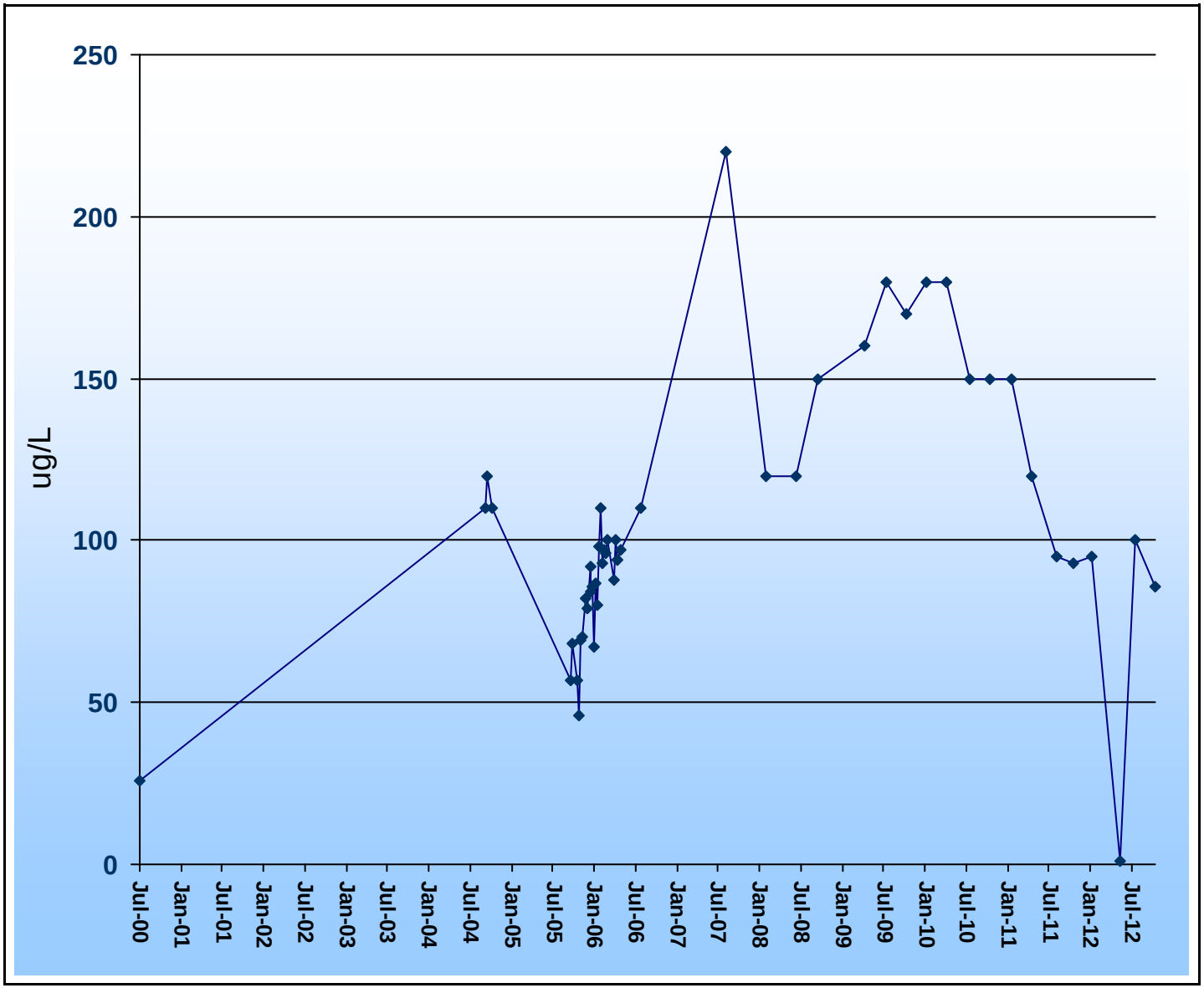
Cleanup Level 1,100 ug/L EPA RSL



Well ID PFE-2

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

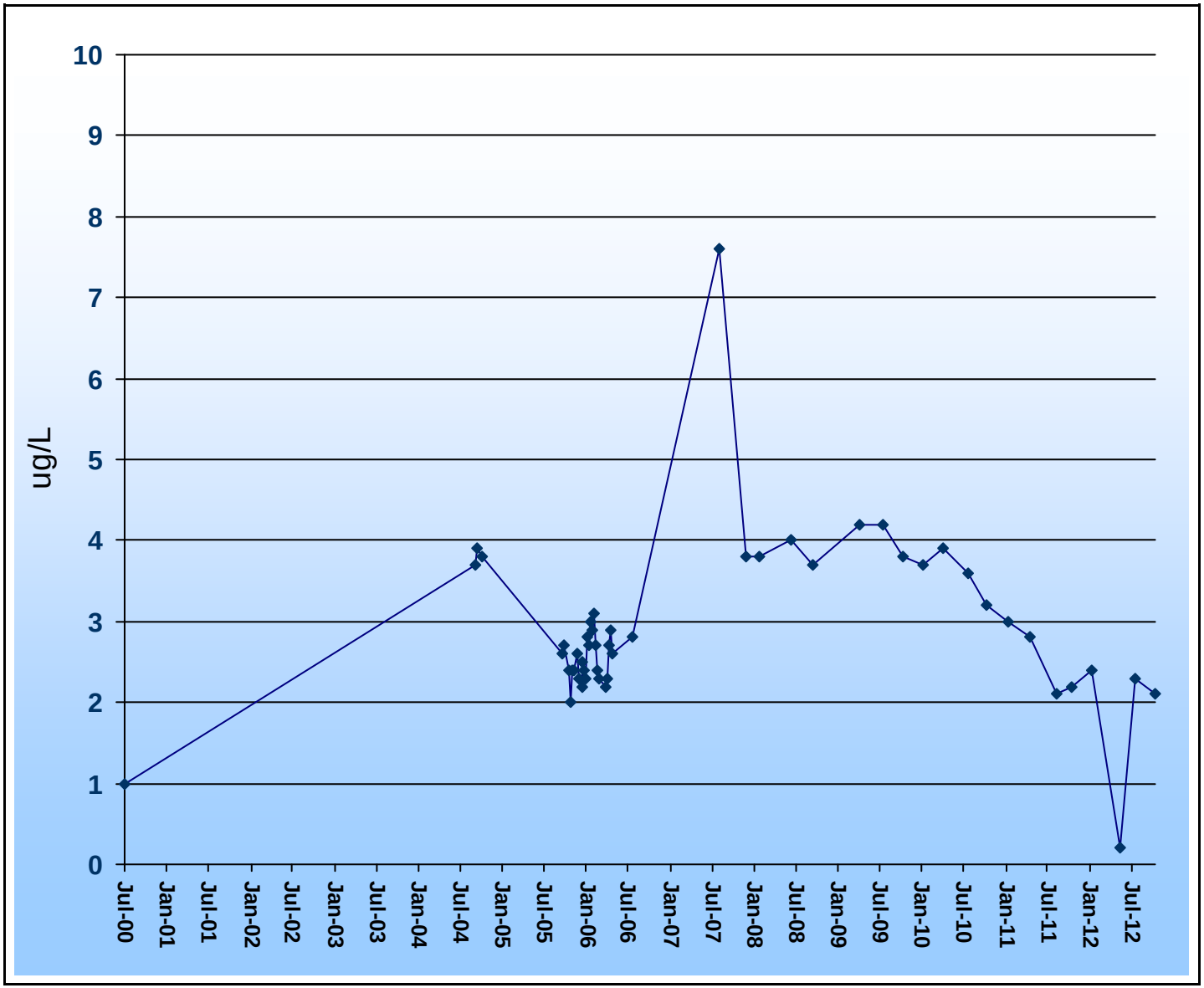
Cleanup Level 53,000 ug/L EPA RSL



Well ID PFE-2

Casno 127-18-4 Analyte Tetrachloroethene

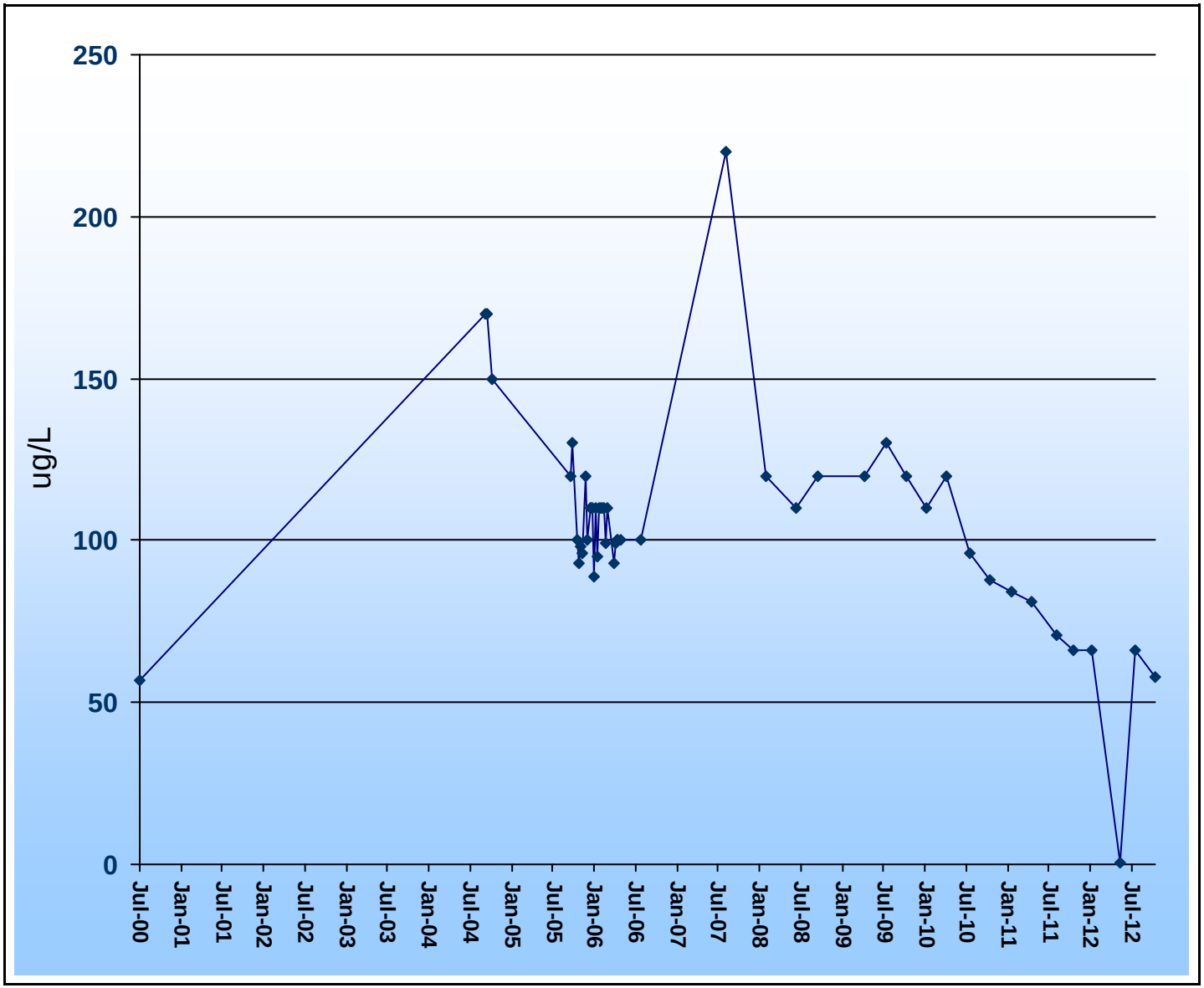
Cleanup Level 1.1 ug/L EPA RSL



Well ID PFE-2

Casno 79-01-6 Analyte Trichloroethene

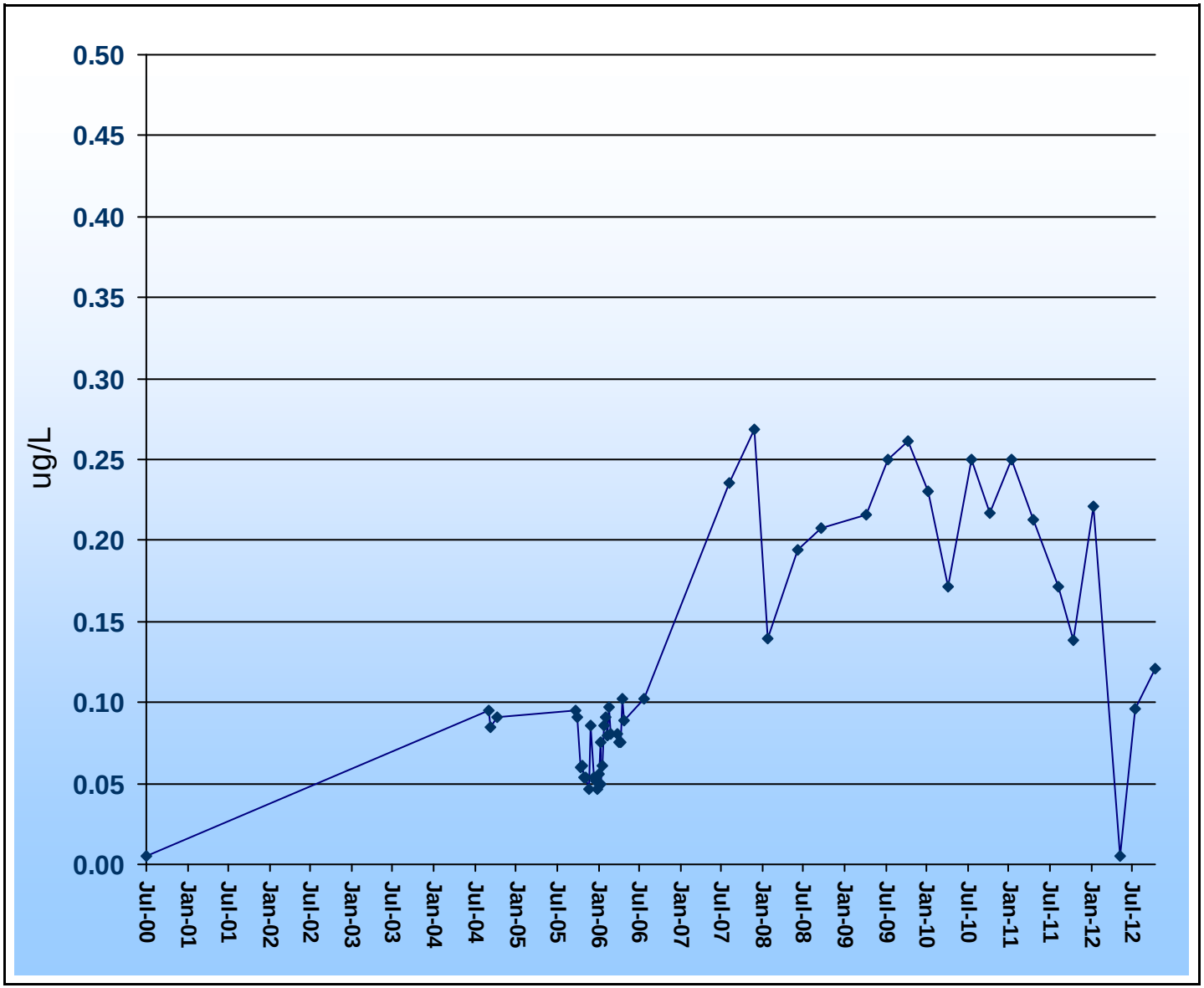
Cleanup Level 5.0 ug/L MCL



Well ID PFE-2

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

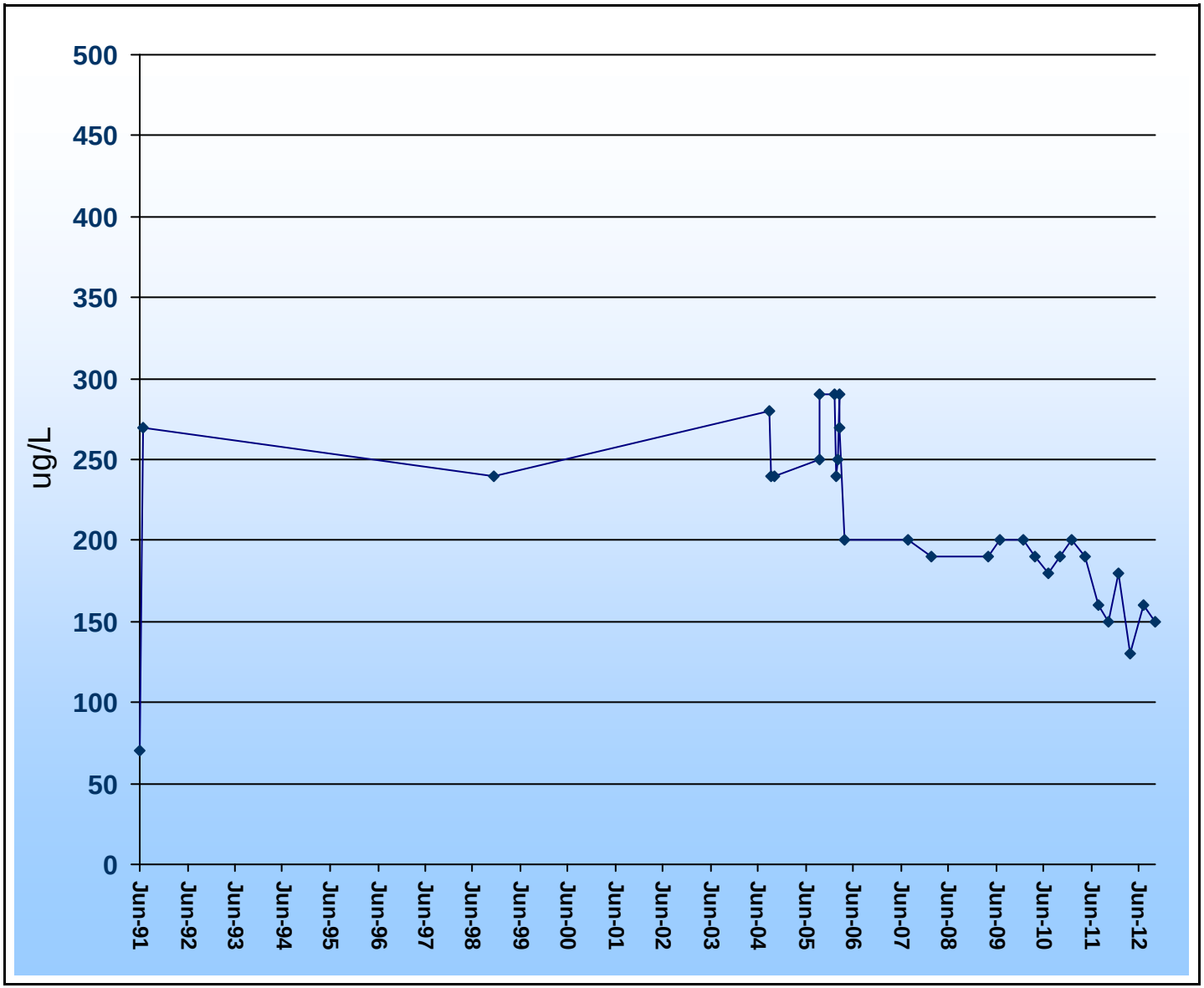
Cleanup Level 0.0042 ug/L EPA RSL



Well ID PFE-3

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

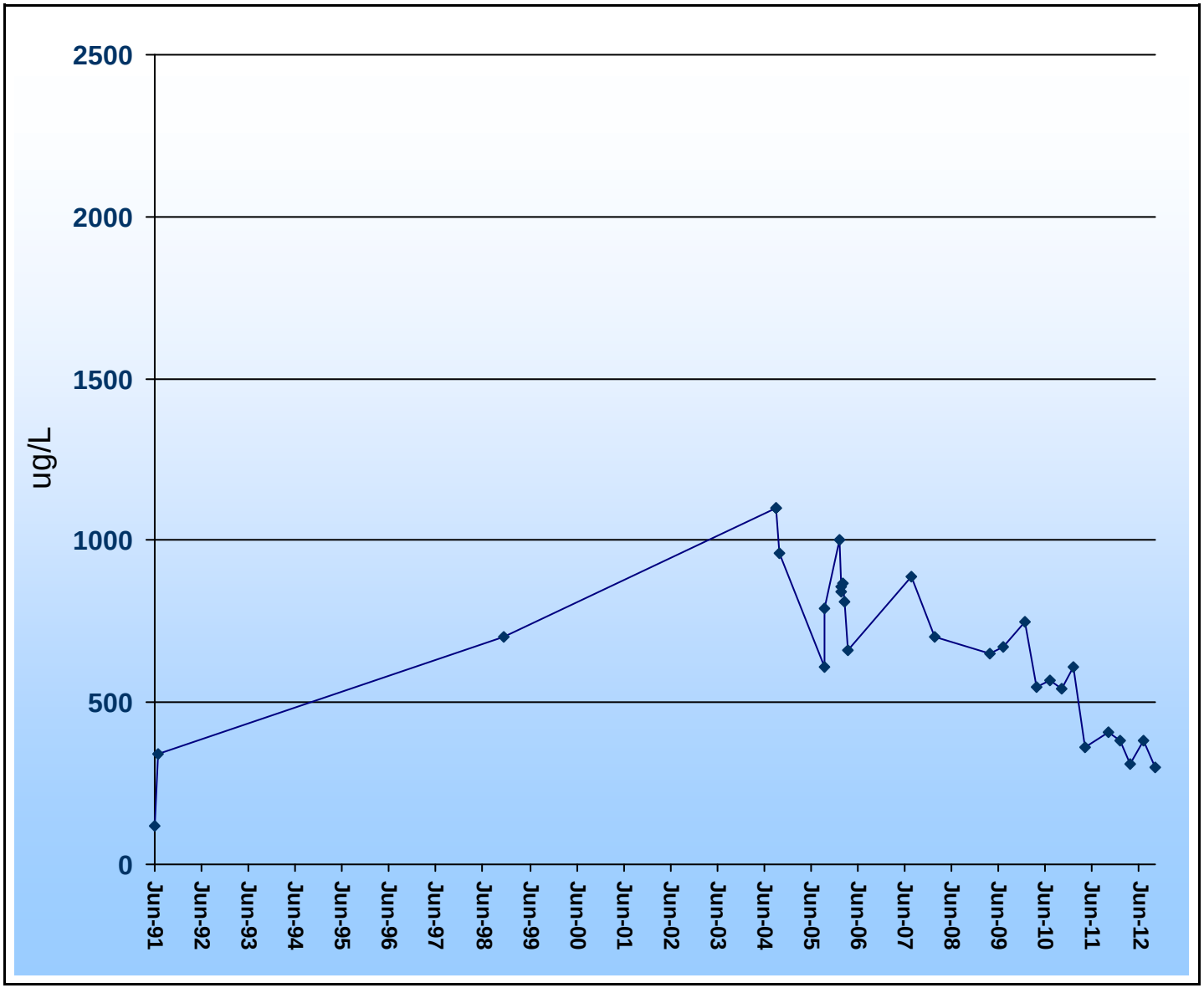
Cleanup Level 1,100 ug/L EPA RSL



Well ID PFE-3

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

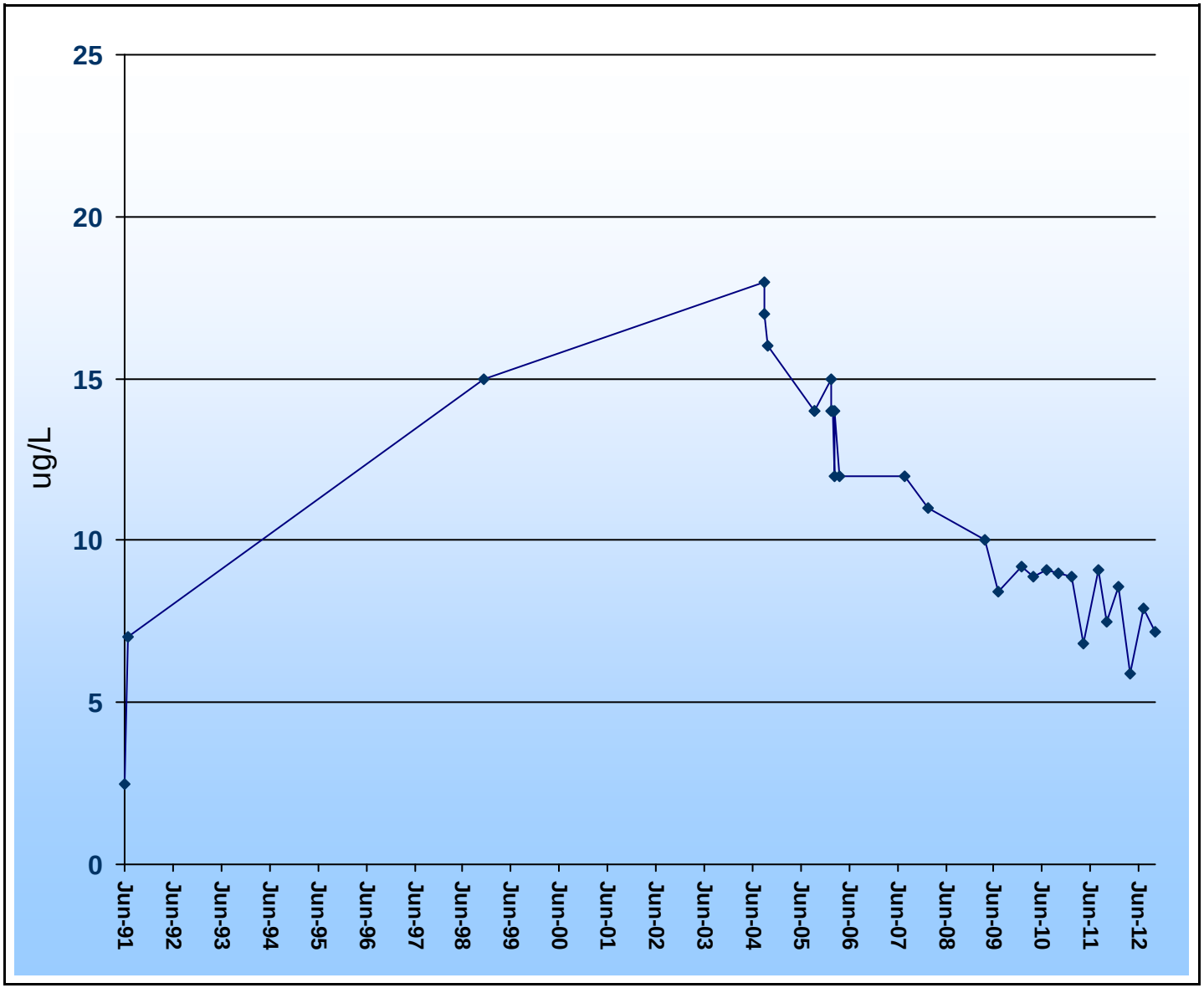
Cleanup Level 53,000 ug/L EPA RSL



Well ID PFE-3

Casno 127-18-4 Analyte Tetrachloroethene

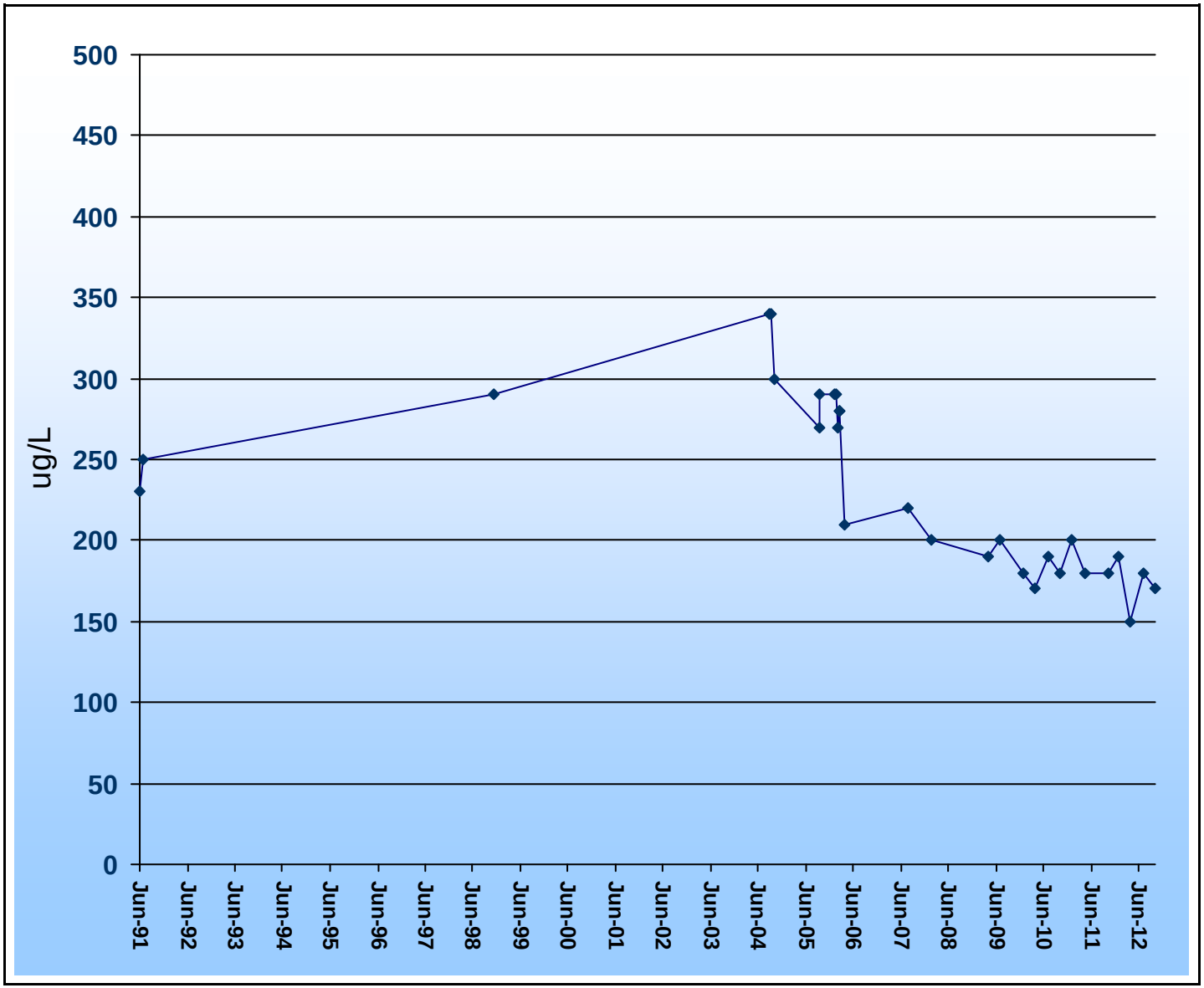
Cleanup Level 1.1 ug/L EPA RSL



Well ID PFE-3

Casno 79-01-6 Analyte Trichloroethene

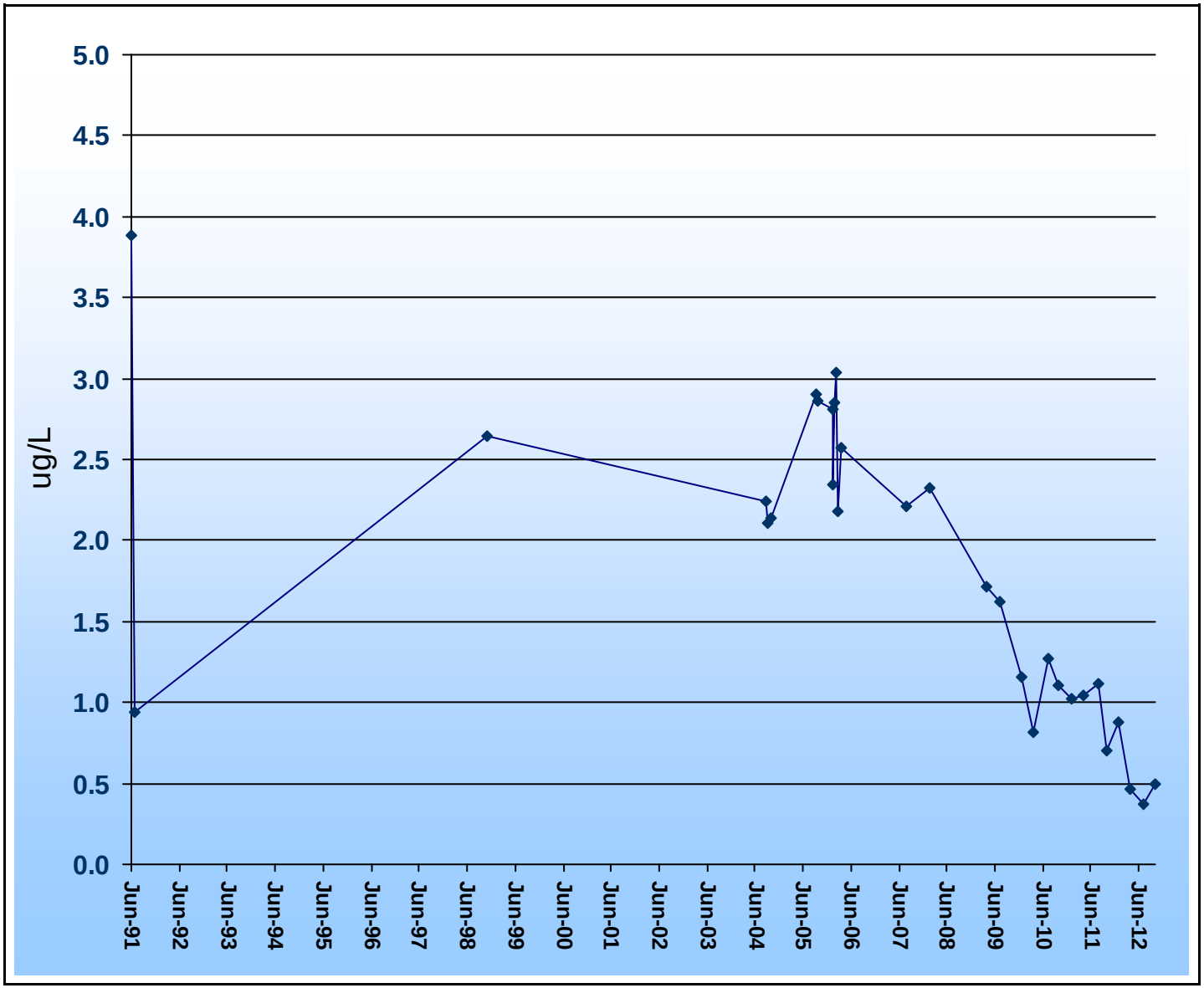
Cleanup Level 5.0 ug/L MCL



Well ID PFE-3

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

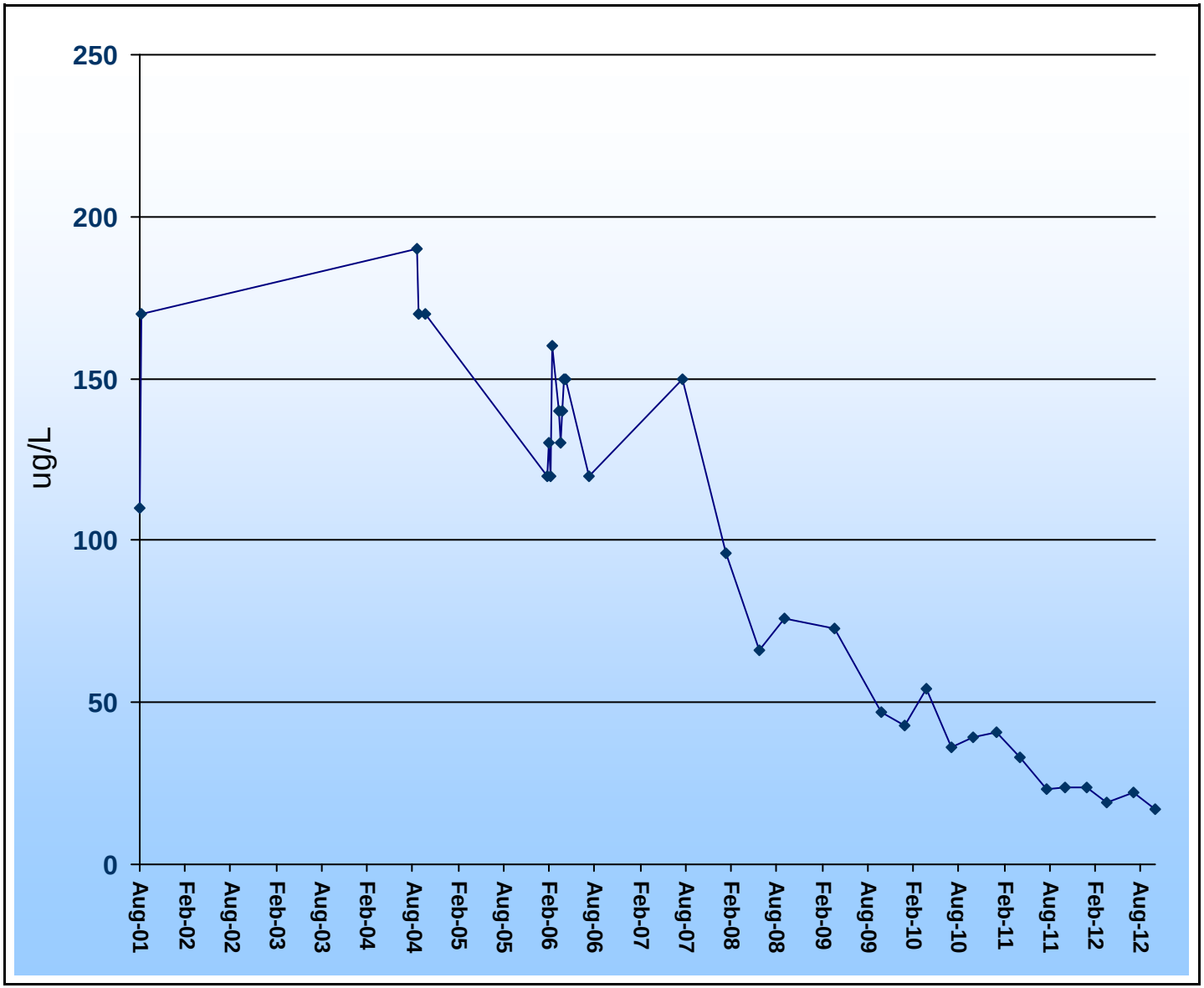
Cleanup Level 0.0042 ug/L EPA RSL



Well ID PFE-4A

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

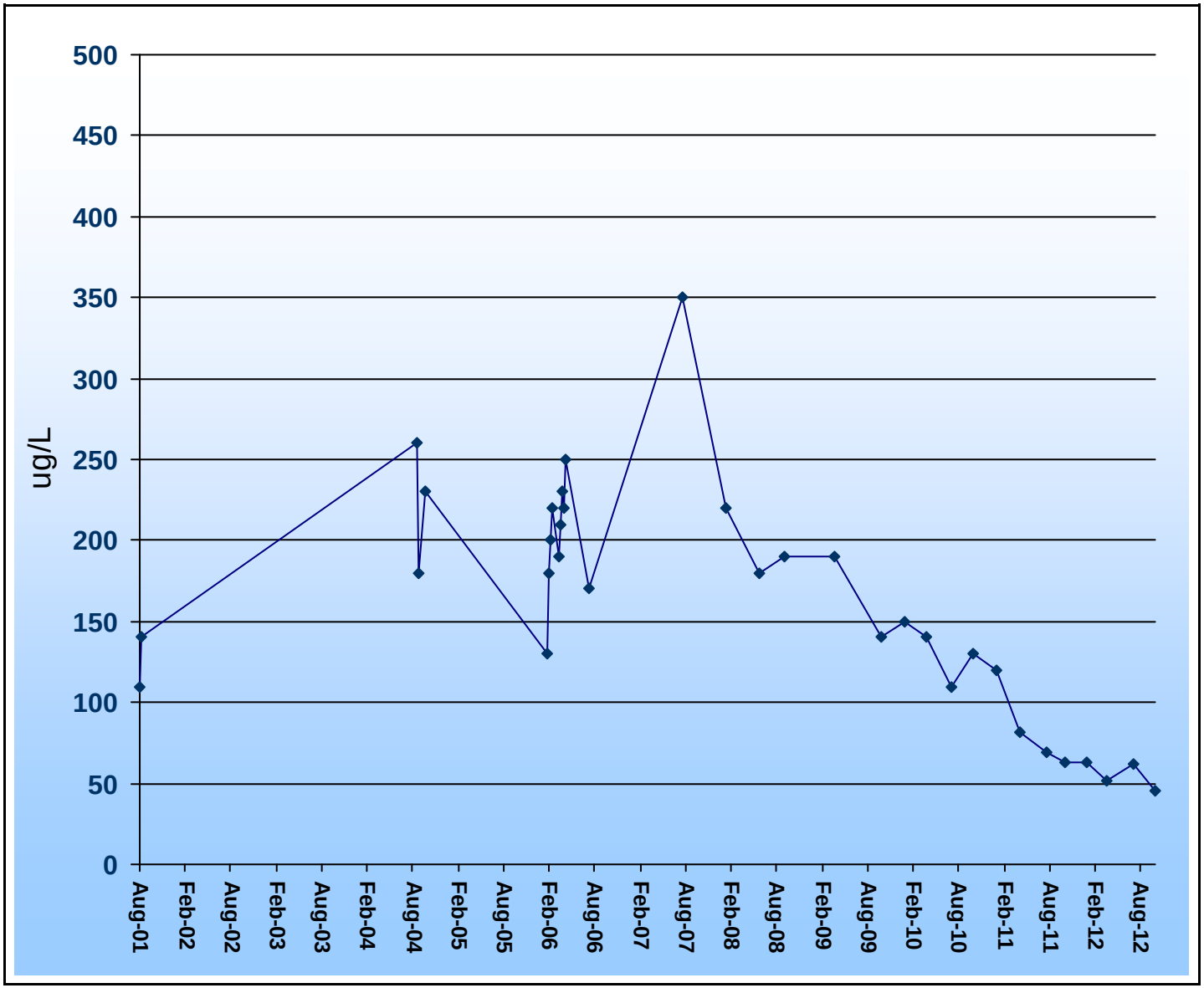
Cleanup Level 1,100 ug/L EPA RSL



Well ID PFE-4A

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

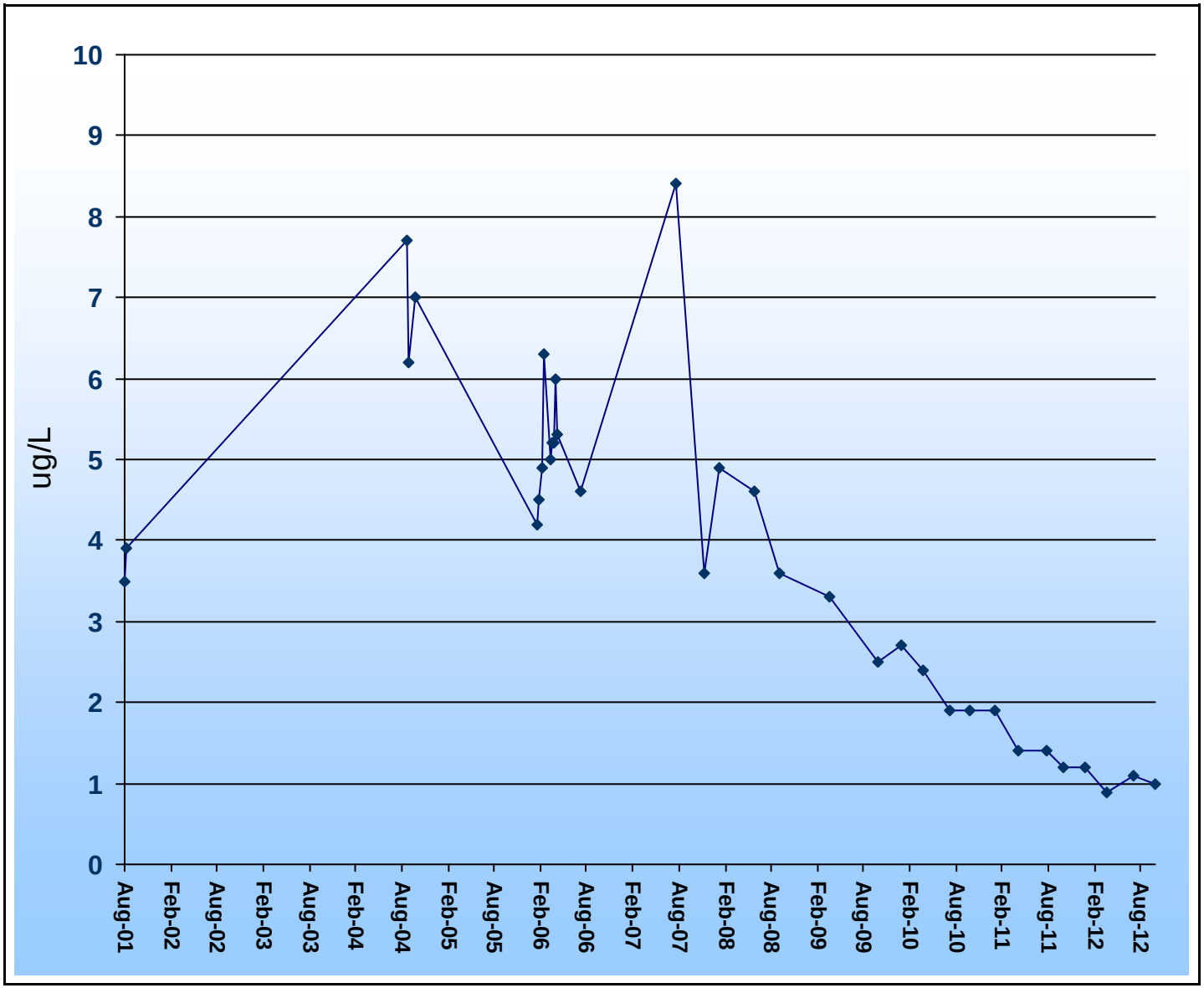
Cleanup Level 53,000 ug/L EPA RSL



Well ID PFE-4A

Casno 127-18-4 Analyte Tetrachloroethene

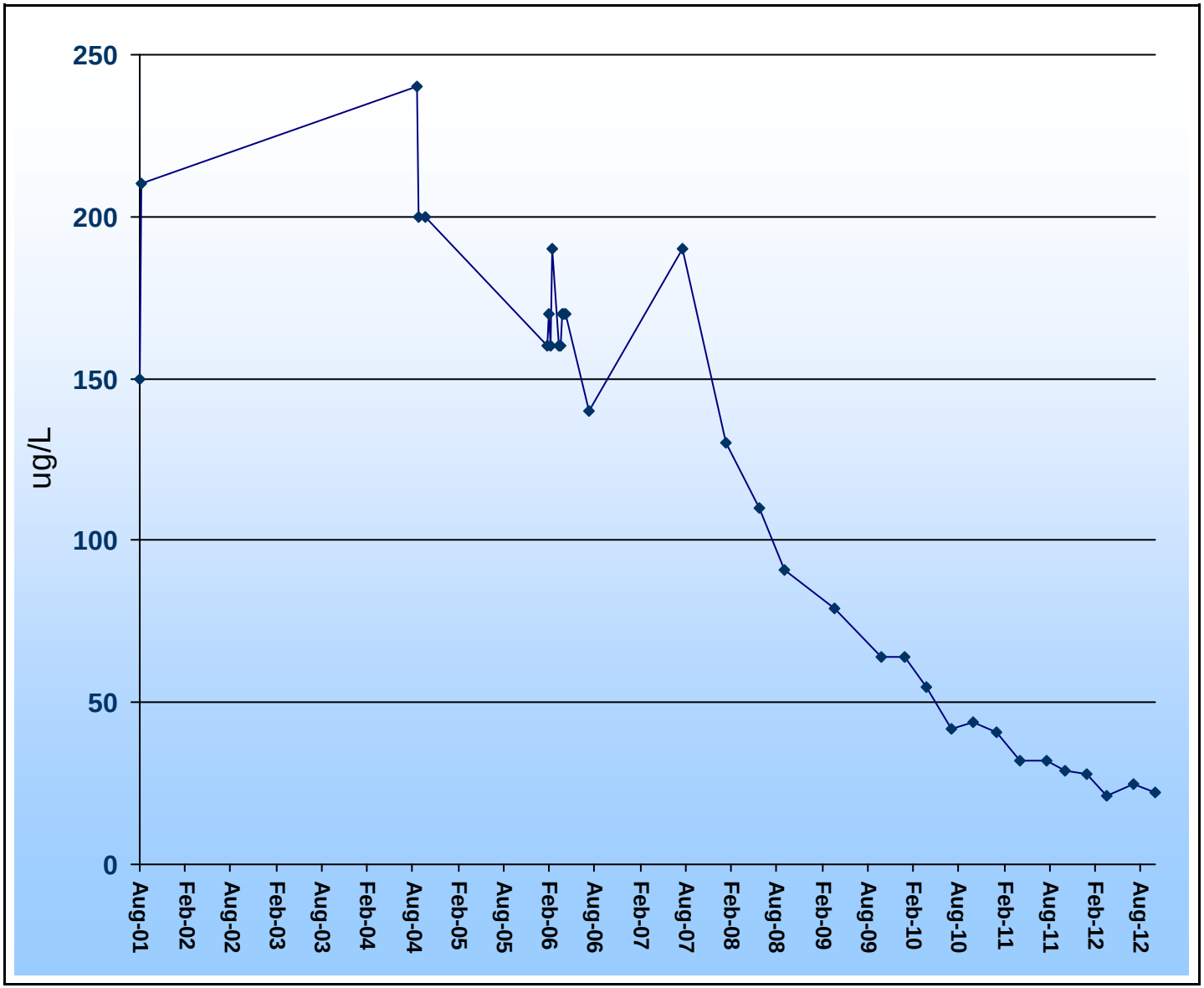
Cleanup Level 1.1 ug/L EPA RSL



Well ID PFE-4A

Casno 79-01-6 Analyte Trichloroethene

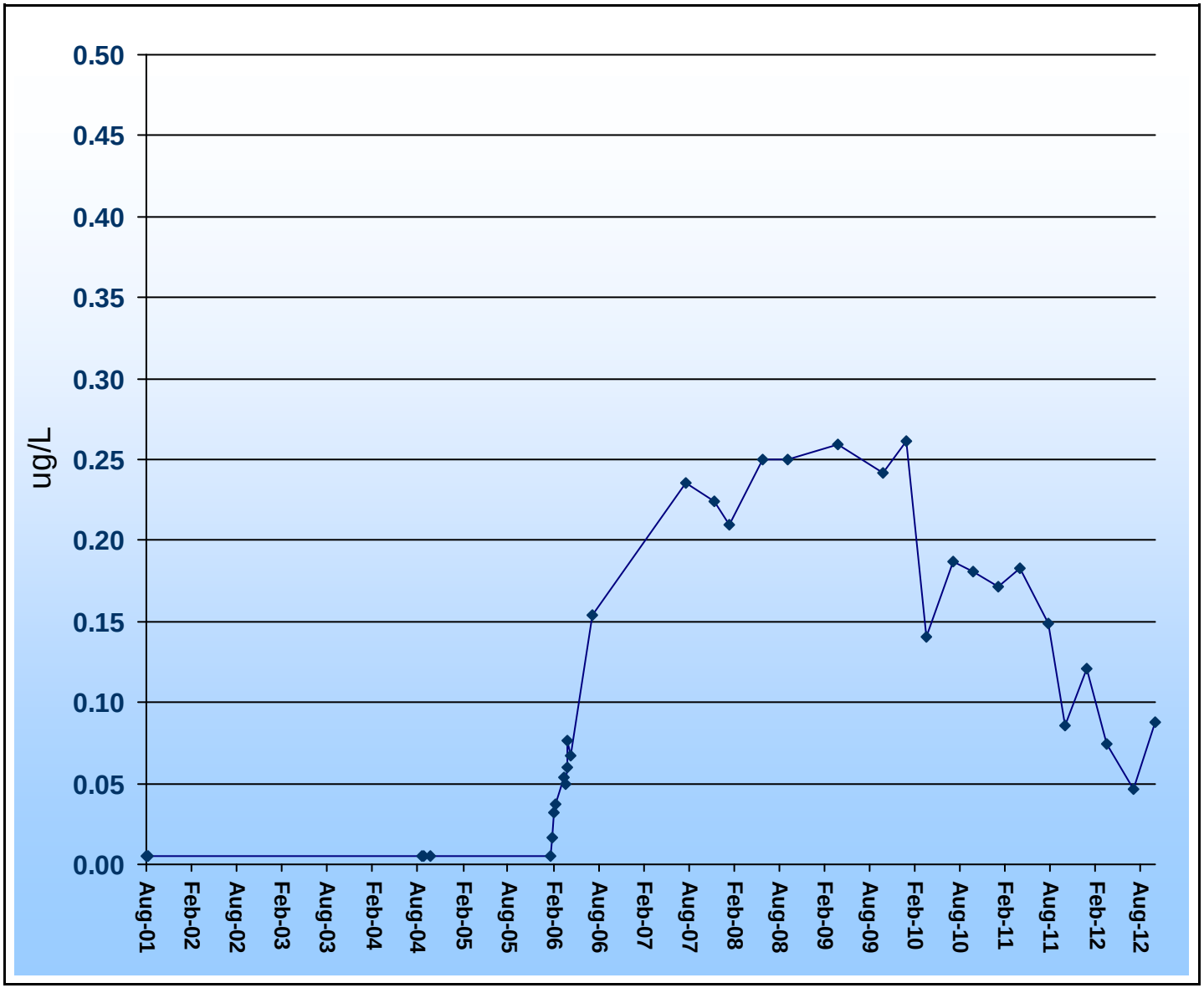
Cleanup Level 5.0 ug/L MCL



Well ID PFE-4A

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

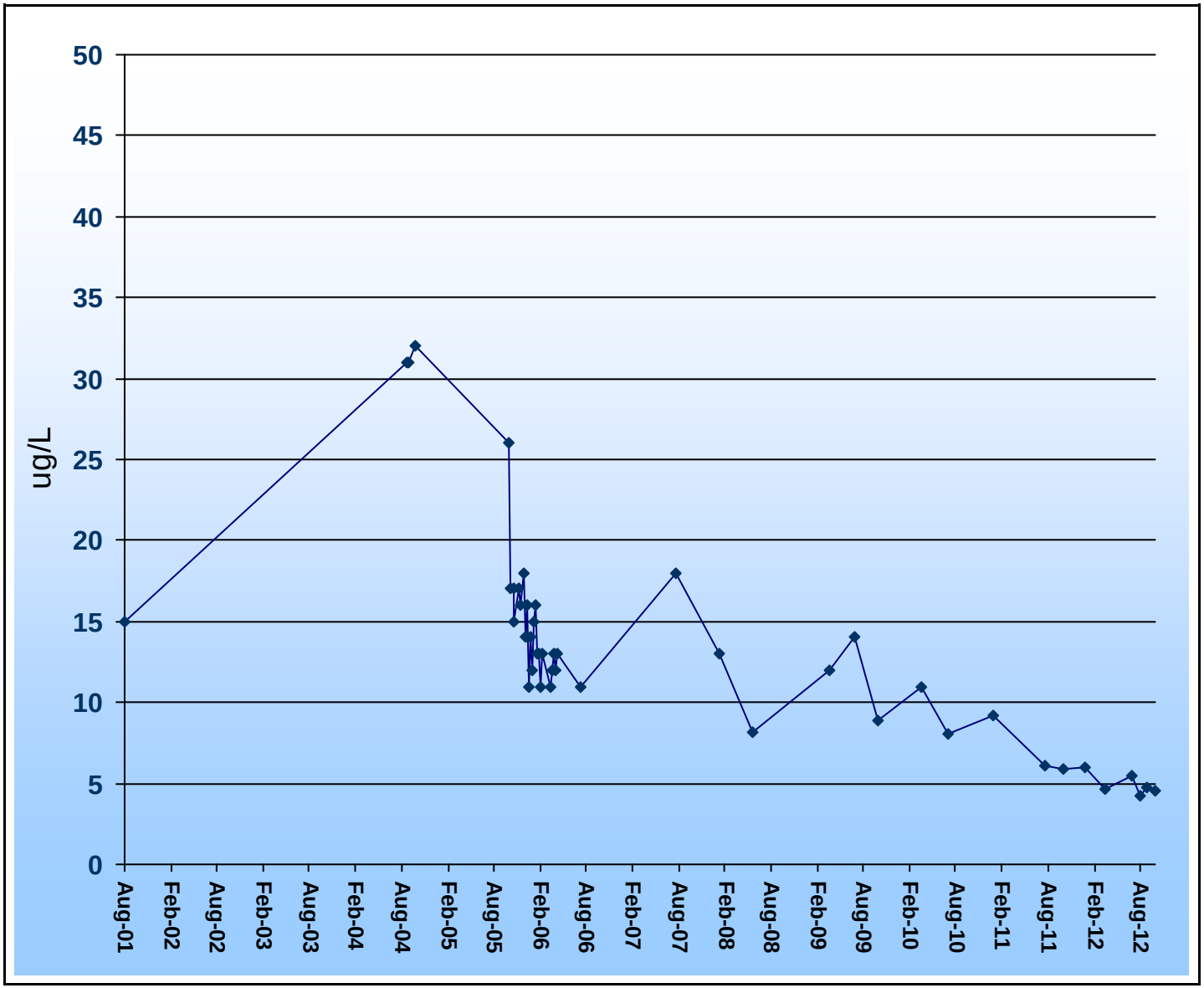
Cleanup Level 0.0042 ug/L EPA RSL



Well ID PFE-7

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

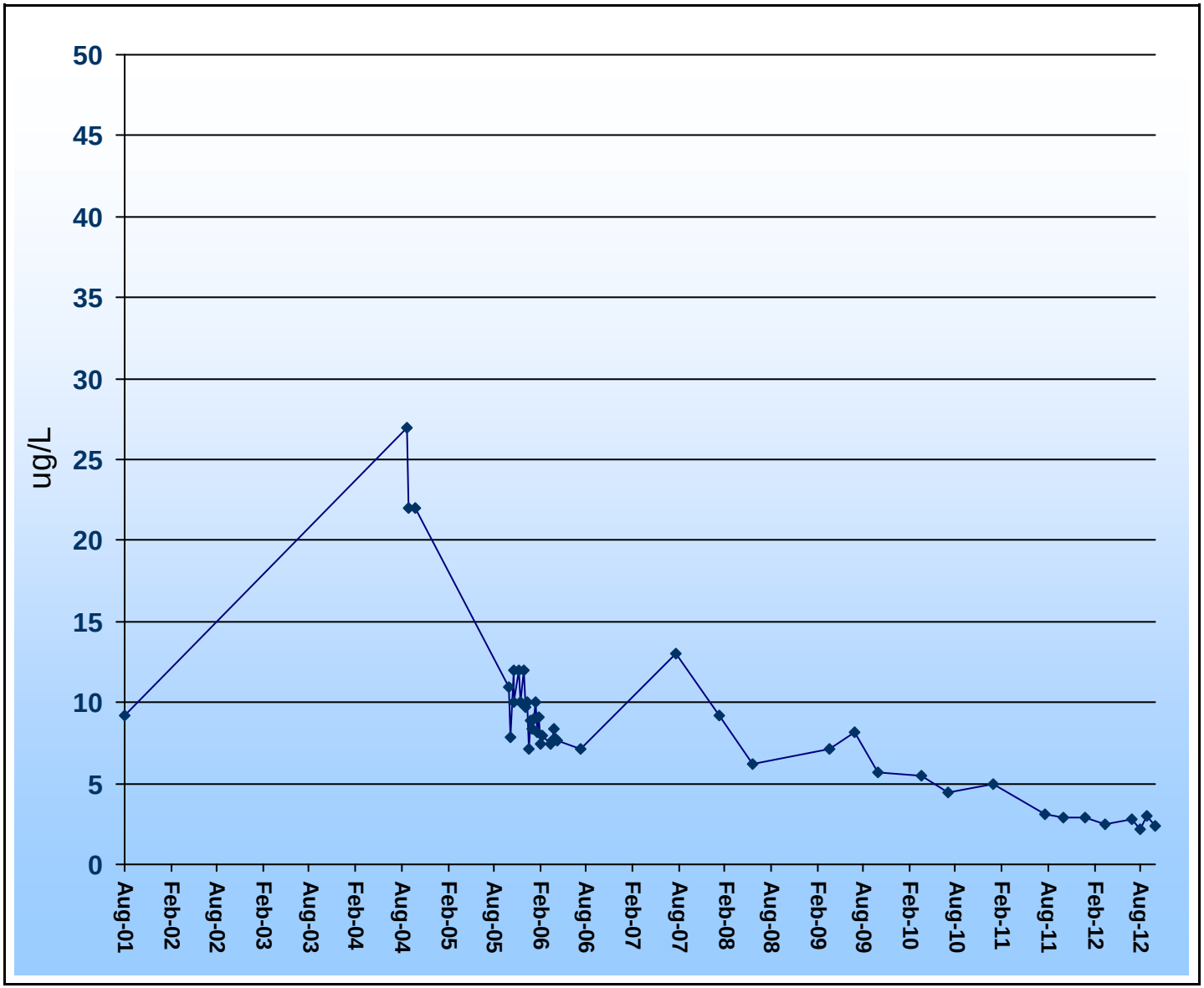
Cleanup Level 1,100 ug/L EPA RSL



Well ID PFE-7

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-Trifluoroethane

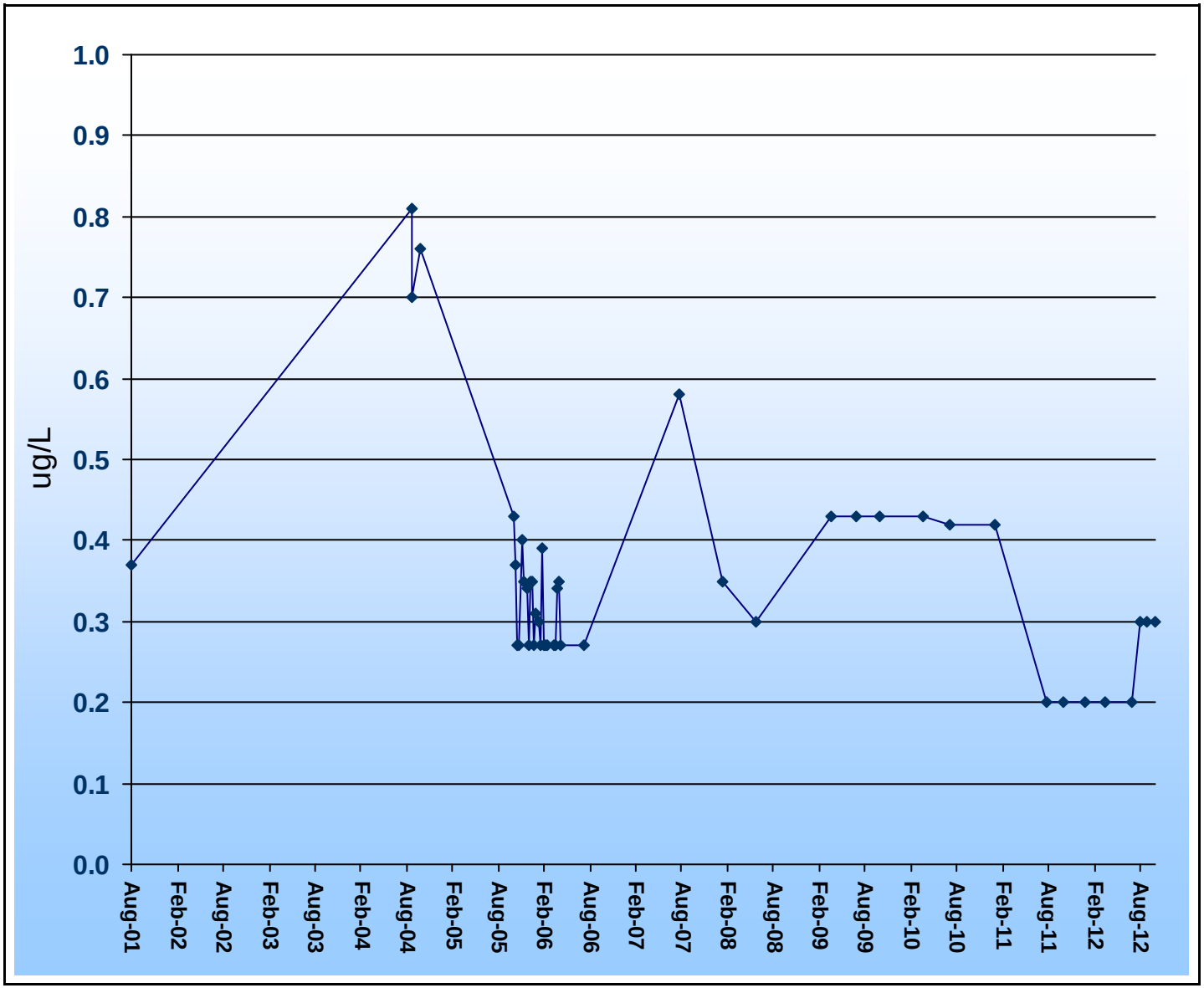
Cleanup Level 53,000 ug/L EPA RSL



Well ID PFE-7

Casno 127-18-4 Analyte Tetrachloroethene

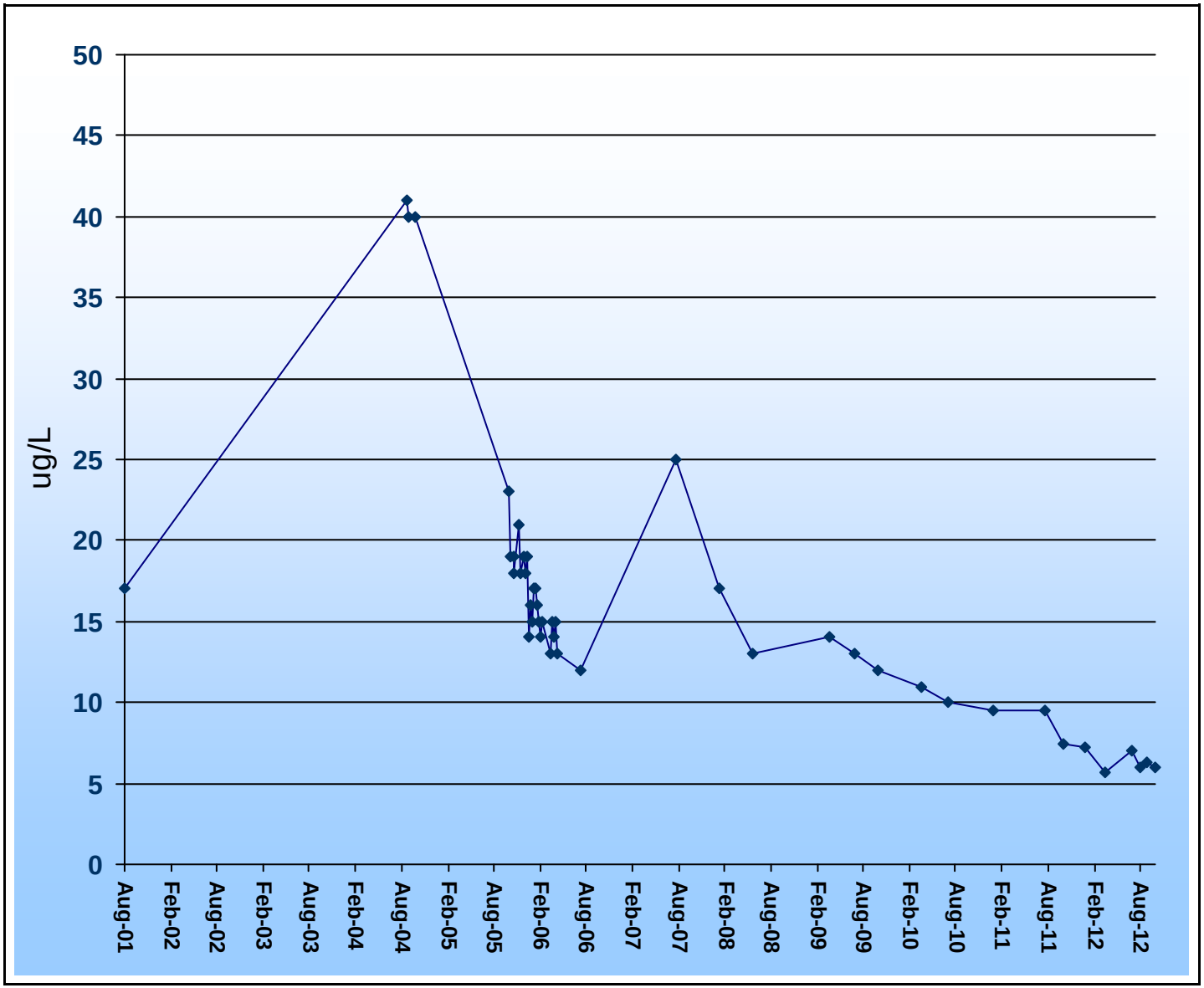
Cleanup Level 1.1 ug/L EPA RSL



Well ID PFE-7

Casno 79-01-6 Analyte Trichloroethene

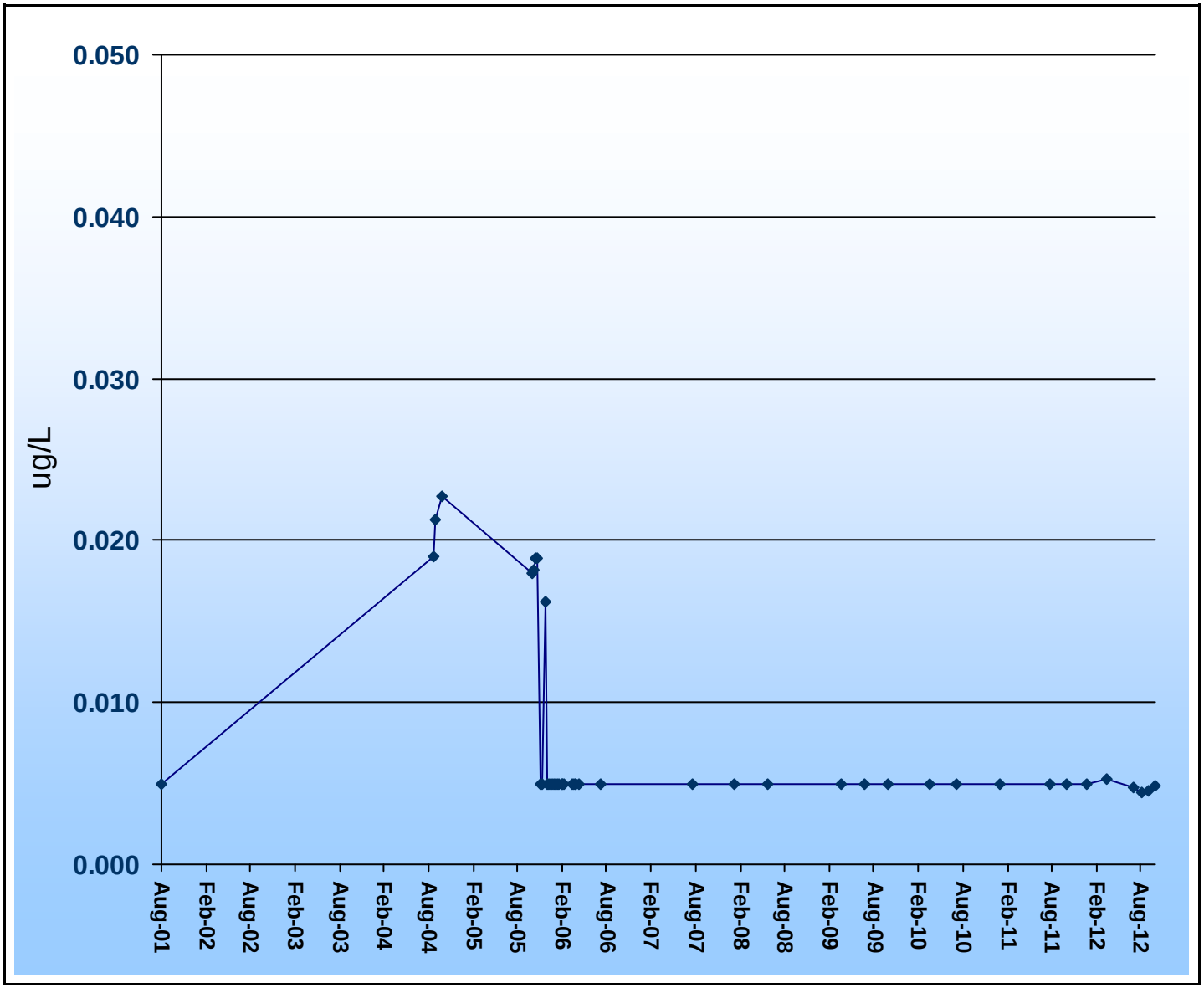
Cleanup Level 5.0 ug/L MCL



Well ID PFE-7

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

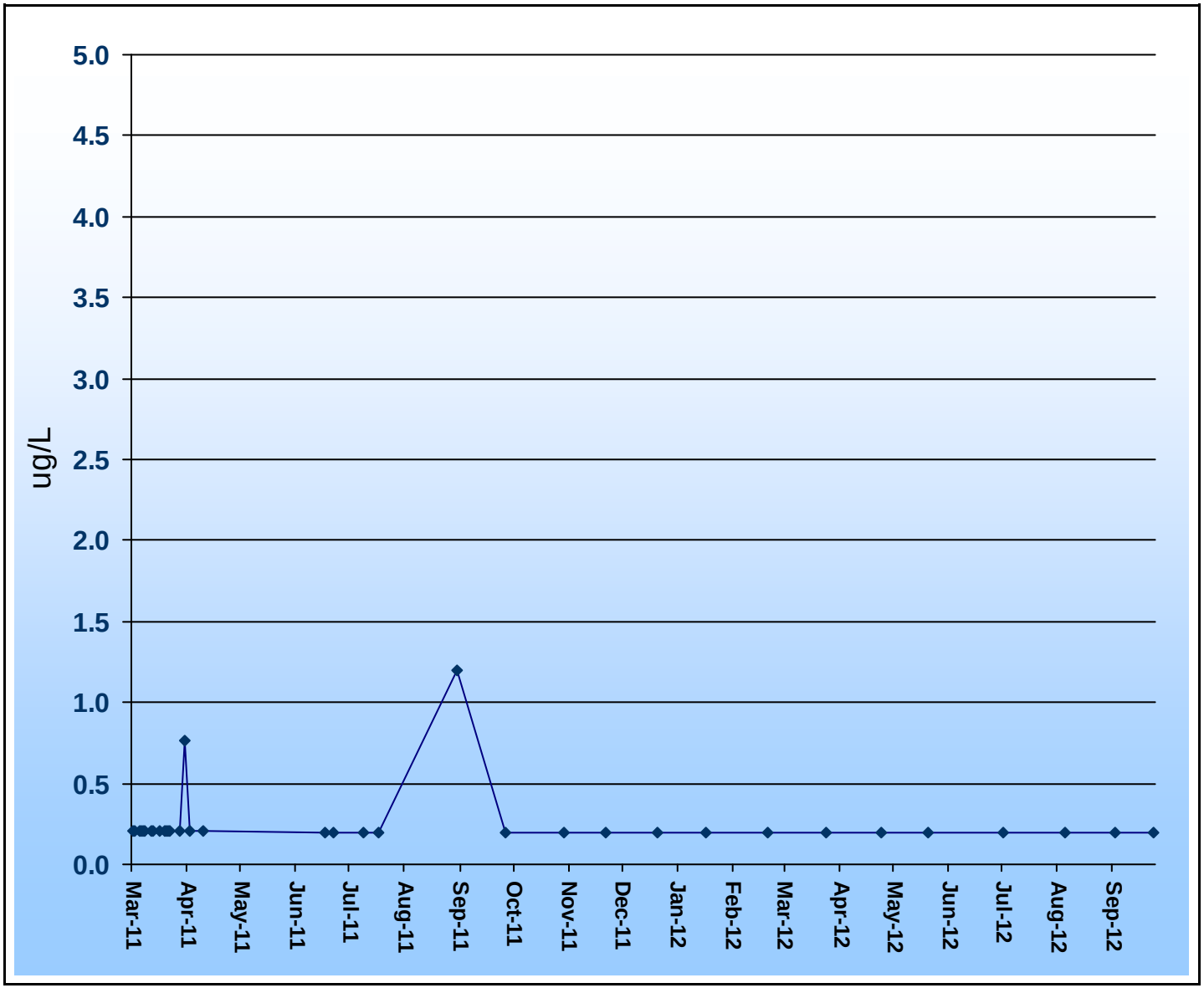
Cleanup Level 0.0042 ug/L EPA RSL



Well ID B655-EFF-2

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

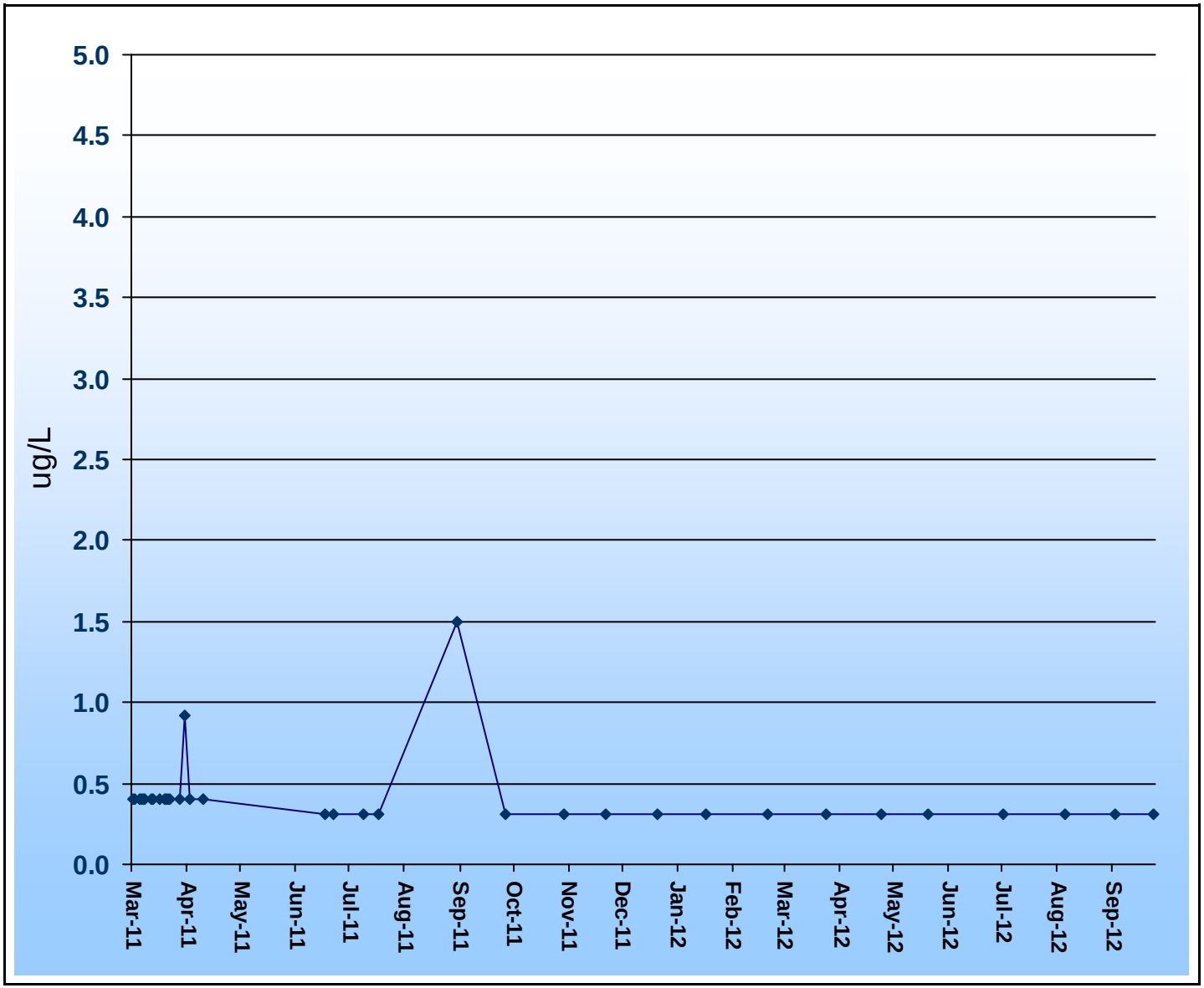
Cleanup Level 1,100 ug/L EPA RSL



Well ID B655-EFF-2

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-trifluoroethane

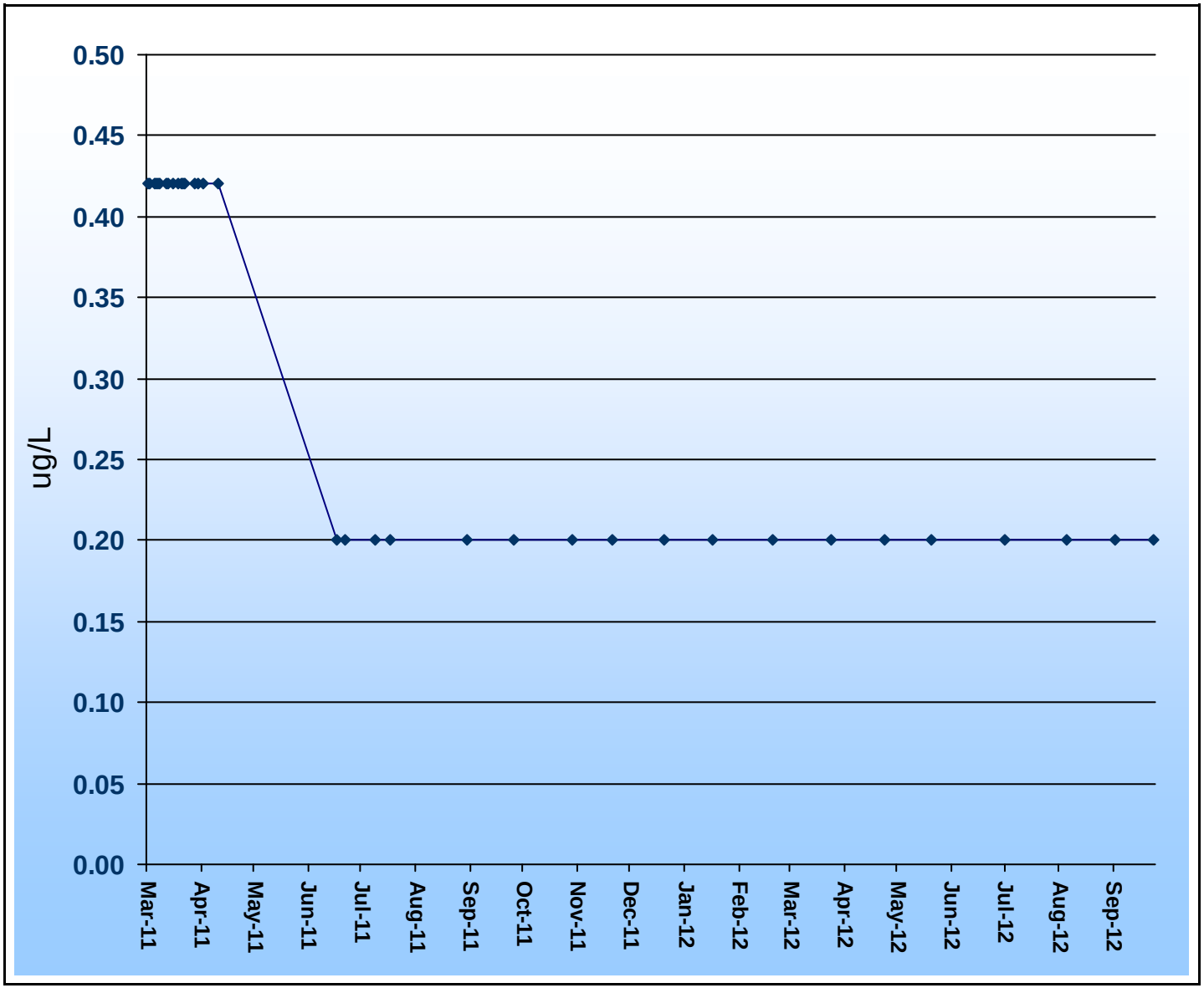
Cleanup Level 53,000 ug/L EPA RSL



Well ID B655-EFF-2

Casno 127-18-4 Analyte Tetrachloroethene

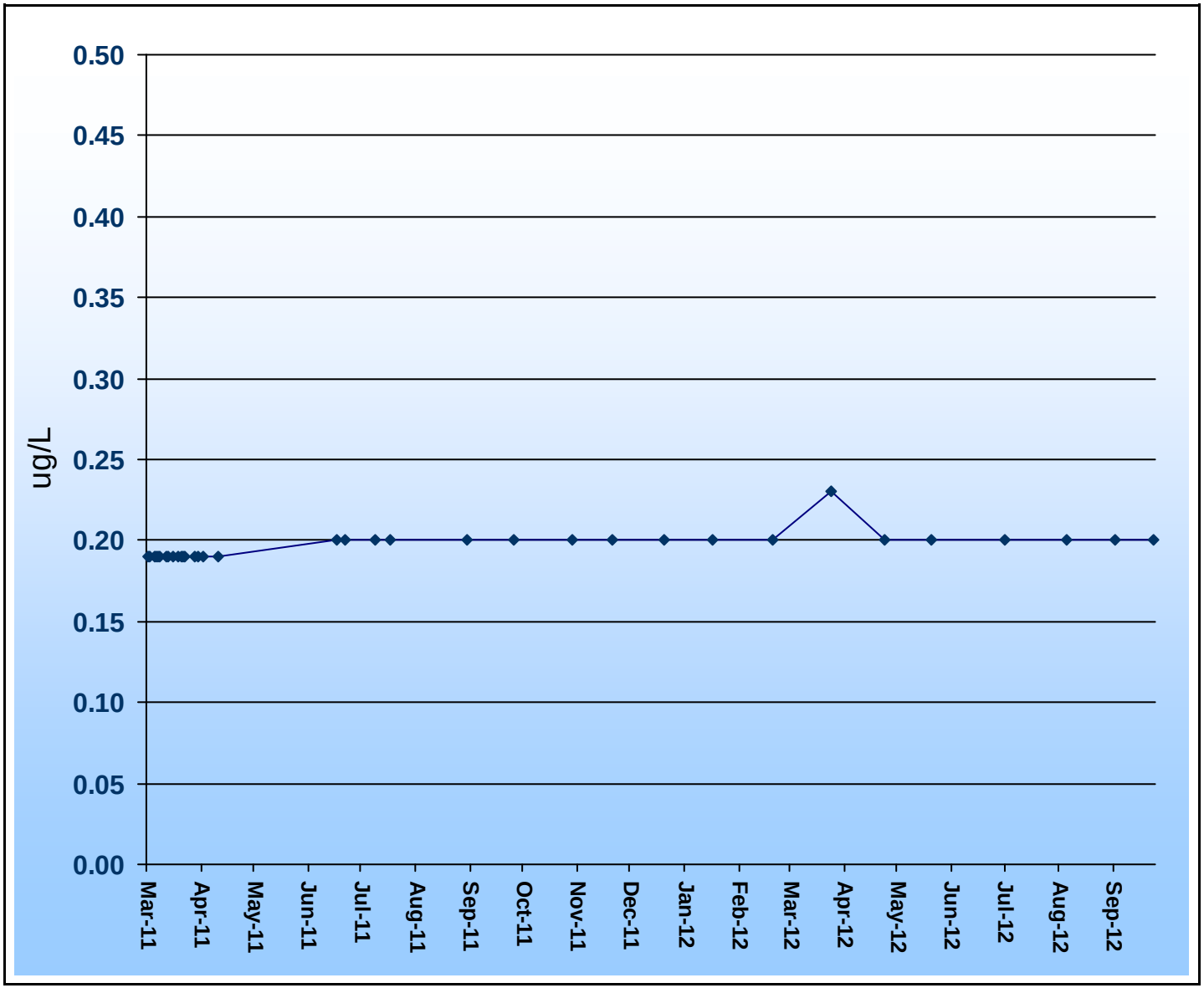
Cleanup Level 1.1 ug/L EPA RSL



Well ID B655-EFF-2

Casno 79-01-6 Analyte Trichloroethene

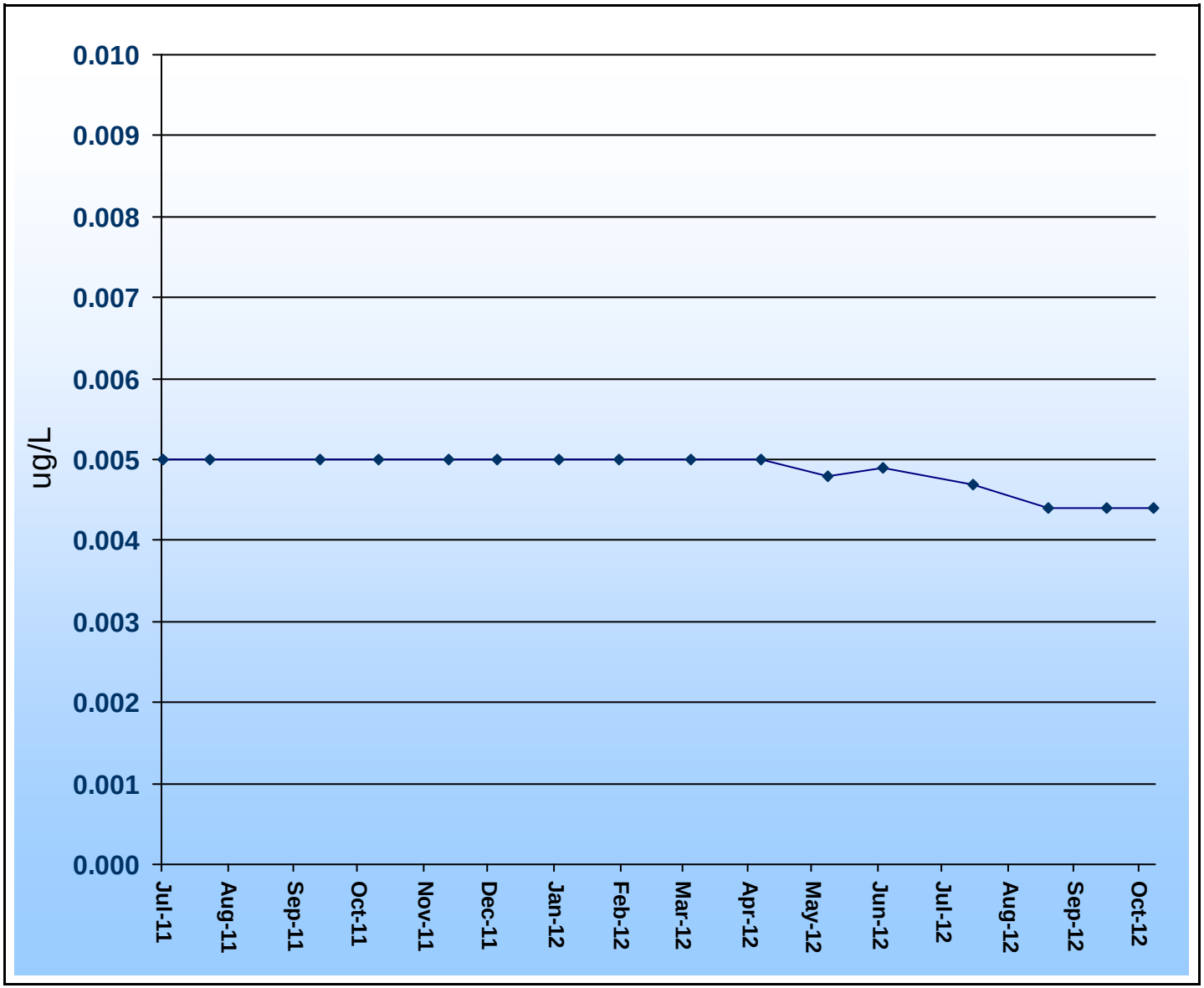
Cleanup Level 5.0 ug/L MCL



Well ID B655-EFF-2

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

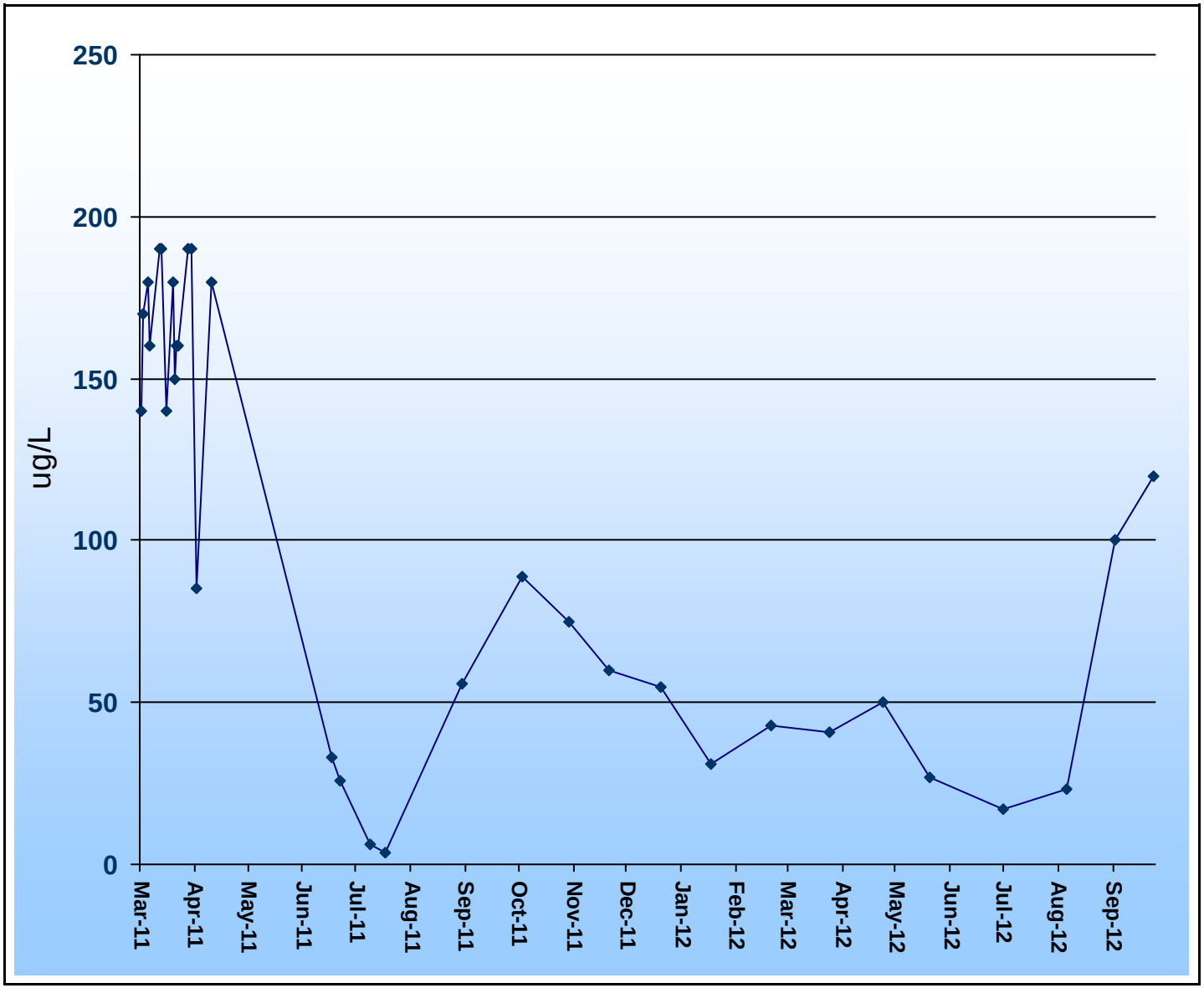
Cleanup Level 0.0042 ug/L EPA RSL



Well ID B655-INF-1

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

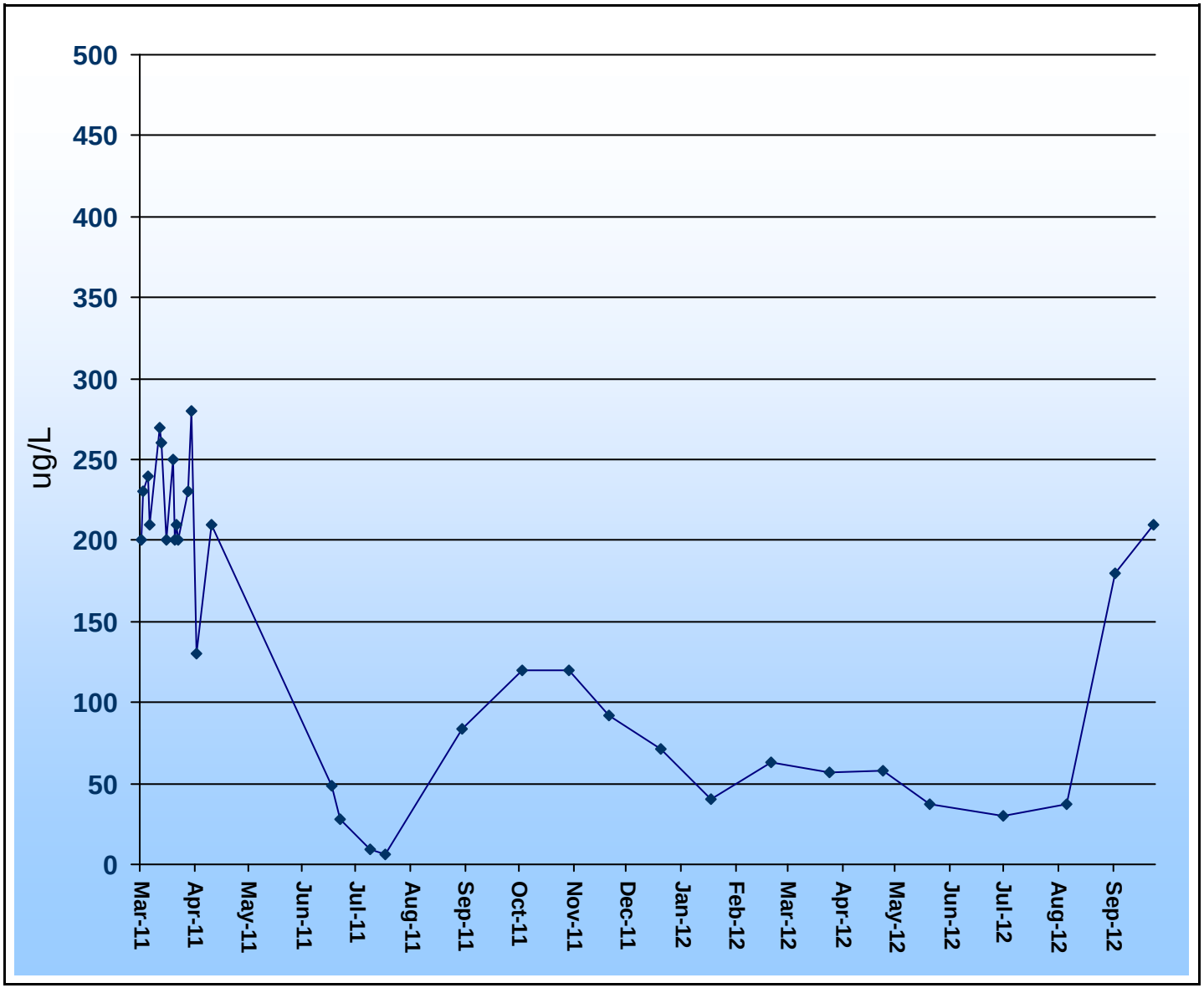
Cleanup Level 1,100 ug/L EPA RSL



Well ID B655-INF-1

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-trifluoroethane

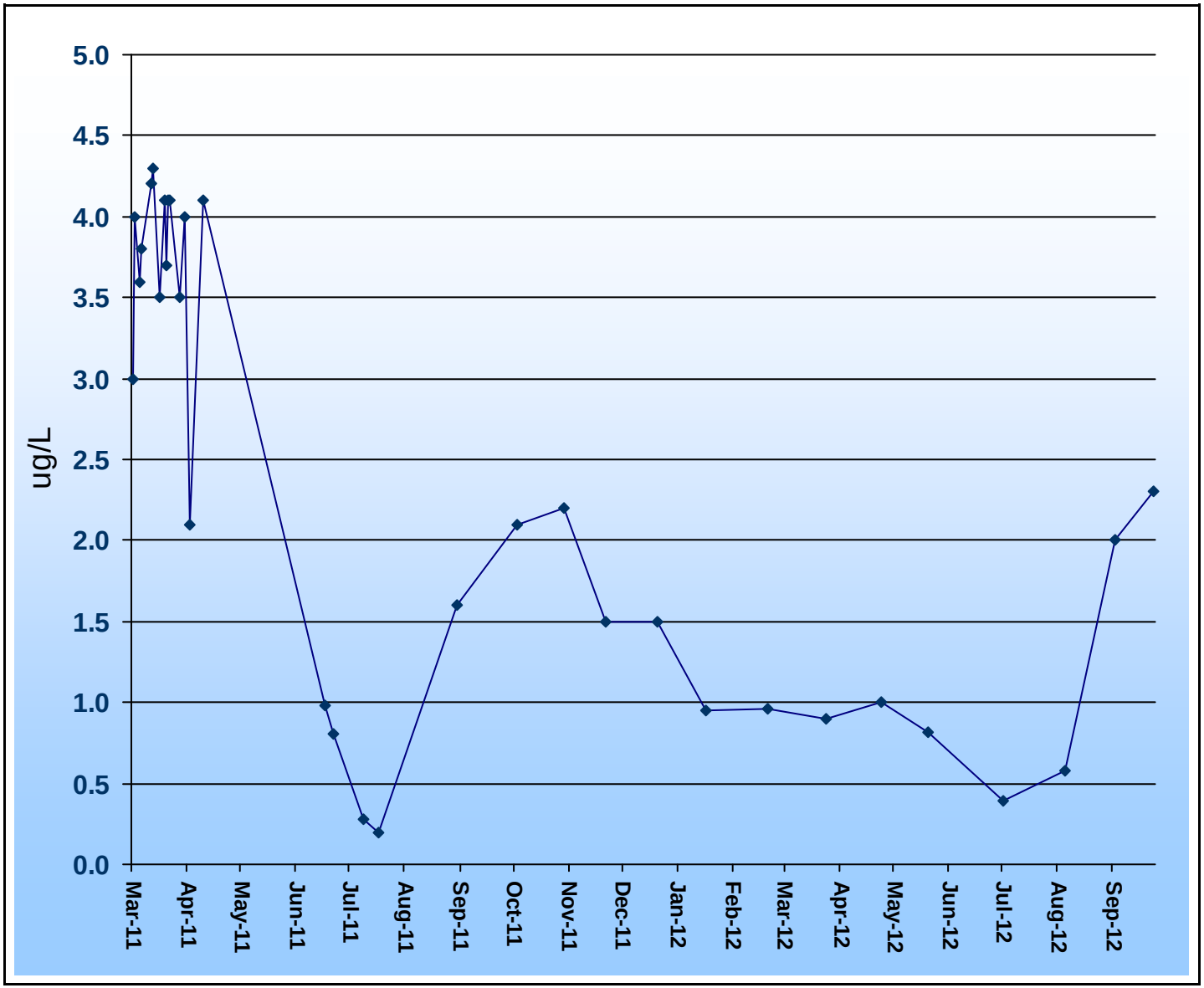
Cleanup Level 53,000 ug/L EPA RSL



Well ID B655-INF-1

Casno 127-18-4 Analyte Tetrachloroethene

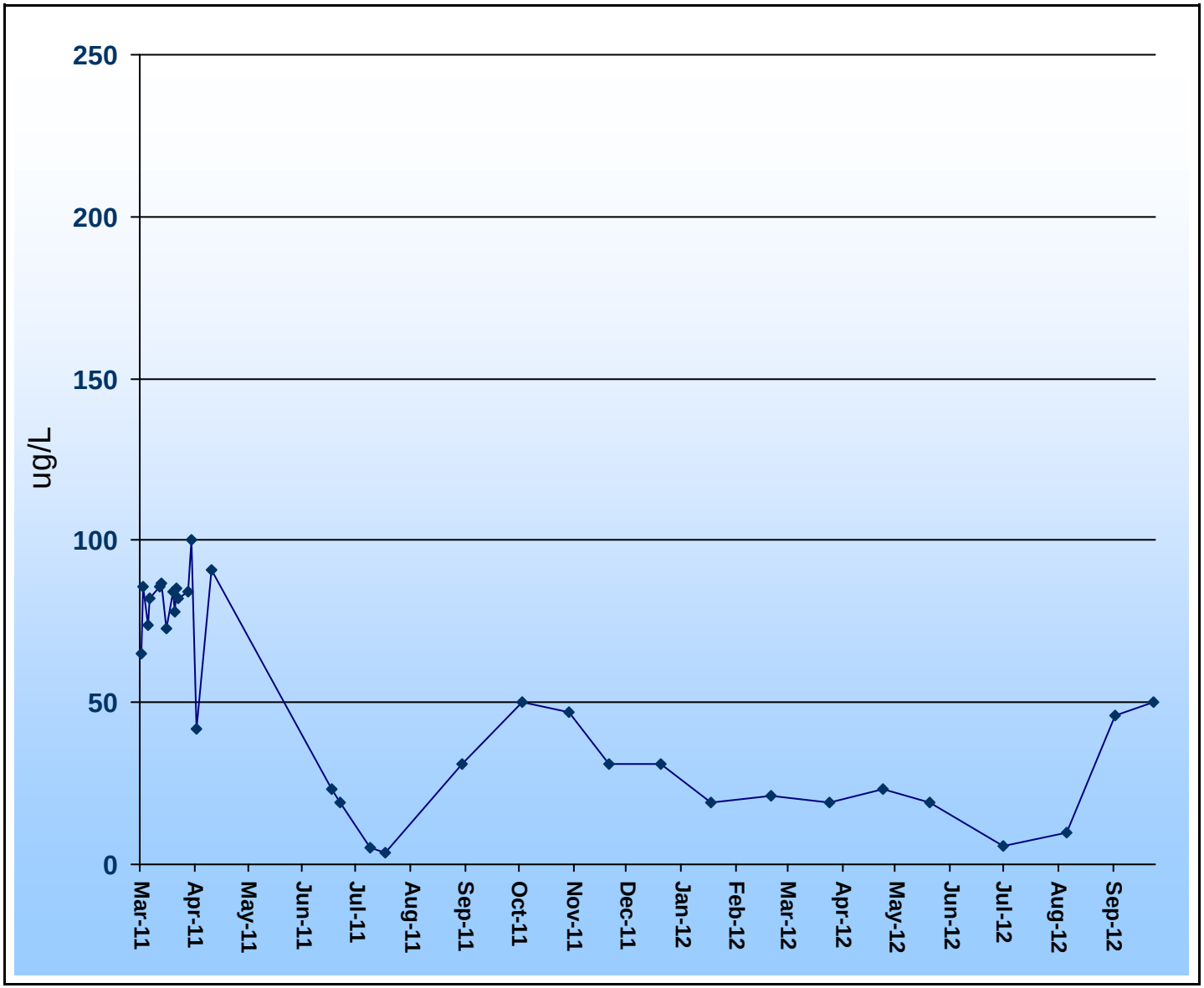
Cleanup Level 1.1 ug/L EPA RSL



Well ID B655-INF-1

Casno 79-01-6 Analyte Trichloroethene

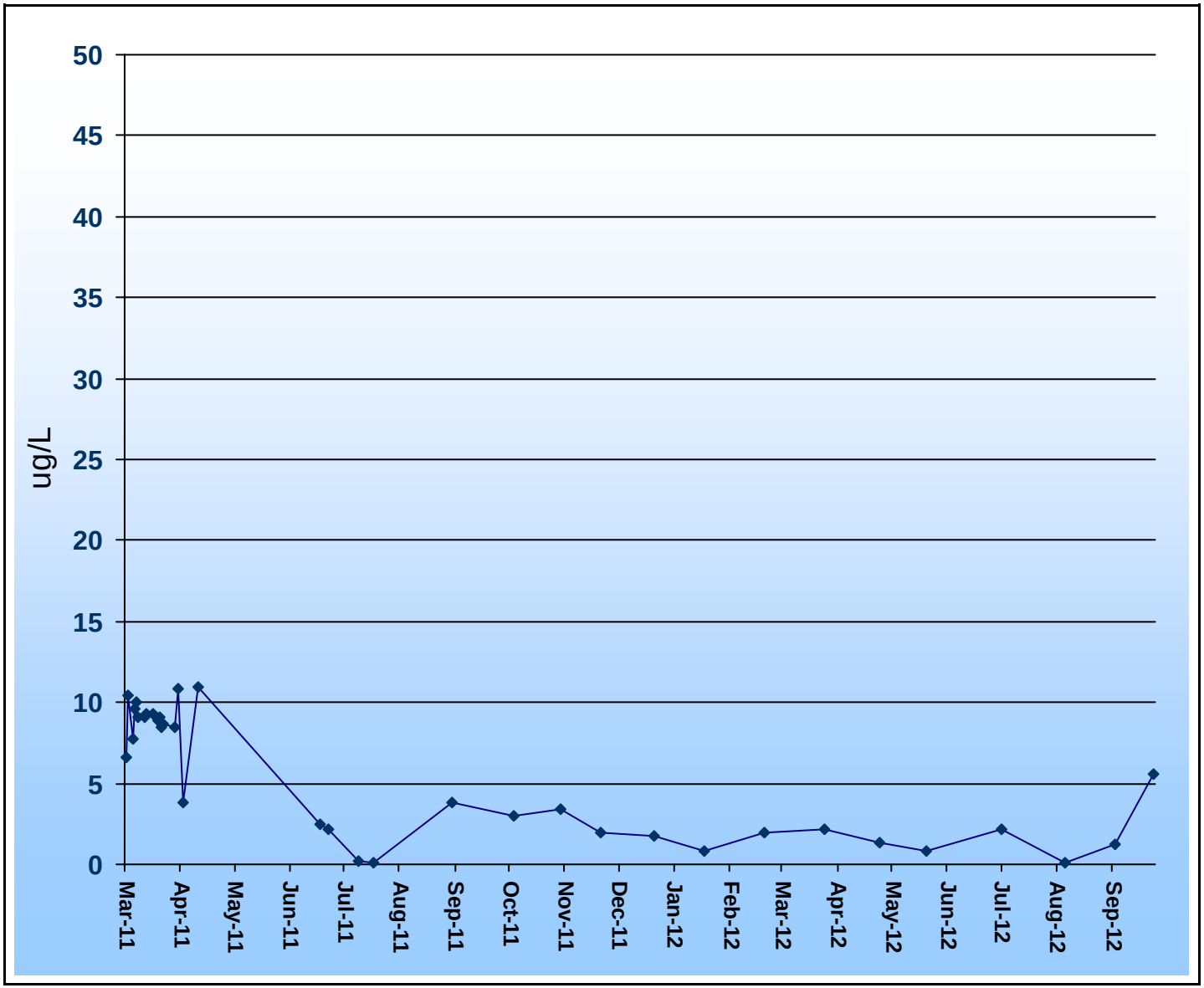
Cleanup Level 5.0 ug/L MCL



Well ID B655-INF-1

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

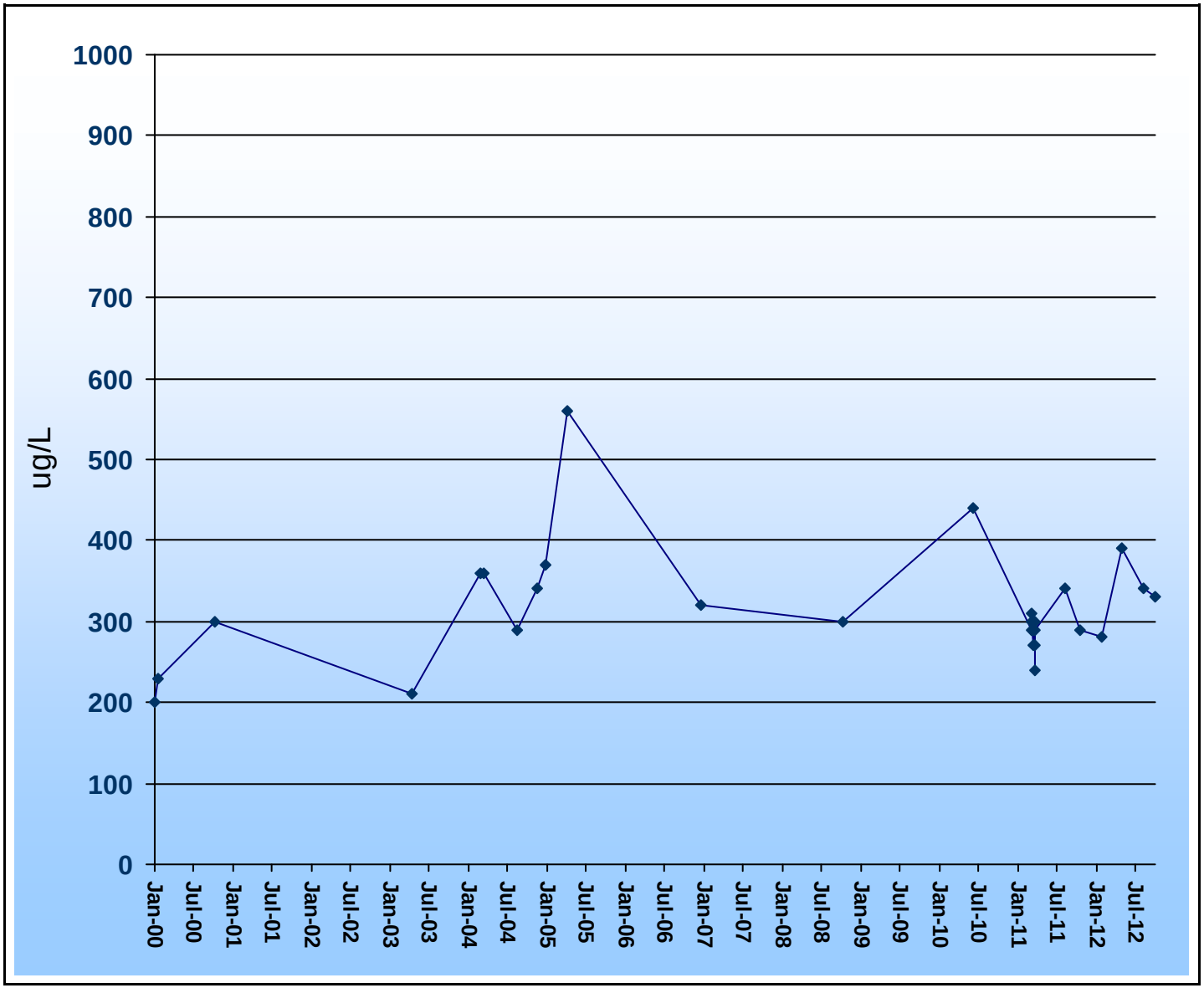
Cleanup Level 0.0042 ug/L EPA RSL



Well ID MPE-1

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

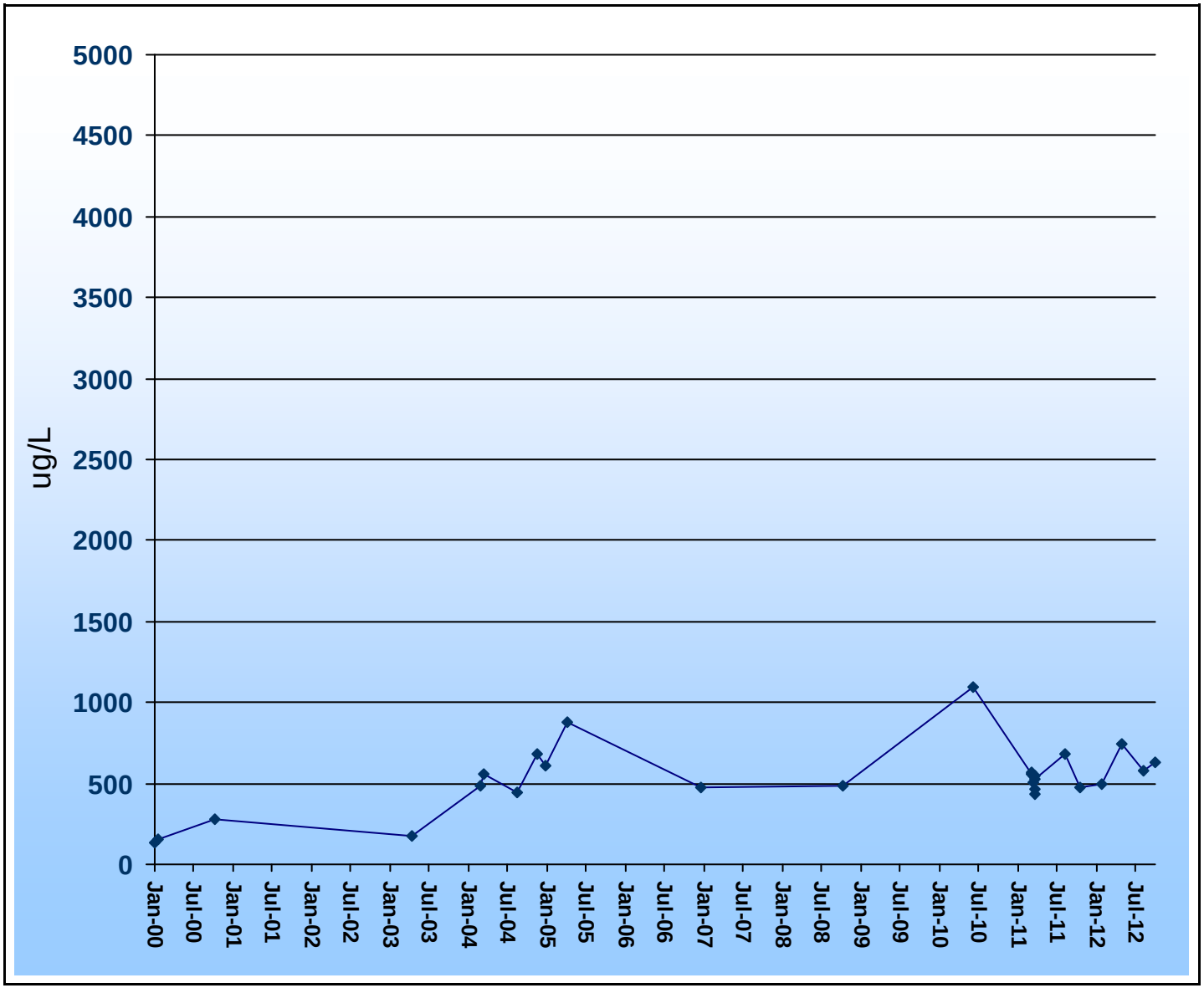
Cleanup Level 1,100 ug/L EPA RSL



Well ID MPE-1

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-trifluoroethane

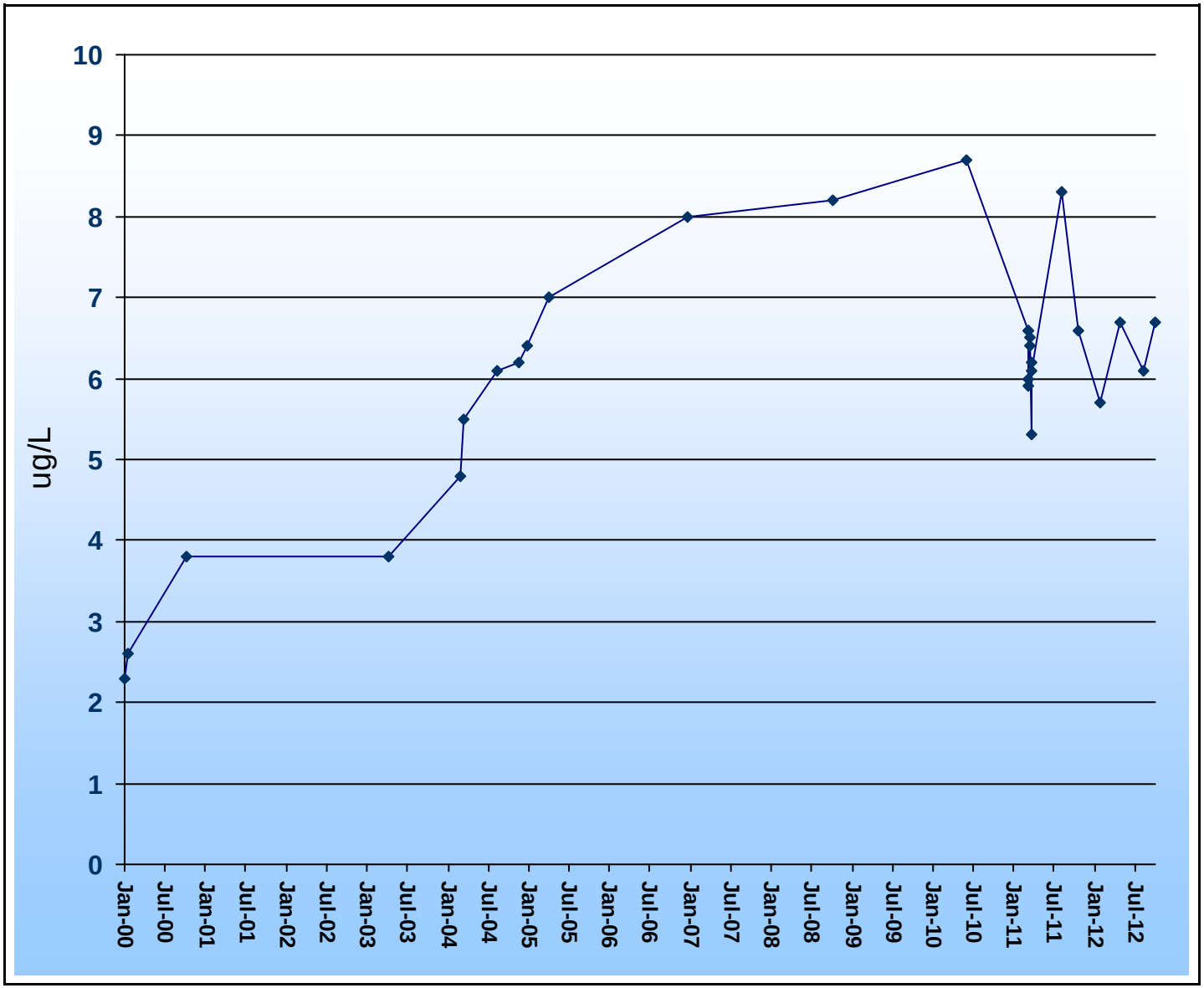
Cleanup Level 53,000 ug/L EPA RSL



Well ID MPE-1

Casno 127-18-4 Analyte Tetrachloroethene

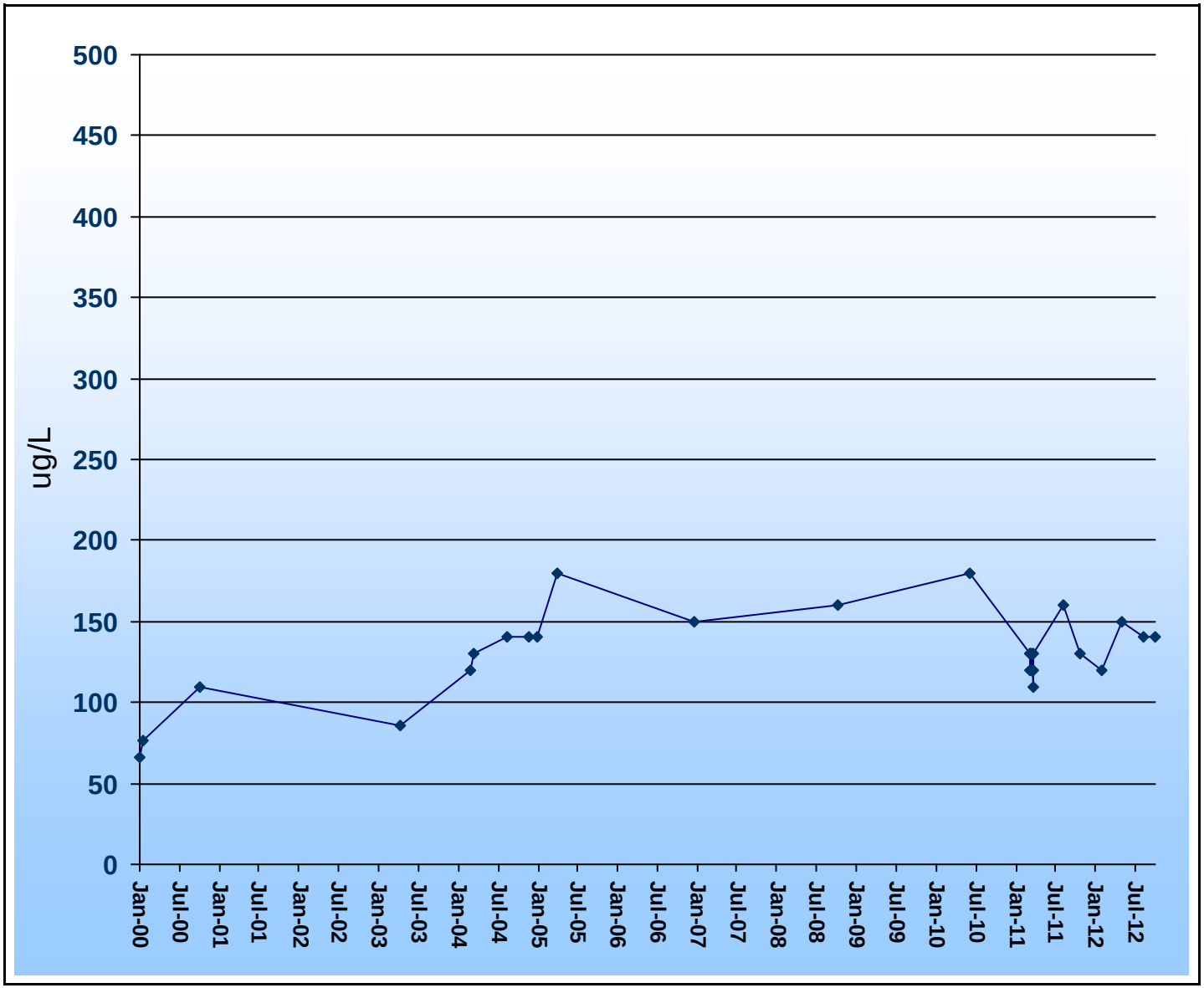
Cleanup Level 1.1 ug/L EPA RSL



Well ID MPE-1

Casno 79-01-6 Analyte Trichloroethene

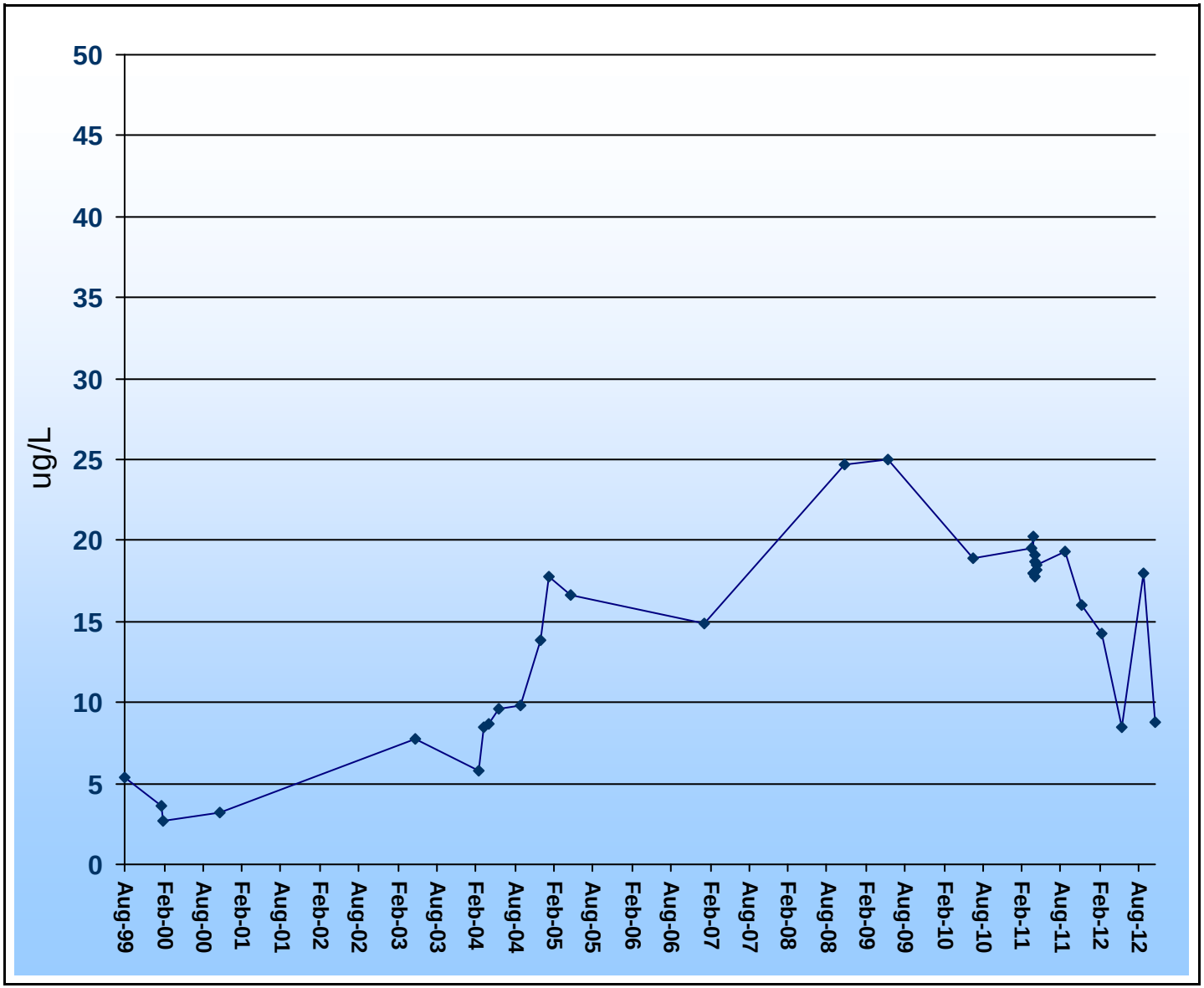
Cleanup Level 5.0 ug/L MCL



Well ID MPE-1

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

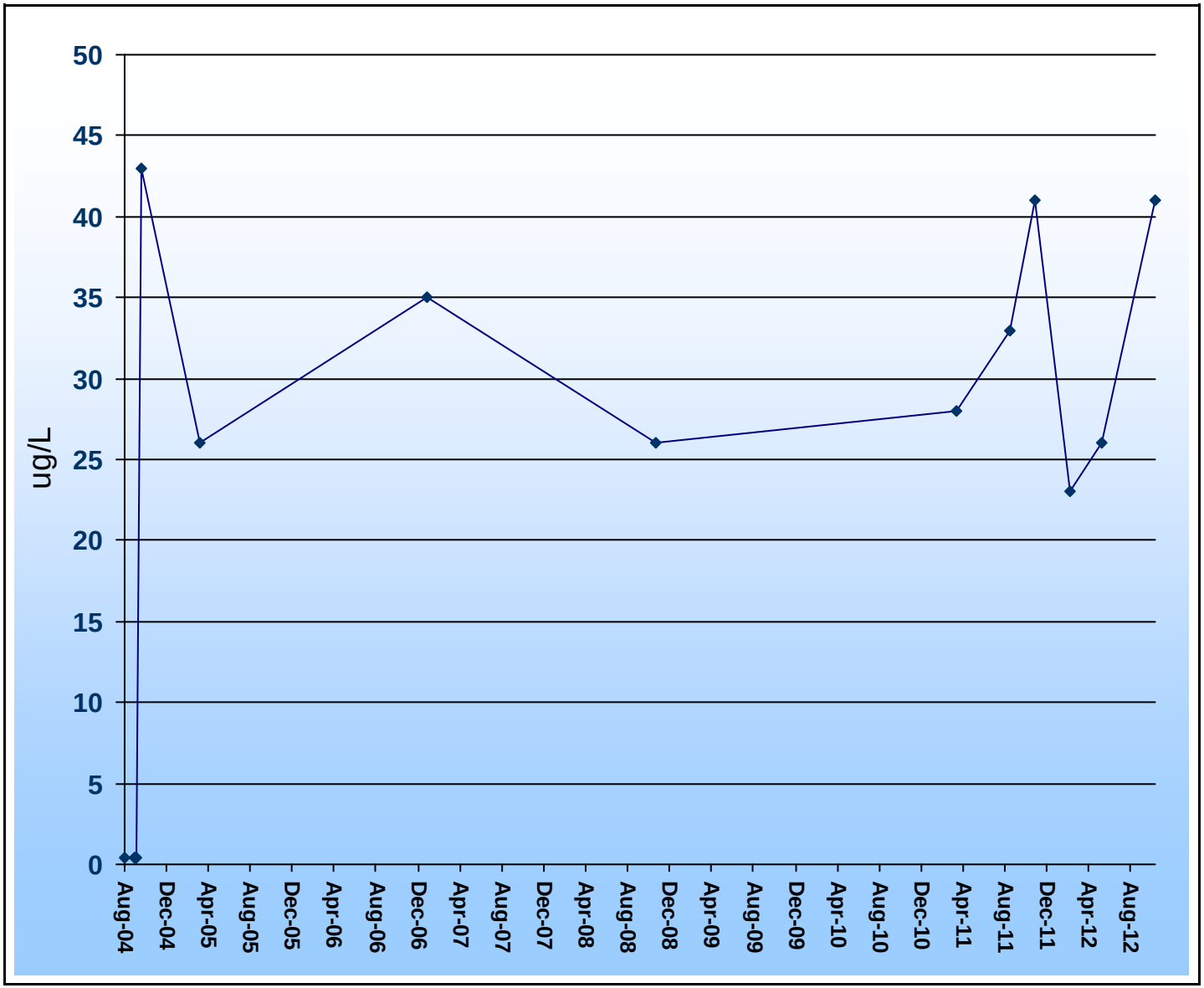
Cleanup Level 0.0042 ug/L EPA RSL



Well ID MPE-10

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

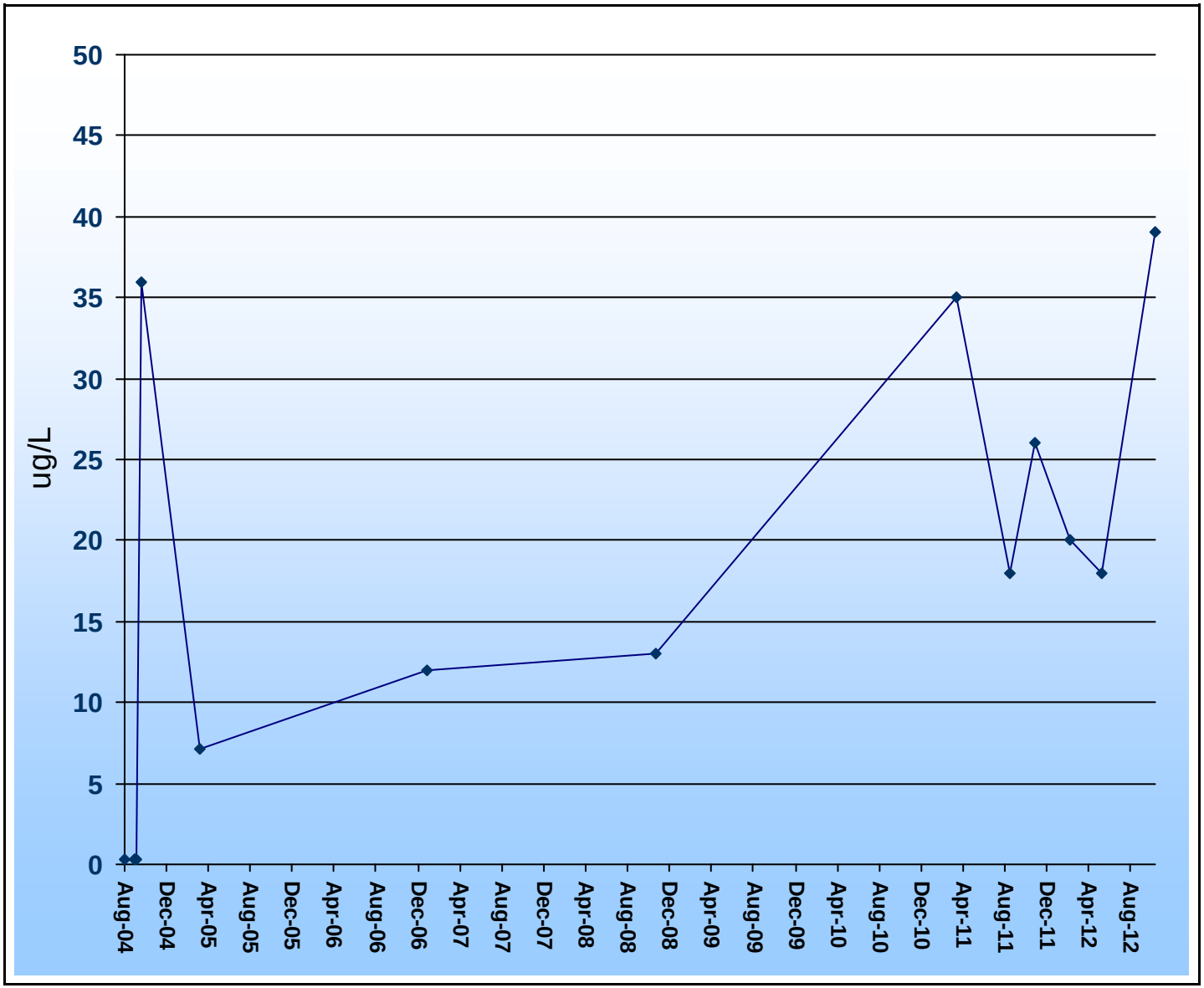
Cleanup Level 1,100 ug/L EPA RSL



Well ID MPE-10

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-trifluoroethane

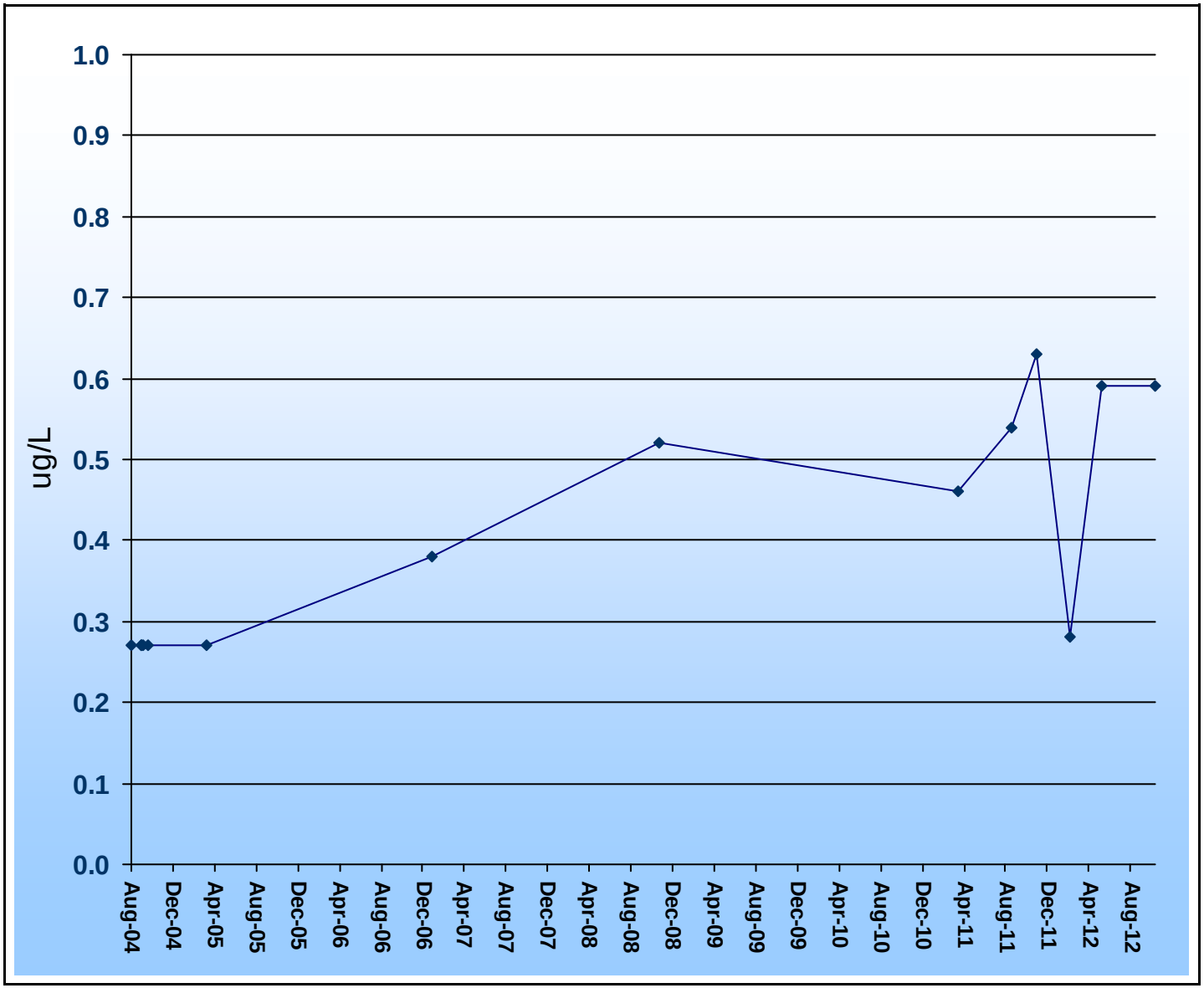
Cleanup Level 53,000 ug/L EPA RSL



Well ID MPE-10

Casno 127-18-4 Analyte Tetrachloroethene

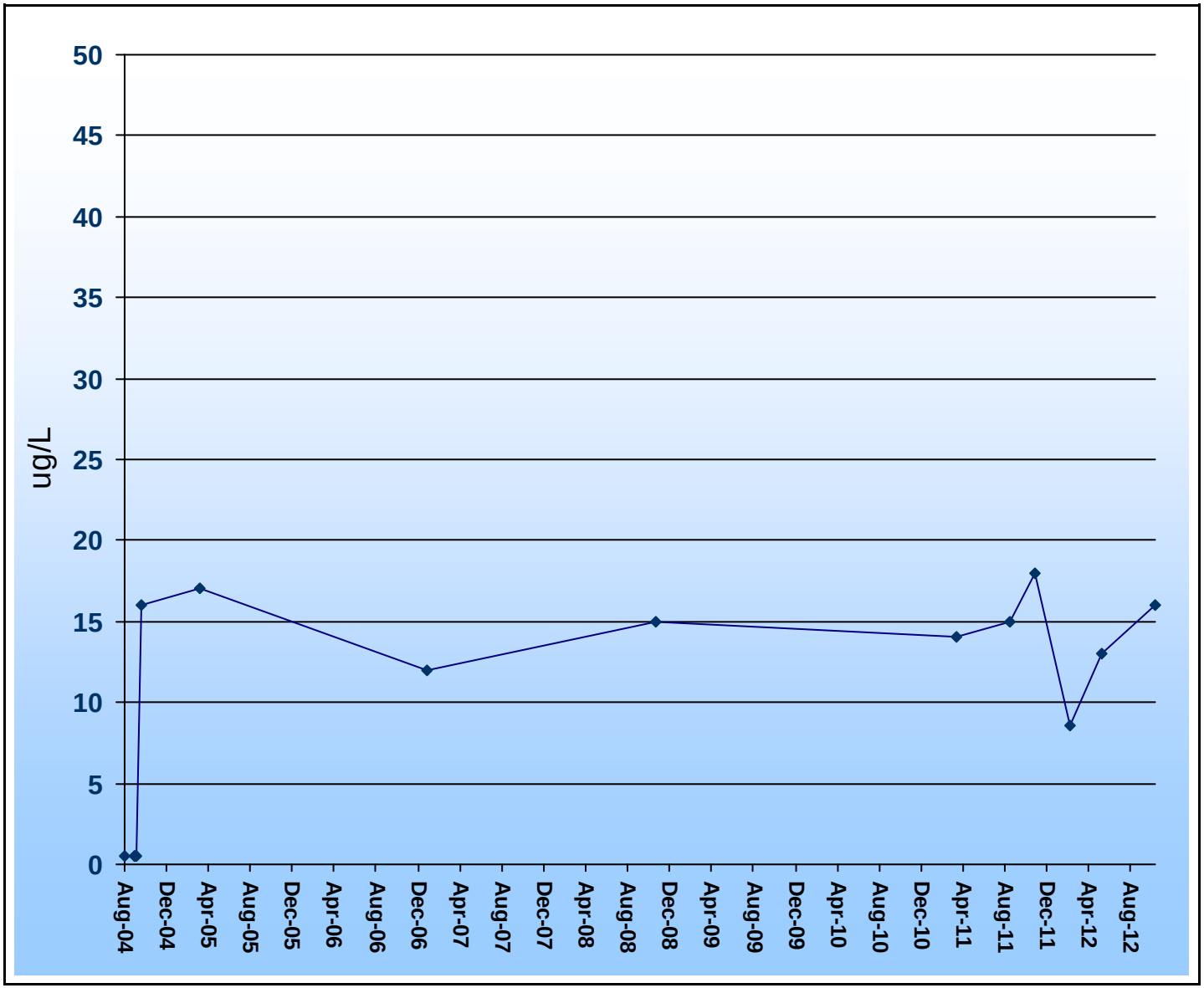
Cleanup Level 1.1 ug/L EPA RSL



Well ID MPE-10

Casno 79-01-6 Analyte Trichloroethene

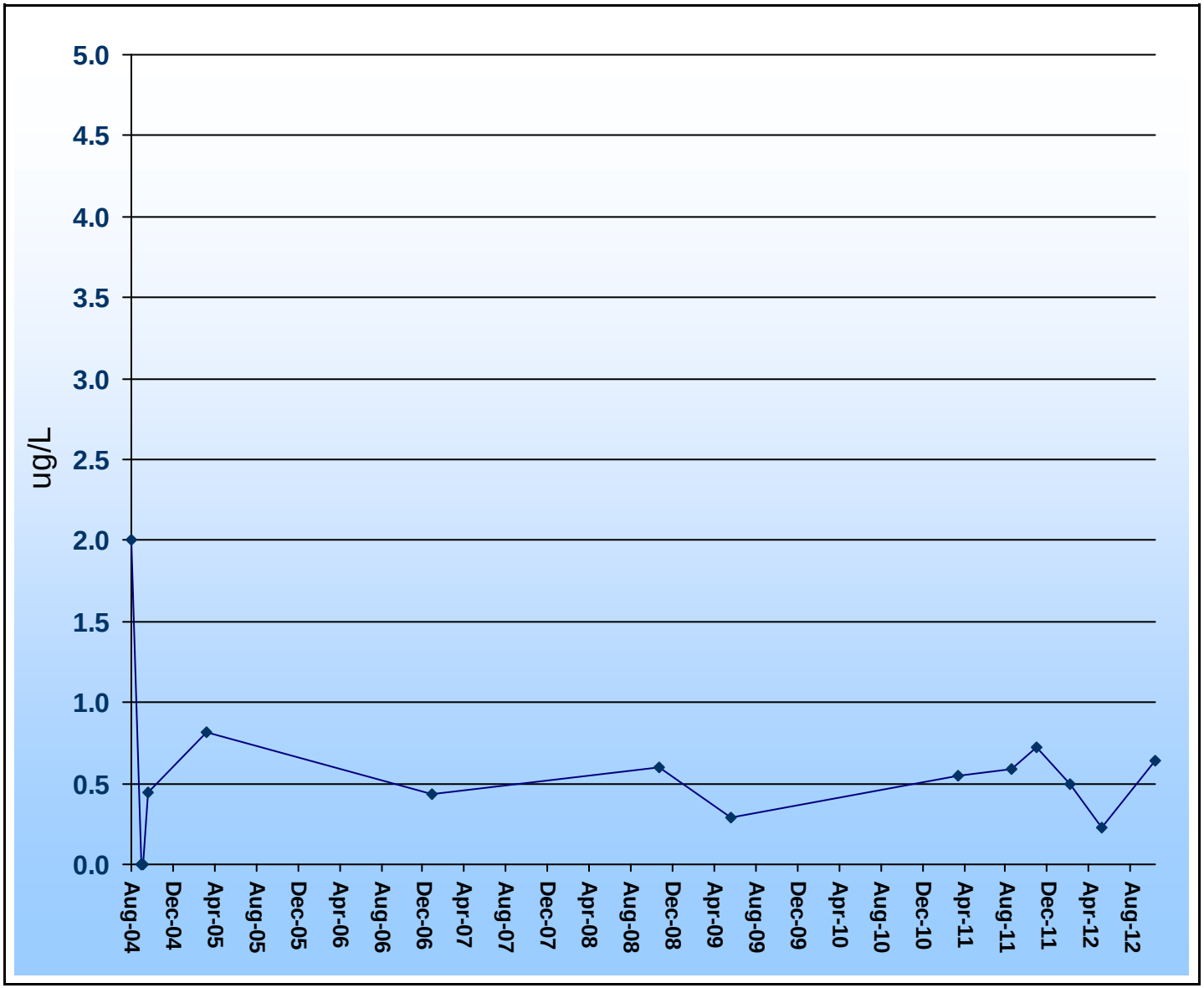
Cleanup Level 5.0 ug/L MCL



Well ID MPE-10

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

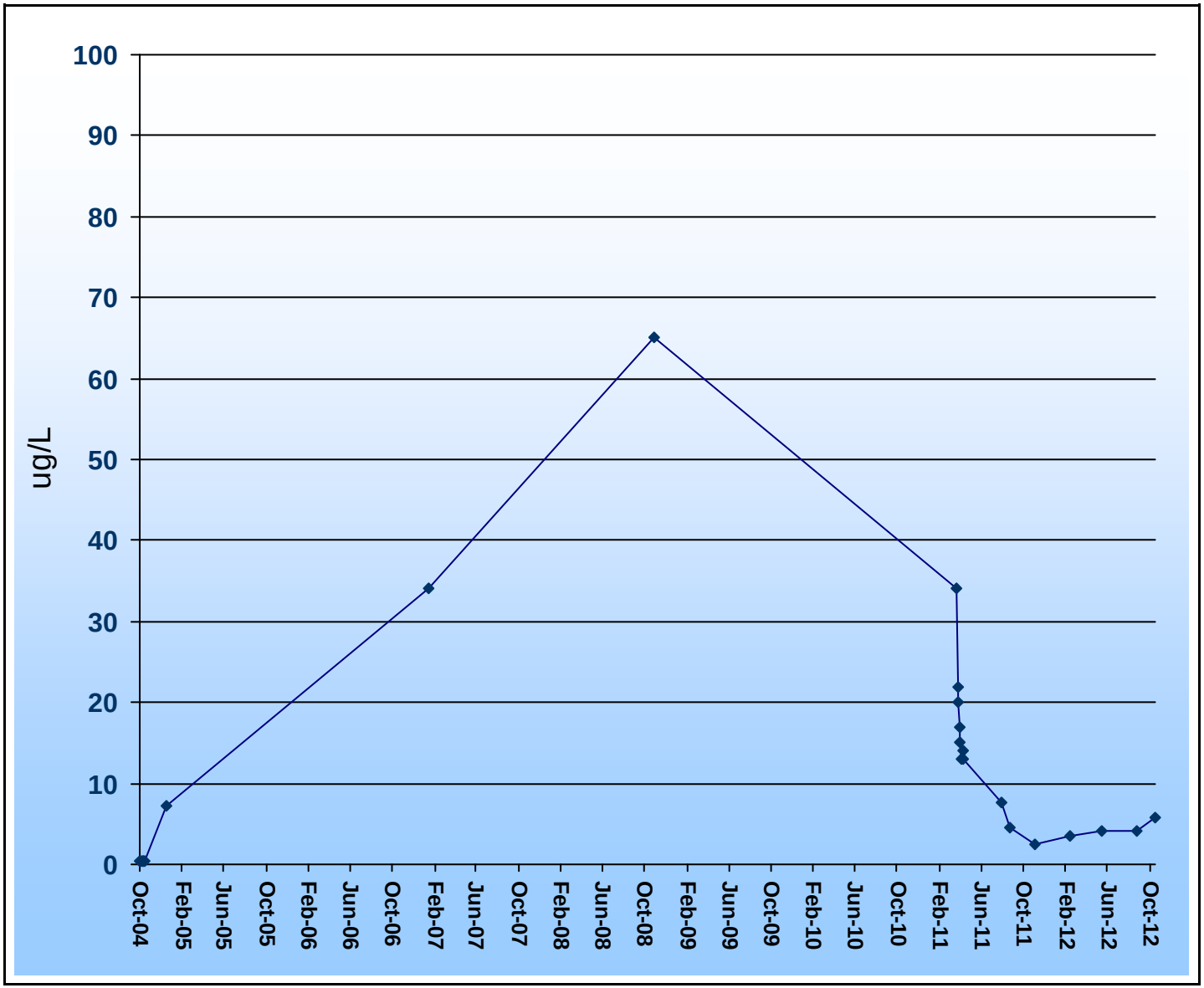
Cleanup Level 0.0042 ug/L EPA RSL



Well ID MPE-11

Casno 75-69-4 Analyte F11 - Trichlorofluoromethane

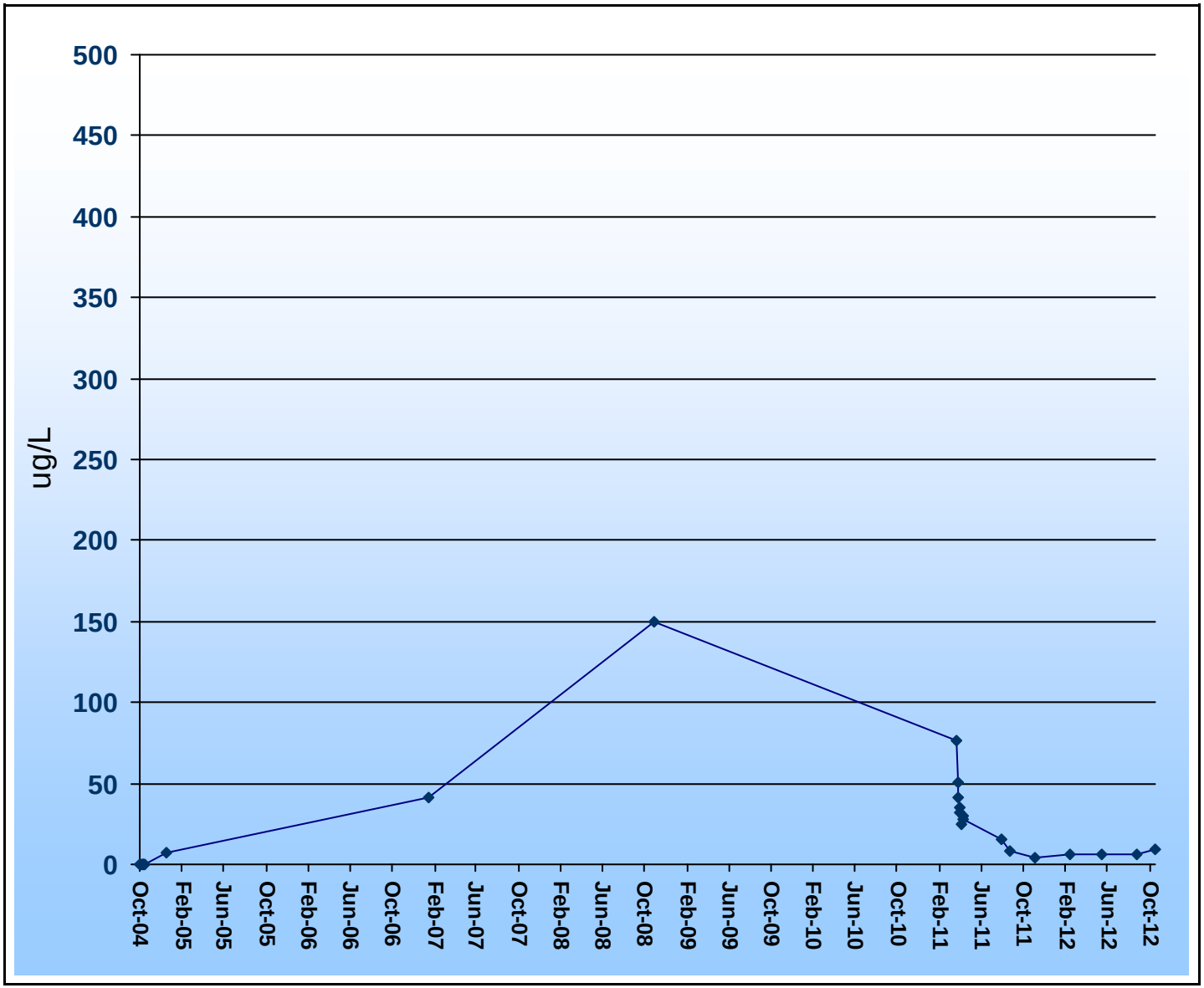
Cleanup Level 1,100 ug/L EPA RSL



Well ID MPE-11

Casno 76-13-1 Analyte F113 - 1,1,2-Trichloro-1,2,2-trifluoroethane

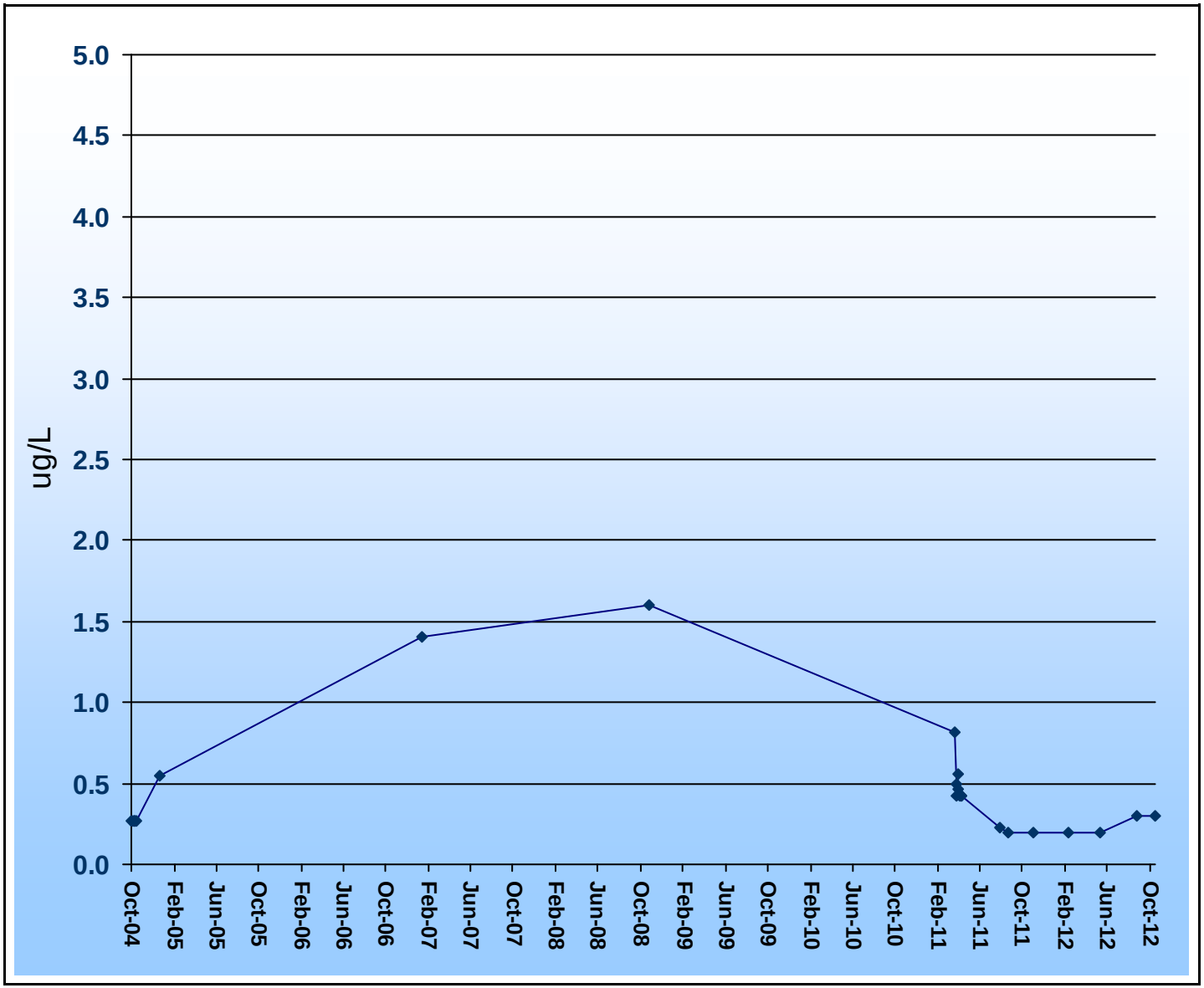
Cleanup Level 53,000 ug/L EPA RSL



Well ID MPE-11

Casno 127-18-4 Analyte Tetrachloroethene

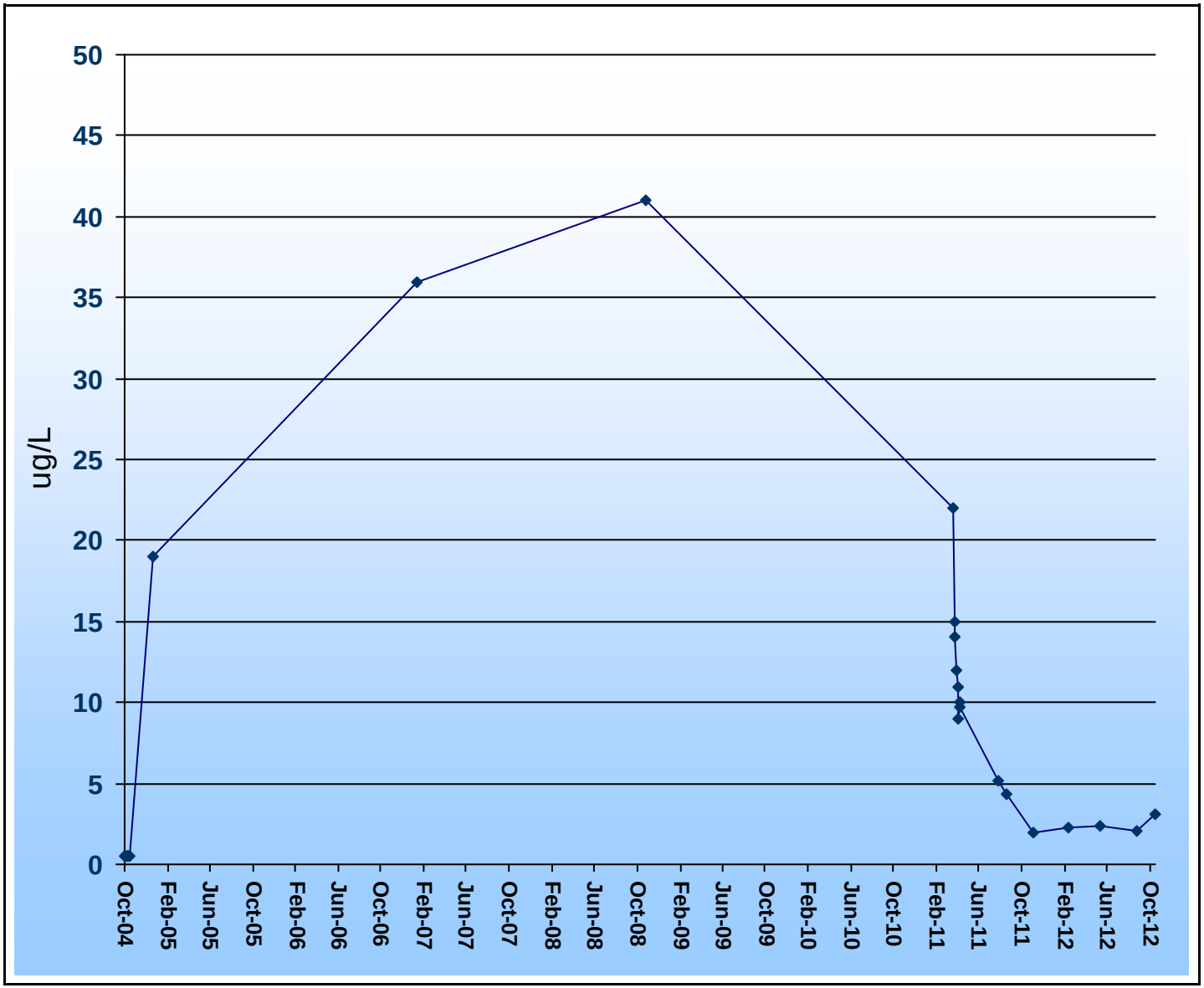
Cleanup Level 1.1 ug/L EPA RSL



Well ID MPE-11

Casno 79-01-6 Analyte Trichloroethene

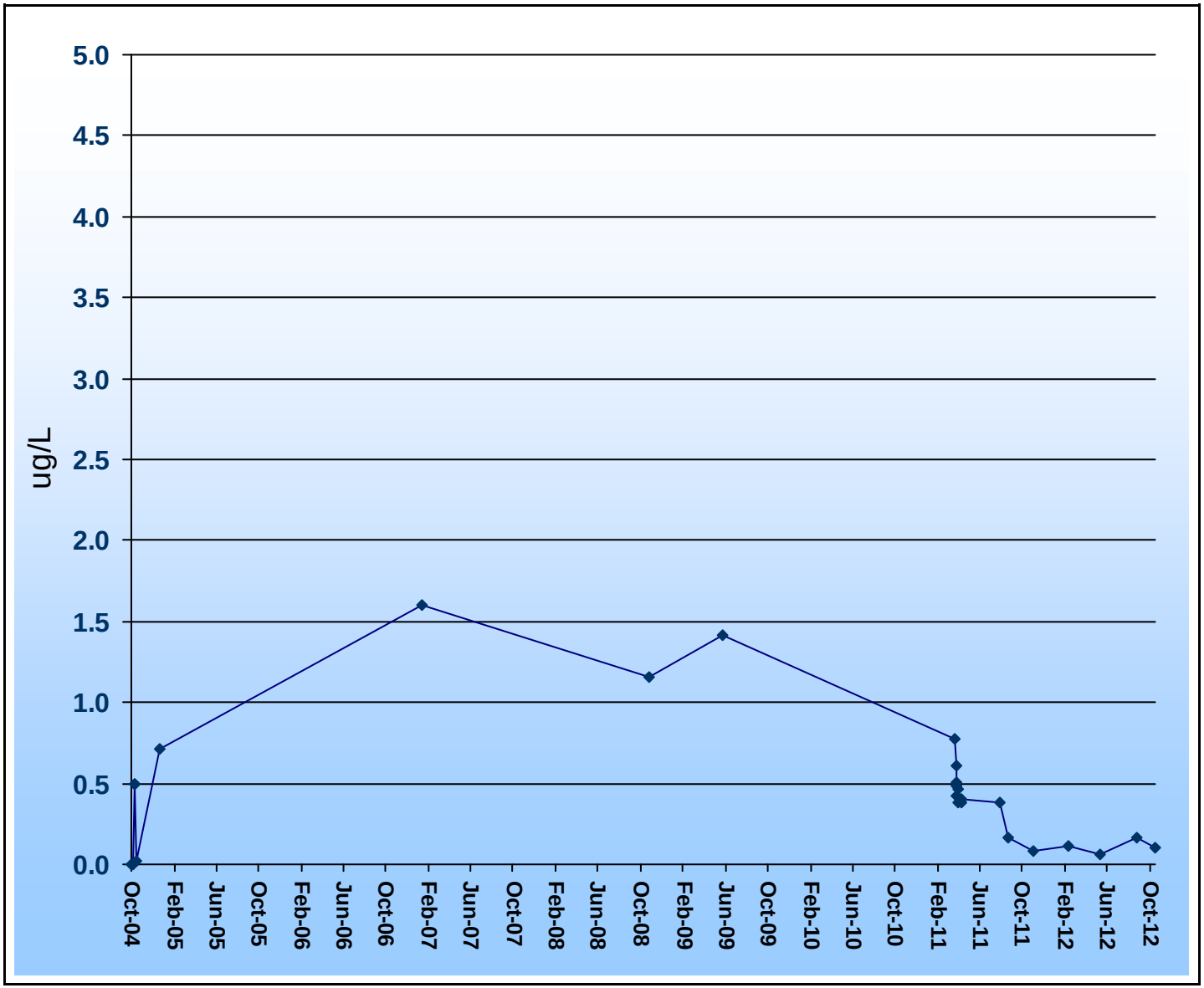
Cleanup Level 5.0 ug/L MCL



Well ID MPE-11

Casno 62-75-9 Analyte N-Nitrosodimethylamine by EPA Method 607

Cleanup Level 0.0042 ug/L EPA RSL



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Hazardous Waste Bureau
Attn: Mr. Dan Comeau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

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A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Kristen Van Horn
C. Date of Delivery 1/30/13

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If YES, enter delivery address below: ☐ No

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1. Article Addressed to:

Mr. Baird Swanson
Ground Water Quality Bureau
New Mexico Environmental Department
5500 San Antonia Drive NE
Albuquerque, NM 87109

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X G Padilla
☐ Agent
☐ Addressee

B. Received by *(Printed Name)* G Padilla
C. Date of Delivery 1-30-13

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
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☐ Registered ☑ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

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(Transfer from service label) 7009 3410 0001 5868 2534

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Lyndon B. Johnson Space Center
White Sands Test Facility
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Las Cruces, NM 88004-0020

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ground Water Pollution Prevention Section
Attn: Mr. Russel A. Isaac
New Mexico Enviromental Department
Harrold Runnels Building
1190 St. Francis Drive
Santa Fe, NM 87502

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent
☐ Addressee

B. Received by *(Printed Name)*

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

USPS SANTA FE, NM 87
JAN 31 2013

3. Service Type
☒ Certified Mail ☒ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7009 3410 0001 5868 2527

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540