

**COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN I)  
Northern and Central California, Nevada, and Utah  
CONTRACT Number N62474-88-D-5086  
Contract Task Order 0267**

**Prepared For**

**DEPARTMENT OF THE NAVY  
Engineering Field Activity West  
Naval Facilities Engineering Command  
San Bruno, California**

**PETROLEUM TANK SITES INVESTIGATION  
DRAFT TECHNICAL MEMORANDUM  
MOFFETT FEDERAL AIRFIELD, CALIFORNIA**

**December 11, 1995**

**Prepared By**

**PRC ENVIRONMENTAL MANAGEMENT, INC  
135 Main Street, Suite 1800  
San Francisco, California  
415/543-4880**

*Frederic Allee*  
for Frederic Allee, Project Engineer

*Peter M. Stang*  
for Peter M. Stang, Project Manager





December 11, 1995

Mr. Don Chuck  
Navy Environmental Office  
P. O. Box 68, Building 107  
Moffett Federal Airfield, CA 94035

CLEAN Contract Number N62474-88-D-5086  
Contract Task Order Number 0267

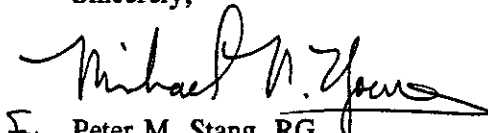
**SUBJECT: Draft Installation Restoration Program Petroleum Sites Investigation  
Technical Memorandum For USTs No. 17, 22, 41A, 55, 57, 69, 86A/B and 87,  
Moffett Federal Airfield, California**

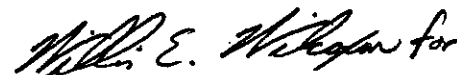
Dear Mr. Chuck:

Enclosed please find <sup>five</sup> two copies of the above-referenced report prepared by PRC Environmental Management, Inc. (PRC). This report presents recommendations for the management of underground storage tank (UST) sites 17, 22, 41A, 55, 57, 69, and 87 and closure of UST sites 86A and 86B. PRC anticipates submittal of this report to regulatory agencies in January if Navy comments on this draft site investigation report are received within 30 days after submittal.

If you have any questions or comments, please call us at (619) 225-1883.

Sincerely,

  
For Peter M. Stang, RG  
Project Manager

  
Fred Allee  
Project Engineer

Enclosures

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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## ACRONYMS AND ABBREVIATIONS

bls	Below land surface
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
CLC	Common Laboratory Contaminants
CLEAN	Comprehensive Long-Term Environmental Action Navy
CLP	Contract Laboratory Program
CRQL	Contract - required quantitation limit
CTO	Contract Task Order
DCE	Dichloroethylene
DQO	Data quality objectives
DTSC	Department of Toxic Substances Control California Environmental Protection Agency
EPA	U.S. Environmental Protection Agency
FSP	Field sampling plan
HSA	Hollow-stem auger (drill rig)
JMM	James M. Montgomery, Consulting Engineers, Inc.
JP-5	Jet fuel (specially refined kerosene)
mg/L	Milligrams per liter
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
MCL	Maximum Contaminant Level
MDL	Method detection limit
MFA	Moffett Federal Airfield
MS	Matrix spikes
MSD	Matrix spike duplicates
NA	Not analyzed
ND	Not detected
NAS	Naval Air Station
NASA	National Aeronautics and Space Administration
NEX	Naval Exchange
PAH	Polynuclear Aromatic Hydrocarbons
PARCC	Precision accuracy, representativeness, comparability, and completeness
PID	Photoionization detector
PRC	PRC Environmental Management Inc.
PRG	Preliminary remediation goal
PVC	Polyvinyl chloride
QC	Quality control
QAPjP	Quality assurance project plan 5 <sub>x</sub> five times 10 <sub>x</sub> times
RPD	Relative percent difference
RWQCB	California Regional Water Quality Control Board, San Francisco Bay Region

## ACRONYMS AND ABBREVIATIONS (Continued)

SVOC	Semivolatile organic compounds
TPH	Total petroleum hydrocarbons
TCE	Trichloroethene
Tri-Board Recommendations	Tri-Regional board staff recommendations for preliminary evaluation and investigation of UST sites
UST	Underground storage tank
VOCs	Volatile organic compounds

## EXECUTIVE SUMMARY

The U.S. Department of the Navy (Navy) has been identifying and evaluating past releases of chemical contaminants at various sites located at Moffett Federal Airfield (MFA). Controlling and eliminating the spread of contaminants from these sites continues to be a primary environmental mission of the Navy. Several environmental restoration activities at MFA are being conducted under the Comprehensive Long-Term Environmental Action Navy (CLEAN) contract. These activities are coordinated with the Navy; the U.S. Environmental Protection Agency (EPA); the California Environmental Protection Agency, including the Department of Toxic Substances Control (DTSC); and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB).

PRC Environmental Management, Inc. (PRC) is providing environmental engineering services related to the assessment of underground storage tank (UST) release sites at MFA under the scope of work for CLEAN Contract Task Order (CTO) 0267. The purpose of CTO 0267 is to provide engineering and field support for field investigations, feasibility studies, and closure for 14 UST sites at MFA. In the MFA Petroleum Tank Sites Closure Report, dated April 7, 1995, no further action was recommended for UST sites 15, 28, 78, 41A, and 88. This recommendation was based on work completed by the Navy before the start of CTO 0267.

This report focuses on the investigations at the remaining eight UST sites (17, 22, 41A, 55, 57, 69, 86A/B, and 87). PRC has conducted field investigations at the sites to evaluate the nature and extent of subsurface environmental impacts of fuel hydrocarbons released from the USTs. Before work began, the Navy had removed eight USTs from seven of the sites. The status of the tank at the eighth site (UST 55) has not been determined, and additional activities to evaluate its location and status may be needed.

The results of the CTO 0267 investigation show that (1) benzene, gasoline and JP-5 contamination in excess of MFA soil and groundwater action levels is present at UST site 17, (2) extractable total petroleum hydrocarbons as motor oil in excess of MFA soil or groundwater action levels for diesel/JP-5 are present at UST Sites 41A, 55, 57, and 87, (3) degraded gasoline contamination in excess of MFA gasoline action levels is present at UST site 86A/B, and (4) no contaminants in excess of MFA action levels are present at UST sites 22 and 69. Sufficient assessment information on which to base a corrective action plan (CAP) for UST site 17 has been collected. UST sites 22, 41A, 55, 57, 69, and 87 may require additional rounds of groundwater monitoring to verify initial findings. Existing data indicate UST site 86A/B is ready for closure application with no further action.

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## 1.0 INTRODUCTION

The U.S. Department of the Navy (Navy) has been identifying and evaluating past releases of chemical contaminants, including hazardous wastes, at Moffett Federal Airfield (MFA). Controlling and eliminating the spread of contaminants from these sites continues to be a primary environmental mission of the Navy. Most of the environmental restoration activities at MFA are being conducted under the Comprehensive Long-Term Environmental Action Navy (CLEAN) contract. These activities are coordinated with the Navy; the U.S. Environmental Protection Agency (EPA); the California Environmental Protection Agency, including the Department of Toxic Substances Control (DTSC); and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB).

PRC Environmental Management, Inc. (PRC) has prepared this draft assessment report under the scope of work for Contract Task Order (CTO) 0267. The purpose of CTO 0267 is to provide engineering and field support for field investigations, feasibility studies, and closure of 13 underground storage tank (UST) sites at MFA. In the MFA Petroleum Tank Sites Closure Report, dated April 7, 1995, no further action was recommended for UST sites 15, 28, 41B, 78, and 88.

This report focuses on the investigations at the remaining eight UST sites (17, 22, 41A, 55, 57, 69, 86A, 86B, and 87). PRC has conducted field investigations at the sites to evaluate the nature and extent of subsurface environmental impacts caused by fuel hydrocarbons and solvents (where applicable) from the USTs. Before work began, the Navy had removed USTs from seven sites. The status of the tank at the eighth site (UST Site 55) has not been determined, and additional activities may be needed to evaluate its location and status.

Soil and groundwater contamination, possibly requiring corrective action, was indicated by analyses of soil and groundwater samples collected from (1) the seven sites following tank removal, and (2) four of the sites following additional soil excavation. This report presents the technical approach used to conduct additional assessments at these sites, including investigation methods and procedures. The goals of the assessment activities were to (1) provide a technical basis for closure of UST sites that do not require additional assessment or mitigation, and (2) provide information on which to base a corrective action plan (CAP).

The main purpose of this report is to document the investigation of eight UST sites at MFA. The objective of these investigations was to evaluate potential contaminant releases to the soil and groundwater, and determine whether site remediation is required. If no further action is required, a request for closure is submitted in accordance with the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of UST Sites" (Tri-Board Recommendations) (RWQCB 1990) and Tri-Board Recommendations Appendix B, Requests for Closure (RWQCB 1994). Tri-Board Recommendations Appendix B requires responsible parties to provide, at a minimum, (1) information concerning 10 closure documentation requirements, and (2) complete closure checklists.

This report has been prepared in conjunction with other reports regarding USTs and petroleum contamination at MFA. The following submittals have been prepared:

- **Petroleum Sites Cleanup Level Analysis Technical Memorandum (PRC 1994a).** This report:
  - Evaluates various cleanup level options on the basis of an assessment of human health risks, contaminant fate and transport considerations, and social and economic factors
  - Recommends cleanup levels for MFA
  - Provides information not contained in Section 4.0 of this report
- **Installation Restoration Program Petroleum Sites (and Wastewater Tanks and Sumps) CAP (PRC 1994b).** This report:
  - Provides additional detail regarding site background and history, land and aquifer use, geology and hydrogeology, cleanup levels, and potential corrective actions
- **Closure Report for USTs 15, 28, 41B, 78, and 88 (PRC 1995a).** This report:
  - Contains assessment information collected at each site and the rationale for recommending closure based on Tri-Board guidelines (see Appendix A)
- **Petroleum Tank Sites Investigation Draft Field Work Plan (PRC 1995b).** This report:
  - Presents the technical approach to conducting additional assessments at UST sites 17, 22, 41A, 55, 57, 69, 86A and 86B, and 87

Appendix a presents the closure document requirements checklist for USTs 15, 28, 41B, 78, and 88.

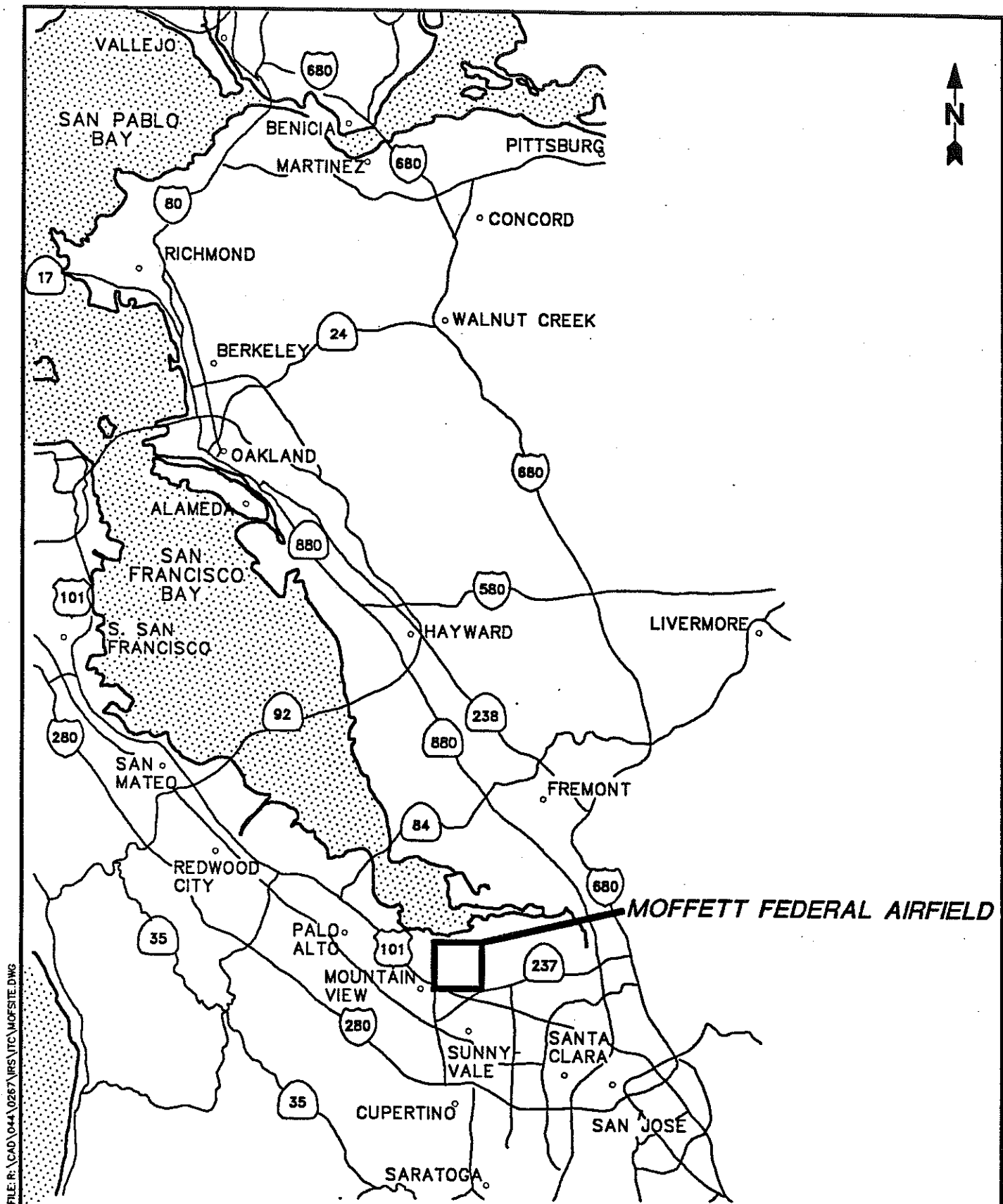


This draft assessment report documents that the RWQCB requirements have been satisfied for the closure of removed UST 86A and UST 86B. It also summarizes previous field activities and presents the rationale for recommending closure of this 2-tank site. Existing analytical data for all of the USTs have been compiled from previous reports and data summaries. Section 2.0 describes the MFA site. Section 3.0 describes the site hydrogeology at MFA. Section 4.0 summarizes petroleum cleanup levels at MFA and discusses UST sites previously recommended for closure. Section 5.0 details the field activities and analytical results associated with each site investigation, in addition to health and safety, waste disposal, and surveying. Section 6.0 assesses the quality of the data collected from sampling. Section 7.0 describes the deviations from the draft field work plan. Section 8.0 presents conclusions and recommendations. A list of documentation references follows Section 8.0.

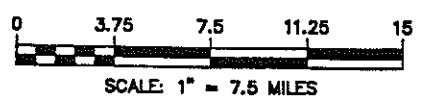
## 2.0 SITE DESCRIPTION

MFA (formerly known as Naval Air Station [NAS] Moffett Field) has been continuously operated by the U.S. military since 1933, when it was commissioned to support the West Coast Dirigible Program. Since the 1950s, the primary mission of MFA has been to support antisubmarine warfare training and patrol squadrons. In 1991, NAS Moffett Field was designated for closure as an active military base under the U.S. Department of Defense Base Realignment and Closure program. In 1994, operation of NAS Moffett Field was transferred to the National Aeronautics and Space Administration (NASA), and operation of the housing units was transferred to Owizuka Air Force Base; NAS Moffett Field was subsequently renamed Moffett Federal Airfield.

MFA is located about 1 mile from the southern end of San Francisco Bay, next to Mountain View and Sunnyvale, California (Figure 1). The facility, encompassing 2,200 acres in Santa Clara County, is bordered by salt evaporation ponds on the north, Lockheed Aerospace Center on the east, U.S. Highway 101 on the south, and Stevens Creek on the west. Within MFA are two aircraft runways, three large aircraft hangars, flight control facilities, aircraft refueling facilities and storage tanks, office complexes, military housing structures, a golf course, automobile fueling and maintenance facilities, warehouses, and shops. In the northwestern portion of MFA are NASA's Ames Research Center facilities, which include several large wind tunnels, laboratories, offices, aircraft hangars, and support facilities. Tidal salt marshes and mud flats covered extensive areas of the southern portion of San Francisco Bay near MFA, but most of these areas have been eliminated or significantly altered by placement of fill material. Commercial salt evaporation ponds are currently located north and northeast of MFA, where dikes separate the bay from MFA. Coyote Creek and Guadalupe Slough drain into San Francisco Bay to the east of MFA, and Stevens Creek drains into the bay on the western boundary of MFA. The only natural surface water features at MFA are about 40 acres of wetlands located along the northern portion of MFA and 80 acres of wetlands located north of the Ames Research Center. Various flora and fauna are present in these wetland areas.



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**FIGURE 1**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**REGIONAL LOCATION MAP**

### 3.0 HYDROGEOLOGY

This section provides a general description of the hydrogeology at MFA; the geology and hydrogeology are described in greater detail in the geology and hydrogeology technical memorandum (PRC and Montgomery Watson 1992).

Subsurface sediments below MFA are divided into the A, B, and C aquifer zones. Aquifer A is divided into two zones; a shallow zone at 5 to 35 feet below land surface (bls), referred to as the A1 aquifer zone; and a deeper zone at 35 to 50 feet bls, referred to as the A2 aquifer zone. Predominant lithologies include fine-grained silt and clay within these zones. Permeable units that comprise these aquifer zones are relatively thin (3 to 20 feet thick) discontinuous channels and lenses of sand and gravel.

A confining layer of clay separates the deposits of the underlying B aquifer from the channels of the A aquifer zones. The lithologies of the B aquifer are similar to those of the A aquifer zones. The permeable zones of the B aquifer are generally finer-grained and lack the gravel of the A aquifer. Throughout the west side of MFA, the B aquifer is encountered at a depth of about 70 feet bls, below a 5- to 7-foot-thick clay layer. On the east side of MFA, the B aquifer is generally encountered at a depth of 50 to 60 feet bls, below a 7- to 20-foot-thick clay zone.

The groundwater in the A and B aquifers generally flows northward toward San Francisco Bay, which is similar to the contour of the present topographic surface. The A and B aquifers beneath MFA are not currently, and have never been, used as potable drinking water sources, although the groundwater has been used for irrigation. The installation currently receives its drinking water from municipal sources.

The C aquifer is confined under a laterally extensive clay aquitard (B/C aquitard), which is beneath MFA from 130 to 160 feet bls. The groundwater in the C aquifer flows northeast. The vertical hydraulic gradient is directed upward from the C aquifer to the A and B aquifers below MFA. The B/C aquitard is generally considered an effective barrier to any potential downward migration of contaminants from the shallower aquifers, because the B/C aquitard is 5 to 20 feet thick and laterally continuous, and the vertical hydraulic gradient is directed upward between the C aquifer and outlying aquifers.

Beneficial uses of groundwater in the Santa Clara Valley Basin beneath MFA are outlined in the RWQCB Basin Plan. According to this plan, groundwater from the main groundwater basins in the San Francisco Bay region, including the Santa Clara Valley Basin, can be used for municipal supply, industrial service and industrial process water supply, and agricultural supply. Basin Plan aquifer designations are basin-wide and are not based on site-specific characteristics.

The upper aquifers at MFA, except those in the northernmost portion of MFA, meet the State Water Resources Control Board definition of a potential drinking water source. However, several inorganic constituents in the MFA upper aquifers have site-specific background concentrations that are above federal or state primary or secondary maximum contaminant levels (MCLs) and Basin Plan water quality objectives. Therefore, the groundwater in the upper aquifers would probably need treatment before it could be distributed as drinking water. Generally, because of elevated salinity and metals concentrations, in addition to low water yield, the upper aquifer groundwater is also unattractive for use as an agricultural supply. The shallow aquifer will be considered in this study as a potential drinking water source, however, because groundwater under the petroleum tank sites meets the state's definition, as specified in the Basin Plan.

Groundwater for drinking and agricultural purposes was formerly collected from the deeper C aquifer. No drinking water wells are currently known to be in use at MFA. There are eight active C aquifer wells at MFA; one is a source of irrigation water (agricultural use) for the golf course, and seven are used only as monitoring wells. Groundwater from the C aquifer in the MFA area is used only for agriculture. Limited use of the C aquifer for agricultural purposes may continue; however, because of withdrawal restrictions, extensive use of the C aquifer groundwater for agricultural supply is unlikely. Water for domestic use at MFA comes from municipal sources that rely mainly on surface water sources.

#### **4.0 CLEANUP LEVEL SUMMARY**

During June and July 1994, the Navy and regulatory agencies reached an agreement regarding acceptable cleanup levels for petroleum and petroleum-related constituents at MFA. The basis of the agreement is documented in a cleanup level analysis technical memorandum prepared by the Navy (PRC 1994a).

Cleanup levels for total petroleum hydrocarbons (TPH) in soil and groundwater, as proposed in Scenario B of the cleanup level analysis technical memorandum, will be as follows:

- Soil
  - TPH purgeable as gasoline (purgeable TPH)—150 milligrams per kilogram (mg/kg)
  - TPH extractable as diesel fuel or JP-5 jet fuel (extractable TPH)—400 mg/kg
- Groundwater
  - Purgeable TPH—50 micrograms per liter ( $\mu\text{g/L}$ ); extractable TPH—700  $\mu\text{g/L}$

Individual cleanup levels for benzene, toluene, ethylbenzene, and xylenes (BTEX) in soil will be consistent with EPA Region 9's most recent risk-based preliminary remediation goals (PRGs) for the industrial scenario (U.S. EPA 1995), as follows:

- Benzene—3.2 mg/kg
- Toluene—2,700 mg/kg
- Ethylbenzene—3,100 mg/kg
- Xylenes—980 mg/kg

Cleanup levels for BTEX and all other constituents of concern in groundwater will be established at California Code of Regulations, Title 22 MCLs, including the following levels for BTEX:

- Benzene—1  $\mu\text{g/L}$
- Toluene—150  $\mu\text{g/L}$
- Ethylbenzene—680  $\mu\text{g/L}$
- Xylenes—1,750  $\mu\text{g/L}$

Data from the tank removals at the petroleum sites revealed the detection of a polynuclear aromatic hydrocarbon (PAH) compound in soils at one site. Because the PAH benzo(a)pyrene had not been detected in soils at the other petroleum sites, DTSC agreed with the Navy to not include PAHs with the soil cleanup levels. The decision, which is based on the site-specific information provided by the Navy, does not contradict DTSC's policy of setting risk-based individual constituent cleanup goals. DTSC and the Navy agreed, however, that PAH samples would be analyzed during future

confirmation sampling. If PAHs are detected, in the near surface or surface soil in which exposures could occur, the Navy will clean up the PAHs to the levels of EPA Region 9 industrial land use scenario PRGs.

Additional requirements by the state include using groundwater monitoring systems (at sites with groundwater contamination) that are capable of monitoring the uppermost (A1) aquifer zone. Wells will be screened across the water table to detect the presence of light nonaqueous phase liquid petroleum hydrocarbon products. Groundwater data will be presented in quarterly groundwater monitoring reports that are prepared by the Navy. Regulatory agencies will review these reports to evaluate the effectiveness of remedial activities.

## **5.0 FIELD ACTIVITIES**

This section describes the various field activities conducted to achieve the objectives of this petroleum tank sites investigation. Figure 2 shows the locations of the UST sites.

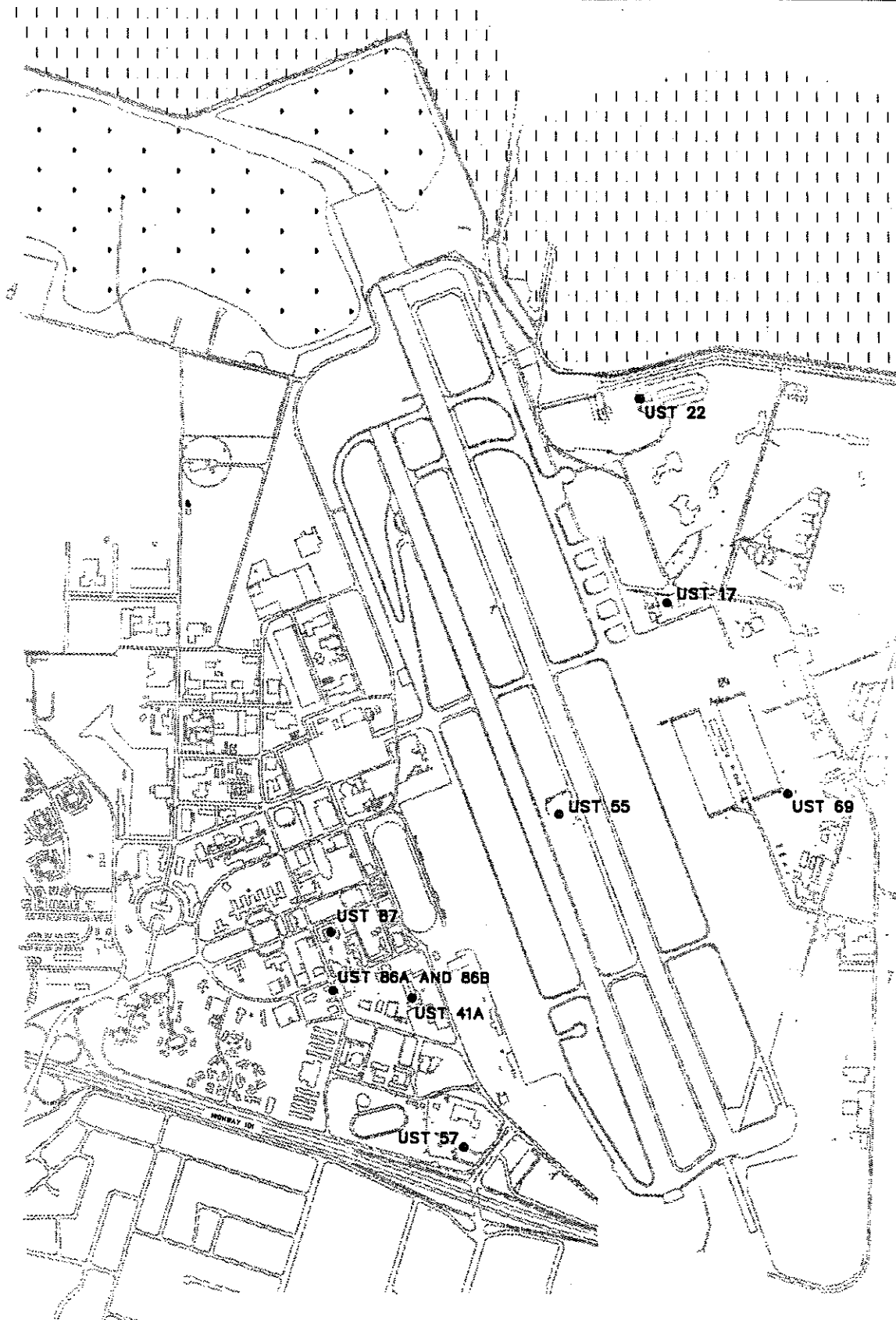
### **5.1 SUBSURFACE UTILITIES CLEARANCE**

Before subsurface exploration activities began at MFA, utility locations were identified at each petroleum UST site. A hand-held magnetometer was used for the survey. Several underground utilities were found; however, no modifications to the proposed sampling locations at any of the sites were necessary.

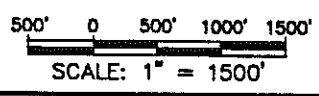
Subsurface sensing work performed at the UST 55 site with the magnetometer included an attempt to determine the location of UST 55, associated piping, and anomalies resembling a backfilled tank excavation or piping trenches. No indications of an UST or piping were found.

### **5.2 UST 17 SITE INVESTIGATION**

UST 17 was located northwest of, and next to, Day Tank 253 in the High-Speed Fuel Farm off Macon Road. Day Tank 253 supplies hydrants located at fueling stations 1 through 4 along the east parallel taxiway to Runway 32R. UST 17 was a 4,200-gallon steel tank within a concrete vault. Contaminated JP-5 jet fuel was stored in UST 17 located adjacent to Day Tank 253. The site remains an active fuel farm, but UST 17 has been replaced with a single-walled steel 2,000-gallon aboveground storage tank located within a coated concrete double-containment basin.



**FIGURE 2**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**SITES LOCATION MAP**



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DATE: 04/03/95 DDJ DN

### 5.2.1 Summary of Previous Field Activities

Analysis of the soil samples for BTEX compounds indicated that benzene, ethylbenzene, and xylenes were present at detectable levels. UST 17 was removed on July 2, 1993. The regulatory agency inspector noted in his report that there were no observed holes in the shell or ends of the tank. Analysis of soil samples 17A and 17B, which were collected during the tank excavation, indicated detectable concentrations of purgeable TPH, which the laboratory quantified as a nongasoline mixture.

### 5.2.2 Soil Sample Collection and Analytical Results

Soil samples were collected from nine locations (GPT17-1 through GPT17-10) by using hand augers. The soils removed from each location were screened for petroleum contamination with a photoionization detector (PID). A soil sample from location GPT17-8 was not submitted to the laboratory for analysis. The soil samples collected at the UST 17 site were submitted to an off-site laboratory, which analyzed them for BTEX, semivolatile organic compounds (SVOCs), purgeable TPH, and extractable TPH.

Soils from ground surface to 5 feet bls exhibited no sign of petroleum contamination. Petroleum-contaminated soils were encountered from about 5 to 9 feet bls within the capillary fringe at sampling locations GPT17-1, GPT17-2, GPT17-3, GPT17-4, GPT17-6, GPT17-7, GPT17-9, and GPT17-10. This indicates the presence of a 3- to 4-foot thick layer of petroleum-contaminated soils extending radially 50 to 60 feet around the former location of UST 17. Figure 3 illustrates the soil boring locations. Figures 4A through 4D present the soil boring locations and associated laboratory analysis results. Tables 1A and 1B summarize soil and groundwater TPH and BTEX, and SVOC data, respectively. Appendix B presents all laboratory chemical data.

The only soil samples that contained petroleum compounds at a shallow depth interval (5.0 to 5.7 feet bls) were sample GPT17-2(5.0), located west of the excavation of the former tank and sample GPT17-4(5.2), located east of the excavation.

Soil samples GPT17-1(8.5), GPT17-2(8.0), GPT17-3(8.5), GPT17-4(9.0), GPT17-6(6.0), GPT17-7(7.5), and GPT17-10(7.5) contained gasoline concentrations ranging from 170 to 890 mg/kg. The same samples also contained JP-5 concentrations ranging from 47 to 1,700 mg/kg. Low concentrations of benzene, ethylbenzene, and xylenes were also detected in these samples. Samples GPT17-1(8.5), GPT17-2(8.0), GPT17-3(8.5), and GPT17-4(9.0) also contained detectable concentrations of the following SVOCs: naphthalene and 2-methylnaphthalene.



MWT17-3  
SBT17-3  
WT17-3

MWT17-2  
SBT17-2  
WT17-2

MACON ROAD



**LEGEND**

- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- SOIL AND GROUNDWATER SAMPLING LOCATION
- ⊕ MONITORING WELL LOCATION
- ⊠ ABOVEGROUND PIPING

GPT17-5  
GWT17-5

FORMER UST 17  
LOCATION

GPT17-3  
GWT17-3

MWT17-1  
SBT17-1  
WT17-1

GPT17-4  
GWT17-4

GPT17-6  
GWT17-6

GPT17-9  
GWT17-9

GPT17-7  
GWT17-7

GPT17-2  
GWT17-2

17A  
17B

GPT17-1  
GWT17-1

DAY TANK  
#253(JP-8)

ABOVE GROUND  
STORAGE TANK FOR  
CONTAMINATED FUEL

GPT17-8  
GWT17-8

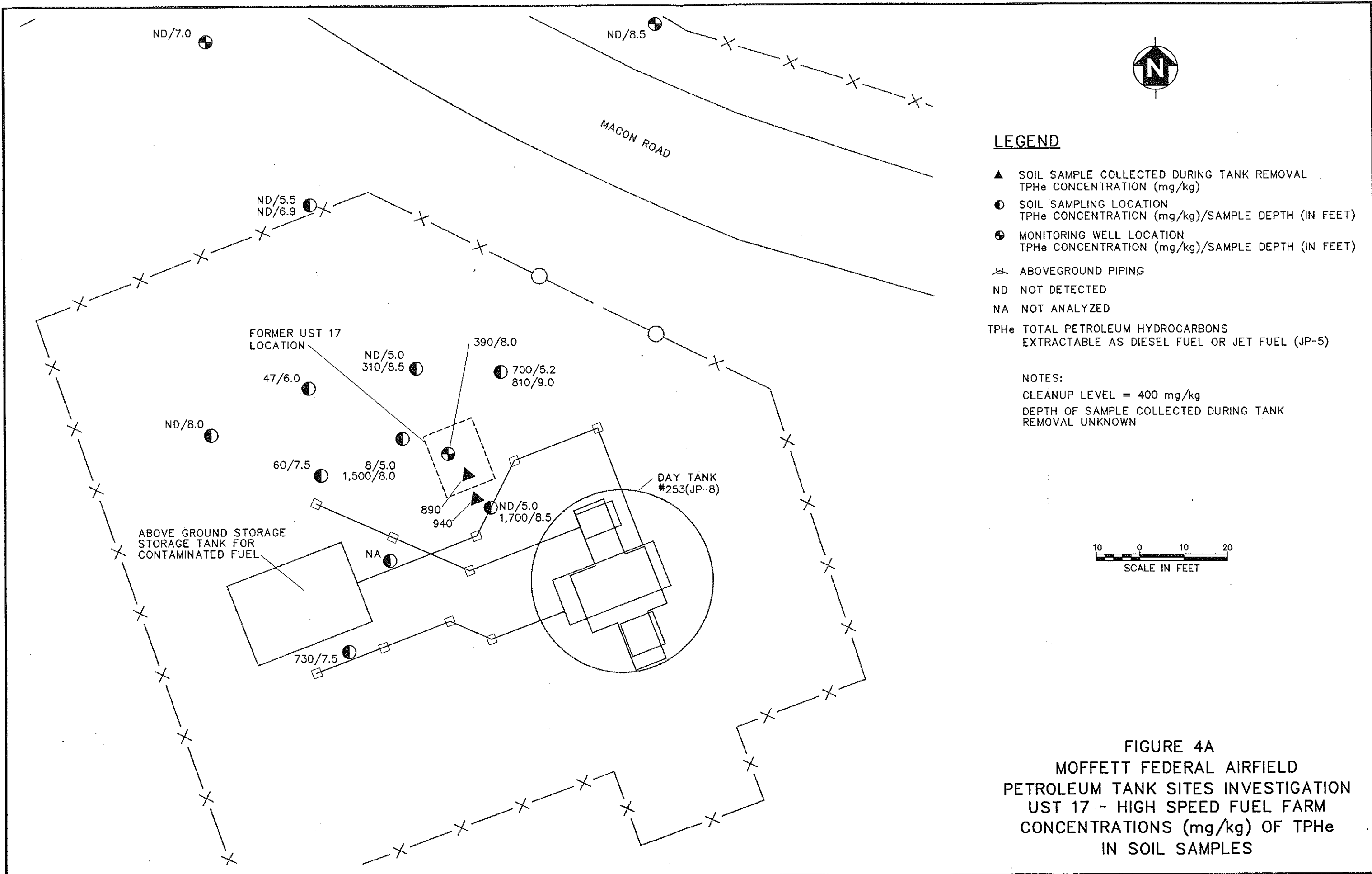
GPT17-10  
GWT17-10



**FIGURE 3**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 17 - HIGH SPEED FUEL FARM**  
**SAMPLING LOCATIONS**

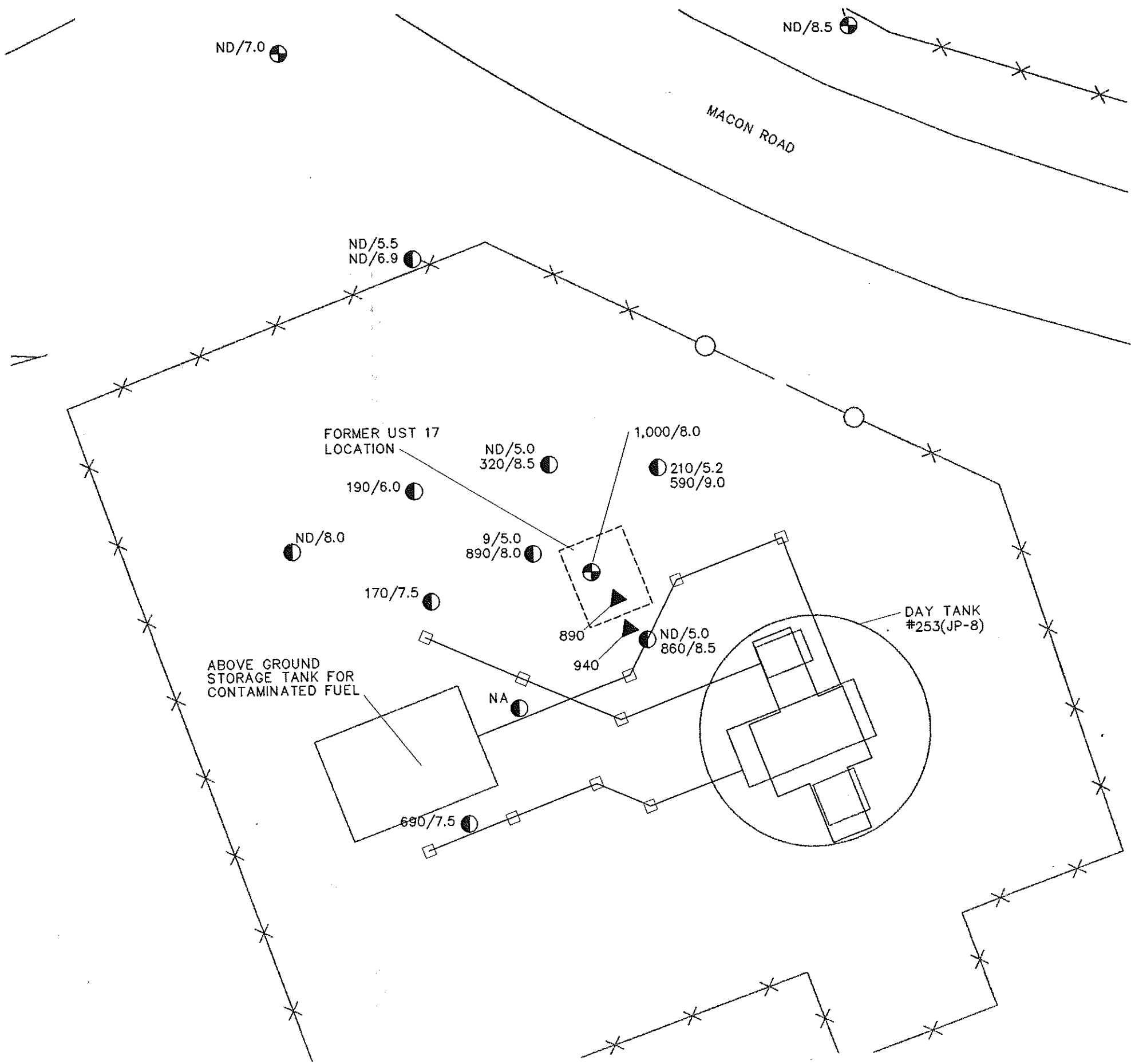
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DATE: 12/04/95  
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FILE NAME: 044\0287\URR\TC\AAA.DWG  
 DATE: 12/04/85  
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**FIGURE 4A**  
 MOFFETT FEDERAL AIRFIELD  
 PETROLEUM TANK SITES INVESTIGATION  
 UST 17 - HIGH SPEED FUEL FARM  
 CONCENTRATIONS (mg/kg) OF TPHe  
 IN SOIL SAMPLES

DATE: 12/06/95 KCH DN  
 FILE NAME: 047\0267\RS\VIC\HBA.DWG



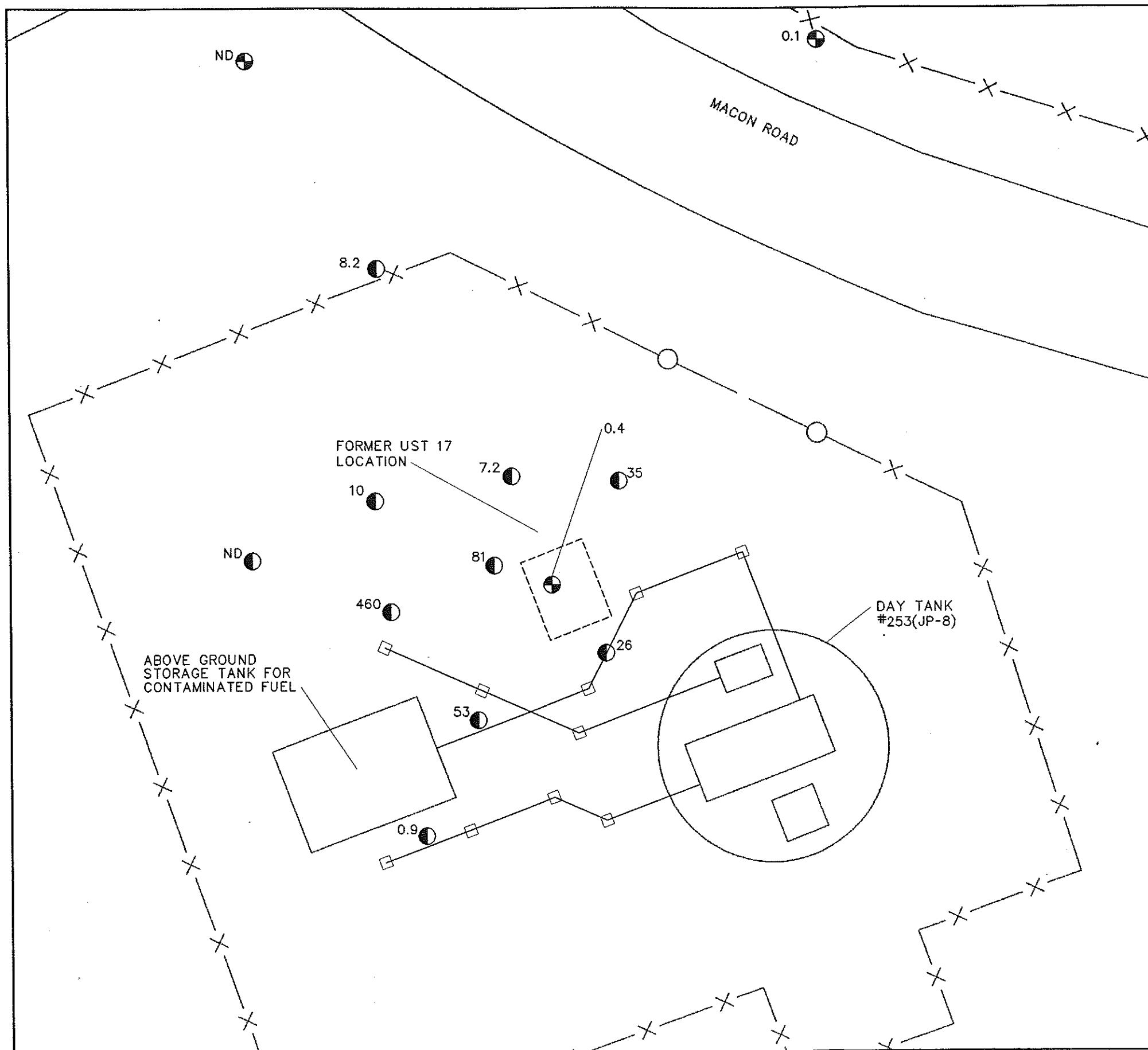
**LEGEND**

- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- SOIL SAMPLING LOCATION
- ⊕ MONITORING WELL LOCATION
- ABOVEGROUND PIPING
- ND NOT DETECTED
- NA NOT ANALYZED
- TPHp TOTAL PETROLEUM HYDROCARBONS PURGEABLE AS GASOLINE

NOTES:  
 TPHp CONCENTRATION (mg/kg)/  
 BELOW LAND SURFACE (FT)  
 CLEANUP LEVEL = 150mg/kg TPHp



**FIGURE 4B**  
 MOFFETT FEDERAL AIRFIELD  
 PETROLEUM TANK SITES INVESTIGATION  
 UST 17 - HIGH SPEED FUEL FARM  
 CONCENTRATIONS (mg/kg) OF TPHp  
 IN SOIL SAMPLES



**LEGEND**

- GROUNDWATER SAMPLING LOCATION  
TPHp CONCENTRATION (mg/L)
- ⊕ MONITORING WELL LOCATION  
TPHp CONCENTRATION (mg/L)
- ABOVEGROUND PIPING
- ND NOT DETECTED
- NA NOT ANALYZED
- TPHp TOTAL PETROLEUM HYDROCARBONS  
PURGEABLE AS GASOLINE

NOTE:  
CLEANUP LEVEL = 0.05 mg/L TPHp



**FIGURE 4C**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 17 - HIGH SPEED FUEL FARM**  
**CONCENTRATIONS OF TPHp**  
**IN WATER SAMPLES**

FILE NAME: 044\0287\RES\17\17\4CA.DWG  
DATE: 12/06/95 KCH DK

FILE NAME: 044\0257\RS\VTIC\4DA.DWG  
DATE: 12/05/95 RDH DN

ND

0.13



MACON ROAD

10

**LEGEND**

- GROUNDWATER SAMPLING LOCATION  
TPHe CONCENTRATION (mg/L)
- ⊕ MONITORING WELL LOCATION
- ⊠ ABOVEGROUND PIPING
- ND NOT DETECTED
- NA NOT ANALYZED
- TPHe TOTAL PETROLEUM HYDROCARBONS  
EXTRACTABLE AS DIESEL FUEL OR JET FUEL (JP-5)

FORMER UST 17  
LOCATION

85

0.4

50

88

ND

200

32

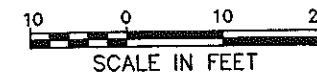
ABOVE GROUND  
STORAGE TANK FOR  
CONTAMINATED FUEL

DAY TANK  
#253(JP-8)

80

79

8.8



**FIGURE 4D**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 17 - HIGH SPEED FUEL FARM**  
**CONCENTRATIONS OF TPHe**  
**IN WATER SAMPLES**

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TABLE 1A

**MOFFETT FEDERAL AIRFIELD  
UST 17—HIGH-SPEED FUEL FARM  
SUMMARY OF TPH AND CLP BTEX DATA**

Sample Designation	Sampling Location	Matrix	Unit	TPH Concentrations Purgeable/Extractable	Chromatographic Pattern	B/T/E/X
<b>Tank Removal Samples</b>						
17A	EXC floor	Soil	mg/kg	890/NA	Nongasoline mix	1.4/ND/4.2/11
17B	Wall	Soil	mg/kg	940/NA	Nongasoline mix	0.65/ND/2/11
<b>CTO 267 Investigation Samples</b>						
GPT17-1(5.0)	S of EXC	Soil	mg/kg	ND/ND	--	ND/ND/ND/ND
GPT17-1(8.5)	S of EXC	Soil	mg/kg	860/1,700	Nongasoline/JP-5	0.44/ND/ND/ND
GPT17-2(5.0)	W of EXC	Soil	mg/kg	9.41/8.4	Nongasoline/JP-5	ND/ND/ND/ND
GPT17-2(8.0)	W of EXC	Soil	mg/kg	890/1,500	Nongasoline/JP-5	1.8/ND/5.2/ND
GPT17-3(5.0)	N of EXC	Soil	mg/kg	ND/ND	--	ND
GPT17-3(8.5)	N of EXC	Soil	mg/kg	320/310	Nongasoline/JP-5	ND
GPT17-4(5.2)	E of EXC	Soil	mg/kg	210/700	Nongasoline/JP-5	ND
GPT17-4(9.0)	E of EXC	Soil	mg/kg	590/810	Nongasoline/JP-5	0.46/ND/ND/ND
GPT17-5(5.5)	N fenceline	Soil	mg/kg	ND/ND	--	ND
GPT17-5(6.9)	N fenceline	Soil	mg/kg	ND/ND	--	ND
GPT17-6(6.0)	NW of EXC	Soil	mg/kg	190/47	Gasoline/JP-5	ND/ND/1.5/1.3
GPT17-7(7.5)	W of EXC	Soil	mg/kg	170/60	Gasoline/JP-5	ND/ND/0.92/2.3
GPT17-9(8.0)	W of EXC	Soil	mg/kg	ND/ND	--	ND
GPT17-10(7.5)	S of AST	Soil	mg/kg	690/730	Gasoline/JP-5	ND/ND/1.8/1.3
SBT17-1(8.0)	Center of EXC	Soil	mg/kg	1,000/390	Gasoline/JP-5	ND/1.8/16/9.1
SBT17-2(8.5)	N of Macon Rd.	Soil	mg/kg	ND/ND	--	ND/ND/ND/0.003
SBT17-3(7.0)	S of Macon Rd.	Soil	mg/kg	ND/ND	--	ND
GWT17-1	S of EXC	Water	mg/L	26/80	Nongasoline/JP-5	ND
GWT17-2	W of EXC	Water	mg/L	81/200	Nongasoline/JP-5	0.88/ND/ND/0.038
GWT17-3	N of EXC	Water	mg/L	7.2/50	Nongasoline/JP-5	0.25/ND/0.013/ND
GWT17-4	E of EXC	Water	mg/L	35/88	Nongasoline/JP-5	0.36/ND/ND/ND
GWT17-5	N fenceline	Water	mg/L	8.2/10	Nongasoline/JP-5	ND/ND/ND/0.004
GWT17-6	NW of EXC	Water	mg/L	10/85	Gasoline/JP-5	ND
GWT17-7	W of EXC	Water	mg/L	460/32	Gasoline/JP-5	ND
GWT17-8	Piping area	Water	mg/L	53/79	Gasoline/JP-5	ND
GWT17-9	W of EXC	Water	mg/L	ND/ND	--	ND
GWT17-10	S of AST	Water	mg/L	0.91/8.8	Gasoline/JP-5	ND/ND/0.005/0.003
WT17-1	Center of EXC	Water	mg/L	0.4/NA	Gasoline	ND/ND/0.003/0.004
WT17-2	N of Macon Rd.	Water	mg/L	0.1/0.15	Gasoline/Diesel	ND/ND/ND/0.002
WT17-3	N of Macon Rd.	Water	mg/L	ND/ND	--	ND

## Notes:

AST	Aboveground storage tank	mg/kg	milligrams per kilogram	ND	Not detected
B/T/E/X	Benzene/toluene/ethylbenzene/xylenes	mg/L	milligrams per liter	NW	Northwest
CLP	Contract Laboratory Program	--	No chromatographic pattern	S	South
E	East	N	North	TPH	Total petroleum hydrocarbons
EXC	Excavation of UST 17	NA	Not analyzed	W	West

TABLE 1B

MOFFETT FEDERAL AIRFIELD  
 UST 17—HIGH-SPEED FUEL FARM  
 SUMMARY OF SOIL CLP SVOC DATA

Sample Designation	Unit	Phenol	Naphthalene	2-Methyl-naphthalene	Dibenzofuran	Fluorene	Phenanthrene	Bis(2-ethylhexyl) phthalate
GPT17-1(5.0)	mg/kg	ND	ND	ND	ND	ND	ND	ND
GPT17-1(8.5)	mg/kg	ND	4.7D	10D	0.1JD	0.29J	0.1J	0.016J
GPT17-2(5.0)	mg/kg	ND	ND	0.073J	ND	ND	ND	0.054
GPT17-2(8.0)	mg/kg	ND	3.8D	7.8D	0.08J	0.24J	0.092J	0.13J
GPT17-3(5.0)	mg/kg	ND	ND	ND	ND	ND	ND	29J
GPT17-3(8.5)	mg/kg	ND	0.76	1.6	ND	0.044J	ND	ND
GPT17-4(5.2)	mg/kg	0.028J	1.6	3.1	0.041J	ND	0.07J	0.028J
GPT17-4(9.0)	mg/kg	ND	1.9	4.5D	ND	0.13J	0.051J	0.024J
GPT17-5(5.5)	mg/kg	NA	NA	NA	NA	NA	NA	NA
GPT17-5(6.9)	mg/kg	NA	NA	NA	NA	NA	NA	NA
GPT17-6(6.0)	mg/kg	NA	NA	NA	NA	NA	NA	NA
GPT17-7(7.5)	mg/kg	NA	NA	NA	NA	NA	NA	NA
GPT17-9(8.0)	mg/kg	NA	NA	NA	NA	NA	NA	NA
GPT17-10(7.5)	mg/kg	NA	NA	NA	NA	NA	NA	NA
SBT17-1(8.0)	mg/kg	NA	NA	NA	NA	NA	NA	NA
SBT17-2(8.5)	mg/kg	NA	NA	NA	NA	NA	NA	NA
SBT17-3(7.0)	mg/kg	NA	NA	NA	NA	NA	NA	NA





### 5.2.3 Groundwater Sample Collection and Analytical Results

Groundwater samples for BTEX, SVOC, and purgeable TPH analysis were collected from locations GPT17-1 through GPT17-10 by lowering disposable bailers directly into the hand-augered boreholes. The samples to be analyzed for extractable TPH were collected in the same way or were collected by using a peristaltic pump and disposable polyethylene tubing to pump groundwater directly into sample containers.

The 10 groundwater samples (GWT17-1 through GWT17-10) collected from the UST 17 site were submitted to an off-site laboratory and analyzed for BTEX, purgeable TPH, extractable TPH, and organic lead. Groundwater samples GWT17-1, GWT17-2, GWT17-3, GWT17-4, GWT17-5, GWT17-6, GWT17-7, GWT17-8, and GWT17-10 contained purgeable TPH concentrations ranging from 0.91 to 460 milligrams per liter (mg/L). The same samples also contained extractable TPH concentrations ranging from 8.8 to 200 mg/L.

In samples GWT17-2, GWT17-3, and GWT17-4, immediately next to the excavation of the former UST, benzene was detected at concentrations of 880, 250, and 360  $\mu\text{g/L}$ , respectively. Toluene was not found at concentrations above the method detection limit (MDL) in any of the groundwater samples collected from the hand-augered borings. In GWT17-3 and GWT17-10, ethylbenzene was detected at concentrations of 13.0 and 5.0  $\mu\text{g/L}$ , respectively. In GWT17-2, GWT17-5, and GWT17-10, xylenes were detected at concentrations of 38, 4, and 3  $\mu\text{g/L}$ , respectively. Sample GWT17-4 contained 480  $\mu\text{g/L}$  of naphthalene and 560  $\mu\text{g/L}$  of 2-methylnaphthalene. The groundwater samples analyzed for metals contained concentrations of metals similar to the natural background concentrations of the silt and clay lithology of MFA. This was true of all soil and groundwater samples analyzed for metals during the investigation.

### 5.2.4 Monitoring Well Installation

The levels of petroleum contamination present in the subsurface at the High-Speed Fuel Farm required the installation of three monitoring wells (MWT17-1, MWT17-2, and MWT17-3), which were two more than the work plan specified. Wells were installed to enable the collection of quarterly groundwater samples. The following subsections describe the installation of the wells, and the collection of additional soil and groundwater samples.

#### **5.2.4.1 Borehole Drilling**

Borehole SBT17-1 is located in the approximate center of the excavation of the former tank. Borehole SBT17-2 is located in the anticipated downgradient direction north of former UST 17 and across Macon Road from the fuel farm gate. Borehole SBT17-3 is located northwest of former UST 17, outside of the fuel farm fence and next to Macon Road. All three borings were drilled with a hollow-stem auger (HSA) through the first saturated permeable interval at about 10 feet bls. Split-spoon samples were collected at 5 feet bls for geotechnical analysis and at 8 feet bls for chemical analysis. The soils excavated during the boring were described for lithologic characteristics on the SBT17-1, SBT17-2, and SBT17-3 borehole logs. Appendix C contains the borehole logs.

#### **5.2.4.2 Soil Sample Collection and Analytical Results**

Soil samples SBT17-1(5.0), SBT17-2(5.0), and SBT17-3(5.0) were collected from 5.0 to 5.5 feet bls. The samples were submitted to a geotechnical laboratory for analysis. Appendix D contains a copy of the report from the geotechnical laboratory. Samples SBT17-1(8.0) and SBT17-2(8.5) were collected from 8.0 to 8.5 feet bls within the capillary fringe. Sample SBT17-3(7.0) was collected from 7 to 7.5 feet bls.

Samples SBT17-1(8.0), SBT17-2(8.5), and SBT17-3(7.0) were submitted to an off-site laboratory, which analyzed them for BTEX, purgeable TPH, and extractable TPH. SBT17-1(8.0) contained the following concentrations:

- Ethylbenzene—16 mg/kg
- Gasoline—1,000 mg/kg
- JP-5 fuel—390 mg/kg
- Toluene—1.8 mg/kg
- Xylenes—9.1 mg/kg

In soil samples SBT17-2(8.5) and SBT17-3(7.0), petroleum compounds were not detected at concentrations above MDLs, except for 0.003 mg/kg of xylenes detected in SBT17-2(8.5).

#### **5.2.4.3 Well Construction and Development**

Monitoring wells MWT17-1, MWT17-2, and MWT17-3 were built in borings SBT17-1, SBT17-2, and SBT17-3 by using 2-inch-diameter polyvinyl chloride (PVC) screen and casing. Figure 3 illustrates monitoring well locations. Well construction details were recorded on well completion

forms. Appendix C contains logs that summarize well construction details. Each well, except MWT17-1 which produced groundwater very slowly, was developed in accordance with the base-wide field sampling plan (FSP) (PRC and James M. Montgomery [JMM] 1992a). MWT17-1 was developed by bailing all water from the well. Development water was containerized, characterized, and disposed of in accordance with applicable regulations.

#### **5.2.4.4 Groundwater Sample Collection and Analytical Results**

Groundwater samples WT17-2 and WT17-3 were collected from the corresponding monitoring wells and were submitted to an off-site laboratory, which analyzed them for BTEX, purgeable TPH, extractable TPH, and lead. Because of insufficient sample volume, sample WT17-1 was analyzed for purgeable TPH and BTEX only.

Analysis of groundwater sample WT17-1 indicated the presence of 400  $\mu\text{g/L}$  of gasoline, 2.5  $\mu\text{g/L}$  of ethylbenzene, and 3.9  $\mu\text{g/L}$  of xylenes. Sample WT17-2 was found to contain 100  $\mu\text{g/L}$  of gasoline, 1.6  $\mu\text{g/L}$  of xylenes, and 150  $\mu\text{g/L}$  of diesel. Groundwater sample WT17-3 did not contain concentrations of BTEX or TPH above MDLs. Lead was not detected in the samples.

Table 1A summarizes the TPH and BTEX data for the UST 17 site. Table 1B summarizes the SVOC data. Appendix B presents the laboratory analysis data for all of the soil and groundwater samples collected at the UST 17 site.

### **5.3 UST 22 SITE INVESTIGATION**

UST 22 was located next to the northwest corner of Building 484 in the Area 3 ammunition bunker compound. This site is the northernmost investigation site included in this CTO and is, therefore, the closest to San Francisco Bay. UST 22 was a 600-gallon tar-coated steel tank used to store diesel fuel for an emergency generator located inside Building 484.

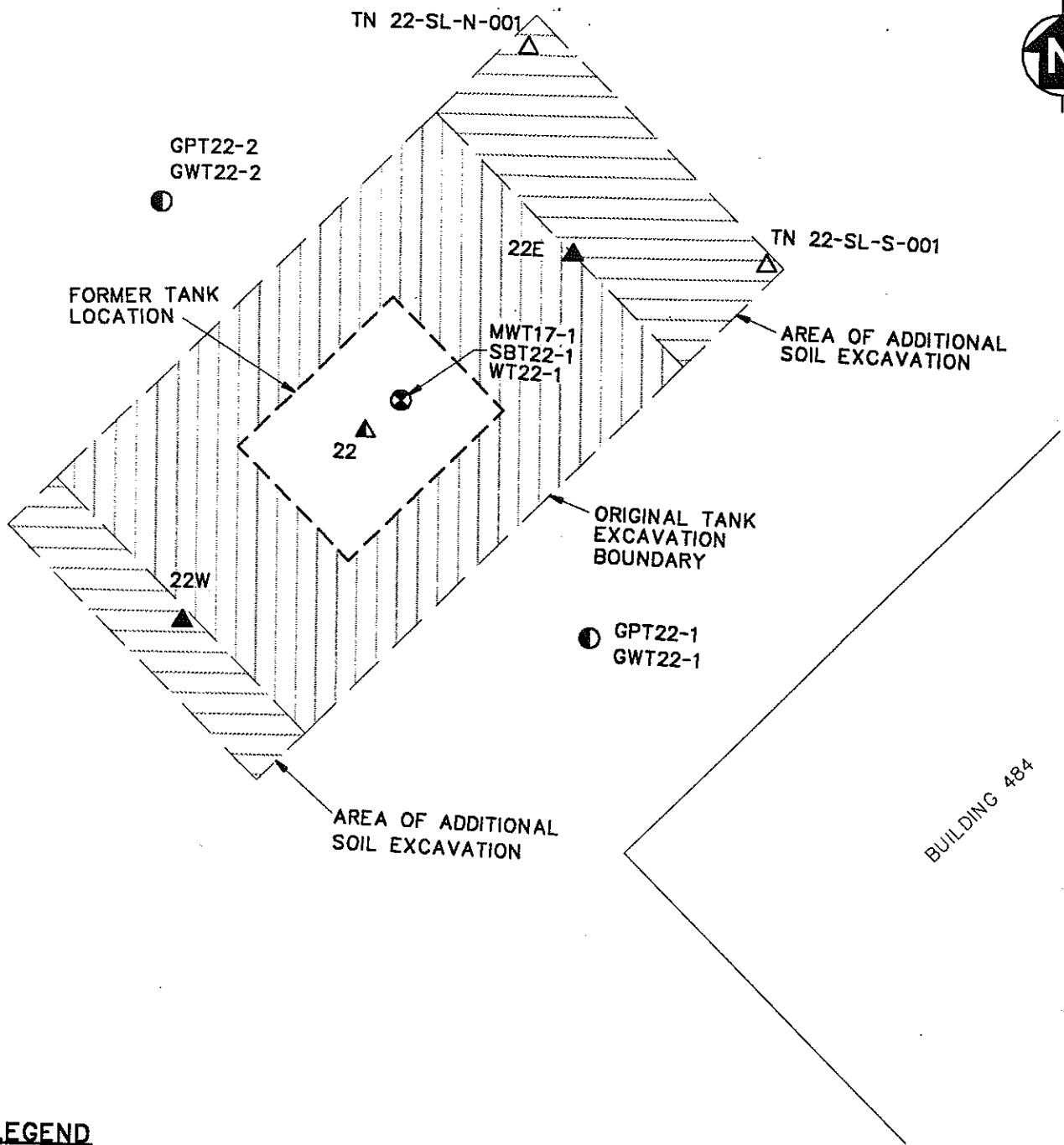
### 5.3.1 Summary of Previous Field Activities

UST 22 was removed on December 18, 1992. The regulatory agency inspector's report noted no observed holes in the shell or ends of the tank. Analysis of soil samples 22E and 22W, collected from beneath the tank, indicated detectable concentrations of TPH, which the laboratory quantified as diesel. BTEX compounds were not detected. Water was present in the excavation. Analysis of water sample 22, collected from the former tank excavation, indicated the presence of a detectable concentration of diesel but no BTEX compounds.

During July 1993, Navy personnel excavated additional soil from the former location of UST 22. Two soil samples were collected from the bottom of the enlarged excavation, immediately east of the former location of the UST. The excavation was enlarged to the east, because the analytical results for the samples collected following the removal of the tank indicated possible additional soil contamination in that direction. Analysis of soil samples TN 22-SL-N-001 and TN 22-SL-S-001, collected from the enlarged excavation, indicated that neither TPH nor BTEX was present at concentrations above its respective detection limits. No groundwater was encountered at the time of the overexcavation activities. Figure 5 illustrates sampling locations. Table 2 summarizes analytical data.

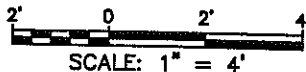
### 5.3.2 Soil Sample Collection and Analytical Results

Soil samples were collected from two locations (GPT22-1 and GPT22-2) by using hand augers. A PID was used to screen the soils removed from each location for petroleum contamination. None of the soils removed from the two hand auger locations exhibited any observable petroleum contamination. Sampling location GPT22-1 is located southeast of the former excavation, between Building 484 and the former position of the tank. At location GPT22-1, samples were collected from (1) 5.1 to 5.6 feet bls within the first change in lithology, and (2) 6.7 to 7.2 feet bls within the field-observed capillary fringe. Sampling location GPT22-2 is located about 4 feet northwest of the former tank location, outside of the previous excavation limits in the anticipated downgradient direction. At location GPT22-2, samples were collected from (1) 5.4 to 5.9 feet bls within the first change in lithology, and (2) 7.0 to 7.5 feet bls within the field-observed capillary fringe. Figure 5 illustrates the soil boring locations.



**LEGEND**

- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- △ SOIL SAMPLE COLLECTED DURING SUBSEQUENT EXCAVATION
- ▲ WATER SAMPLE COLLECTED DURING TANK REMOVAL
- SOIL AND GROUNDWATER SAMPLE COLLECTED DURING INVESTIGATION
- ⊙ MONITORING WELL LOCATION



**FIGURE 5**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 22 - AREA 3 AMMO BUNKERS**  
**SAMPLING LOCATIONS**

FILE NAME: R:\CAD\044\0267\RS\VT\UST-22.DWG  
 DATE: 11/07/95 JH DN

**TABLE 2**

**MOFFETT FEDERAL AIRFIELD  
UST 22—AREA 3 AMMUNITION BUNKERS  
SUMMARY OF TPH AND BTEX DATA**

Sample Designation	Sampling Location	Matrix	Unit	Purgeable/Extractable TPH Concentrations	Chromatographic Pattern	B/T/E/X
<b>Tank Removal Samples</b>						
2E	E EXC wall	Soil	mg/kg	NA/2.4	Diesel	ND
22W	W EXC wall	Soil	mg/kg	NA/130	Diesel	ND
22	In EXC	Water	µg/L	NA/58,000	Diesel	ND
<b>Remedial Excavation Samples</b>						
TN22-SL-N	NE EXC Floor	Soil	mg/kg	NA/ND	--	ND
TN22-SL-S	E EXC Floor	Soil	mg/kg	NA/ND	--	ND
<b>CTO 267 Investigation Samples</b>						
GPT22-1(5.1)	SE of EXC	Soil	mg/kg	ND/ND	--	ND
GPT22-1(6.7)	SE of EXC	Soil	mg/kg	ND/ND	--	ND
GPT22-2(5.4)	NW of EXC	Soil	mg/kg	ND/38	Motor oil	ND
GPT22-2(7.0)	NW of EXC	Soil	mg/kg	ND/ND	--	ND
SBT22-1(8.0)	Center of EXC	Soil	mg/kg	ND/ND	--	ND
GWT22-1	SE of EXC	Water	µg/L	ND/NA	--	ND
GWT22-2	NW of EXC	Water	µg/L	ND/450	Long-chain, P	ND
WT22-1	Center of EXC	Water	µg/L	ND/280, 120	Diesel, motor oil	ND

**Notes:**

- B/T/E/X Benzene/toluene/ethylbenzene/xylenes
- E East
- EXC Excavation of former UST 22
- mg/kg milligrams per kilogram
- µg/L micrograms per liter
- NA Not analyzed
- ND Not detected
- NE Northeast
- NW Northwest
- P Petroleum
- SE Southeast
- TPH Total petroleum hydrocarbons
- W West
- No chromatographic pattern

The four soil samples collected at the UST 22 site (GPT22-1[5.1], GPT22-1[6.7], GPT22-2[5.4], and GPT22-2[7.0]) were submitted to an off-site laboratory, which analyzed them for BTEX, purgeable TPH, and extractable TPH. None of these petroleum compounds was detected in the samples at concentrations above MDLs.

### **5.3.3 Groundwater Sample Collection and Analytical Results**

Groundwater samples were collected from locations GPT22-1 and GPT22-2 by lowering disposable bailers directly into the hand-augered boreholes. Unlike groundwater samples collected by using this method at other locations within MFA, these samples contained a large amount of suspended sediment that later settled out in the sample containers. It was necessary for PRC to return to the UST 22 site to use the Geoprobe at locations GPT22-1 and GPT22-2. A replacement set of groundwater samples was collected through slotted PVC pipe that was installed in the Geoprobe boreholes. The samples to be analyzed for purgeable TPH and BTEX were collected by lowering disposable bailers through the PVC piping into the groundwater. The samples to be analyzed for extractable TPH were collected by using a peristaltic pump and disposable polyethylene tubing to pump groundwater directly into sample containers.

The two groundwater samples collected from the UST 22 site (GWT22-1 and GWT22-2) were submitted to the laboratory, which analyzed them for BTEX, purgeable TPH, and extractable TPH. None of these petroleum compounds was detected in sample GWT22-1 at concentrations above MDLs. Analysis of groundwater sample GWT22-2 for extractable TPH indicated the presence of 450  $\mu\text{g/L}$  of long-chain petroleum compounds. The laboratory was unable to identify this contaminant as a specific fuel due to the degree of individual compound degradation. BTEX and purgeable TPH compounds were not present in GWT22-2 at concentrations above MDLs.

### **5.3.4 Monitoring Well Installation**

Although the level of long-chain petroleum compounds present in the groundwater at sampling location GPT22-2 was below the MFA action level of 700  $\mu\text{g/L}$ , the proximity of the UST 22 site to the bay indicated the need for a temporary well to enable the collection of quarterly groundwater monitoring data. The following subsections describe the installation of the well, and the collection of additional soil and groundwater samples.



#### **5.3.4.1 Borehole Drilling**

Borehole SBT22-1 is located in the approximate center of the excavation of the tank. An HSA drill rig was used to drill into the first saturated permeable interval at about 10 feet bls. Continuous split-spoon cores were collected and were described for lithologic characteristics on the SBT22-1 borehole log. Appendix C contains a copy of the log.

#### **5.3.4.2 Soil Sample Collection and Analytical Results**

Soil sample SBT22-1(5.0) was collected from 5.0 to 5.5 feet bls and submitted to a geotechnical laboratory for analysis. Appendix D contains a copy of the report from the geotechnical laboratory. Sample SBT22-1(8.0) was collected from 8.0 to 8.5 feet bls within the capillary fringe and submitted to an off-site laboratory, which analyzed it for BTEX, purgeable TPH, and extractable TPH. None of these petroleum compounds was detected at concentrations above MDLs.

#### **5.3.4.3 Well Construction and Development**

Monitoring well MWT22-1 was built in borehole SBT22-1 by using 2-inch-diameter PVC screen and casing. Figure 5 illustrates the location of the monitoring well. Well construction details were recorded on well completion forms. Appendix C contains borelogs showing the well construction details. The well was developed in accordance with the base-wide FSP (PRC and JMM 1992a). Development water was containerized, characterized, and disposed of in accordance with applicable regulations.

#### **5.3.4.4 Groundwater Sample Collection and Analytical Results**

Groundwater sample WT22-1 was collected from MWT22-1 and submitted to an off-site laboratory, which analyzed it for BTEX, purgeable TPH, and extractable TPH. Analysis of groundwater sample WT22-1 for extractable TPH indicated the presence of 280  $\mu\text{g/L}$  of diesel and 120  $\mu\text{g/L}$  of motor oil. BTEX and purgeable TPH compounds were not detected in WT22-1 at concentrations above MDLs.

Table 2 summarizes the TPH and BTEX data for the UST 22 site. Appendix B presents the laboratory analytical data for the soil and groundwater samples collected at the UST 22 site.

## **5.4 UST 41A SITE INVESTIGATION**

UST 41A was a 550-gallon-capacity steel tank used to store waste oil. It was located next to Building 503, the Naval Exchange (NEX) service station. A remote-fill pipeline extended from inside the NEX service bays building to the tank.

### **5.4.1 Summary of Previous Field Activities**

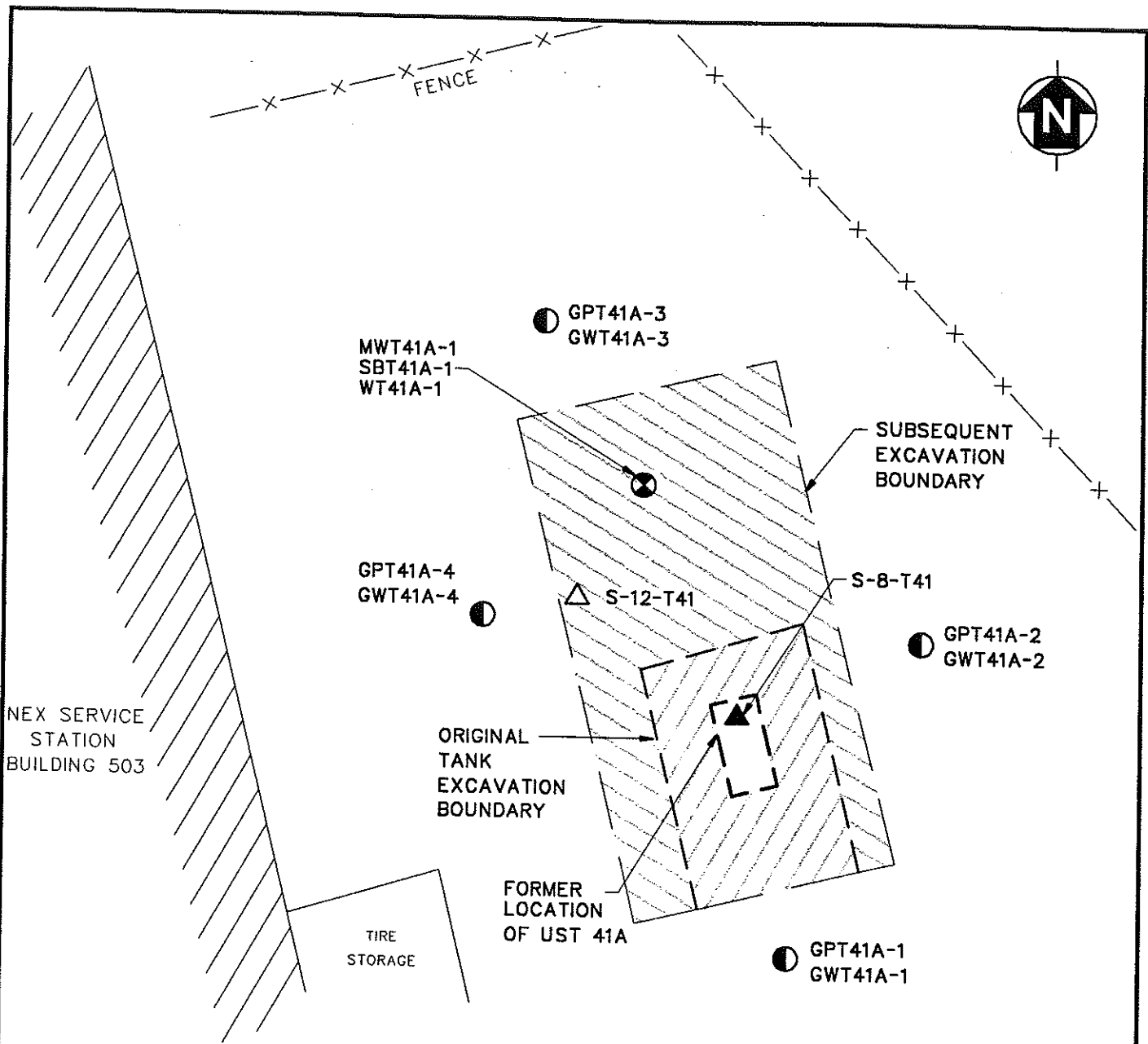
In June 1991, UST 41A was removed, and soil sample S-8-T41 was collected from beneath the tank. Compounds detected in the soil sample included TPH—quantified as both gasoline and motor oil; total oil and grease; toluene; ethylbenzene; xylenes; trichloroethane; and several metals.

In August 1991, Navy personnel excavated additional soil from the area of the former location of UST 41A. Visible soil contamination was evident on the western sidewall. Excavation activities were suspended to avoid compromising the integrity of the service station building west of the excavation. Analysis of soil sample S-12-T41, collected from the western sidewall, indicated the presence of detectable concentrations of TPH quantified as gasoline and motor oil, benzene, toluene, and several metals. Groundwater was observed in the excavation but was not sampled. Figure 6 illustrates sampling locations. Table 3A summarizes the analytical data.

### **5.4.2 Soil Sample Collection and Analytical Results**

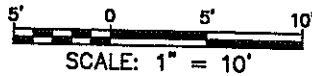
In June 1995, soil samples were collected from four points strategically selected from around the former location of UST 41A. Samples were collected with a Geoprobe sampler at depths ranging from 5 to 8.5 feet bls. Figure 6 illustrates the four Geoprobe soil boring locations. A PID was used to screen the soils removed from each location for petroleum contamination. Samples from each location were submitted to an off-site laboratory, which analyzed them for TPH, BTEX, extractable TPH, Contract Laboratory Program (CLP) volatile organic compounds (VOCs), CLP SVOCs and CLP metals. Table 3A presents the TPH and BTEX results. Table 3B presents the CLP VOC results.

Sampling point GPT41A-1 is located about 10 feet south of the former tank location; two soil samples were collected at this location at depth intervals of 5.0 and 7.5 feet bls. At sampling point GPT41A-2, located about 10 feet east of the former tank location, two soil samples were collected at



**LEGEND**

- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- △ SOIL SAMPLE COLLECTED DURING SUBSEQUENT EXCAVATION
- SOIL AND GROUNDWATER SAMPLE COLLECTED DURING INVESTIGATION
- ⊗ MONITORING WELL LOCATION



**FIGURE 6**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 41A - NEX SERVICE STATION**  
**SAMPLING LOCATIONS**

FILE NAME: R:\CAD\044\0267\IRS\ITC\UST-41A.DWG

DATE: 11/07/95 J.L.H. DN

TABLE 3A

**MOFFETT FEDERAL AIRFIELD  
UST 41A—NEX SERVICE STATION  
SUMMARY OF TPH AND BTEX DATA**

Sample Designation	Sampling Location	Matrix	Unit	TPH Concentrations Purgeable/Extractable	Chromatographic Pattern	B/T/E/X
<b>Tank Removal Sample</b>						
S-8-T41	Beneath tank	Soil	mg/kg	200/6,400	Gasoline/motor oil	ND/0.11/0.07/0.3 1
<b>Remedial Excavation Samples</b>						
S-12-T41	W wall	Soil	mg/kg	230/3,400	Gasoline/motor oil	0.07/0.08/ND/N D
<b>CTO 267 Investigation Samples</b>						
GPT41A-1(5.0)	S of EXC	Soil	mg/kg	ND/ND	--	ND
GPT41A-1(7.5)	S of EXC	Soil	mg/kg	ND/ND	--	ND
GPT41A-2(5.0)	E of EXC	Soil	mg/kg	ND/ND	--	ND
GPT41A-2(8.5)	E of EXC	Soil	mg/kg	ND/ND	--	ND
GPT41A-3(5.0)	N of EXC	Soil	mg/kg	ND/ND	--	ND
GPT41A-3(8.0)	N of EXC	Soil	mg/kg	ND/ND	--	ND
GPT41A-4(6.7)	W of EXC	Soil	mg/kg	ND/82	Motor oil	ND
SBT41A-1(5.5)	N of tank	Soil	mg/kg	ND/ND	--	ND
GWT41A-1	S of EXC	Water	µg/L	30/ND	NP	ND
GWT41A-2	E of EXC	Water	µg/L	64/ND	NP	ND
GWT41A-3	N of EXC	Water	µg/L	ND/ND	--	ND
GWT41A-4	W of EXC	Water	µg/L	54/3,300	NP/motor oil	ND
WT41A-1	N of tank	Water	µg/L	38/440; 290	Gasoline/diesel/ motor oil	ND

## Notes:

B/T/E/X Benzene/toluene/ethylbenzene/xylenes  
 E East  
 EXC Excavation of former UST  
 mg/kg milligrams per kilogram  
 µg/L micrograms per liter  
 N North

ND Not detected  
 NP Nonpetroleum  
 S South  
 TPH Total petroleum hydrocarbons  
 W West  
 -- No chromatographic pattern

**TABLE 3B**

**MOFFETT FEDERAL AIRFIELD  
UST 41A—NEX SERVICE STATION  
SUMMARY OF CLP VOC GROUNDWATER DATA**

Sample Designation	Unit	Carbon Disulfide	1,1-DCE	1,1 DCA	1,2-DCE	TCE	Benzene	Toluene	Xylene
GPTH41A-01(5.0)	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
GPTH41A-01(7.5)	µg/L	ND	1J	28B	11J	ND	ND	ND	ND
GPTH41A-02(5.0)	µg/L	0.3J	ND	ND	ND	ND	ND	ND	ND
GPTH41A-02(8.5)	µg/L	ND	0.5J	2J	34B	8J	ND	ND	ND
GPTH41A-03(5.0)	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
GPTH41A-03(8.0)	µg/L	ND	ND	ND	4BJ	ND	ND	ND	ND
GPTH41A-4(6.7)	µg/L	ND	ND	ND	15	11J	ND	ND	ND
GWT41A-1	µg/L	ND	9J	21	180	98	0.4J	ND	ND
GWT41A-2	µg/L	ND	4J	17	100	29	0.4J	ND	ND
GWT41A-3	µg/L	ND	0.2J	2J	4	ND	0.2J	0.2J	0.2J
GWT41A-4	µg/L	0.4J	5J	16	100	23	0.7J	0.8J	ND
WT41A-1	µg/L	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

- B Indicates the compound was also detected in the laboratory blank sample
- CLP Contract Laboratory Program
- DCA Dichloroethane
- DCE Dichloroethylene
- J Indicates that the reported value is estimated
- µg/L Micrograms per liter
- ND Not detected
- TCE Trichloroethylene
- VOC Volatile organic compounds

depth intervals of 5.0 and 8.5 feet bls. At sampling point GPT41A-3, located about 25 feet north of the former tank location, two soil samples were collected at depth intervals of 5.0 and 8.0 feet bls. At sampling point GPT41A-4, located about 15 feet northwest of the former tank location, one soil sample was collected at 6.7 feet bls in the capillary fringe.

Only one of the soil samples (GPT41A-4[6.7]) had TPH and BTEX concentrations that were above the analytical MDLs. Analysis of soil sample GPT41A-4(6.7) detected 82 mg/kg of motor oil. VOC analysis revealed trace levels of some chlorinated hydrocarbons in several of the soil samples collected from the capillary fringe. A portion of these compounds may be attributed to the regional groundwater VOC plume. The only SVOC detected in the soil samples was bis(2-ethylhexyl)phthalate. This compound was detected at trace levels (below the MDL) and is a common laboratory contaminant known to have no environmental consequences.

#### **5.4.3 Groundwater Sample Collection and Analytical Results**

Groundwater samples GWT41A-1 through GWT41A-4 were collected from the four soil sampling locations by lowering disposable bailers directly into the Geoprobe boreholes. An off-site laboratory analyzed three water samples for TPH, BTEX, CLP VOCs, CLP SVOCs (GWT41A-4 only), and CLP metals. Three of the four water samples had TPH and BTEX concentrations that were above the MDLs; however, these results do not indicate a petroleum hydrocarbon release and can be attributed to the regional levels of chlorinated hydrocarbons. One of the four water samples (GWT41A-4) had extractable TPH concentrations that were above the MDLs. This concentration of 3,300  $\mu\text{g/L}$  exhibited a chromatographic pattern similar to that of motor oil. No SVOCs were detected in the groundwater sample. VOC analysis of the water samples detected concentrations of chlorinated hydrocarbons at levels believed to be attributable to the regional VOC groundwater plume.

#### **5.4.4 Monitoring Well Installation**

A monitoring well (MWT41A-1) was built about 16 feet downgradient (north) of the former tank location. The following subsections describe the installation of the well, and the collection of additional soil and groundwater samples.

#### **5.4.4.1 Borehole Drilling**

An HSA drill rig was used to drill borehole SBT41A-1 through the first saturated permeable interval to about 12 feet bls. Split-spoon cores were collected and described for lithologic characteristics on the SBT41A-1 borehole log. Appendix C contains a copy of the borehole log.

#### **5.4.4.2 Soil Sample Collection and Analytical Results**

Soil sample SBT41A-1(5.5) was collected from boring SBT41A-1 at 5.5 feet bls. A portion of this sample was analyzed for TPH and BTEX. The remaining portion was analyzed for geotechnical parameters. The soil sample was classified as a light brown and gray silty clay. The moisture content was 29.5 percent. All TPH and BTEX concentrations were below MDLs.

#### **5.4.4.3 Well Construction and Development**

Monitoring well MWT41A-1 was constructed in borehole SBT41A-1, about 15 feet north of the former tank location by using 2-inch-diameter PVC screen and casing. Well construction details are recorded in Appendix C, in the well construction diagram section of the SBT41A-1 borehole log. The well was developed in accordance with the base-wide FSP (PRC and JMM 1992a). No problems were encountered during development. Development water was contained, characterized, and disposed of in accordance with applicable regulations.

#### **5.4.4.4 Groundwater Sample Collection and Analytical Results**

Groundwater sample WT41A-1 was collected from MWT41A-1 and submitted to the off-site laboratory for analysis for CLP VOCs, TPH, BTEX, and CLP metals. Tables 3A and 3B summarize organic compound data. The CLP VOC analyses detected volatile organic constituents. Analysis of purgeable TPH indicated low levels (38  $\mu\text{g/L}$ ) of gasoline in the sample. Extractable TPH analysis indicated diesel and motor oil at 440 and 290  $\mu\text{g/L}$ , respectively. Appendix B contains copies of the laboratory analytical results.

## **5.5 UST 55 SITE INVESTIGATION**

UST 55 was reportedly installed next to Building 408, within a circular revetment identified as Facility 461. This area is located on the median between Runways 32 L and 32 R. Radar equipment was installed in Building 408.

### **5.5.1 Summary of Previous Field Activities**

A records search was conducted to locate UST 55. During utility location, a geophysical survey was also conducted with a magnetometer to locate subsurface anomalies associated with UST systems. Although use records for the tank were not available, the fuel manager for MFA has stated that the tank fueled a diesel generator. No tank removal records were available from the Navy, and a careful visual survey of the area yielded no further information about the location of a UST at the site.

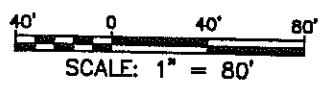
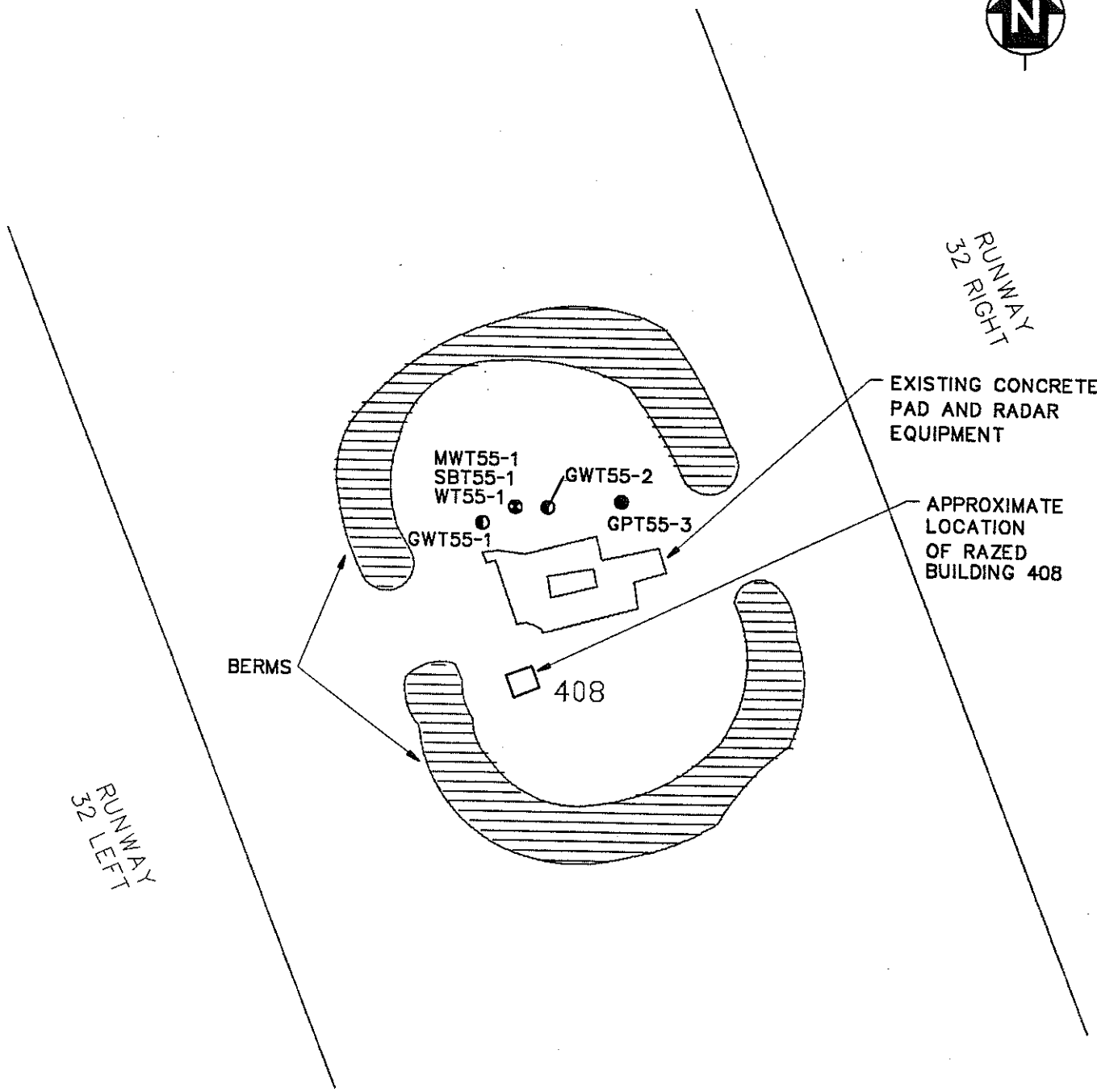
### **5.5.2 Observation of Soil Conditions**

Soil samples were collected from locations GPT55-1 through GPT55-3 by using the Geoprobe. The soils removed from each location were screened for petroleum contamination with a PID. No contamination was observed. Soil samples were not analyzed by an off-site laboratory. All sampling points are located on the northern side (downgradient) of the existing concrete pad and radar equipment.

### **5.5.3 Groundwater Sample Collection and Analytical Results**

Groundwater samples GWT55-1 and GWT55-2 were collected from Geoprobe soil borings GPT55-1 and GPT55-2. A groundwater sample could not be collected from GPT55-3, because no groundwater entered the 9-foot-deep borehole. Groundwater samples were collected by lowering disposable bailers directly into the Geoprobe boreholes. An off-site laboratory analyzed the water samples for TPH and BTEX. Figure 7 illustrates UST 55 sampling locations, and Table 4 presents the results of these analyses. In GWT55-2, motor oil was detected at a concentration of 1,600  $\mu\text{g/L}$ , although no other concentrations were above the MDLs.





**LEGEND**

- GROUNDWATER SAMPLING LOCATION
- LOCATION OF ATTEMPTED GROUNDWATER SAMPLE
- MONITORING WELL LOCATION

**FIGURE 7**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 55 - OLD RUNWAY RADAR**  
**SAMPLING LOCATIONS**

FILE NAME: R:\CAD\044\0267\IRS\ITC\FIG-6.DWG

DATE: 10/27/95 DDJ DN

TABLE 4

MOFFETT FEDERAL AIRFIELD  
 UST 55—OLD RUNWAY RADAR AREA  
 SUMMARY OF TPH AND BTEX DATA

Sample Designation	Sampling Location	Matrix	Unit	Purgeable/Extractable TPH Concentrations	Chromatographic Pattern	B/T/E/X
SBT55-1(5.5)	N of radar pad inside berm	Soil	mg/kg	ND/49, 440	Diesel, Motor oil	ND
GWT55-1	NW of radar pad	Water	µg/L	ND/ND	--	ND
GWT55-2	N of radar pad inside berm	Water	µg/L	ND/1,600	Motor oil	ND
WT55-1	N of radar pad inside berm	Water	µg/L	43/62; 63	Gasoline/diesel, motor oil	ND/ND/ND/1.1

Notes:

- B/T/E/X Benzene/toluene/ethylbenzene/xylenes
- mg/kg milligrams per kilogram
- µg/L micrograms per liter
- ND Not detected
- TPH Total petroleum hydrocarbons
- No chromatographic pattern

#### **5.5.4 Monitoring Well Installation**

A monitoring well was installed to monitor the groundwater conditions downgradient of the suspected location of UST 55. The following subsections describe the installation of the well, and the collection of additional soil and groundwater samples.

##### **5.5.4.1 Borehole Drilling**

Borehole SBT55-1 was drilled immediately next to groundwater sampling location GWT55-2. An HSA drill rig was used to drill the borehole through the first saturated permeable interval to about 10 feet bls. Split- spoon cores were collected and were described for lithologic characteristics on the SBT55-1 bore log. Appendix C contains a copy of the log.

##### **5.5.4.2 Soil Sample Collection and Analytical Results**

Soil sample STB55-1(5.5) was collected in boring SBT55-1 from 5.5 to 6.5 feet bls. A portion of this soil sample was analyzed for TPH and BTEX and the rest was submitted to the laboratory for geotechnical evaluation. Diesel and motor oil were detected at concentrations of 49 and 440 mg/kg, respectively; all other concentrations were less than MDLs. The geotechnical laboratory classified the soil as a brown and gray silty clay, with a moisture content of 25.3 percent by weight.

##### **5.5.4.3 Well Construction and Development**

Monitoring well MWT55-1 was built in boring SBT55-1 by using 2-inch-diameter PVC screen and casing. Well construction details are recorded in Appendix C, in the well diagram section of the SBT55-1 log.

This well did not yield sufficient quantities of groundwater to permit standard development in accordance with the basewide FSP (PRC and JMM 1992a). The well was bailed dry, and development water was containerized, characterized, and disposed of in accordance with applicable regulations.

#### **5.5.4.4 Groundwater Sample Collection and Analytical Results**

Groundwater sample WT55-1 was collected from MWT55-1 and submitted to an off-site laboratory for TPH and BTEX analysis. Xylenes were detected at a concentration of 1.1  $\mu\text{g/L}$ . Purgeable TPH as gasoline was detected at 43 a concentration of  $\mu\text{g/L}$ . Extractable TPH as diesel and motor oil was detected at concentrations of 62 and 63  $\mu\text{g/L}$ , respectively. Table 4 summarizes the analytical data. Appendix B contains the laboratory analytical results.

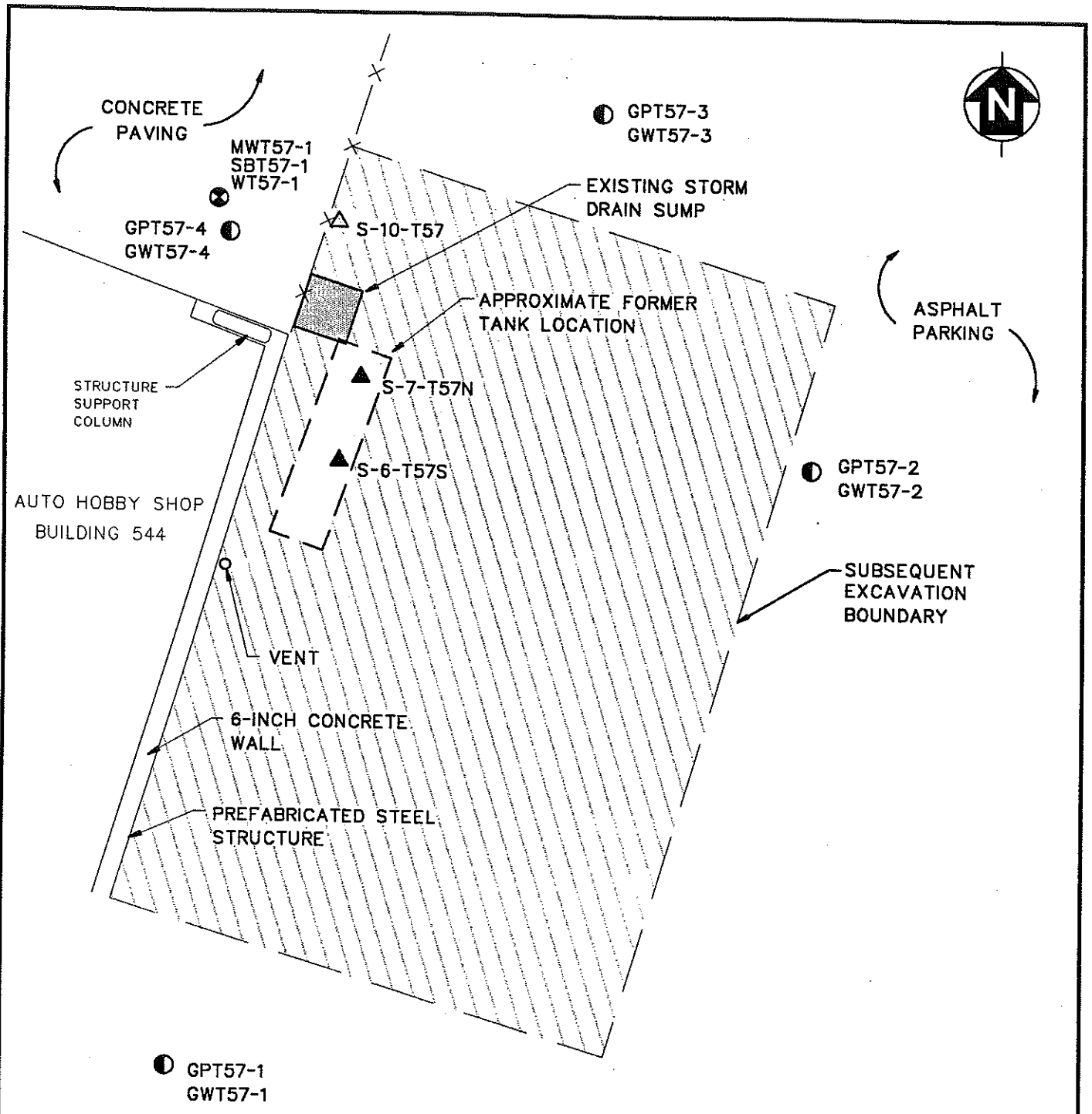
### **5.6 UST 57 SITE INVESTIGATION**

UST 57 was located immediately east of Building 544, outside of the auto hobby shop yard fence. UST 57 was a 550-gallon steel tank that was used to store waste oil. A remote fill pipeline extended east from the auto shop service bays, underneath the fence, to the tank. This site is the southernmost investigation site included in CTO 0267 and is located within the regional VOC groundwater plume.

#### **5.6.1 Summary of Previous Field Activities**

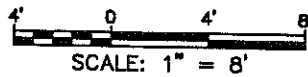
UST 57 was removed in June 1991. Soil samples S-6-T57S and S-7-T57N were collected from the floor of the excavation beneath the former location of the tank. Compounds detected included TPH—quantified as gasoline and motor oil; total oil and grease; toluene; ethylbenzene; xylenes; pyrene; and several metals. Figure 8 illustrates sampling locations, and Table 5A summarizes the initial TPH and BTEX data.

During August 1991, Navy personnel excavated additional soil from the area of former UST 57. Visible soil contamination was evident only on the western sidewall of the remedial excavation when soil removal was discontinued. Excavation activities were suspended to prevent damage to the hobby shop structure, fence, and parking lot. Analysis of soil sample S-10-T57, collected from the western sidewall, indicated detectable concentrations of TPH—quantified as gasoline and motor oil; and several metals. Groundwater was not reported in the excavation during the tank removal or subsequent remedial excavation activities. Table 5A summarizes the results of the laboratory analysis of the sidewall sample.



**LEGEND**

- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- △ SOIL SAMPLE COLLECTED DURING SUBSEQUENT EXCAVATION
- SOIL AND GROUNDWATER SAMPLE COLLECTED DURING INVESTIGATION
- ⊗ MONITORING WELL LOCATION



**FIGURE 8**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 57 - AUTO HOBBY SHOP**  
**SAMPLING LOCATIONS**

FILE NAME: R:\CAD\044\0267\RS\ITC\UST-57.DWG  
 DATE: 11/07/95 J.L.H. DN

TABLE 5A

**MOFFETT FEDERAL AIRFIELD  
UST 57—AUTO HOBBY SHOP  
SUMMARY OF TPH AND BTEX DATA**

Sample Designation	Sampling Location	Matrix	Unit	TPH Concentrations Purgeable/Extractable	Chromatographic Pattern	B/T/E/X
<b>Tank Removal Sample</b>						
S-6-T57S	Beneath tank	Soil	mg/kg	ND/2,000	Motor oil	ND/0.06/0.16/1
S-7-T57N	Beneath tank	Soil	mg/kg	25/2,400	Gasoline/motor oil	ND
<b>Remedial Excavation Samples</b>						
S-10-T57	W wall	Soil	mg/kg	2.0/6,300	Gasoline/motor oil	ND
<b>CTO 267 Investigation Samples</b>						
GPT57-1(6.0)	S of EXC	Soil	mg/kg	ND/ND	--	ND
GPT57-1(8.5)	S of EXC	Soil	mg/kg	ND/ND	--	ND
GPT57-2(4.5)	E of EXC	Soil	mg/kg	ND/ND	--	ND
GPT57-3(5.0)	N of EXC	Soil	mg/kg	ND/75	Motor oil	ND
GPT57-3(7.5)	N of EXC	Soil	mg/kg	ND/83	Motor oil	ND
GPT57-4(4.5)	W of EXC	Soil	mg/kg	ND/83	Motor oil	ND
SBT57-1(5.5)	Next to GPT57-4	Soil	mg/kg	ND/16	Motor oil	ND
GWT57-1	S of EXC	Water	µg/L	ND/ND	--	ND
GWT57-2	E of EXC	Water	µg/L	ND/ND	--	ND
GWT57-3	N of EXC	Water	µg/L	ND/ND	--	ND
GWT57-4	W of EXC	Water	µg/L	ND/1,900, 350	Motor oil, NP	ND

## Notes:

B/T/E/X Benzene/toluene/ethylbenzene/xylenes

E East

EXC Excavation of former UST 57

mg/kg milligrams per kilogram

µg/L micrograms per liter

N North

ND Not detected

NP Nonpetroleum

S South

TPH Total petroleum hydrocarbons

W West

-- No chromatographic pattern

### 5.6.2 Soil Sample Collection and Analytical Results

Continuous soil cores were collected from four locations (GPT57-1 through GPT57-4) with a Geoprobe. A PID was used to field-screen soil cores for petroleum contamination. Sampling location GPT57-1 is about 40 feet south of the former tank location; two soil samples were collected from GPT57-1 at 6.0 feet bls in the capillary fringe and 8.5 feet bls in the saturated zone. Sampling location GPT57-2 is about 26 feet east of the former tank location; a soil sample was collected from the capillary fringe at 4.5 feet bls. Sampling location GPT57-3 is about 16 feet northeast (downgradient) of the former tank location; samples were collected at 5.0 and 7.5 feet bls. Sampling location GPT57-4 is about 6 feet northwest of the former tank position; a sample was collected at 4.5 feet bls. Figure 8 illustrates these soil sampling locations.

The six soil samples were collected at the UST 57 site and submitted to an off-site laboratory, which analyzed them for TPH, BTEX, CLP VOCs, and CLP metals. Motor oil was detected in three samples - GPT57-3(5.0), GPT57-3(7.5) and GPT57-4(4.5) at concentrations of 75, 83, and 83 mg/kg, respectively. The other TPH concentrations were below the MDLs. Trace levels of two VOC compounds (carbon disulfide and 1,1 dichloroethylene [DCE]) were detected at sampling location GPT57-3. These trace levels may be attributable to the regional VOC plume that underlies the Auto Hobby Shop site. Tables 5A and 5B summarize analytical data.

### 5.6.3 Groundwater Sample Collection and Analytical Results

Groundwater samples GWT57-1 through GWT57-4 were collected from Geoprobe boreholes GPT57-1 through GPT57-4. Samples to be analyzed for purgeable TPH and VOCs were collected directly from the borehole with a peristaltic pump and disposable tubing.

The samples were analyzed for TPH, BTEX, and CLP VOCs. Groundwater samples GWT57-1, GWT57-2, and GWT57-3 did not exhibit TPH, BTEX, or CLP VOCs contamination at concentrations above MDLs. Sample GWT57-4, located inside the yard fence in the vicinity of the former UST 57 remote fill piping, exhibited 1,900  $\mu\text{g}/\text{L}$  of extractable TPH quantified as motor oil. In the sample GWT57-4, a nonpetroleum compound was detected at a concentration of 350  $\mu\text{g}/\text{L}$ . The contaminant might have been associated with the regional Superfund VOC plume.

TABLE 5B

MOFFETT FEDERAL AIRFIELD  
 UST 57—AUTO HOBBY SHOP  
 SUMMARY OF CLP VOC DATA

Sample Designation	Matrix	Unit	Carbon Disulfide	1,1-DCE	1,1-DCA	1,2-DCE	Butane	TCE	Benzene	Hexanone
GPT57-01(6.0)	Soil	µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
GPT57-01(8.5)	Soil	µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
GPT57-02(4.5)	Soil	µg/kg	ND	ND	ND	ND	ND	ND	ND	ND
GPT57-03(5.0)	Soil	µg/kg	0.5J	ND	ND	ND	ND	ND	ND	ND
GPT57-03(7.5)	Soil	µg/kg	2J	0.6J	ND	ND	ND	ND	ND	ND
GPT57-04(4.5)	Soil	µg/kg	ND	ND	ND	4J	ND	ND	ND	ND
GWT57-01	Water	µg/L	ND	0.1J	0.6J	4	ND	0.6J	ND	ND
GWT57-02	Water	µg/L	ND	9J	21	180	98	ND	0.5J	ND
GWT57-03	Water	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
GWT57-04	Water	µg/L	ND	ND	1J	0.2J	2	ND	ND	2J

Notes:

- CLP Contract Laboratory Program
- DCA Dichloroethane
- DCE Dichloroethylene
- J Indicates that the reported value is estimated
- µg/kg micrograms per kilogram
- µg/L micrograms per liter
- ND not detected
- TCE trichloroethylene
- VOC Volatile organic compounds



#### **5.6.4 Monitoring Well Installation**

The presence of the petroleum constituents at sampling location GWT57-4 indicated the need for a monitoring well to collect quarterly groundwater samples. The following subsections describe the installation of the well and the collection of additional soil samples.

##### **5.6.4.1 Borehole Drilling**

Borehole SBT57-1 is located next to Geoprobe sampling location GWT57-4, about 8 feet northwest of the former tank excavation. An HSA drilling was used to drill through the first saturated permeable interval to about 10 feet bls. A split-spoon core was collected and was described for lithologic characteristics on the SBT57-1 borehole log. Appendix C contains a copy of the log.

##### **5.6.4.2 Soil Sample Collection and Analytical Results**

Soil sample SBT57-1(5.5) was collected at location SBT57-1 between 5.5 and 7.0 feet bls. An attempt to recover a second sample at about 7 feet bls was unsuccessful. A portion of sample SBT57-1(5.5) was submitted to an off-site laboratory, where it was analyzed for TPH and BTEX. Motor oil was detected in the sample at a concentration of 16 mg/kg. All other analytical results were below MDLs. A portion of sample SBT57-1(5.5) was also submitted to a geotechnical laboratory for analysis. Appendix D contains a copy of the report from the geotechnical laboratory.

##### **5.6.4.3 Well Construction and Development**

Monitoring well MWT57-1 was constructed in borehole SBT57-1 by using 2-inch-diameter PVC screen and casing. Figure 8 illustrates the monitoring well location. Well construction details were recorded on a well completion form. Borehole logs in Appendix C summarize well construction details.

Geoprobe cores indicated groundwater at 5.5 feet bls. Subsequently the well screen was positioned at 5 to 10 feet bls. Following installation, less than 1 inch of water was observed in MWT57-1 and the well could not be developed in accordance with the basewide FSP (PRC and JMM 1992a).

#### **5.6.4.4 Groundwater Sample Collection and Analytical Results**

Insufficient groundwater gathered in MWT57-1 to permit sample collection. Sample collection will be attempted at periodic intervals throughout the rainy season, when shallow groundwater levels are expected to rise.

### **5.7 UST 69 SITE INVESTIGATION**

UST 69, a 2000-gallon steel tank that was used to store wastewater, was located next to Hangar 3 (Building 47), in the east parking area. The tank was used to store wastewater from sinks located inside the building, because there was no nearby sewer connection.

#### **5.7.1 Summary of Previous Field Activities**

UST 69 was removed in June 1991. Soil sample S-7-T69 was collected from the east sidewall of the tank excavation, and groundwater sample W-7-T69 was collected from within the excavation. TPH—quantified as motor oil—was detected in the groundwater sample, but none of the target analytes was detected in the soil sample. Figure 9 illustrates the sampling locations, and Table 6A summarizes data from the initial investigation.

#### **5.7.2 Soil Sample Collection and Analytical Results**

In July 1995, soil samples were collected from four locations (GPT69-1 through GPT69-4) strategically selected from around the former tank location. Samples were collected with the Geoprobe at depths ranging from 5.0 to 6.5 feet bls. A PID was used to field-survey soils, removed from each location, for petroleum contamination. Samples from each location were submitted to an off-site laboratory which analyzed them for TPH, BTEX, CLP VOCs, and CLP metals. Sample GPT69-2(6.5) was also analyzed for CLP SVOCs.

Sampling location GPT69-1 is about 2.5 feet south of the former tank location; one soil sample was collected at 6.0 feet bls. Sampling location GPT69-2 is about 2.5 feet west of the former tank location; one soil sample was collected at 6.5 feet bls. Sampling location GPT69-3 is about 2.5 feet



ASPHALT PAVING

CONCRETE PAVING

HANGAR 3  
(BUILDING 47)

APPROXIMATE FORMER  
TANK LOCATION

BOUNDARY OF  
TANK EXCAVATION

GPT69-2  
GWT69-2

GPT69-3  
GWT69-3

MWT69-1  
SBT69-2  
WT69-1

W-7-T69

SBT69-1

GPT69-4  
GWT69-4

S-7-T69

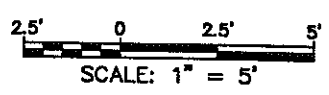
VENT

GPT69-1  
GWT69-1

ASPHALT PAVING

**LEGEND**

- ▲ GROUNDWATER SAMPLE COLLECTED DURING TANK REMOVAL
- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- SOIL AND GROUNDWATER SAMPLE COLLECTED DURING INVESTIGATION
- PROPOSED MONITORING WELL LOCATION
- ⊙ MONITORING WELL LOCATION



**FIGURE 9**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 69 - HANGAR 3 EAST PARKING AREA**  
**SAMPLING LOCATIONS**

FILE NAME: R:\CAD\044\0267\RS\VIC\UST-69.DWG  
 DATE: 11/07/95 J.L.H. DN

TABLE 6A

MOFFETT FEDERAL AIRFIELD  
 UST 69—HANGAR 3 EAST PARKING AREA  
 SUMMARY OF TPH AND BTEX DATA

Sample Designation	Sampling Location	Matrix	Unit	Purgeable/Extractable TPH Concentrations	Chromatographic Pattern	B/T/E/X
<b>Tank Removal Samples</b>						
S-7-T69	E wall	Soil	mg/kg	NA/ND	--	ND
W-7-T69	In EXC	Water	µg/L	NA/5,400	Motor oil	ND
<b>CTO 267 Investigation Samples</b>						
GPT69-1(6.0)	S of EXC	Soil	mg/kg	ND/ND	--	ND
GPT69-2(6.5)	W of EXC	Soil	mg/kg	ND/ND	--	ND
GPT69-3(6.5)	N of EXC	Soil	mg/kg	ND/ND	--	ND
GPT69-4(5.0)	E of EXC	Soil	mg/kg	ND/ND	--	ND
SBT69-2(8.0)	N of EXC	Soil	mg/kg	ND/ND	--	ND
WT69-1	N of EXC	Water	µg/L	ND/52	Motor oil	ND
GWT69-1	S of EXC	Water	µg/L	ND/ND	--	ND
GWT69-2	W of EXC	Water	µg/L	ND/ND	--	ND
GWT69-3	N of EXC	Water	µg/L	ND/ND	--	ND
GWT69-4	E of EXC	Water	µg/L	ND/ND	--	ND

Notes:

- B/T/E/X Benzene/toluene/ethylbenzene/xylenes
- EXC Excavation of former UST 69
- mg/kg milligrams per kilogram
- µg/L micrograms per liter
- NA Not analyzed
- ND Not detected
- TPH Total petroleum hydrocarbons
- No chromatographic pattern

north of the former tank location; one soil sample was collected at 6.5 feet bls. Sampling location GPT69-4 is about 2.5 feet east of the former tank location; one soil sample was collected at 5.0 feet bls. Figure 9 illustrates the sampling locations.

Concentrations of TPH and BTEX were below the MDLs in all four soil samples. However, the CLP VOC analysis detected trace levels of benzene and toluene in three of the four soil samples. Benzene was detected in samples GPT69-1(6.0) and GPT69-2(6.5) at 0.4  $\mu\text{g}/\text{kg}$  and 0.7  $\mu\text{g}/\text{kg}$ , respectively. Benzene was also detected in the associated method and trip blank samples. Toluene was detected at estimated concentrations of (1) 1.0  $\mu\text{g}/\text{kg}$  in samples GPT69-2(6.5) and GPT69-4(5.0), and (2) 0.7  $\mu\text{g}/\text{kg}$  in sample GPT69-1(6.0). SVOCs were analyzed for in GPT69-2(6.5), and concentrations were below MDLs. Tables 6A and 6B present the analytical data.

### 5.7.3 Groundwater Sample Collection and Analytical Results

Groundwater samples GWT69-1 through GWT69-4 were collected from the four Geoprobe soil sampling locations. Samples for purgeable TPH and VOC analyses were collected by lowering disposable bailers directly into the Geoprobe boreholes, and samples for extractable TPH, SVOC, and metals analyses were collected by using a peristaltic pump and disposable tubing. The water samples were analyzed for TPH, BTEX, CLP VOCs, CLP SVOCs (GWT69-2 only), and CLP metals.

TPH and BTEX analyses indicated concentrations below MDLs. The CLP VOC analysis detected trace levels of other volatile organic constituents. These concentrations were also measured in the corresponding method and trip blanks, and can be validated as nondetects. The results of the trip blank analyses are discussed in Section 6.2.4. SVOCs were not detected in groundwater sample GPT69-2 at concentrations above MDLs.

### 5.7.4 Monitoring Well Installation

Monitoring well MWT69-1 was placed about 1 foot north (downgradient) of the former tank location. The following subsections describe the installation of the well, and the collection of additional soil and groundwater data at the UST 69 site. Figure 9 presents the location of the monitoring well in relation to the former UST excavation and investigation sampling points. Table 6A presents the TPH and BTEX data. Table 6B presents the CLP VOC data.

TABLE 6B

MOFFETT FEDERAL AIRFIELD  
 UST 69—HANGAR 3 EAST PARKING AREA  
 SUMMARY OF CLP VOC DATA

Sample Designation	Matrix	Unit	Carbon Disulfide	1,1-DCE	Benzene	Toluene
GPT69-1(6.0)	Soil	µg/kg	ND	ND	0.4J	0.7J
GPT69-2(6.5)	Soil	µg/kg	ND	ND	0.7J	1J
GPT69-3(6.5)	Soil	µg/kg	ND	ND	ND	ND
GPT69-4(5.0)	Soil	µg/kg	ND	ND	ND	1J
GWT69-1	Water	µg/L	ND	0.06J	0.06J	ND
GWT69-2	Water	µg/L	ND	ND	ND	ND
GWT69-3	Water	µg/L	ND	ND	ND	ND
GWT69-4	Water	µg/L	0.2J	ND	ND	ND
WT69-1	Water	µg/L	ND	ND	ND	ND

Notes:

- CLP Contract Laboratory Program
- DCE Dichloroethylene
- J Indicates that the reported value is estimated
- µg/kg micrograms per kilogram
- µg/L micrograms per liter
- ND Not detected
- VOC Volatile organic compounds

#### **5.7.4.1 Borehole Drilling**

An HSA drill rig in the approximate center of the excavation of the former tank was used to drill borehole SBT69-1. A concrete surface, presumed to be a remnant of the UST 69 antibouyancy anchor slab, was encountered at 6.5 feet bls, and the hole was abandoned by filling it with Type II cement grout. Borehole SBT69-2 was drilled immediately north of the former tank excavation, next to sampling location GPT69-3, through the first saturated permeable interval to about 10 feet bls. Split-spoon cores were collected and were described for lithologic characteristics on the SBT69-1 and SBT69-2 borehole logs. Appendix C contains a copy of the borehole logs.

#### **5.7.4.2 Soil Sample Collection and Analytical Results**

Soil sample SBT69-1(5.5) was collected from boring SBT69-1 before the anchor slab was encountered. It was submitted to the geotechnical laboratory for evaluation and was found to consist of a silty clay. Soil sample SBT69-2(8.0) was collected from boring SBT69-2 in the field-observed capillary fringe from 8.0 to 9.5 feet bls. The sample was analyzed for TPH and BTEX. All concentrations were below MDLs.

#### **5.7.4.3 Well Construction and Development**

Monitoring well MWT69-1 was constructed in borehole SBT69-2 by using 2-inch-diameter PVC screen and casing. Well construction details are documented on the SBT69-2 borehole log in Appendix C. The well was developed in accordance with the basewide FSP (PRC and JMM 1992a). Development water was containerized, characterized, and disposed of in accordance with applicable regulations.

#### **5.7.4.4 Groundwater Sample Collection and Analytical Results**

Groundwater sample WT69-1 was collected from monitoring well MWT69-1. The sample was analyzed for TPH, BTEX, CLP VOCs, and CLP metals. Motor oil was detected in the sample at a concentration of 52  $\mu\text{g/L}$ . All other concentrations were below MDLs.

## **5.8 UST 86A AND UST 86B SITE INVESTIGATION**

USTs 86A and 86B, formerly located beneath the lawn southwest of Building 107, were removed on January 7, 1993. UST 86A, a 5,000-gallon steel tank, and UST 86B, a 7,000-gallon steel tank, had been used to store leaded gasoline.

### **5.8.1 Summary of Previous Field Activities**

During removal of the USTs, the regulatory inspector noted holes in both tanks. Four soil samples collected from beneath the tanks—two from beneath each tank—did not contain detectable concentrations of target analytes. Following the removal of the tanks, groundwater was observed in the void below each tank. A groundwater sample was collected from each void and analyzed for TPH—quantified as gasoline, BTEX, and total lead. TPH and BTEX were not detected in the soil samples collected from beneath USTs 86A and 86B. TPH was not detected in the groundwater beneath UST 86A; however, benzene, toluene, and xylenes were detected at concentrations near their respective detection limits in the groundwater sample collected from beneath UST 86A. TPH quantified as gasoline, and BTEX were detected in the groundwater sample collected from beneath UST 86B. The Navy has suggested that contamination detected in the groundwater beneath USTs 86A and 86B may not have been caused by a leak from the UST during its operational life. Fuel may have spilled from the tanks or piping into the excavation during the removal of the tanks. Table 7A summarizes the TPH and BTEX data from the tank removal.

### **5.8.2 Soil Sample Collection and Analytical Results**

In June 1995, a soil sample was collected from location GPT86B-1 at a depth of 9.5 feet bls. This soil sample was collected with a hand auger from the approximate center of the former position of UST 86B. Concrete was encountered at 9.5 feet bls. It is probably the UST antibouyancy anchor slab. A PID was used to screen the hand-augured soil from this location for petroleum contamination. Screening indicated contamination between 9.0 and 9.5 feet bls. A soil sample from this depth was analyzed for purgeable TPH and BTEX. Purgeable TPH, identified as a nongasoline petroleum compound, was detected at a concentration of 190 mg/kg, and all BTEX concentrations were below MDLs. Figure 10 illustrates the soil boring locations, and Table 7A presents the TPH and BTEX data.



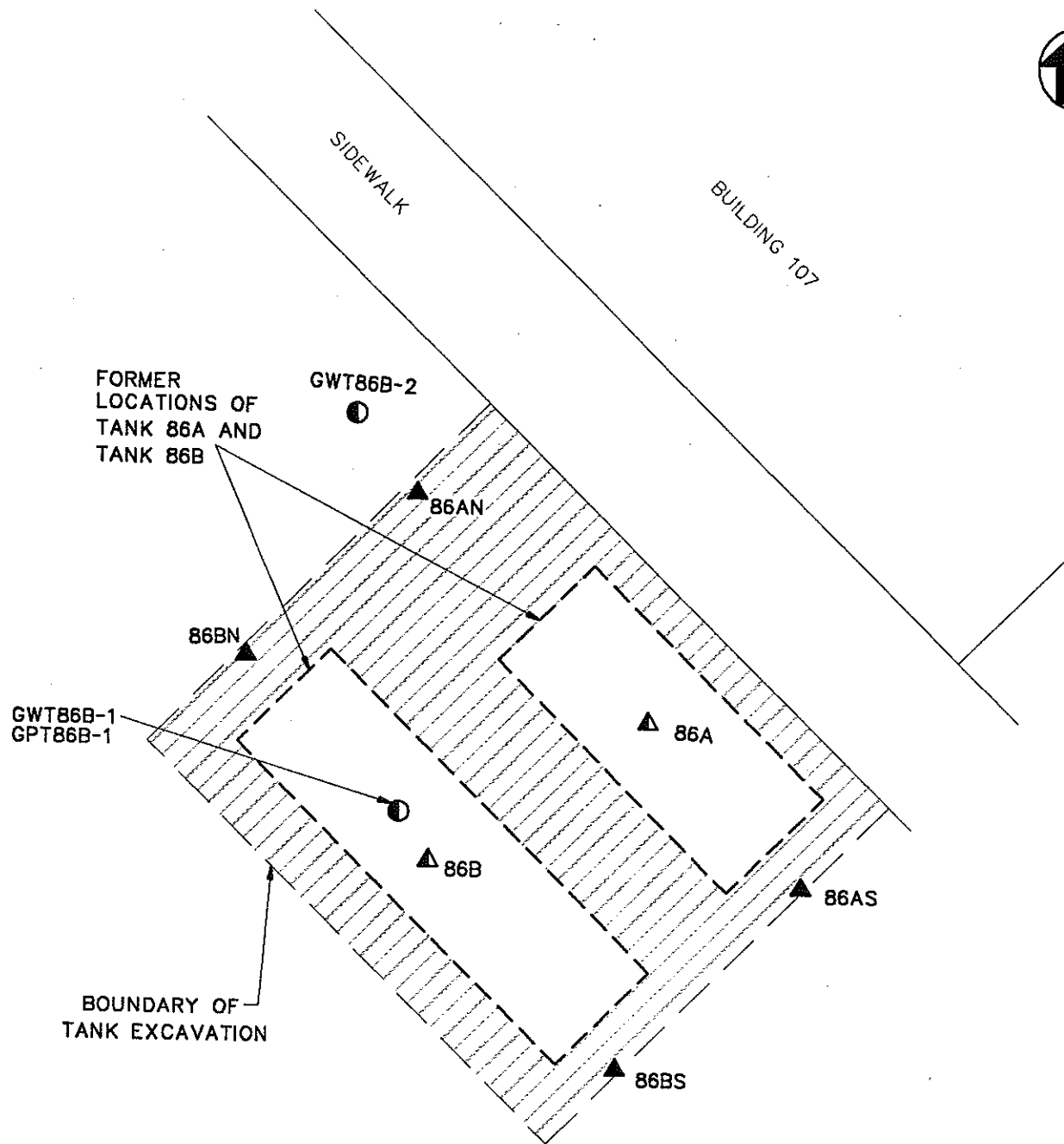
**TABLE 7A**

**MOFFETT FEDERAL AIRFIELD  
UST 86A AND UST 86B—BUILDING 107 SOUTH LAWN  
SUMMARY OF TPH AND BTEX DATA**

Sample Designation	Sampling Location	Matrix	Unit	TPH Concentrations Purgeable/Extractable	Chromatographic Pattern	B/T/E/X
<b>Tank Removal Samples</b>						
86AN	Tank A-N wall	Soil	mg/kg	ND/NA	--	ND
86AS	Tank A-S wall	Soil	mg/kg	ND/NA	--	ND
86BN	Tank B-N wall	Soil	mg/kg	ND/NA	--	ND
86BS	Tank B-S wall	Soil	mg/kg	ND/NA	--	ND
86A	Beneath Tank A	Water	µg/L	ND/NA	--	0.75/2.1/ND/4.3
86B	Beneath Tank B	Water	mg/L	7.3/NA	Gasoline	0.16/7.78/0.130/1.4
<b>CTO 267 Investigation Samples</b>						
GPT86B-1(9.5)	Beneath Tank 86B	Soil	mg/kg	190/NA	Nongasoline	ND
GWT86B-1	Beneath Tank 86B	Water	µg/L	5,900/NA	Nongasoline	ND/ND/6/ND
GWT86B-2	NW of Tanks EXC	Water	µg/L	ND/NA	--	ND

Notes:

- B/T/E/X Benzene/toluene/ethylbenzene/xylenes
- EXC Excavation of former UST 86A and UST 86B
- mg/kg milligrams per kilogram
- µg/L micrograms per liter
- mg/L milligrams per liter
- N North
- NA Not analyzed
- ND Not detected
- NW Northwest
- S South
- TPH Total petroleum hydrocarbons
- No chromatographic pattern



**LEGEND**



- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- ▲ WATER SAMPLE COLLECTED DURING TANK REMOVAL
- SOIL AND/OR GROUNDWATER SAMPLE COLLECTED DURING INVESTIGATION

**FIGURE 10**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**USTs 86A AND 86B - BUILDING 107**  
**SAMPLING LOCATIONS**

FILE NAME: R:\CAD\044\0267\RS\TTC\UST-86.DWG  
DATE: 11/07/95 J.L.H. DN

Field screening indicated no petroleum contaminants in soils from boring GP86B-2. No soil samples were collected from this boring for chemical analysis.

### **5.8.3 Groundwater Sample Collection and Analytical Results**

Groundwater sample GWT86B-1 was collected from the GPT86B-1 soil sampling location. Groundwater sample GWT86B-2 was collected from a location northwest (downgradient) of the former UST excavation. Both samples were collected with disposable bailers directly from the hand-augered boreholes. The water samples were analyzed for TPH, BTEX, and CLP VOCs.

The TPH and BTEX analyses of groundwater sample GWT86B-2 indicated that all concentrations were below MDLs. The CLP VOC analysis detected a trace level of benzene. Analysis of groundwater sample GWT86B-1 for TPH and BTEX indicated the presence of 5,900  $\mu\text{g/L}$  of TPH quantified by the laboratory as a nongasoline petroleum compound (which PRC interpreted to denote weathered gasoline), and 6  $\mu\text{g/L}$  of ethylbenzene. CLP VOC analysis detected concentrations below 1  $\mu\text{g/L}$  of BTEX, in addition to 0.09  $\mu\text{g/L}$  of carbon disulfide, a common laboratory contaminant. Tables 7A and 7B summarize the groundwater sampling analytical results.

## **5.9 UST 87 SITE INVESTIGATION**

UST 87 was formerly located next to Building 15. It was a 10,000-gallon steel UST that was used to store diesel fuel until its removal in July 1993.

### **5.9.1 Summary of Previous Field Activities**

During removal of the UST, the regulatory inspector noted pin-sized holes in the tank. Soil samples 87A and 87B were collected from beneath the tank and did not contain detectable concentrations of TPH, BTEX, or lead. Groundwater sample 87, collected from the UST excavation, contained purgeable and extractable TPH as discrete nonpetroleum peaks; however, BTEX compounds were not detected at concentrations above their MDLs. The regional VOC plume underlies the site. Figure 11 illustrates the sampling locations, and Table 8A summarizes the tank removal data.

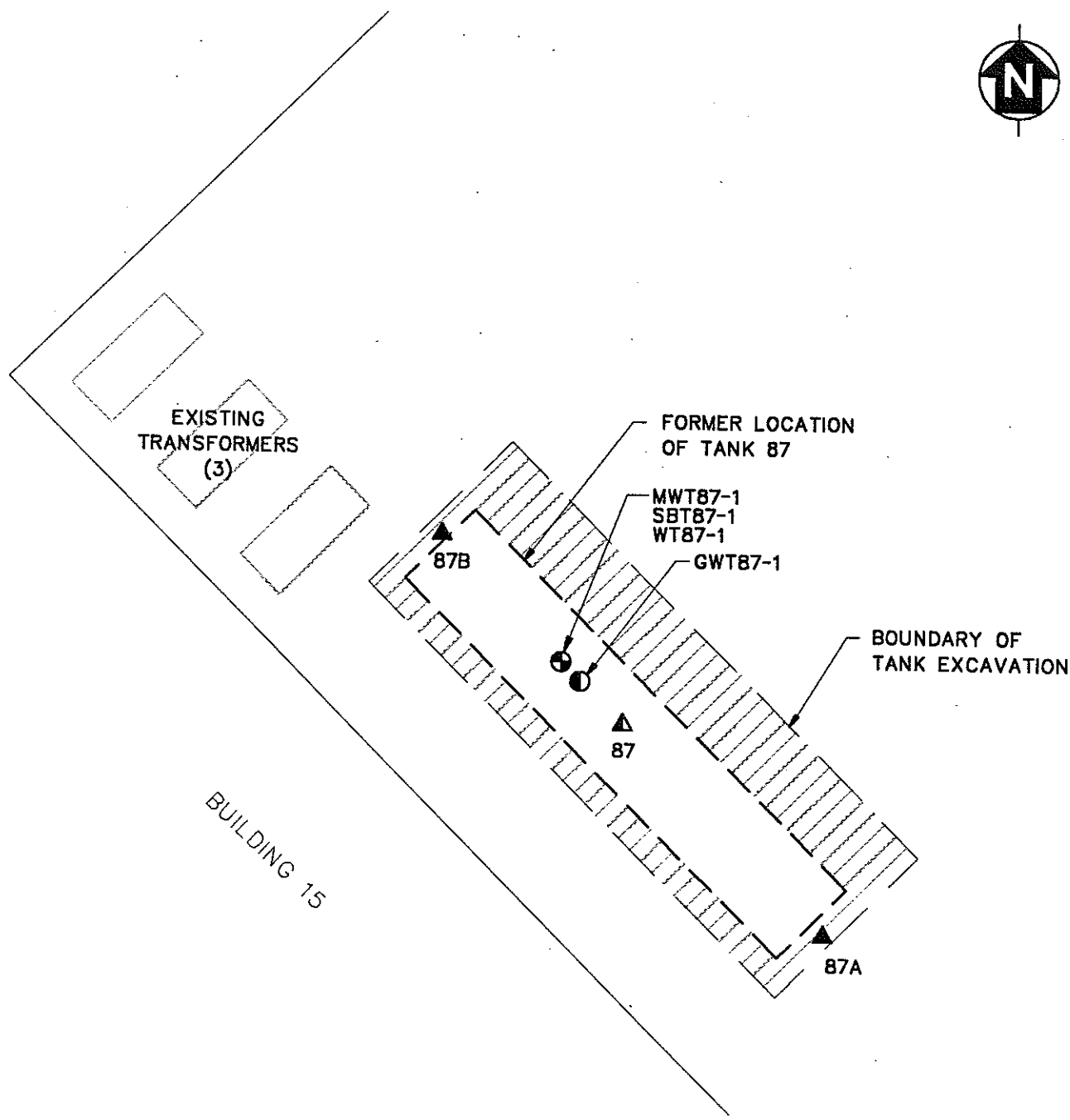
TABLE 7B

MOFFETT FEDERAL AIRFIELD  
UST 86A AND UST 86B—BUILDING 107 SOUTH LAWN  
SUMMARY OF GROUNDWATER CLP VOC DATA

Sample Designation	Unit	Carbon Disulfide	Benzene	Toluene	Ethylbenzene	Xylene
GWT86B-1	µg/L	0.09J	0.4J	0.4J	0.2J	0.3J
GWT86B-2	µg/L	ND	0.1J	ND	ND	ND

Notes:

- CLP Contract Laboratory Program  
J Indicates that the reported value is estimated  
µg/L micrograms per liter  
ND Not detected  
VOC Volatile organic compounds
-

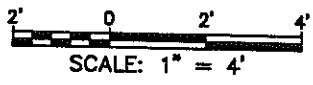


FILE NAME: R:\CAD\044\0267\RS\ITC\UST-87.DWG

DATE: 11/07/95 JLH DN

**LEGEND**

- ▲ SOIL SAMPLE COLLECTED DURING TANK REMOVAL
- ▲ WATER SAMPLING COLLECTED DURING TANK REMOVAL
- GROUNDWATER SAMPLE COLLECTED DURING INVESTIGATION
- ⊕ MONITORING WELL LOCATION



**FIGURE 11**  
**MOFFETT FEDERAL AIRFIELD**  
**PETROLEUM TANK SITES INVESTIGATION**  
**UST 87 - BUILDING 15 ALCOVE**  
**SAMPLING LOCATIONS**

TABLE 8A

MOFFETT FEDERAL AIRFIELD  
 UST 87—BUILDING 15 ALCOVE  
 SUMMARY OF TPH AND BTEX DATA

Sample Designation	Sampling Location	Matrix	Unit	TPH Concentrations Purgeable/Extractable	Chromatographic Pattern	B/T/E/X
<b>Tank Removal Samples</b>						
87A	S wall	Soil	mg/kg	ND/NA	--	ND
87B	N wall	Soil	mg/kg	ND/NA	--	ND
87	In EXC	Water	µg/L	60/14,000	Discrete peaks	ND
<b>CTO 267 Investigation Samples</b>						
SBT87-1(8.5)	Beneath tank	Soil	mg/kg	NA/180, 1,600	Diesel, Motor oil	ND
GWT87-1	Beneath tank	Water	µg/L	NA/88, 3,400	NP, Motor oil	ND
WT87-1	Beneath tank	Water	µg/L	NA/380, 140	Diesel, Motor oil	ND

Notes:

- B/T/E/X Benzene/toluene/ethylbenzene/xylenes
- EXC Excavation of Former UST 87
- mg/kg milligrams per kilogram
- µg/L micrograms per liter
- N North
- NA Not analyzed
- ND Not detected
- NP Nonpetroleum
- S South
- TPH Total petroleum hydrocarbons
- No chromatographic pattern

## 5.9.2 Groundwater Sample Collection and Analytical Results

A temporary groundwater sampling location was established with a Geoprobe sampling system. A groundwater sample was collected from location GWT87-1 by lowering a disposable bailer directly into the Geoprobe borehole. The groundwater sample was submitted to an off-site laboratory, which analyzed it for CLP VOCs, BTEX, and extractable TPH. BTEX compounds were not detected at concentrations above their MDLs. Extractable TPH—quantified as motor oil—was detected at a concentration of 3,400  $\mu\text{g/L}$ , and 88  $\mu\text{g/L}$  of nonpetroleum compounds were also detected. 1,2-DCE and trichloroethylene (TCE) were also detected in the groundwater sample at concentrations that were representative of the regional Superfund VOC plume. Table 8B summarizes the data. Figure 11 illustrates the groundwater sampling locations.

## 5.9.3 Monitoring Well Installation

The presence of 3,400  $\mu\text{g/L}$  of motor oil in groundwater underlying the former location of UST 87 indicated the need for a monitoring well to enable the collection of quarterly groundwater monitoring data. The following subsections describe the installation of the well, and the collection of additional soil and groundwater data.

### 5.9.3.1 Borehole Drilling

Borehole SBT87-1 is located in the approximate center of the excavation of the former tank. An HSA drill rig was used to drill through the first saturated permeable interval to about 10 feet bls. Split-spoon cores were collected and were described for lithologic characteristics on the SBT22-1 borehole log. Appendix C contains a copy of the log.

### 5.9.3.2 Soil Sample Collection and Analytical Results

Soil sample SBT87-1(5.0) was collected at location SBT87-1 from 5.0 to 5.5 feet bls and submitted to a geotechnical laboratory for analysis. Appendix D contains a copy of the report from the geotechnical laboratory. The soil was classified as a silty clay.

Sample SBT97-1(8.5) was collected at location SBT87-1 from 8.5 to 9.0 feet bls within the capillary fringe and was submitted to an off-site laboratory, which analyzed it for extractable TPH and BTEX. The TPH analysis indicated the presence of 180 mg/kg of diesel and 1,600 mg/kg of motor oil. BTEX compounds were not detected at concentrations above their MDLs. Figure 11 illustrates the sampling location, and Tables 8A and 8B summarize the analytical data.

**TABLE 8B**  
**MOFFETT FEDERAL AIRFIELD**  
**UST 87—BUILDING 15 ALCOVE**  
**SUMMARY OF GROUNDWATER CLP VOC DATA**

Sample Designation	Unit	1,1-DCE	1,1-DCA	1,2-DCE	TCE
GWT87-1	µg/L	40J	44J	2,500	210
WT87-1	µg/L	ND	51J	2,400	61J

Notes:

- CLP Contract Laboratory Program
- DCA Dichloroethane
- DCE Dichloroethylene
- J Indicates that the reported value is estimated
- µg/L micrograms per liter
- ND Not detected
- TCE Trichloroethylene
- VOC Volatile organic compounds



### **5.9.3.3 Well Construction and Development**

Monitoring well MWT87-1 was built in borehole SBT87-1 by using 2-inch-diameter PVC screen and casing. Figure 11 illustrates the monitoring well location. Well construction details were recorded on well completion forms. Appendix C contains logs showing the well construction details. The well was developed in accordance with the base-wide FSP (PRC and JMM 1992a). Development water was containerized, characterized, and disposed of in accordance with applicable regulations.

### **5.9.3.4 Groundwater Sample Collection and Analytical Results**

Groundwater sample WT87-1 was collected from MWT87-1 and was submitted to an off-site laboratory, which analyzed it for extractable TPH, BTEX, and CLP VOCs. Analysis of groundwater sample WT87-1 for extractable TPH detected concentrations of 380 and 140  $\mu\text{g/L}$  of diesel and motor oil, respectively. BTEX compounds were not present in WT87-1 at concentrations above their MDLs.

Table 8A summarizes the TPH and BTEX data for the UST 87 site. Table 8B summarizes the CLP VOC data. Appendix B contains the laboratory analytical data for the soil and groundwater samples collected at the UST 87 site.

## **5.10 SURVEYING**

A California-licensed surveyor mapped all Geoprobe borehole and monitoring well locations for position and elevation in relation to the California state plane coordinate system. All locations were determined in relation to MFA benchmark 4-111, which is located at the south end of Hangar 1. The surveying was completed to an accuracy of 0.1 foot horizontally and 0.01 foot vertically. Appendix F presents the survey report.

## **5.11 DISPOSAL OF INVESTIGATION-DERIVED WASTE**

The small amount of borehole soil cuttings excavated from locations sampled by using hand augers and Geoprobe corings were placed into a 55-gallon drum labeled with the date and "CTO 267." The drum was placed into the storage yard behind the NEX service station building. These soils contain a trace of TPH originating from the UST 17 and UST 86B sites, with little or no BTEX. It is not

anticipated that the disposition of these soils will require any special handling. Borehole soil cuttings excavated by the HSA drill rig were placed into individual drums, each of which was labeled with the date and boring location designation. These drums were stored in former vehicle service bays south of the National Guard vehicle maintenance area, directly west of the Auto Hobby Shop. Only one drum of soils from this group may require special handling; it originated from boring SBT17-1 in the High-Speed Fuel Farm. PRC recommends that this small volume of soil, in addition to TPH-affected soils originating from other MFA cleanup efforts, be included in a future biological or thermal treatment program. All soils will be handled in accordance to the Program Waste Management Plan for Investigation-Derive Wastes (PRC 1994c).

Well development and purging water is being stored temporarily in the Baker tank next to the PRC field office trailer. The water will be discharged to the Sunnyvale sanitary sewer system after approval for its release has been received from its wastewater treatment facility.

#### **5.12 HEALTH AND SAFETY**

Field activities were conducted in EPA Level D personal protective equipment, as described in the basewide "Health and Safety Plan" prepared by PRC (1992). Existing data reviewed before the draft work plan was developed indicated no significant health hazards. This was confirmed by field air monitoring conducted during the investigation. The only site that presented any field-measurable quantities of petroleum contaminants was the UST 17 High-Speed Fuel Farm. Dermal contact with soil and groundwater contaminated with petroleum was avoided by using latex gloves. No health and safety incidents occurred during the investigation.

#### **6.0 DATA QUALITY ASSESSMENT**

This section discusses the results of data validation and the achievement of data quality objectives (DQOs) during the investigation of the petroleum tank sites at MFA. Sampling was conducted from June through August 1995. Ninety-eight soil and groundwater samples were analyzed. Twenty analyses were validated by an independent laboratory consulting firm, and the other data were checked internally for correctness.

## **6.1 DATA VALIDATION**

Data validation is the systematic and independent verification of data quality. The data validation process provides information concerning the analytical limitations of data, based on specific quality control (QC) criteria established in the following documents:

- U.S. EPA CLP National Functional Guidelines for Organic Data Review (U.S. EPA 1994a)
- U.S. EPA CLP Functional Guidelines for Inorganic Data Review (U.S. EPA 1994b)

The reviewer verified that the proper analytical method and laboratory requirements were followed for each analysis. cursory validation was conducted on 100 percent of the data, and full validation was conducted on 10 percent of the samples. The samples were analyzed for CLP VOCs, CLP SVOCs, CLP metals, purgeable TPH, and extractable TPH. QC criteria that were reviewed are as follows:

- Method compliance
- Holding times (from time of sample collection)
- Calibration (initial and continuing)
- Blanks (laboratory and field)
- Surrogate recovery
- Sample duplicates, matrix spikes (MS) and matrix spike duplicates (MSD)
- Other laboratory QC criteria specified by the method

The following subsections summarize the results of the data validation.

### **6.1.1 Method Compliance**

All samples were prepared and analyzed correctly by using protocols established in the following documents:

- CLEAN Laboratory Basic Ordering Agreement (PRC 1994d)
- CLP Statement of Work for Organic Analyses (U.S. EPA 1993)

- CLP Statement of Work for Inorganic Analyses (U.S. EPA 1990)
- Leaking Underground Fuel Tank Field Manual (State Water Resources Control Board 1989)

No method deviations were encountered.

### 6.1.2 Holding Times

Samples were reviewed by using limits found in the appropriate methods. All holding times were within these established limits.

### 6.1.3 Calibrations

All initial and continuing calibrations were within established QC limits, except for the following, in which some constituents were qualified as estimated (UJ-K and/or J-K) because of continuing calibration percent differences that exceeded QC limits:

- SVOC samples GWT17-5, GWT86B-1, and GWT86B-2 (UJ-K)
  - 4-Chloroaniline
  - 2,4-Dinitrophenol
  - 3-Nitroaniline
  - 4-Nitroaniline
  - 4-Nitrophenol
  - Pentachlorophenol
- Samples GPT17-1(5.0), GPT17-1(8.5), GPT17-2(5.0), GPT17-2(8.0), GPT17-3(5.0), GPT17-3(8.5), GPT17-4(5.2), and GPT17-4(9.0) (UJ-K)
  - 3-Nitroaniline
- VOC samples GWT86-1RE, GPT86B-1, and GWT86B-2 (UJ-K and J-K)
  - Acetone
- Samples GPT17-1DL(8.5), GPT17-2DL(8.0), GWT17-4DL, and GPT17-4DL(9.0)
  - 4-Chloroaniline
  - 2,4-Dinitrophenol
  - 3-Nitroaniline
  - 4-Nitrophenol
  - Pentachlorophenol

#### 6.1.4 Blanks

Any compound detected in both a sample and an associated blank is qualified if the sample concentration is less than five times (5x) the blank concentration. In VOC and SVOC analyses, the 5x rule is changed to 10 times (10x) for common laboratory contaminants (CLC). VOC CLCs include methylene chloride, acetone, carbon disulfide, and 2-butanone. SVOC CLCs include the common phthalate ester contaminants. Values at or above the contract-required quantitation limit (CRQL) are qualified UJ-B, and sample values initially detected at below the CRQL are qualified (U-B) if the sample concentration is less than 5x (or 10x for CLCs).

Analyses of field and laboratory blanks detected concentrations that were within laboratory established QC limits, except for the following:

- Butylbenzylphthalate and bis(2-ethylhexyl)phthalate were detected in the laboratory blank; however, data were not affected by the blank levels, because sample analysis results were nondetects.
- In sample GWT86B-1, di-n-butylphthalate was qualified (U-B) because of a laboratory contamination problem.
- In SVOC samples GWT86B-1 and GWT86B-1RE, 2-butanone was qualified (U-B) because of laboratory contamination problems.
- In SVOC samples GPT17-1(8.5), GPT17-2(8.0), GPT17-3(5.0), GPT17-4(5.2), GPT17-4(9.0), and GWT17-4, bis(2-ethylhexyl)phthalate was qualified (U-B) because of common laboratory contamination problems.

#### 6.1.5 Surrogates

All samples are spiked with surrogate compounds to assess method performance in the laboratory. Because surrogates are outside the QC limits, results for the following detected and nondetected compounds were qualified as estimated (J-S/UJ-S):

- All positive compounds in TPH-diesel sample GPT22-2(5.4)
- All compounds in purgeable TPH samples GPT17-5(5.5), GPT17-5(6.9), and GPT22-2(5.4)
- All compounds in extractable TPH—sample GWT17-5

- All positive compounds in VOC sample GWT86B-1
- All positive compounds in purgeable TPH samples GPT17-1(8.5), GPT17-2(8.0), GPT17-3(8.5), GPT17-4(5.2), and GPT17-4(9.0)
- All compounds in SVOC sample GWT17-4
- All compounds in extractable TPH samples GPT17-1(8.5), GPT17-2(8.0), GPT17-4(5.2), and GPT17-4(9.0).

#### 6.1.6 Sample Duplicates and MS/MSDs

All laboratory sample duplicates and MS/MSDs were within established QC limits, except for those in the following table.

<u>Analyte</u>	<u>Sample</u>	<u>MS% Recovery</u>	<u>MSD%R</u>	<u>QC Limits</u>
Purgeable TPH/benzene	GPT17-5(5.5)	61	65	75-125
	GPT17-1(5.0)	54	53	75-125
Purgeable TPH/toluene	GPT17-5(5.5)	60	65	75-125
	GPT17-1(5.0)	52	51	75-125
Purgeable TPH/ethylbenzene	GPT17-5(5.5)	60	65	75-125
	GPT17-1(5.0)	54	52	75-125
Purgeable TPH/xylenes	GPT17-5(5.5)	62	66	75-125
	GPT17-1(5.0)	55	52	75-125
Extractable TPH	GWT17-5	OK	0	40-140
	GPT17-4(9.0)	0	0	40-140

The 0% recovery in extractable TPH appears to have been caused by a laboratory error. Generally, organic data are not qualified on the basis of MS/MSD criteria alone.

#### 6.1.7 Other QC Specified Method

All other laboratory QC criteria specified by the appropriate methods have been reported and found to be within established QC limits.

## **6.2 DATA QUALITY OBJECTIVES—PARCC PARAMETERS**

The quality of data needed to achieve informed decisions depends on the scientific validity and the integrity of the data. The data validity is based on the comparison of the analytical and QC results to the DQOs for the project. The integrity of the data is maintained by observing procedures designed to minimize errors and loss of data during manipulation and transfer.

A comparison of the MFA results to project DQOs, as defined in the basewide Quality Assurance Project Plan (QAPjP) (PRC & JMM, 1992b), formed the basis for evaluating the quality of the analytical data. As described in the QAPjP, analytical data must be of a known and acceptable quality to be used to evaluate the presence of chemicals. Data quality was determined on the basis of the precision, accuracy, representativeness, comparability, and completeness (PARCC) of the data. After these characteristics were evaluated, PRC determined whether the data were acceptable for their intended use.

Subsections 6.2.1 through 6.2.5 discuss the results of the following QC samples: field duplicates, MS/MSDs, method blanks, trip blanks, and equipment rinsates. Subsection 6.2.6 summarizes the overall comparability and completeness of the sampling effort.

### **6.2.1 Field Duplicates**

Field duplicates are two samples collected at the same time and from the same source; they are used to evaluate combined sampling and analytical precision through the calculation of relative percent difference (RPD) values. Collection of field duplicate samples was scheduled for 10 percent of the total number of samples. The acceptance criterion for the precision of field duplicates for water and soil samples was established at RPD values of less than 25 and 35 percent, respectively (PRC 1994d).

The fulfillment of QC sampling objectives was measured by (1) calculating the actual number of duplicate samples collected and analyzed, (2) dividing by the total number of samples actually collected and analyzed, and (3) multiplying by 100 to obtain a percentage. For this investigation, the QC sampling objective for field duplicates was 3.3 percent, which is below the target goal of 10 percent. Although field duplicate groundwater samples may be analyzed to obtain meaningful RPD values, the collection and analysis of duplicate soil samples, even under laboratory conditions with homogeneous soils, is considered to be of limited value, because duplicate concentration

differences can vary widely by two orders of magnitude or more as a result of soil microheterogeneities. The target goal of 10 percent field duplicates was met for groundwater samples.

The validated results of the duplicate samples were used to calculate the RPDs, which were used to evaluate field and analytical precision. RPD values were calculated by using the following equation:

$$\left( \text{RPD} = \frac{|A-B|}{\frac{A+B}{2}} \right)$$

where

A = primary field sample concentration (mg/kg,  $\mu\text{g/L}$ )

B = duplicate sample concentration (mg/kg,  $\mu\text{g/L}$ )

Because of the limitations of analytical reporting and the formula used to calculate the RPD, analytical values at or near the CRQL are typically subject to a greater variation when evaluated on a percentage basis. Therefore, RPD values calculated by using results near the CRQL are large and sometimes misleading when used to evaluate data quality. For example, concentration values for TCE of 2 and 3  $\mu\text{g/L}$  yield an RPD of 40 percent, which is outside of the acceptance criterion. These values are not significantly different, and using either value would not change an interpretation of water quality. Also, because the purpose of calculating RPDs for field duplicates is to determine field and laboratory precision, calculation of RPDs for samples in which contamination has been detected in an associated blank sample (resulting in a validation blank qualifier) would interfere with a direct measurement of precision. Data having the following qualifiers are also inappropriate for explaining all qualifiers:

- Laboratory qualifier "E"
  - indicates interference when used for reporting inorganic analyses
  - indicates exceedance of the calibration range when used for reporting organic analyses
- Validation qualifier "R"
  - indicates unusable data



- Validation qualifier "J-V"
  - indicates that estimated result verification is lacking

To avoid nonrepresentative values, PRC did not calculate RPD values for field duplicate samples for VOC and SVOC results to which either of the following applied:

- Both results were less than 5x the CRQL.
- One or both results were qualified with "B," "R," "E," or "J-V."

RPD values were not calculated for field duplicate samples for purgeable TPH or extractable TPH analyses to which any of the following applied:

- Both results were less than 5x the reporting limit.
- One or both results were qualified with "B," "R," or "J-V."
- Results were for nontarget hydrocarbons ("other light" and "other heavy").

RPD values were not calculated for field duplicate samples for total and dissolved metals analyses in which one or both values were qualified with a "B" (below the contract-required detection limit or above the instrument detection limit, "E", "J-V," or "R."

#### 6.2.2 MS/MSD Samples

The precision and accuracy of an analytical method for a specific environmental sample matrix were determined by analyzing two samples, to which were added an equal and known concentration of a target analyte. Triplicate volumes for samples GPT41A-02(5.0), GPT41A-4(6.7), GPT69-01(6.0), GWT86B-2, and GWT17-5 were collected for this purpose.

MS/MSD samples were to be collected for 5 percent of the total number of samples collected. The acceptance criteria for recoveries and RPDs were established by the analytical procedures for CLP methods and by laboratory-established control limits for non-CLP methods. Acceptable recoveries and RPDs have been established for each target analyte (U.S. EPA 1993).

The fulfillment of QC sampling objectives was measured by (1) calculating the number of MS/MSD samples collected and analyzed, (2) dividing the total by the total number of samples actually collected and analyzed, and (3) multiplying the results by 100 to obtain a percentage. The QC sampling objective for MS samples was 5 percent of the total number of samples. For this specific investigation, 6 percent was achieved.

### **6.2.3 Method Blanks**

Method blanks, consisting of laboratory pure water, were prepared and processed in the same manner as field samples. Method blanks were analyzed to determine whether laboratory procedures, equipment, or reagents introduced contamination that might affect the analytical results for field samples.

The laboratory frequency of analysis of method blanks was determined on the basis of guidance provided for each CLP method (U.S. EPA 1993). The acceptance criterion for method blank results was that all reported values below the CRQL for each organic analyte of interest (PRC 1994c).

Validators evaluated laboratory compliance with established guidance for the frequency of analysis of method blanks. The validators determined that the laboratory fulfilled the analytical objectives. Method blank results were evaluated for organic and inorganic analyses (VOCs, SVOCs, purgeable TPH, extractable TPH, and metals).

### **6.2.4 Trip Blanks**

Trip blanks were prepared in 40-milliliter glass vials that were completely filled with purged, deionized, organic-free water. Trip blanks were transported to the site with empty sample containers and stored at the site until field samples for VOC analyses were collected. The trip blanks were then placed with the field samples in coolers for storage and transportation to the laboratory for analysis to determine whether field storage and transportation procedures introduced volatile organic contamination into field samples. The QC sampling objective was that each cooler, used to store and transport field samples to the laboratory for VOC analyses, would contain one trip blank. The DQO for trip blank results was that all values were to have remained below the CRQL for each analyte of interest (PRC 1994d).

The QC sampling objective for trip blanks was not fulfilled. The trip blanks were analyzed for CLP VOCs and purgeable TPH and BTEX. Associated samples in which these compounds were detected have been appropriately qualified. It is not known how the compounds contaminated the trip blanks. For the purposes of this investigation, contamination is not considered significant, because the wells, from which the initial round of groundwater samples was collected, will be monitored quarterly for at least 1 year. The set of data, rather than one groundwater sample analysis result, will be used to evaluate groundwater conditions at the sites.

#### **6.2.5 Equipment Rinsates**

Equipment rinsates are collected and analyzed to determine whether equipment cleaning and decontamination procedures were effective in removing contaminants that may have been present from the collection of field samples. Equipment rinsates are collected between collection of field samples, typically immediately before collection of a field sample. The DQO for equipment rinsates was that all values be below the CRQL for the analyses (PRC 1994d).

All water sampling was conducted by using disposable sampling devices. Therefore, no equipment rinsates were collected for water samples. Two equipment rinsates were collected from the soil sampling apparatus. All results were below the CRQL; therefore, the QC sampling objectives were met.

#### **6.2.6 Comparability and Completeness Summary**

Comparability was promoted through the use of standard units of measurement in reporting the analytical data and selecting the analytical methods. The units of measurement and the analytical methods used were comparable to those used during previous investigations at MFA.

Completeness is a measure of the percentage of project-specified data that are considered valid. All data that are not rejected ("R" qualified data) through the validation process will be considered valid. For VOCs, SVOCs, purgeable TPH, extractable TPH, and metals, the DQO of 90 percent completeness was met.

## 7.0 DEVIATIONS FROM THE DRAFT FIELD WORK PLAN

This section details adjustments that were made to the draft field work plan before and during the work activities:

- Because of the type and age of the hydrocarbons anticipated to be encountered during the investigation, an immunoassay soil sample screening system was not used in the field.
- Because the Geoprobe did not arrive on the scheduled date, and some sampling points at the UST 17 High-Speed Fuel Farm were not accessible to vehicles, hand augers were used to collect soil and groundwater samples at UST sites 17, 22, and 86B; also, several additional sampling points and two additional monitoring wells were installed at the UST 17 site, because additional assessment of the contamination was needed.
- Because of an accessibility problem at the UST 41A NEX service station site, sampling location GPT41A-005 was deleted. An alternative location (004) was cored slightly further from the west edge of the excavation. Based on the analytical results of the four Geoprobe sampling locations, monitoring well MWT41A-1 was located north of the former tank location in the remedial excavation area.
- Based on the analytical results of the four Geoprobe sampling locations at the UST 57 Auto Hobby Shop site, monitoring well MWT57-1 was located inside the yard fence, which was west of its planned position.
- Because the tank tie-down concrete slab was within the former excavation footprint at the UST 69 Hangar 3 site at about 6.5 feet bls, monitoring well MWT69-1 was located north of the former excavation.
- To avoid coring the sidewalk south of Building 107 and to gain data that were more representative of ambient conditions, PRC moved groundwater sampling location GWT86B-2 to a more downgradient position, which is northwest of the former location of UST 86B.
- Based on the analytical results from the Geoprobe sampling location at the UST 87 Building 15 Alcove site, monitoring well MWT87-1 was built in the excavation of the former tank.
- Because hand augers were used in addition to the Geoprobe penetrometer rig, the GP sample code designates a soil sample collected either by hand auger or the Geoprobe sampling system; the GW code was used for groundwater samples collected from boreholes generated by either method; the MW code was used to identify monitoring wells; groundwater samples collected from the wells were coded as W.
- To minimize waste, PRC installed 0.75-inch-diameter PVC piping in only those boreholes from which acceptable groundwater samples could not be bailed directly. Sampling locations were destroyed by using Type II cement rather than granular bentonite, as proposed.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

This section summarizes the results of, and provides recommendations for, each UST site that was investigated. Table 9 presents a reference list of results and recommendations for the UST sites.

### 8.1 UST 17 SITE

The UST 17 site is the most contaminated of the sites investigated as part of CTO 0267. The MFA soil action level for purgeable TPH quantified as both gasoline and nongasoline petroleum compounds (150 mg/kg) and for extractable TPH quantified as JP-5 (400 mg/kg) is exceeded within a 50- to 60-foot radial distance from the former location of UST 17. A 3-foot-thick layer of petroleum affected soils is present at about 5 to 9 feet bls in this area. The analytical results for soil sample GPT17-4(5.2) indicate that piping associated with the tank or, perhaps, surface spillage may have also contributed to the plume, because 5.2 feet bls is significantly above the depth at which the bottom of UST 17 was formerly located. The analytical results for soil sample GPT17-10(7.5) also indicate that leakage from UST 17 may not have been the only source of subsurface contamination at the site. GPT17-10(7.5) is located about 60 feet upgradient of UST 17; however, it contains TPH levels that are comparable to those of soil samples collected from within, and immediately next to, the tank excavation. The groundwater plume at the site is less well-defined (probably because of the clay content of the saturated zone soils), but the MFA purgeable and extractable TPH action levels (0.05 and 0.7 mg/L) are exceeded everywhere, except at the downgradient (northern) and western edges of the plume. As expected, the purgeable TPH plume component has moved out through the clayey soils further from the former excavation than the extractable TPH. Further exploration east and south of the former location of UST 17 will be difficult because of the presence of (1) the day tank (UST 253) currently being used to store JP-8, (2) associated aboveground and below ground piping, and (3) fuel conveyance system equipment.

If the petroleum contamination at the UST 17 site is as old as is indicated by its chromatographic pattern and the relatively low BTEX results, and there is no longer a source of any type, the groundwater plume has reached equilibrium, and the well array can be used to monitor the subsurface groundwater conditions. PRC recommends quarterly groundwater monitoring for TPH and BTEX. PRC also recommends that, based on the continued use of the site as a fuel farm, a plan for either long-term monitoring or corrective action at the site be developed.

TABLE 9

MOFFETT FEDERAL AIRFIELD  
 PETROLEUM UST SITES RECOMMENDATIONS TABLE

UST Site Number	Contaminants Exceeding MFA Action Levels	Recommendations
17	GW—benzene; TPH as gasoline, degraded gasoline, and JP-5 Soil—TPH	(1) Quarterly GW monitoring, and (2) either Long-term monitoring plan or corrective action plan <sup>a</sup>
22	None	(1) Quarterly GW monitoring for 1 year, and (2) closure <sup>b</sup>
41A	GW—Motor oil <sup>c</sup> Soil—None	(1) Quarterly GW monitoring for 1 year, and (2) closure <sup>b, d</sup>
55	GW—Motor oil <sup>c</sup> Soil—Motor oil <sup>c</sup>	1) Quarterly GW monitoring for 1 year, and (2) closure <sup>b, d</sup>
57	GW—Motor oil <sup>c</sup> Soil—None	(1) Quarterly GW monitoring for one year (2) closure <sup>b, d</sup>
69	None	1) Quarterly GW monitoring for 1 year, and (2) closure <sup>b</sup>
86A/B	GW—Degraded Gasoline <sup>e</sup> Soil—Degraded Gasoline <sup>e</sup>	Closure, based on (1) condition and age of contaminant; (2) small contaminant mass involved; (3) lack of impact outside of former tank excavation footprint; and (4) absence of significant effect on groundwater quality <sup>a</sup>
87	GW—None Soil—Motor oil <sup>c</sup>	(1) Quarterly GW monitoring for 1 year, and (2) closure <sup>b, d</sup>

Notes:

GW Groundwater  
 JP-5 Jet fuel (specially refined kerosene)  
 TPH Total petroleum hydrocarbons

- <sup>a</sup> May include fate and transport study and screening risk assessment considerations
- <sup>b</sup> Closure recommendation based on four rounds of GW monitoring showing results below MFA action levels
- <sup>c</sup> Specific action levels for motor oil do not exist; extractable TPH value for diesel and JP-5 was used for table
- <sup>d</sup> May require negotiation of an action level for motor oil, based on effects of long-chain hydrocarbons
- <sup>e</sup> Short-chain hydrocarbons with no benzene present

## 8.2 UST 22 SITE

Soil and groundwater MFA contaminant action levels do not appear to have been exceeded at the UST 22 site in the Area 3 Ammunition Bunkers compound. The presence of diesel and motor oil within the groundwater immediately next to the excavation, in addition to the proximity of the site to the bay, is cause for concern. PRC recommends that groundwater be monitored quarterly at the site for 1 year, followed by a request to the agencies for site closure if contaminant concentrations remain below MFA action levels.

## 8.3 UST 41A SITE

MFA soil and groundwater contaminant action levels do not appear to have been exceeded at the UST 41A NEX service station site, except in the area between the former excavation and the service bays building, as represented by the groundwater sample collected at location GPT41A-4. A concentration of 3,300  $\mu\text{g/L}$  of motor oil was detected in groundwater for GPT 41A-4. The contaminant level appears, however, to attenuate downward by one order of magnitude to 290  $\mu\text{g/L}$  at the location of the monitoring well MWT41A-1, which is less than 15 feet downgradient from GPT41A-4. A 440- $\mu\text{g/L}$  diesel component of the plume was also detected in a groundwater sample collected from the monitoring well. The attenuation downward of the contaminant concentrations may be a result of the differences between water samples originating from the borehole (GPT 41A-4) and water samples originating from the well (MWT 41A-1). PRC recommends quarterly groundwater monitoring at the site for 1 year, followed by a request to the agencies for site closure if contaminant concentrations in the groundwater remain below MFA action levels for TPH and BTEX.

## 8.4 UST 55 SITE

Soil and groundwater extractable TPH contaminant concentrations are slightly above MFA contaminant action levels at the Old Runway Radar site. Because samples were collected in suspected worst-case locations, and the soil type is a silty clay, PRC recommends quarterly groundwater monitoring at the site for 1 year. The monitoring phase should be followed by a request to the agencies for site closure if contaminant concentrations in MWT55-1 are below MFA action levels.

## 8.5 UST 57 SITE

MFA soil and groundwater contaminant action levels do not appear to have been exceeded at the UST 57 Auto Hobby Shop site, except in the area of the former remote fill piping, which extended from the service bays building to the tank, as represented by sampling location GPT57-4. A concentration of 1,900  $\mu\text{g/L}$  of motor oil was detected in groundwater from GPT 57-4. PRC recommends quarterly groundwater monitoring at the site for 1 year. If the continued absence of groundwater in the well prevents such monitoring, PRC recommends either that the well be aggressively rehabilitated or that a deeper well be installed at the location. Following a year of quarterly groundwater monitoring, a request should be made to the agencies for site closure if contaminant concentrations in the groundwater fall below MFA action levels for TPH and BTEX.

## 8.6 UST 69 SITE

Soil and groundwater MFA contaminant action levels do not appear to have been exceeded at the UST 69 site in the Hangar 3 East Parking Area. PRC recommends quarterly groundwater monitoring at the site for 1 year, followed by a request to the agencies for site closure if contaminant concentrations remain below MFA action levels.

## 8.7 UST 86A AND UST 86B SITE

There appears to be a 6-inch-thick layer of weathered gasoline-affected soils above the tank anchor slab at the UST 86B Building 107 site. The purgeable TPH content of soil sample GPT86B-1(9.5), collected from this layer, exceeded the MFA soil contaminant action level for gasoline by 40 mg/kg. The BTEX content, however, was below the MDLs.

Groundwater sample GWT86B-1, collected from the same location, exceeded the MFA groundwater action level for gasoline by 5.8 mg/L. The benzene, toluene, and xylenes concentrations were below MDLs, and the detected ethylbenzene concentration of 6  $\mu\text{g/L}$  is significantly below the MFA action level of 680  $\mu\text{g/L}$ . Also, chlorinated solvents were not detected in groundwater sample GWT86B-1. This indicates that the groundwater perched above the concrete slab is isolated from groundwater beneath the slab. Groundwater sample GWT86B-2, collected 20 feet downgradient of GWT86B-1 and about 4 feet outside of the tank excavation, did not contain detectable concentrations of TPH and BTEX. PRC recommends that a request to the agencies for site closure, based on (1) the age of the



contaminant; (2) the relatively small mass of contaminated soil remaining following removal of the tanks; (3) the absence of BTEX compounds in groundwater within, or downgradient from, the tank excavation; and (4) apparent isolation of the contaminants from the A-1 groundwater.

#### **8.8 UST 87 SITE**

The MFA soil extractable TPH action level has been exceeded at the UST 87 site in the Building 15 Alcove area by 1,200 mg/kg of motor oil. The absence of BTEX compounds, and the presence of diesel at concentrations below MFA action levels, in the soil sampled during the investigation mitigate any recommendation for corrective action. Because UST 87 was used to store diesel, the only known source of oil-contaminated soils at the site would be from a protective tar and fabric wrapping. It is not known whether UST 87 had such a wrapping. The concentration of diesel and motor oil within the groundwater in the former excavation is below the MFA extractable TPH action level. PRC recommends quarterly groundwater monitoring at the site for 1 year, followed by a request to the agencies for site closure if contaminant concentrations in the groundwater remain below MFA action levels.

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**APPENDIX A**  
**UST SITE CLOSURE**  
**RECOMMENDATIONS CHECKLIST**

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**MOFFETT FEDERAL AIRFIELD  
CLOSURE DOCUMENTATION REQUIREMENTS CHECKLIST**

Requirement	UST 15	UST 28	UST 41B	UST 78	UST 88
Distance to production wells for municipal, domestic, agriculture, industry and other uses within 2,000 feet of the site	A	A	A	A	A
Site maps, to scale, of affected area showing locations of former and existing tank systems, elevation contours, gradients, and nearby surface waters, buildings, streets, and subsurface utilities	See Figure 3	See Figure 5	See Figure 7	See Figure 9	See Figure 11
High and low groundwater levels (below ground surface)	B	B	B	B	B
Tabulated results of all sampling and analyses	See Table 2	See Table 3	See Table 4	See Table 5	See Table 6
Vertical and lateral concentration contours of contaminants found initially, and those remaining in soil and groundwater, both on and off site	C	D	D	E	D
Mass balance calculation of the substance treated versus that remaining	F	D	D	E	D
Technology used to clean the site; if Best Available Technology (BAT) not used, explain why	G	H	H	H	H
Zone of influence calculated for the subsurface remediation system and the zone of capture attained for the soil and groundwater remediation system	I	D	D	E	D
Reasons why "background" was/is unattainable using BAT	H	D	D	E	D
Rational why conditions remaining at the site will not adversely affect water quality, health, or other beneficial uses	C	D	D	E	D

Notes:

- UST    Underground storage tank
- A      No production wells within 2,000 feet of former USTs 15, 28, 78, 88, 41B
- B      Water was not present in tank excavations except for Tank 78; however, Tank 78 was never used.
- C      Only minor, localized contamination identified (see Section 5.1 in text)
- D      Slight or no contamination identified at USTs 28, 88, and 41B above cleanup levels
- E      No contamination identified - UST never used (see Section 5.4 in text)
- F      Only minor, localized contamination identified - not above cleanup levels
- G      Minor, localized contaminated soil removed by overexcavation
- H      No comparisons with BAT - no ongoing remediation system employed
- I      Only minor, localized contamination identified - no remediation system employed



**APPENDIX B**

**LABORATORY ANALYTICAL DATA**



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# CHEMICAL DATA TRANSFER LIST

METHOD CODES

PRC/JMM SAMPLE ID	SAMPLE DATE	S <sub>1</sub> P <sub>1</sub> C	S <sub>2</sub> P <sub>2</sub> C	T <sub>1</sub> P <sub>1</sub> G M-d-PUS	T <sub>2</sub> P <sub>2</sub> G M-d-PUS	C <sub>1</sub> P <sub>1</sub> V <sub>1</sub> C T <sub>1</sub> L <sub>1</sub> S				VALIDATION COMPANY	COMMENTS
<u>GWT56B-1</u>	6-27-95	P		P		P				Triangle	reanalysis w/ original
GWT56B-2		P		P		P					
GWT17-4			P	P	P						Dilution
GPT17-4(5.2)			P	P	P						
GPT17-4(9.0)			P	P	P						Dilution
GPT17-3(5.0)			P	P	P						reanalysis w/ original
GPT17-3(8.5)			P	P	P						
<u>GPT17-2(5.0)</u>			P	P	P						reanalysis w/ original
GPT17-2(8.0)			P	P	P						Dilution
GPT17-1(5.0)			P	P	P						
GPT17-1(8.5)			P	P	P						Dilution
GWT17-2				P	P						
GWT17-3				P	P						
<u>GWT17-1</u>				P	P						
<u>GWT17-99</u>	GWT17-3				P						
TB-1				P	P						
GPT56B-1(9.5)				P	P						
VBLKAY	6-30-95	N				N					
SBLKWH	6-30-95		N								
SBLKSP	7-6-95		N								
TOTAL NO. OF SAMPLES: _____										TOTAL PAGES: _____	

Originated by: John L. Benaro Date: 8-12-95  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Entered to database by: \_\_\_\_\_ Date: \_\_\_\_\_

P = PENDING VALID. C = VALID. COMPLETE U = VALID. STATUS UNKNOWN R = RETURNED TO LAB. N = NO VALID. CONDUCTED  
 1 = NEESA LEVEL A 2 = NEESA LEVEL B 3 = NEESA LEVEL C 4 = NEESA LEVEL D 5 = NEESA LEVEL E

NOTE: Please return this form signed and dated to: PRC Denver, attn: Moffett Field Document Control, after the date has been entered into the Moffett database.  
 C:\FORMS\TRANSFER.FRM vpb 02-08-82



9506108

PROJECT NAME	PROJECT JOB #		SAMPLE LOCATION	SAMPLE MEDIUM (MATRIX)	TIME OF COLLECTION	DATE OF COLLECTION	SAMPLER(S): PRINTED NAME AND SIGNATURE	SAMPLING TEAM #	NUMBERSIZE OF CONTAINERS	ANALYSES REQUIRED				REMARKS
	SYD	305								TPH	SYOC	VOC	FIELD SAMPLE PREPARATION	
PETROLEUM TANK SITES INVEST. 044-06671RSIFW			Tank 17	Water	20:20	6/27/95	Willis Wilson, Fred Allee	NA	2 - Amber/3 40ml	P	U	U	U	
			Tank 17	Water	19:40	6/27/95			2 - Amber/3 40ml	P	U	U	U	
			Tank 17	Water	20:00	6/27/95			2 - Amber/3 40ml	P	U	U	U	
			Tank 17	Water	19:30	6/27/95			4 - Amber/3 40ml	P	U	U	U	
			Tank 17	water	20:00	6/27/95			2 - amber		U			
			Tank 17	water	20:20	6/27/95			2 - amber/3 40ml	P	U			
				Water					2 - 40ml VOA	P				
			Tank 86B	Water	14:45	6/27/95			2 - 40ml VOA	P				
			Tank 86B	Water	13:55	6/27/95			10 - 40 ml VOA	P				Extra volume for MTHMSD

RELINQUISHED BY:	SIGNATURE	NAME (print)	COMPANY/TITLE	DATE	TIME
	<i>Fred Allee</i>	FREDERIC A. ALLEE	PRC - EMI	6-28-95	17:00
	<i>P. Aranda</i>	P. ARANDA	PACE/MP / SAMPLE CUSTODIAN	6/28/95	12:00
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

REMARKS: RECD 1000 AT 800 # 9075 PN 6/28/95

REG. TURN AROUND 0

INSTRUCTIONS: Enter only one of the following four codes for each analysis required & for each sample listed. The codes should be entered under the columns labeled "ANALYSES REQUIRED".  
**U = UNPRESERVED AND UNFILTERED SAMPLE** **P = PRESERVED SAMPLE** **F = FILTERED SAMPLE** **B = BOTH PRESERVED & FILTERED SAMPLE**



VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/08/95 13:40:44

PRC Sample ID Lab Samp Id SDG # Matrix Units Date Received Date Analyzed	GMT868-1 9506108-07A V6108 WATER UG/L 06/28/95 06/30/95		GMT868-1RE 9506108-07A V6108 WATER UG/L 06/28/95 06/30/95		GMT868-2 9506108-08A V6108 WATER UG/L 06/28/95 06/30/95		Result	Com	Val	Com	Result	Com	Val	Com
	Result	Val	Com	Result	Val	Com								
CHLOROMETHANE	2 U		2 U		2 U									
BROMOMETHANE	2 U		2 U		2 U									
VINYL CHLORIDE	2 U		2 U		2 U									
CHLOROETHANE	0.3 BJ		0.4 BJ		0.6 BJ									
METHYLENE CHLORIDE	8 B		8 B		6 B									
ACETONE	0.09 J		2 U		2 U									
CARBON DISULFIDE	2 U		2 U		2 U									
1,1-DICHLOROETHENE	2 U		2 U		2 U									
1,1-DICHLOROETHANE	2 U		2 U		0.2 J									
1,2-DICHLOROETHENE (TOTAL)	2 U		2 U		2 U									
CHLOROFORM	2 U		2 U		2 U									
1,2-DICHLOROETHANE	2 U		2 U		2 U									
2-BUTANONE	2 J		2 J		2 U									
1,1,1-TRICHLOROETHANE	2 U		2 U		2 U									
CARBON TETRACHLORIDE	2 U		2 U		2 U									
BROMOCHLOROMETHANE	2 U		2 U		2 U									
1,2-DICHLOROPROPANE	2 U		2 U		2 U									
CIS-1,3-DICHLOROPROPENE	2 U		2 U		2 U									
TRICHLOROETHENE	2 U		2 U		2 U									
DIBROMOCHLOROMETHANE	2 U		2 U		2 U									
1,1,2-TRICHLOROETHANE	2 U		2 U		2 U									
BENZENE	0.4 J		0.3 J		0.1 J									
TRANS-1,3-DICHLOROPROPENE	2 U		2 U		2 U									
BROMOFORM	2 U		2 U		2 U									
4-METHYL-2-PENTANONE	2 U		2 U		2 U									
2-HEXANONE	2 U		2 U		2 U									
TETRACHLOROETHENE	2 U		2 U		2 U									
1,1,2,2-TETRACHLOROETHANE	2 U		2 U		2 U									
TOLUENE	0.4 J		0.3 J		2 U									
CHLOROBENZENE	2 U		2 U		2 U									
ETHYLBENZENE	0.2 J		2 U		2 U									
STYRENE	2 U		2 U		2 U									
XYLENE (TOTAL)	0.3 J		2 U		2 U									

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/08/95 13:41:07

Compound	GPT17-1(5.0) 9506108-168 V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95		GPT17-1(8.5) 9506108-178 V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95		GPT17-1(5.0) 9506108-168 V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95		GPT17-1(8.5) 9506108-178 V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95	
	Result	Com	Result	Com	Result	Com	Result	Com
PHENOL	430 U		400 U		1000 U		980 U	
BIS(2-CHLOROETHYL)ETHER	430 U		400 U		1000 U		980 U	
2-CHLOROPHENOL	430 U		400 U		430 U		400 U	
1,3-DICHLOROBENZENE	430 U		400 U		430 U		400 U	
1,4-DICHLOROBENZENE	430 U		400 U		430 U		400 U	
1,2-DICHLOROBENZENE	430 U		400 U		430 U		400 U	
2-METHYLPHENOL	430 U		400 U		430 U		400 U	
2,2'-OXYBIS(1-CHLOROPROPANE)	430 U		400 U		1000 U		980 U	
4-METHYLPHENOL	430 U		400 U		1000 U		980 U	
N-NITROSO-DI-N-PROPYLAMINE	430 U		400 U		430 U		400 U	
HEXACHLOROETHANE	430 U		400 U		430 U		400 U	
NITROBENZENE	430 U		400 U		430 U		400 U	
ISOPHORONE	430 U		400 U		1000 U		980 U	
2-NITROPHENOL	430 U		400 U		430 U		400 U	
2,4-DIMETHYLPHENOL	430 U		400 U		430 U		400 U	
BIS(2-CHLOROETHOXY)METHANE	430 U		400 U		430 U		400 U	
2,4-DICHLOROPHENOL	430 U		400 U		430 U		400 U	
1,2,4-TRICHLOROBENZENE	430 U		400 U		430 U		400 U	
NAPHTHALENE	430 U		4300 E-		430 U		400 U	
4-CHLORANILINE	430 U		400 U		430 U		400 U	
HEXACHLOROBUTADIENE	430 U		400 U		430 U		400 U	
4-CHLORO-3-METHYLPHENOL	430 U		400 U		430 U		400 U	
2-METHYLNAPHTHALENE	430 U		8900 E-		430 U		400 U	
HEXACHLOROCYCLOPENTADIENE	430 U		400 U		430 U		400 U	
2,4,6-TRICHLOROPHENOL	430 U		400 U		430 U		400 U	
2,4,5-TRICHLOROPHENOL	1000 U		980 U		430 U		400 U	
2-CHLORONAPHTHALENE	430 U		400 U		430 U		400 U	
2-NITROANILINE	1000 U		980 U		430 U		400 U	
DIMETHYLPHTHALATE	430 U		400 U		430 U		400 U	
ACENAPHTHYLENE	430 U		400 U		430 U		400 U	
2,6-DINITROTOLUENE	430 U		400 U		430 U		400 U	
3-NITROANILINE	1000 U		980 U		430 U		400 U	
ACENAPHTHENE	430 U		400 U		430 U		400 U	
2,4-DINITROPHENOL	430 U		400 U		430 U		400 U	
DIBENZOFURAN	430 U		400 U		430 U		400 U	
2,4-DINITROTOLUENE	430 U		400 U		430 U		400 U	
DIETHYLPHTHALATE	430 U		400 U		430 U		400 U	
4-CHLOROPHENYL-PHENYLETHER	430 U		400 U		430 U		400 U	
FLUORENE	430 U		400 U		430 U		290 J	
4-NITROANILINE	430 U		400 U		1000 U		980 U	
4,6-DINITRO-2-METHYLPHENOL	430 U		400 U		1000 U		980 U	
N-NITROSDIPIHENYLAMINE (1)	430 U		400 U		430 U		400 U	
4-BROMOPHENYL-PHENYLETHER	430 U		400 U		430 U		400 U	
HEXACHLOROBENZENE	430 U		400 U		430 U		400 U	
PENTACHLOROPHENOL	430 U		400 U		1000 U		980 U	
PHENANTHRENE	430 U		400 U		430 U		100 J	
ANTHRACENE	430 U		400 U		430 U		400 U	
CARBAZOLE	430 U		400 U		430 U		400 U	
DI-N-BUTYLPHTHALATE	430 U		400 U		430 U		400 U	
FLUORANTHENE	430 U		400 U		430 U		400 U	
PYRENE	430 U		4300 E-		430 U		400 U	
BUTYLBENZYLPHTHALATE	430 U		400 U		430 U		400 U	
3,3'-DICHLOROBENZIDINE	430 U		400 U		430 U		400 U	
BENZO(A)ANTHRACENE	430 U		400 U		430 U		400 U	
CHRYSENE	8900 E-		400 U		430 U		400 U	
BIS(2-ETHYLHEXYL)PHTHALATE	430 U		400 U		430 U		16 J	
DI-N-OCTYLPHTHALATE	430 U		400 U		430 U		400 U	
BENZO(B)FLUORANTHENE	980 U		980 U		430 U		400 U	
BENZO(K)FLUORANTHENE	400 U		400 U		430 U		400 U	
BENZO(A)PYRENE	980 U		980 U		430 U		400 U	
INDENO(1,2,3-CD)PYRENE	400 U		400 U		430 U		400 U	
DIBENZ(A,H)ANTHRACENE	400 U		400 U		430 U		400 U	
BENZO(G,H,I)PERYLENE	980 U		980 U		430 U		400 U	

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 06/08/95 13:41:07

Compound	GPT17-1(8.5)DL 9506108-17C		GPT17-2(5.0) 9506108-14B		GPT17-1(8.5)DL 9506108-17C		GPT17-2(5.0) 9506108-14B	
	Result	Com	Result	Com	Result	Com	Result	Com
PHENOL	2000 U		430 U		4900 U		1000 U	
BIS(2-CHLOROETHYL)ETHER	2000 U		430 U		4900 U		1000 U	
2-CHLOROPHENOL	2000 U		430 U		100 JD		430 U	
1,3-DICHLOROBENZENE	2000 U		430 U		2000 U		430 U	
1,4-DICHLOROBENZENE	2000 U		430 U		2000 U		430 U	
1,2-DICHLOROBENZENE	2000 U		430 U		2000 U		430 U	
2-METHYLPHENOL	2000 U		430 U		360 JD		430 U	
2,2'-OXYBIS(1-CHLOROPROPANE)	2000 U		430 U		4900 U		1000 U	
4-METHYLPHENOL	2000 U		430 U		4900 U		1000 U	
N-NITROSO-DI-N-PROPYLAMINE	2000 U		430 U		2000 U		430 U	
HEXACHLOROETHANE	2000 U		430 U		2000 U		430 U	
NITROBENZENE	2000 U		430 U		2000 U		430 U	
ISOPHORONE	2000 U		430 U		4900 U		1000 U	
2-NITROPHENOL	2000 U		430 U		2000 U		430 U	
2,4-DIMETHYLPHENOL	2000 U		430 U		2000 U		430 U	
BIS(2-CHLOROETHOXY)METHANE	2000 U		430 U		2000 U		430 U	
2,4-DICHLOROPHENOL	2000 U		430 U		2000 U		430 U	
1,2,4-TRICHLOROBENZENE	2000 U		430 U		2000 U		430 U	
NAPHTHALENE	4700 D		430 U		2000 U		430 U	
4-CHLOROANILINE	2000 U		430 U		2000 U		430 U	
HEXACHLOROBUTADIENE	2000 U		430 U		2000 U		430 U	
4-CHLORO-3-METHYLPHENOL	2000 U		430 U		2000 U		430 U	
2-METHYLNAPHTHALENE	10000 D		73 J		2000 U		430 U	
HEXACHLOROCYCLOPENTADIENE	2000 U		430 U		2000 U		430 U	
2,4,6-TRICHLOROPHENOL	4900 U		1000 U		2000 U		430 U	
2,4,5-TRICHLOROPHENOL	2000 U		430 U		2000 U		430 U	
2-CHLORONAPHTHALENE	2000 U		430 U		2000 U		430 U	
2-NITROANILINE	4900 U		1000 U		2000 U		430 U	
DIMETHYLPHTHALATE	2000 U		430 U		2000 U		430 U	
ACENAPHTHYLENE	2000 U		430 U		2000 U		430 U	
2,6-DINITROTOLUENE	2000 U		430 U		2000 U		430 U	
3-NITROANILINE	4900 U		1000 U		2000 U		430 U	
ACENAPHTHENE	2000 U		430 U		2000 U		430 U	
2,4-DINITROPHENOL								
DIBENZOFURAN								
2,4-DINITROTOLUENE								
DIETHYLPHTHALATE								
4-CHLOROPHENYL-PHENYLETHER								
FLUORENE								
4-NITROANILINE								
4,6-DINITRO-2-METHYLPHENOL								
N-NITROSDIPHENYLAMINE (1)								
4-BROMOPHENYL-PHENYLETHER								
HEXACHLOROBENZENE								
PENTACHLOROPHENOL								
PHENANTHRENE								
ANTHRACENE								
CARBAZOLE								
DI-N-BUTYLPHTHALATE								
FLUORANTHENE								
PYRENE								
BUTYL BENZYLPHTHALATE								
3,3'-DICHLOROBENZIDINE								
BENZOC(A)ANTHRACENE								
CHRYSENE								
BIS(2-ETHYLHEXYL)PHTHALATE								
DI-N-OCTYLPHTHALATE								
BENZO(B)FLUORANTHENE								
BENZO(K)FLUORANTHENE								
BENZO(A)PYRENE								
INDENO(1,2,3-CD)PYRENE								
DIBENZ(A,H)ANTHRACENE								
BENZO(G,H,I)PERYLENE								

al - Validity Refer to data qualifier definitions.  
 om - Comments  
 A - Not Analyzed



SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/08/95 13:41:07

Compound	GPT17-2(8.0) 9506108-15B		GPT17-2(8.0)DL 9506108-15C		GPT17-2(8.0) 9506108-15B		GPT17-2(8.0)DL 9506108-15C	
	Result	Com	Result	Com	Result	Com	Result	Com
PHENOL	400 U		1600 U		980 U		3900 U	
BIS(2-CHLOROETHYL)ETHER	400 U		1600 U		980 U		3900 U	
2-CHLOROPHENOL	400 U		1600 U		80 J		1600 U	
1,3-DICHLOROBENZENE	400 U		1600 U		400 U		1600 U	
1,4-DICHLOROBENZENE	400 U		1600 U		400 U		1600 U	
1,2-DICHLOROBENZENE	400 U		1600 U		400 U		1600 U	
2-METHYLPHENOL	400 U		1600 U		240 J		310 JD	
2,2'-OXYBIS(1-CHLOROPROPANE)	400 U		1600 U		980 U		3900 U	
4-METHYLPHENOL	400 U		1600 U		980 U		3900 U	
N-NITROSO-DI-N-PROPYLAMINE	400 U		1600 U		400 U		1600 U	
HEXACHLOROETHANE	400 U		1600 U		400 U		1600 U	
NITROBENZENE	400 U		1600 U		400 U		1600 U	
ISOPHORONE	400 U		1600 U		980 U		3900 U	
2-NITROPHENOL	400 U		1600 U		92 J		1600 U	
2,4-DIMETHYLPHENOL	400 U		1600 U		400 U		1600 U	
BIS(2-CHLOROETHOXY)METHANE	400 U		1600 U		400 U		1600 U	
2,4-DICHLOROPHENOL	400 U		1600 U		400 U		1600 U	
1,2,4-TRICHLOROBENZENE	400 U		1600 U		400 U		1600 U	
1,2,4-TRICHLOROBENZENE	3400 E		3800 D		400 U		1600 U	
1,2,4-TRICHLOROBENZENE	400 U		1600 U		400 U		1600 U	
4-CHLOROANILINE	400 U		1600 U		400 U		1600 U	
HEXACHLOROBTADIENE	400 U		1600 U		400 U		1600 U	
4-CHLORO-3-METHYLPHENOL	400 U		1600 U		400 U		1600 U	
2-METHYLNAPHTHALENE	6700 E		7800 D		400 U		1600 U	
HEXACHLOROCYCLOPENTADIENE	400 U		1600 U		400 U		1600 U	
2,4,6-TRICHLOROPHENOL	980 U		3900 U		400 U		1600 U	
2,4,5-TRICHLOROPHENOL	400 U		1600 U		400 U		1600 U	
2-CHLORONAPHTHALENE	980 U		3900 U		400 U		1600 U	
2-NITROANILINE	400 U		1600 U		400 U		1600 U	
DIMETHYLPHTHALATE	400 U		1600 U		400 U		1600 U	
ACENAPHTHYLENE	400 U		1600 U		400 U		1600 U	
2,6-DINITROTOLUENE	400 U		1600 U		400 U		1600 U	
3-NITROANILINE	980 U		3900 U		400 U		1600 U	
ACENAPHTHRENE	400 U		1600 U		400 U		1600 U	
2,4-DINITROPHENOL								
4-NITROPHENOL								
DIBENZOFURAN								
2,4-DINITROTOLUENE								
DIETHYLPHTHALATE								
4-CHLOROPHENYL-PHENYLETHER								
FLUORENE								
4-NITROANILINE								
4,6-DINITRO-2-METHYLPHENOL								
N-NITROSODIPHENYLAMINE (1)								
4-BROMOPHENYL-PHENYLETHER								
HEXACHLOROBENZENE								
PENTACHLOROPHENOL								
PHENANTHRENE								
ANTHRACENE								
CARBAZOLE								
DI-N-BUTYLPHTHALATE								
FLUORANTHENE								
PYRENE								
BUTYLBENZYLPHTHALATE								
3,3'-DICHLOROBENZIDINE								
BENZO(A)ANTHRACENE								
CHRYSENE								
BIS(2-ETHYLHEXYL)PHTHALATE								
DI-N-OCTYLPHTHALATE								
BENZO(B)FLUORANTHENE								
BENZO(K)FLUORANTHENE								
BENZO(A)PYRENE								
INDENO(1,2,3-CD)PYRENE								
DIBENZ(A,H)ANTHRACENE								
BENZO(G,H,I)PERYLENE								

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/08/95 13:41:07

PRC Sample ID Lab. Sample ID SDG # Matrix Units Date Received Date Extracted Date Analyzed	GPT17-3(5.0) 9506108-12B V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95		GPT17-3(8.5) 9506108-13B V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95		GPT17-3(5.0) 9506108-12B V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95		GPT17-3(8.5) 9506108-13B V6108 SOIL UG/KG 06/28/95 06/29/95 07/05/95	
	Result	Com	Result	Com	Result	Com	Result	Com
PHENOL	410 U		400 U		1000 U		960 U	
BIS(2-CHLOROETHYL)ETHER	410 U		400 U		1000 U		960 U	
2-CHLOROPHENOL	410 U		400 U		410 U		400 U	
1,3-DICHLOROBENZENE	410 U		400 U		410 U		400 U	
1,4-DICHLOROBENZENE	410 U		400 U		410 U		400 U	
1,2-DICHLOROBENZENE	410 U		400 U		410 U		400 U	
2-METHYLPHENOL	410 U		400 U		410 U		400 U	
2,2'-OXYBIS(1-CHLOROPROPANE)	410 U		400 U		1000 U		44 J	
4-METHYLPHENOL	410 U		400 U		1000 U		960 U	
N-NITROSO-DI-N-PROPYLAMINE	410 U		400 U		410 U		400 U	
HEXACHLOROETHANE	410 U		400 U		410 U		400 U	
NITROBENZENE	410 U		400 U		410 U		400 U	
ISOPHORONE	410 U		400 U		1000 U		960 U	
2-NITROPHENOL	410 U		400 U		410 U		400 U	
2,4-DIMETHYLPHENOL	410 U		400 U		410 U		400 U	
BIS(2-CHLOROETHOXY)METHANE	410 U		400 U		410 U		400 U	
2,4-DICHLOROPHENOL	410 U		400 U		410 U		400 U	
1,2,4-TRICHLOROBENZENE	410 U		400 U		410 U		400 U	
NAPHTHALENE	410 U		760		410 U		400 U	
4-CHLOROANILINE	410 U		400 U		410 U		400 U	
HEXACHLOROBTADIENE	410 U		400 U		410 U		400 U	
4-CHLORO-3-METHYLPHENOL	410 U		400 U		410 U		400 U	
2-METHYLNAPHTHALENE	410 U		400 U		410 U		400 U	
HEXACHLOROCYCLOPENTADIENE	410 U		1600		410 U		400 U	
2,4,6-TRICHLOROPHENOL	410 U		400 U		410 U		400 U	
2,4,5-TRICHLOROPHENOL	1000 U		960 U		410 U		400 U	
2-CHLORONAPHTHALENE	410 U		400 U		410 U		400 U	
2-NITROANILINE	1000 U		960 U		410 U		400 U	
DIMETHYLPHthalate	410 U		400 U		410 U		400 U	
ACENAPHTHYLENE	410 U		400 U		410 U		400 U	
2,6-DINITROTOLUENE	410 U		400 U		410 U		400 U	
3-NITROANILINE	1000 U		960 U		410 U		400 U	
ACENAPHTHENE	410 U		400 U		410 U		400 U	
2,4-DINITROPHENOL	410 U		400 U		410 U		400 U	
DIBENZOFURAN	410 U		400 U		410 U		400 U	
DIETHYLPHthalate	410 U		400 U		410 U		400 U	
4-CHLOROPHENYL-PHENYLETHER	410 U		400 U		410 U		400 U	
FLUORENE	410 U		400 U		410 U		400 U	
4-NITROANILINE	410 U		400 U		410 U		400 U	
4,6-DINITRO-2-METHYLPHENOL	410 U		400 U		410 U		400 U	
N-NITROSDIPHENYLAMINE (1)	410 U		400 U		410 U		400 U	
4-BROMOPHENYL-PHENYLETHER	410 U		400 U		410 U		400 U	
HEXACHLOROBENZENE	410 U		400 U		410 U		400 U	
PENTACHLOROPHENOL	410 U		400 U		410 U		400 U	
PHENANTHRENE	410 U		400 U		410 U		400 U	
ANTHRACENE	410 U		400 U		410 U		400 U	
CARBAZOLE	410 U		400 U		410 U		400 U	
DI-N-BUTYLPHthalate	410 U		400 U		410 U		400 U	
FLUORANTHENE	410 U		400 U		410 U		400 U	
PYRENE	410 U		400 U		410 U		400 U	
BUTYLBENZYLPHthalate	410 U		400 U		410 U		400 U	
3,3'-DICHLOROBENZIDINE	410 U		400 U		410 U		400 U	
BENZO(A)ANTHRACENE	410 U		400 U		410 U		400 U	
CHRYSENE	410 U		1600		410 U		400 U	
BIS(2-ETHYLHEXYL)PHthalate	29 J		400 U		29 J		400 U	
DI-N-OCTYLPHthalate	410 U		400 U		410 U		400 U	
BENZO(B)FLUORANTHENE	410 U		960 U		410 U		400 U	
BENZO(K)FLUORANTHENE	410 U		400 U		410 U		400 U	
BENZO(A)PYRENE	410 U		960 U		410 U		400 U	
INDENOC(1,2,3-CD)PYRENE	410 U		400 U		410 U		400 U	
DIBENZ(A,H)ANTHRACENE	410 U		400 U		410 U		400 U	
BENZO(G,H,I)PERYLENE	410 U		960 U		410 U		400 U	

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 Com - Comments  
 NA - Not Analyzed



SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/08/95 13:41:07

Compound	GPT17-4(9.0)DL 9506108-11C		GPT17-4(9.0)DL 9506108-11C		GPT17-4(9.0)DL 9506108-11C		GPT17-4(9.0)DL 9506108-11C		GPT17-4(9.0)DL 9506108-03B	
	Result	Val	Com	Result	Val	Com	Result	Val	Result	Com
PHENOL	840 U	10 U								
BIS(2-CHLOROETHYL)ETHER	840 U	10 U								
2-CHLOROPHENOL	840 U	10 U								
1,3-DICHLOROBENZENE	840 U	10 U								
1,4-DICHLOROBENZENE	840 U	10 U								
1,2-DICHLOROBENZENE	840 U	10 U								
2-METHYLPHENOL	840 U	10 U								
2,2-OXYBIS(1-CHLOROPROPANE)	840 U	10 U								
4-METHYLPHENOL	840 U	10 U								
N-NITROSO-DI-N-PROPYLAMINE	840 U	10 U								
HEXACHLOROETHANE	840 U	10 U								
NITROBENZENE	840 U	10 U								
ISOPHORONE	840 U	10 U								
2-NITROPHENOL	840 U	10 U								
2,4-DIMETHYLPHENOL	840 U	10 U								
BIS(2-CHLOROETHOXY)METHANE	840 U	10 U								
2,4-DICHLOROPHENOL	840 U	10 U								
1,2,4-TRICHLOROBENZENE	840 U	10 U								
NAPHTHALENE	1900 D	320 E								
4-CHLORANILINE	840 U	10 U								
HEXACHLOROBUTADIENE	840 U	10 U								
4-CHLORO-3-METHYLPHENOL	840 U	10 U								
2-METHYLNAPHTHALENE	4500 D	440 E								
HEXACHLOROCYCLOPENTADIENE	840 U	10 U								
2,4,6-TRICHLOROPHENOL	840 U	10 U								
2,4,5-TRICHLOROPHENOL	2000 U	25 U								
2-CHLORONAPHTHALENE	840 U	10 U								
2-NITROANILINE	2000 U	25 U								
DIMETHYLPHTHALATE	840 U	10 U								
ACENAPHTHYLENE	840 U	10 U								
2,6-DINITROTOLUENE	840 U	10 U								
3-NITROANILINE	2000 U	25 U								
ACENAPHTHENE	840 U	10 U								
2,4-DINITROPHENOL	840 U	10 U								
DIBENZOFURAN	840 U	10 U								
2,4-DINITROTOLUENE	840 U	10 U								
DIETHYLPHTHALATE	840 U	10 U								
4-CHLOROPHENYL-PHENYLETHER	840 U	10 U								
FLUORENE	140 JD	10 U								
4-NITROANILINE	2000 U	25 U								
4,6-DINITRO-2-METHYLPHENOL	2000 U	25 U								
N-NITROSODIPHENYLAMINE (1)	840 U	10 U								
4-BROMOPHENYL-PHENYLETHER	840 U	10 U								
HEXACHLOROBENZENE	840 U	10 U								
PENTACHLOROPHENOL	2000 U	25 U								
PHENANTHRENE	840 U	10 U								
ANTHRACENE	840 U	10 U								
CARBAZOLE	840 U	10 U								
DI-N-BUTYLPHTHALATE	840 U	10 U								
FLUORANTHENE	840 U	10 U								
PYRENE	840 U	10 U								
BUTYLBENZYLPHTHALATE	840 U	10 U								
3,3'-DICHLOROBENZIDINE	840 U	10 U								
BENZO(A)ANTHRACENE	840 U	10 U								
CHRYSENE	840 U	10 U								
BIS(2-ETHYLHEXYL)PHTHALATE	840 U	0.5 J								
DI-N-OCTYLPHTHALATE	840 U	10 U								
BENZO(B)FLUORANTHENE	840 U	10 U								
BENZO(K)FLUORANTHENE	840 U	10 U								
BENZO(A)PYRENE	840 U	10 U								
INDENO(1,2,3-CD)PYRENE	840 U	10 U								
DIBENZO(A,H)ANTHRACENE	840 U	10 U								
BENZO(G,H,I)PERYLENE	840 U	10 U								

al - Validity Refer to data qualifier definitions.  
 om - Comments  
 A - Not Analyzed

SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/08/95 13:41:07

Compound	GWT17-4DL 9506108-03C V6108 WATER UG/L		GWT17-4DL 9506108-03C V6108 WATER UG/L		Result	Com	Val	Com	Result	Com	Val	Com
	Result	Com	Result	Com								
PHENOL	80 U											
BIS(2-CHLOROETHYL)ETHER	80 U											
2-CHLOROPHENOL	80 U											
1,3-DICHLOROBENZENE	80 U											
1,4-DICHLOROBENZENE	80 U											
1,2-DICHLOROBENZENE	80 U											
2-METHYLPHENOL	80 U											
2,2'-OXYBIS(1-CHLOROPROPANE)	80 U											
4-METHYLPHENOL	80 U											
N-NITROSO-DI-N-PROPYLAMINE	80 U											
HEXACHLOROETHANE	80 U											
NITROBENZENE	80 U											
ISOPHORONE	80 U											
2-NITROPHENOL	80 U											
2,4-DIMETHYLPHENOL	80 U											
BIS(2-CHLOROETHOXY)METHANE	80 U											
2,4-DICHLOROPHENOL	80 U											
1,2,4-TRICHLOROBENZENE	80 U											
NAPHTHALENE	480 D											
4-CHLOROANILINE	80 U											
HEXACHLOROBUTADIENE	80 U											
4-CHLORO-3-METHYLPHENOL	80 U											
2-METHYLNAPHTHALENE	560 D											
HEXACHLOROCYCLOPENTADIENE	80 U											
2,4,6-TRICHLOROPHENOL	80 U											
2,4,5-TRICHLOROPHENOL	200 U											
2-CHLORONAPHTHALENE	80 U											
2-NITROANILINE	200 U											
DIMETHYLPHTHALATE	80 U											
ACENAPHTHYLENE	80 U											
2,6-DINITROTOLUENE	80 U											
3-NITROANILINE	200 U											
ACENAPHTHENE	80 U											
2,4-DINITROPHENOL	200 U											
4-NITROPHENOL	200 U											
DIBENZOFURAN	80 U											
2,4-DINITROTOLUENE	80 U											
DIETHYLPHTHALATE	80 U											
4-CHLOROPHENYL-PHENYLETHER	80 U											
FLUORENE	80 U											
4-NITROANILINE	200 U											
4,6-DINITRO-2-METHYLPHENOL	200 U											
N-NITROSDIPHENYLAMINE (1)	80 U											
4-BROMOPHENYL-PHENYLETHER	80 U											
HEXACHLOROBENZENE	80 U											
PENTACHLOROPHENOL	200 U											
PHENANTHRENE	4 JD											
ANTHRACENE	80 U											
CARBAZOLE	80 U											
DI-N-BUTYLPHTHALATE	80 U											
FLUORANTHENE	80 U											
PYRENE	80 U											
BUTYLBENZYLPHTHALATE	80 U											
3,3'-DICHLOROBENZIDINE	80 U											
BENZO(A)ANTHRACENE	80 U											
CHRYSENE	80 U											
BIS(2-ETHYLHEXYL)PHTHALATE	80 U											
DI-N-OCTYLPHTHALATE	80 U											
BENZO(B)FLUORANTHENE	80 U											
BENZO(K)FLUORANTHENE	80 U											
BENZO(A)PYRENE	80 U											
INDENO(1,2,3-CD)PYRENE	80 U											
DIBENZ(A,H)ANTHRACENE	80 U											
BENZO(G,H,I)PERYLENE	80 U											

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

SDG V6108 \*\*\* PCTMST \*\*\* 08/08/95 13:41:42

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT117-1(5.0)	9506108-16A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	23	
GPT117-1(8.5)	9506108-17A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	18	
GPT117-2(5.0)	9506108-14A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	23	
GPT117-2(8.0)	9506108-15A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	18	
GPT117-3(5.0)	9506108-12A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	20	
GPT117-3(8.5)	9506108-13A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	17	
GPT117-4(5.2)	9506108-10A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	21	
GPT117-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	06/30/95	06/29/95	PERCENT MOISTURE	21	
GPT868-1(9.5)	9506108-09A	SOIL	ORIG	06/27/95	07/06/95	07/05/95	PERCENT MOISTURE	24	

IG V6108 \*\*\* TPHPRG \*\*\* 08/08/95 13:41:44

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
PT17-1(5.0)	9506108-16A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - BENZENE	6	U
PT17-1(5.0)	9506108-16A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOLUENE	6	U
PT17-1(5.0)	9506108-16A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - ETHYLBENZENE	6	U
PT17-1(5.0)	9506108-16A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOTAL XYLENES	6	U
PT17-1(5.0)	9506108-16A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	1300	U
PT17-1(5.0)	9506108-16A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	1300	U
PT17-1(8.5)	9506108-17A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - BENZENE	440	U
PT17-1(8.5)	9506108-17A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOLUENE	120	U
PT17-1(8.5)	9506108-17A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - ETHYLBENZENE	120	U
PT17-1(8.5)	9506108-17A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOTAL XYLENES	120	U
PT17-1(8.5)	9506108-17A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	24000	U
PT17-1(8.5)	9506108-17A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	860000	Y
PT17-2(5.0)	9506108-14A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - BENZENE	6	U
PT17-2(5.0)	9506108-14A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - TOLUENE	6	U
PT17-2(5.0)	9506108-14A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - ETHYLBENZENE	6	U
PT17-2(5.0)	9506108-14A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - TOTAL XYLENES	6	U
PT17-2(5.0)	9506108-14A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - GASOLINE	1300	U
PT17-2(5.0)	9506108-14A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	OTHER COMPONENTS *	7400	U
PT17-2(8.0)	9506108-15A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - BENZENE	1800	U
PT17-2(8.0)	9506108-15A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOLUENE	120	U
PT17-2(8.0)	9506108-15A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - ETHYLBENZENE	5200	U
PT17-2(8.0)	9506108-15A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOTAL XYLENES	120	U
PT17-3(5.0)	9506108-12A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	24000	U
PT17-3(5.0)	9506108-12A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	890000	Y
PT17-3(5.0)	9506108-12A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - BENZENE	6	U
PT17-3(5.0)	9506108-12A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOLUENE	6	U
PT17-3(5.0)	9506108-12A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - ETHYLBENZENE	6	U
PT17-3(5.0)	9506108-12A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOTAL XYLENES	6	U
PT17-3(8.5)	9506108-13A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	1200	U
PT17-3(8.5)	9506108-13A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	1200	U
PT17-3(8.5)	9506108-13A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - BENZENE	120	U
PT17-3(8.5)	9506108-13A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOLUENE	120	U
PT17-3(8.5)	9506108-13A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - ETHYLBENZENE	120	U
PT17-3(8.5)	9506108-13A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOTAL XYLENES	120	U
PT17-4(5.2)	9506108-10A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	24000	U
PT17-4(5.2)	9506108-10A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	320000	Y
PT17-4(5.2)	9506108-10A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - BENZENE	25	U
PT17-4(5.2)	9506108-10A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - TOLUENE	25	U
PT17-4(5.2)	9506108-10A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - ETHYLBENZENE	25	U
PT17-4(5.2)	9506108-10A	SOIL	ORIG	06/27/95	07/05/95	06/30/95	TPH - TOTAL XYLENES	25	U
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	5100	U
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	210000	Y
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - BENZENE	460	U
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOLUENE	130	U
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - ETHYLBENZENE	130	U
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOTAL XYLENES	130	U
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	25000	U
PT17-4(9.0)	9506108-11A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	590000	Y
PT868-1(9.5)	9506108-09A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - BENZENE	66	U
PT868-1(9.5)	9506108-09A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOLUENE	66	U
PT868-1(9.5)	9506108-09A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - ETHYLBENZENE	66	U
PT868-1(9.5)	9506108-09A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - TOTAL XYLENES	66	U
PT868-1(9.5)	9506108-09A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	TPH - GASOLINE	13000	U
PT868-1(9.5)	9506108-09A	SOIL	ORIG	06/27/95	07/01/95	06/30/95	OTHER COMPONENTS *	190000	Y
PT17-1	9506108-05A	WATER	ORIG	06/27/95	06/30/95		TPH - BENZENE	25	U
PT17-1	9506108-05A	WATER	ORIG	06/27/95	06/30/95		TPH - TOLUENE	25	U
PT17-1	9506108-05A	WATER	ORIG	06/27/95	06/30/95		TPH - ETHYLBENZENE	25	U

GWT17-1	9506108-05A	WATER	ORIG	06/27/95	06/30/95	TPH - TOTAL XYLENES	25	U
GWT17-1	9506108-05A	WATER	ORIG	06/27/95	06/30/95	TPH - GASOLINE	2500	U
GWT17-1	9506108-05A	WATER	ORIG	06/27/95	06/30/95	OTHER COMPONENTS *	26000	Y
GWT17-2	9506108-01A	WATER	ORIG	06/27/95	06/30/95	TPH - BENZENE	880	U
GWT17-2	9506108-01A	WATER	ORIG	06/27/95	06/30/95	TPH - TOLUENE	25	U
GWT17-2	9506108-01A	WATER	ORIG	06/27/95	06/30/95	TPH - ETHYLBENZENE	25	X
GWT17-2	9506108-01A	WATER	ORIG	06/27/95	06/30/95	TPH - TOTAL XYLENES	38	U
GWT17-2	9506108-01A	WATER	ORIG	06/27/95	06/30/95	TPH - GASOLINE	2500	U
GWT17-2	9506108-01A	WATER	ORIG	06/27/95	06/30/95	OTHER COMPONENTS *	81000	Y
GWT17-2	9506108-01A	WATER	ORIG	06/27/95	06/30/95	TPH - BENZENE	250	U
GWT17-3	9506108-02A	WATER	ORIG	06/27/95	06/30/95	TPH - TOLUENE	5	U
GWT17-3	9506108-02A	WATER	ORIG	06/27/95	06/30/95	TPH - ETHYLBENZENE	13	U
GWT17-3	9506108-02A	WATER	ORIG	06/27/95	06/30/95	TPH - TOTAL XYLENES	5	U
GWT17-3	9506108-02A	WATER	ORIG	06/27/95	06/30/95	TPH - GASOLINE	500	U
GWT17-3	9506108-02A	WATER	ORIG	06/27/95	06/30/95	OTHER COMPONENTS *	7200	Y
GWT17-4	9506108-03A	WATER	ORIG	06/27/95	06/30/95	TPH - BENZENE	360	U
GWT17-4	9506108-03A	WATER	ORIG	06/27/95	06/30/95	TPH - TOLUENE	10	U
GWT17-4	9506108-03A	WATER	ORIG	06/27/95	06/30/95	TPH - ETHYLBENZENE	10	U
GWT17-4	9506108-03A	WATER	ORIG	06/27/95	06/30/95	TPH - TOTAL XYLENES	10	U
GWT17-4	9506108-03A	WATER	ORIG	06/27/95	06/30/95	TPH - GASOLINE	1000	U
GWT17-4	9506108-03A	WATER	ORIG	06/27/95	06/30/95	OTHER COMPONENTS *	35000	Y
GWT868-1	9506108-07B	WATER	ORIG	06/27/95	07/01/95	TPH - BENZENE	0.5	U
GWT868-1	9506108-07B	WATER	ORIG	06/27/95	07/01/95	TPH - TOLUENE	0.5	U
GWT868-1	9506108-07B	WATER	ORIG	06/27/95	07/01/95	TPH - ETHYLBENZENE	0.5	U
GWT868-1	9506108-07B	WATER	ORIG	06/27/95	07/01/95	TPH - TOTAL XYLENES	6	X
GWT868-1	9506108-07B	WATER	ORIG	06/27/95	07/01/95	TPH - GASOLINE	50	U
GWT868-1	9506108-07B	WATER	ORIG	06/27/95	07/01/95	OTHER COMPONENTS *	5900	Y
GWT868-2	9506108-08B	WATER	ORIG	06/27/95	06/29/95	TPH - BENZENE	0.5	U
GWT868-2	9506108-08B	WATER	ORIG	06/27/95	06/29/95	TPH - TOLUENE	0.5	U
GWT868-2	9506108-08B	WATER	ORIG	06/27/95	06/29/95	TPH - ETHYLBENZENE	0.5	U
GWT868-2	9506108-08B	WATER	ORIG	06/27/95	06/29/95	TPH - TOTAL XYLENES	0.5	U
GWT868-2	9506108-08B	WATER	ORIG	06/27/95	06/29/95	TPH - GASOLINE	50	U
GWT868-2	9506108-08B	WATER	ORIG	06/27/95	06/29/95	OTHER COMPONENTS *	50	U
TB-1	9506108-06A	WATER	ORIG	06/27/95	06/29/95	TPH - BENZENE	0.5	U
TB-1	9506108-06A	WATER	ORIG	06/27/95	06/29/95	TPH - TOLUENE	0.5	U
TB-1	9506108-06A	WATER	ORIG	06/27/95	06/29/95	TPH - ETHYLBENZENE	0.5	U
TB-1	9506108-06A	WATER	ORIG	06/27/95	06/29/95	TPH - TOTAL XYLENES	0.5	U
TB-1	9506108-06A	WATER	ORIG	06/27/95	06/29/95	TPH - GASOLINE	50	U
TB-1	9506108-06A	WATER	ORIG	06/27/95	06/29/95	OTHER COMPONENTS *	50	U



CLIENTS/ID	LABSID	MATRIX	SMP/TYPE	SAMP/DATE	ANLY/DATE	EXT/DATE	ANALYTE	RESULT	QUAL
GPT17-1(5.0)	9506108-168	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - DIESEL (C8-C28)	1300	U
GPT17-1(5.0)	9506108-168	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - KEROSENE (C8-C18)	1300	U
GPT17-1(5.0)	9506108-168	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - MOTOR OIL (C16-C32)	13000	U
GPT17-1(5.0)	9506108-168	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - JP-5 (C8-C16)	1300	U
GPT17-1(5.0)	9506108-168	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS *	1300	U
GPT17-1(8.5)	9506108-178	SOIL	ORIG	06/27/95	07/06/95	06/29/95	TPH - DIESEL (C8-C28)	6100	U
GPT17-1(8.5)	9506108-178	SOIL	ORIG	06/27/95	07/06/95	06/29/95	TPH - KEROSENE (C8-C18)	6100	U
GPT17-1(8.5)	9506108-178	SOIL	ORIG	06/27/95	07/06/95	06/29/95	TPH - MOTOR OIL (C16-C32)	61000	U
GPT17-1(8.5)	9506108-178	SOIL	ORIG	06/27/95	07/06/95	06/29/95	TPH - JP-5 (C8-C16)	6100	U
GPT17-2(5.0)	9506108-148	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS * JPS	1700000	Y
GPT17-2(5.0)	9506108-148	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - DIESEL (C8-C28)	1300	U
GPT17-2(5.0)	9506108-148	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - KEROSENE (C8-C18)	1300	U
GPT17-2(5.0)	9506108-148	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - MOTOR OIL (C16-C32)	13000	U
GPT17-2(5.0)	9506108-148	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - JP-5 (C8-C16)	1300	U
GPT17-2(5.0)	9506108-148	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS *	8400	U
GPT17-2(8.0)	9506108-158	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - DIESEL (C8-C28)	6100	U
GPT17-2(8.0)	9506108-158	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - KEROSENE (C8-C18)	6100	U
GPT17-2(8.0)	9506108-158	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - MOTOR OIL (C16-C32)	61000	U
GPT17-2(8.0)	9506108-158	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - JP-5 (C8-C16)	6100	U
GPT17-3(5.0)	9506108-128	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS * JPS	1500000	Y
GPT17-3(5.0)	9506108-128	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - DIESEL (C8-C28)	1200	U
GPT17-3(5.0)	9506108-128	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - KEROSENE (C8-C18)	1200	U
GPT17-3(5.0)	9506108-128	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT17-3(5.0)	9506108-128	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - JP-5 (C8-C16)	1200	U
GPT17-3(5.0)	9506108-128	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS *	1200	U
GPT17-3(8.5)	9506108-138	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - DIESEL (C8-C28)	1200	U
GPT17-3(8.5)	9506108-138	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - KEROSENE (C8-C18)	1200	U
GPT17-3(8.5)	9506108-138	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT17-3(8.5)	9506108-138	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - JP-5 (C8-C16)	1200	U
GPT17-3(8.5)	9506108-138	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS * JPS	3100000	Y
GPT17-4(5.2)	9506108-108	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - DIESEL (C8-C28)	5100	U
GPT17-4(5.2)	9506108-108	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - KEROSENE (C8-C18)	5100	U
GPT17-4(5.2)	9506108-108	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - MOTOR OIL (C16-C32)	51000	U
GPT17-4(5.2)	9506108-108	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - JP-5 (C8-C16)	5100	U
GPT17-4(5.2)	9506108-108	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS * JPS	700000	Y
GPT17-4(9.0)	9506108-118	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - DIESEL (C8-C28)	5100	U
GPT17-4(9.0)	9506108-118	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - KEROSENE (C8-C18)	5100	U
GPT17-4(9.0)	9506108-118	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - MOTOR OIL (C16-C32)	51000	U
GPT17-4(9.0)	9506108-118	SOIL	ORIG	06/27/95	07/05/95	06/29/95	TPH - JP-5 (C8-C16)	5100	U
GPT17-4(9.0)	9506108-118	SOIL	ORIG	06/27/95	07/05/95	06/29/95	OTHER COMPONENTS * JPS	8100000	Y
GWT17-1	9506108-058	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - DIESEL (C8-C28)	500	U
GWT17-1	9506108-058	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - KEROSENE (C8-C18)	500	U
GWT17-1	9506108-058	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - MOTOR OIL (C16-C32)	5000	U
GWT17-1	9506108-058	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - JP-5 (C8-C16)	500	U
GWT17-1	9506108-058	WATER	ORIG	06/27/95	07/06/95	06/29/95	OTHER COMPONENTS * JPS	80000	Y
GWT17-2	9506108-018	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - DIESEL (C8-C28)	1000	U
GWT17-2	9506108-018	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - KEROSENE (C8-C18)	1000	U
GWT17-2	9506108-018	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - MOTOR OIL (C16-C32)	10000	U
GWT17-2	9506108-018	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - JP-5 (C8-C16)	1000	U
GWT17-2	9506108-018	WATER	ORIG	06/27/95	07/06/95	06/29/95	OTHER COMPONENTS * JPS	2000000	Y
GWT17-3	9506108-028	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - DIESEL (C8-C28)	500	U
GWT17-3	9506108-028	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - KEROSENE (C8-C18)	500	U
GWT17-3	9506108-028	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - MOTOR OIL (C16-C32)	5000	U
GWT17-3	9506108-028	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - JP-5 (C8-C16)	500	U
GWT17-3	9506108-028	WATER	ORIG	06/27/95	07/06/95	06/29/95	OTHER COMPONENTS * JPS	50000	Y
GWT17-4	9506108-038	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - DIESEL (C8-C28)	500	U
GWT17-4	9506108-038	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - KEROSENE (C8-C18)	500	U

GMT17-4	9506108-03B	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - MOTOR OIL (C16-C32)	5000	U
GMT17-4	9506108-03B	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - JP-5 (C8-C16)	500	U
GMT17-4	9506108-03B	WATER	ORIG	06/27/95	07/06/95	06/29/95	OTHER COMPONENTS * JP5	88000	Y
GMT17-99	9506108-04A	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - DIESEL (C8-C28)	500	U
GMT17-99	9506108-04A	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - KEROSENE (C8-C18)	500	U
GMT17-99	9506108-04A	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - MOTOR OIL (C16-C32)	5000	U
GMT17-99	9506108-04A	WATER	ORIG	06/27/95	07/06/95	06/29/95	TPH - JP-5 (C8-C16)	500	U
GMT17-99	9506108-04A	WATER	ORIG	06/27/95	07/06/95	06/29/95	OTHER COMPONENTS *	67000	Y

# PRC CHEMICAL DATA TRANSFER LIST

METHOD CODES

PRC/JMM SAMPLE ID	SAMPLE DATE	CLP VOC	CLP SVOC	TPHG Metals	TPHD Metals	Chp Metals	CLP VOC TICS	VALIDATION STATUS / LEVEL	VALIDATION COMPANY	COMMENTS
GWT87-1	7-5-95	N	N	N	N	N	N		NA	
GPT41A-4(6.7)	7-7-95	N	N	N	N	N	N			
GPT57-4(4.5)	7-6-95	N	N	N	N	N	N			
GPT57-3(5.0)	7-5-95	N	N	N	N	N	N			
GWT41A-4	7-7-95	N	N	N	N	N	N			
GWT57-4	7-6-95	N	N	N	N	N	N			
GPT57-3(7.5)	7-5-95	N	N	N	N	N	N			
GPT57-2(4.5)	7-6-95	N	N	N	N	N	N			
GWT57-3	7-5-95	N	N	N	N	N	N			
GWT57-2	7-6-95	N	N	N	N	N	N			
GPT57-1(6.0)	7-5-95	N	N	N	N	N	N			
GPT57-1(8.5)	7-5-95	N	N	N	N	N	N			
GWT57-1	↓	N	N	N	N	N	N			
GPT69-2(6.5)	7-7-95	N	N	N	N	N	N			
GWT69-2	7-7-95	N	N	N	N	N	N			
GWT22-2	7-6-95	N	N	N	N	N	N			
GWT22-1	↓	N	N	N	N	N	N			
GWT55-1	↓	N	N	N	N	N	N			
GWT55-2	↓	N	N	N	N	N	N			
VBLKAG	7-11-95	N	N	N	N	N	N			
TOTAL NO. OF SAMPLES: _____									TOTAL PAGES: _____	

Originated by: Jack Barrow Date: 8-18-95  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Entered to database by: \_\_\_\_\_ Date: \_\_\_\_\_

P = PENDING VALID. C = VALID. COMPLETE U = VALID. STATUS UNKNOWN R = RETURNED TO LAB. N = NO VALID. CONDUCTED  
 1 = NEESA LEVEL A 2 = NEESA LEVEL B 3 = NEESA LEVEL C 4 = NEESA LEVEL D 5 = NEESA LEVEL E

NOTE: Please return this form signed and dated to: PRC Denver, attn: Moffett Field Document Control, after the data has been entered into the Moffett database.



**CHAIN-OF-CUSTODY RECORD**

DESTINATION

V7018

950 7020

SAMPLE I.D.	DATE OF COLLECTION	TIME OF COLLECTION	SAMPLE MEDIUM (MATRIX)	PROJECT JOB #		SAMPLING TEAM #	SAMPLE LOCATION	NUMBER/SIZE OF CONTAINERS	ANALYSES REQUIRED				REMARKS
				GR	SR				FIELD SAMPLE PREPARATION	OTHER	OTHER	OTHER	
21	7/16/95	0930	Soil	X			TANK 57	2-400Z JARS	MS	MS	MS	MS	MS
22	7/16/95	0930	Water	X			TANK 57	1-16oz jar					
23	7/16/95	1030	Soil	X			TANK 57	2-16oz jars					MS
24	7/16/95	1115	Water	X			TANK 57	4-16oz jars					
25	7/16/95	1518	Water				TANK 22	2-40ml P					
26	7/16/95	1535	Water	X			TANK 22	3-40ml P					
27	7/16/95	1903	Water	X			TANK 55	2-40ml P					
28	7/16/95	1945	Water	X			TANK 55	3-40ml P					
29	7/16/95	0930	Soil	X			TANK 69	2-16oz jars					
30	7/16/95	1005	Water	X			TANK 69	2-16oz jars					

SIGNATURE	NAME (print)	COMPANY/TITLE	DATE	TIME
<i>Frederic A. Aulsebrook</i>	FREDERIC A. AUSEBROOK	PRC-EMI	7-7-95	1500
<i>Faye Aranda</i>	FAYE ARANDA	FACE/MP / SAMPLE CUSTODIAN	7/7/95	15:00

REMARKS:  
 Please note that there are only 3 VOA vials and that TPH migrates and VOLS are required.  
 10-DAY VERBAL FIDSA

INSTRUCTIONS: Enter only one of the following four codes for each analysis required & for each sample listed. The codes should be entered under the columns labeled "ANALYSES REQUIRED".  
**U = UNPRESERVED AND UNFILTERED SAMPLE**    **P = PRESERVED SAMPLE**    **F = FILTERED SAMPLE**    **B = BOTH PRESERVED & FILTERED SAMPLE**

PROJECT NAME	PROJECT JOB #	ANALYSES REQUIRED		NUMBER/SIZE OF CONTAINERS	REMARKS
		FIELD SAMPLE PREPARATION	ANALYSES REQUIRED		
Molten Protein Tank Sigsbee	0440201RS1FW	U	U	7-1000	
SAMPLER(S): PRINTED NAME AND SIGNATURE John Mergat, Gweneth Fred Allee	SAMPLING TEAM #	U	U	1-400	
SAMPLE ID.	DATE OF COLLECTION	TIME OF COLLECTION	SAMPLE MEDIUM (MATRIX)	SAMPLE LOCATION	
APT-41A-4(67)	7.7.95	1158	Sol	TANK 41A	
AWT-41A-4	7.7.95	1210	WATN	TANK 41A	Additional volume for MS/MSD

SIGNATURE	NAME (print)	COMPANY/TITLE	DATE	TIME
<i>Frederic A Allee</i>	FREDERIC A. ALLEE	PRC. EMI	7.7.95	15:00
<i>Paul Aranda</i>	PAUL ARANDA	PACE/EMP / SAMPLE CUSTODIAN	7.7.95	15:00
RELINQUISHED BY:				
RECEIVED BY:				
RELINQUISHED BY:				
RECEIVED BY:				
RELINQUISHED BY:				
RECEIVED BY:				

REMARKS:  
**10 DAY VERBA/CURBST**

INSTRUCTIONS: Enter only one of the following four codes for each analysis required & for each sample listed. The codes should be entered under the columns labeled "ANALYSES REQUIRED".  
**U = UNPRESERVED AND UNFILTERED SAMPLE**    **P = PRESERVED SAMPLE**    **F = FILTERED SAMPLE**    **B = BOTH PRESERVED & FILTERED SAMPLE**

VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:41:32

Compound	GWT57-2 9507020-04A V7018 WATER UG/L 07/07/95 07/12/95		GWT57-3 9507018-04A V7018 WATER UG/L 07/07/95 07/17/95		GWT57-4 9507020-02A V7018 WATER UG/L 07/07/95 07/12/95		GWT69-2 9507020-10A V7018 WATER UG/L 07/07/95 07/12/95		GWT87-1 9507018-01A V7018 WATER UG/L 07/07/95 07/17/95		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val
CHLOROMETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
BROMOMETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
VINYL CHLORIDE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
CHLOROETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
METHYLENE CHLORIDE	0.08 BJ	0.2 BJ		0.2 BJ	0.1 BJ		0.1 BJ	45 BJ		120 BJ	
ACETONE	2 J	4 B		2 U	1 J		2 U	200 U		40 J	
CARBON DISULFIDE	2 U	2 U		2 U	2 U		2 U	200 U		44 J	
1,1-DICHLOROETHENE	2 U	2 U		2 U	2 U		2 U	2500 U		2500 U	
1,1-DICHLOROETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
1,2-DICHLOROETHENE (TOTAL)	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
CHLOROFORM	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
1,2-DICHLOROETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
2-BUTANONE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
1,1,1-TRICHLOROETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
CARBON TETRACHLORIDE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
BROMODICHLOROMETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
1,2-DICHLOROPROPANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
CIS-1,3-DICHLOROPROPENE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
TRICHLOROETHENE	2 U	2 U		2 U	2 U		2 U	210		200 U	
DIBROMOCHLOROMETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
1,1,2-TRICHLOROETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
BENZENE	0.05 J	0.05 J		2 U	2 U		2 U	200 U		200 U	
TRANS-1,3-DICHLOROPROPENE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
BROMOFORM	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
4-METHYL-2-PENTANONE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
2-HEXANONE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
TETRACHLOROETHENE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
1,1,2,2-TETRACHLOROETHANE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
TOLUENE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
CHLOROBENZENE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
ETHYLBENZENE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
STYRENE	2 U	2 U		2 U	2 U		2 U	200 U		200 U	
XYLENE (TOTAL)	2 U	2 U		2 U	2 U		2 U	200 U		200 U	

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:41:32

Compound	GPT57-3(7.5) 9507018-03A V7018 SOIL UG/KG 07/07/95 07/11/95		GPT57-4(4.5) 9507020-01A V7018 SOIL UG/KG 07/07/95 07/11/95		GPT69-2(6.5) 9507020-09A V7018 SOIL UG/KG 07/07/95 07/11/95		GWT41A-4 9507019-02A V7018 WATER UG/L 07/07/95 07/18/95		GWT57-1 9507018-07A V7018 WATER UG/L 07/07/95 07/12/95		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val
CHLOROMETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
BROMOMETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
VINYL CHLORIDE	13 U	14 U		12 U	10 U		2 U	2 U			
CHLOROETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
METHYLENE CHLORIDE	0.9 BJ	0.8 BJ		0.8 BJ	6 BJ		2 U	2 U			
ACETONE	17 B	10 BJ		8 BJ	29 B		3	3			
CARBON DISULFIDE	2 J	14 U		12 U	0.4 J		2 U	2 U			
1,1-DICHLOROETHENE	0.6 J	14 U		12 U	5 J		0.1 J	0.1 J			
1,1-DICHLOROETHANE	13 U	14 U		12 U	16		0.6 J	0.6 J			
1,2-DICHLOROETHENE (TOTAL)	13 U	14 U		12 U	100		4	4			
CHLOROFORM	13 U	14 U		12 U	10 U		2 U	2 U			
1,2-DICHLOROETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
2-BUTANONE	13 U	14 U		12 U	10 U		2 U	2 U			
1,1,1-TRICHLOROETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
CARBON TETRACHLORIDE	13 U	14 U		12 U	10 U		2 U	2 U			
BROMODICHLOROMETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
1,2-DICHLOROPROPANE	13 U	14 U		12 U	10 U		2 U	2 U			
CIS-1,3-DICHLOROPROPENE	13 U	14 U		12 U	10 U		2 U	2 U			
TRICHLOROETHENE	13 U	14 U		12 U	10 U		2 U	2 U			
DIBROMOCHLOROMETHANE	13 U	14 U		12 U	23		0.6 J	0.6 J			
1,1,2-TRICHLOROETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
BENZENE	13 U	14 U		12 U	10 U		2 U	2 U			
TRANS-1,3-DICHLOROPROPENE	13 U	14 U		12 U	0.7 J		2 U	2 U			
BROMOFORM	13 U	14 U		12 U	10 U		2 U	2 U			
4-METHYL-2-PENTANONE	13 U	14 U		12 U	10 U		2 U	2 U			
2-HEXANONE	13 U	14 U		12 U	10 U		2 U	2 U			
TETRACHLOROETHENE	13 U	14 U		12 U	10 U		2 U	2 U			
1,1,2,2-TETRACHLOROETHANE	13 U	14 U		12 U	10 U		2 U	2 U			
TOLUENE	13 U	14 U		12 U	0.8 J		2 U	2 U			
CHLOROBENZENE	13 U	14 U		12 U	10 U		2 U	2 U			
ETHYLBENZENE	13 U	14 U		12 U	10 U		2 U	2 U			
STYRENE	13 U	14 U		12 U	10 U		2 U	2 U			
XYLENE (TOTAL)	13 U	14 U		12 U	10 U		2 U	2 U			

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed



VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:41:32

Compound	GPT41A-4(6.7)		GPT57-1(6.0)		GPT57-1(8.5)		GPT57-2(4.5)		GPT57-3(5.0)	
	Result	Com	Result	Com	Result	Com	Result	Com	Result	Com
CHLOROMETHANE	13 U		14 U		12 U		13 U		13 U	
BROMOMETHANE	13 U		14 U		12 U		13 U		13 U	
VINYL CHLORIDE	13 U		14 U		12 U		13 U		13 U	
CHLOROETHANE	13 U		14 U		12 U		13 U		13 U	
METHYLENE CHLORIDE	0.8 BJ		0.9 BJ		0.8 BJ		0.7 BJ		2 BJ	
ACETONE	12 BJ		9 BJ		7 BJ		7 BJ		15 B	
CARBON DISULFIDE	13 U		14 U		12 U		13 U		0.5 J	
1,1-DICHLOROETHENE	13 U		14 U		12 U		13 U		13 U	
1,1-DICHLOROETHANE	13 U		14 U		12 U		13 U		13 U	
1,2-DICHLOROETHENE (TOTAL)	15		14 U		12 U		13 U		13 U	
CHLOROFORM	13 U		14 U		12 U		13 U		13 U	
1,2-DICHLOROETHANE	13 U		14 U		12 U		13 U		13 U	
2-BUTANONE	13 U		14 U		12 U		13 U		13 U	
1,1,1-TRICHLOROETHANE	13 U		14 U		12 U		13 U		13 U	
CARBON TETRACHLORIDE	13 U		14 U		12 U		13 U		13 U	
BROMODICHLOROMETHANE	13 U		14 U		12 U		13 U		13 U	
1,2-DICHLOROPROPANE	13 U		14 U		12 U		13 U		13 U	
CIS-1,3-DICHLOROPROPENE	13 U		14 U		12 U		13 U		13 U	
TRICHLOROETHENE	11 J		14 U		12 U		13 U		13 U	
DIBROMOCHLOROMETHANE	13 U		14 U		12 U		13 U		13 U	
1,1,2-TRICHLOROETHANE	13 U		14 U		12 U		13 U		13 U	
BENZENE	13 U		14 U		12 U		13 U		13 U	
TRANS-1,3-DICHLOROPROPENE	13 U		14 U		12 U		13 U		13 U	
BROMOFORM	13 U		14 U		12 U		13 U		13 U	
4-METHYL-2-PENTANONE	13 U		14 U		12 U		13 U		13 U	
2-HEXANONE	13 U		14 U		12 U		13 U		13 U	
TETRACHLOROETHENE	13 U		14 U		12 U		13 U		13 U	
1,1,2,2-TETRACHLOROETHANE	13 U		14 U		12 U		13 U		13 U	
TOLUENE	13 U		14 U		12 U		13 U		13 U	
CHLOROBENZENE	13 U		14 U		12 U		13 U		13 U	
ETHYLBENZENE	13 U		14 U		12 U		13 U		13 U	
STYRENE	13 U		14 U		12 U		13 U		13 U	
XYLENE (TOTAL)	13 U		14 U		12 U		13 U		13 U	

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed



SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:42:00

Compound	GMT41A-4 9507019-02C V7018 WATER UG/L 07/07/95 07/10/95 07/11/95		GMT69-2 9507020-10C V7018 WATER UG/L 07/07/95 07/10/95 07/11/95		GMT41A-4 9507019-02C V7018 WATER UG/L 07/07/95 07/10/95 07/11/95		GMT69-2 9507020-10C V7018 WATER UG/L 07/07/95 07/10/95 07/11/95	
	Result	Com	Result	Com	Result	Com	Result	Com
PHENOL	10 U		10 U		10 U		10 U	
BIS(2-CHLOROETHYL)ETHER	10 U		10 U		10 U		10 U	
2-CHLOROPHENOL	10 U		10 U		10 U		10 U	
1,3-DICHLOROBENZENE	10 U		10 U		10 U		10 U	
1,4-DICHLOROBENZENE	10 U		10 U		10 U		10 U	
1,2-DICHLOROBENZENE	10 U		10 U		10 U		10 U	
2-METHYLPHENOL	10 U		10 U		10 U		10 U	
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U		10 U		10 U		10 U	
4-METHYLPHENOL	10 U		10 U		10 U		10 U	
N-NITROSO-DI-N-PROPYLAMINE	10 U		10 U		10 U		10 U	
HEXACHLOROETHANE	10 U		10 U		10 U		10 U	
NITROBENZENE	10 U		10 U		10 U		10 U	
ISOPHORONE	10 U		10 U		10 U		10 U	
2-NITROPHENOL	10 U		10 U		10 U		10 U	
2,4-DIMETHYLPHENOL	10 U		10 U		10 U		10 U	
BIS(2-CHLOROETHOXY)METHANE	10 U		10 U		10 U		10 U	
2,4-DICHLOROPHENOL	10 U		10 U		10 U		10 U	
1,2,4-TRICHLOROBENZENE	10 U		10 U		10 U		10 U	
NAPHTHALENE	10 U		10 U		10 U		10 U	
4-CHLOROANILINE	10 U		10 U		10 U		10 U	
HEXACHLOROBTADIENE	10 U		10 U		10 U		10 U	
4-CHLORO-3-METHYLPHENOL	10 U		10 U		10 U		10 U	
2-METHYLNAPHTHALENE	10 U		10 U		10 U		10 U	
HEXACHLOROCYCLOPENTADIENE	10 U		10 U		10 U		10 U	
2,4,6-TRICHLOROPHENOL	25 U		25 U		25 U		25 U	
2,4,5-TRICHLOROPHENOL	10 U		10 U		10 U		10 U	
2-CHLORONAPHTHALENE	10 U		10 U		10 U		10 U	
2-NITROANILINE	25 U		25 U		25 U		25 U	
DIMETHYLPHTHALATE	10 U		10 U		10 U		10 U	
ACENAPHTHYLENE	10 U		10 U		10 U		10 U	
2,6-DINITROTOLUENE	10 U		10 U		10 U		10 U	
3-NITROANILINE	25 U		25 U		25 U		25 U	
ACENAPHTHENE	10 U		10 U		10 U		10 U	
2,4-DINITROPHENOL	10 U		10 U		10 U		10 U	
4-NITROPHENOL	10 U		10 U		10 U		10 U	
DIBENZOFURAN	10 U		10 U		10 U		10 U	
2,4-DINITROTOLUENE	10 U		10 U		10 U		10 U	
DIETHYLPHTHALATE	10 U		10 U		10 U		10 U	
4-CHLOROPHENYL-PHENYLETHER	10 U		10 U		10 U		10 U	
FLUORENE	10 U		10 U		10 U		10 U	
4-NITROANILINE	25 U		25 U		25 U		25 U	
4,6-DINITRO-2-METHYLPHENOL	25 U		25 U		25 U		25 U	
N-NITROSODIPHENYLAMINE (1)	10 U		10 U		10 U		10 U	
4-BROMOPHENYL-PHENYLETHER	10 U		10 U		10 U		10 U	
HEXACHLOROBENZENE	10 U		10 U		10 U		10 U	
PENTACHLOROPHENOL	25 U		25 U		25 U		25 U	
PHENANTHRENE	10 U		10 U		10 U		10 U	
ANTHRACENE	10 U		10 U		10 U		10 U	
CARBAZOLE	10 U		10 U		10 U		10 U	
DI-N-BUTYLPHTHALATE	10 U		10 U		10 U		10 U	
FLUORANTHENE	10 U		10 U		10 U		10 U	
PYRENE	10 U		10 U		10 U		10 U	
BUTYLBENZYLPHTHALATE	10 U		10 U		10 U		10 U	
3,3'-DICHLOROBENZIDINE	10 U		10 U		10 U		10 U	
BENZOCANTHRACENE	10 U		10 U		10 U		10 U	
CHRYSENE	10 U		10 U		10 U		10 U	
BIS(2-ETHYLHEXYL)PHTHALATE	16 B		16 B		16 B		16 B	
DI-N-OCTYLPHTHALATE	10 U		10 U		10 U		10 U	
BENZOC(B)FLUORANTHENE	10 U		10 U		10 U		10 U	
BENZOC(K)FLUORANTHENE	10 U		10 U		10 U		10 U	
BENZOC(A)PYRENE	10 U		10 U		10 U		10 U	
INDENO(1,2,3-CD)PYRENE	10 U		10 U		10 U		10 U	
DIBENZ(A,H)ANTHRACENE	10 U		10 U		10 U		10 U	
BENZOC(G,H,I)PERYLENE	10 U		10 U		10 U		10 U	

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

SDG v7018 \*\*\* PCTMST \*\*\* 08/18/95 08:43:41

CLIENTSID	LABSID	MATRIX	SMP TYPE	SAMP DATE	ANLY DATE	EXT DATE	ANALYTE	RESULT	QUAL
GPT41A-4(6.7)	9507019-01E	SOIL	ORIG	07/07/95	07/11/95	07/10/95	PERCENT MOISTURE	22	
GPT57-1(6.0)	9507018-05E	SOIL	ORIG	07/05/95	07/11/95	07/10/95	PERCENT MOISTURE	26	
GPT57-1(8.5)	9507018-06E	SOIL	ORIG	07/05/95	07/11/95	07/10/95	PERCENT MOISTURE	20	
GPT57-2(4.5)	9507020-03E	SOIL	ORIG	07/06/95	07/11/95	07/10/95	PERCENT MOISTURE	24	
GPT57-3(5.0)	9507018-02E	SOIL	ORIG	07/05/95	07/11/95	07/10/95	PERCENT MOISTURE	22	
GPT57-3(7.5)	9507018-03C	SOIL	ORIG	07/05/95	07/12/95	07/11/95	PERCENT MOISTURE	22	
GPT57-4(4.5)	9507020-01E	SOIL	ORIG	07/06/95	07/11/95	07/10/95	PERCENT MOISTURE	26	
GPT69-2(6.5)	9507020-09E	SOIL	ORIG	07/07/95	07/11/95	07/10/95	PERCENT MOISTURE	20	

GWT22-2	9507020-05A	WATER	ORIG	07/06/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT22-2	9507020-05A	WATER	ORIG	07/06/95	07/11/95	TPH - GASOLINE	50	U
GWT22-2	9507020-05A	WATER	ORIG	07/06/95	07/11/95	OTHER COMPONENTS *	50	U
GWT41A-4	9507019-02B	WATER	ORIG	07/07/95	07/11/95	TPH - BENZENE	0.5	U
GWT41A-4	9507019-02B	WATER	ORIG	07/07/95	07/11/95	TPH - TOLUENE	0.5	U
GWT41A-4	9507019-02B	WATER	ORIG	07/07/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT41A-4	9507019-02B	WATER	ORIG	07/07/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT41A-4	9507019-02B	WATER	ORIG	07/07/95	07/11/95	TPH - GASOLINE	50	U
GWT41A-4	9507019-02B	WATER	ORIG	07/07/95	07/11/95	OTHER COMPONENTS *	54	Z
GWT55-1	9507020-07A	WATER	ORIG	07/06/95	07/11/95	TPH - BENZENE	0.5	U
GWT55-1	9507020-07A	WATER	ORIG	07/06/95	07/11/95	TPH - TOLUENE	0.5	U
GWT55-1	9507020-07A	WATER	ORIG	07/06/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT55-1	9507020-07A	WATER	ORIG	07/06/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT55-1	9507020-07A	WATER	ORIG	07/06/95	07/11/95	TPH - GASOLINE	50	U
GWT55-1	9507020-07A	WATER	ORIG	07/06/95	07/11/95	OTHER COMPONENTS *	50	U
GWT55-2	9507020-08A	WATER	ORIG	07/06/95	07/11/95	TPH - BENZENE	0.5	U
GWT55-2	9507020-08A	WATER	ORIG	07/06/95	07/11/95	TPH - TOLUENE	0.5	U
GWT55-2	9507020-08A	WATER	ORIG	07/06/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT55-2	9507020-08A	WATER	ORIG	07/06/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT55-2	9507020-08A	WATER	ORIG	07/06/95	07/11/95	TPH - GASOLINE	50	U
GWT55-2	9507020-08A	WATER	ORIG	07/06/95	07/11/95	OTHER COMPONENTS *	50	U
GWT57-1	9507018-07B	WATER	ORIG	07/05/95	07/11/95	TPH - BENZENE	0.5	U
GWT57-1	9507018-07B	WATER	ORIG	07/05/95	07/11/95	TPH - TOLUENE	0.5	U
GWT57-1	9507018-07B	WATER	ORIG	07/05/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT57-1	9507018-07B	WATER	ORIG	07/05/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT57-1	9507018-07B	WATER	ORIG	07/05/95	07/11/95	TPH - GASOLINE	50	U
GWT57-1	9507018-07B	WATER	ORIG	07/05/95	07/11/95	OTHER COMPONENTS *	50	U
GWT57-2	9507020-04B	WATER	ORIG	07/06/95	07/11/95	TPH - BENZENE	0.5	U
GWT57-2	9507020-04B	WATER	ORIG	07/06/95	07/11/95	TPH - TOLUENE	0.5	U
GWT57-2	9507020-04B	WATER	ORIG	07/06/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT57-2	9507020-04B	WATER	ORIG	07/06/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT57-2	9507020-04B	WATER	ORIG	07/06/95	07/11/95	TPH - GASOLINE	50	U
GWT57-2	9507020-04B	WATER	ORIG	07/06/95	07/11/95	OTHER COMPONENTS *	50	U
GWT57-3	9507018-04B	WATER	ORIG	07/05/95	07/11/95	TPH - BENZENE	0.5	U
GWT57-3	9507018-04B	WATER	ORIG	07/05/95	07/11/95	TPH - TOLUENE	0.5	U
GWT57-3	9507018-04B	WATER	ORIG	07/05/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT57-3	9507018-04B	WATER	ORIG	07/05/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT57-3	9507018-04B	WATER	ORIG	07/05/95	07/11/95	TPH - GASOLINE	50	U
GWT57-3	9507018-04B	WATER	ORIG	07/05/95	07/11/95	OTHER COMPONENTS *	50	U
GWT57-4	9507020-02B	WATER	ORIG	07/06/95	07/11/95	TPH - BENZENE	0.5	U
GWT57-4	9507020-02B	WATER	ORIG	07/06/95	07/11/95	TPH - TOLUENE	0.5	U
GWT57-4	9507020-02B	WATER	ORIG	07/06/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT57-4	9507020-02B	WATER	ORIG	07/06/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT57-4	9507020-02B	WATER	ORIG	07/06/95	07/11/95	TPH - GASOLINE	50	U
GWT57-4	9507020-02B	WATER	ORIG	07/06/95	07/11/95	OTHER COMPONENTS *	50	U
GWT69-2	9507020-10B	WATER	ORIG	07/07/95	07/11/95	TPH - BENZENE	0.5	U
GWT69-2	9507020-10B	WATER	ORIG	07/07/95	07/11/95	TPH - TOLUENE	0.5	U
GWT69-2	9507020-10B	WATER	ORIG	07/07/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT69-2	9507020-10B	WATER	ORIG	07/07/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT69-2	9507020-10B	WATER	ORIG	07/07/95	07/11/95	TPH - GASOLINE	50	U
GWT69-2	9507020-10B	WATER	ORIG	07/07/95	07/11/95	OTHER COMPONENTS *	50	U

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CLIENTSID	LABSID	MATRIX	SMPYTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT41A-4(6.7)	9507019-01B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - BENZENE	6	U
GPT41A-4(6.7)	9507019-01B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - TOLUENE	6	U
GPT41A-4(6.7)	9507019-01B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	6	U
GPT41A-4(6.7)	9507019-01B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	6	U
GPT41A-4(6.7)	9507019-01B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - GASOLINE	1300	U
GPT41A-4(6.7)	9507019-01B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	OTHER COMPONENTS *	1300	U
GPT57-1(6.0)	9507018-05B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - BENZENE	7	U
GPT57-1(6.0)	9507018-05B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOLUENE	7	U
GPT57-1(6.0)	9507018-05B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	7	U
GPT57-1(6.0)	9507018-05B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	7	U
GPT57-1(6.0)	9507018-05B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - GASOLINE	1400	U
GPT57-1(6.0)	9507018-05B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	OTHER COMPONENTS *	1400	U
GPT57-1(8.5)	9507018-06B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - BENZENE	6	U
GPT57-1(8.5)	9507018-06B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOLUENE	6	U
GPT57-1(8.5)	9507018-06B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	6	U
GPT57-1(8.5)	9507018-06B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	6	U
GPT57-1(8.5)	9507018-06B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - GASOLINE	1200	U
GPT57-1(8.5)	9507018-06B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	OTHER COMPONENTS *	1200	U
GPT57-2(4.5)	9507020-03B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - BENZENE	7	U
GPT57-2(4.5)	9507020-03B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - TOLUENE	7	U
GPT57-2(4.5)	9507020-03B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	7	U
GPT57-2(4.5)	9507020-03B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	7	U
GPT57-2(4.5)	9507020-03B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - GASOLINE	1300	U
GPT57-2(4.5)	9507020-03B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	OTHER COMPONENTS *	1300	U
GPT57-3(5.0)	9507018-02B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - BENZENE	6	U
GPT57-3(5.0)	9507018-02B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOLUENE	6	U
GPT57-3(5.0)	9507018-02B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	6	U
GPT57-3(5.0)	9507018-02B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	6	U
GPT57-3(5.0)	9507018-02B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - GASOLINE	1300	U
GPT57-3(5.0)	9507018-02B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	OTHER COMPONENTS *	1300	U
GPT57-3(7.5)	9507018-03B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - BENZENE	6	U
GPT57-3(7.5)	9507018-03B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOLUENE	6	U
GPT57-3(7.5)	9507018-03B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	6	U
GPT57-3(7.5)	9507018-03B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	6	U
GPT57-3(7.5)	9507018-03B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	TPH - GASOLINE	1300	U
GPT57-3(7.5)	9507018-03B	SOIL	ORIG	07/05/95	07/11/95	07/11/95	OTHER COMPONENTS *	1300	U
GPT57-4(4.5)	9507020-01B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - BENZENE	7	U
GPT57-4(4.5)	9507020-01B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - TOLUENE	7	U
GPT57-4(4.5)	9507020-01B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	7	U
GPT57-4(4.5)	9507020-01B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	7	U
GPT57-4(4.5)	9507020-01B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	TPH - GASOLINE	1400	U
GPT57-4(4.5)	9507020-01B	SOIL	ORIG	07/06/95	07/11/95	07/11/95	OTHER COMPONENTS *	1400	U
GPT69-2(6.5)	9507020-09B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - BENZENE	6	U
GPT69-2(6.5)	9507020-09B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - TOLUENE	6	U
GPT69-2(6.5)	9507020-09B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	6	U
GPT69-2(6.5)	9507020-09B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	6	U
GPT69-2(6.5)	9507020-09B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	TPH - GASOLINE	1200	U
GPT69-2(6.5)	9507020-09B	SOIL	ORIG	07/07/95	07/11/95	07/11/95	OTHER COMPONENTS *	1200	U
GWT22-1	9507020-06A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - BENZENE	0.5	U
GWT22-1	9507020-06A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - TOLUENE	0.5	U
GWT22-1	9507020-06A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	0.5	U
GWT22-1	9507020-06A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - TOTAL XYLENES	0.5	U
GWT22-1	9507020-06A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - GASOLINE	50	U
GWT22-1	9507020-06A	WATER	ORIG	07/06/95	07/11/95	07/11/95	OTHER COMPONENTS *	50	U
GWT22-2	9507020-05A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - BENZENE	0.5	U
GWT22-2	9507020-05A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - TOLUENE	0.5	U
GWT22-2	9507020-05A	WATER	ORIG	07/06/95	07/11/95	07/11/95	TPH - ETHYLBENZENE	0.5	U

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CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT41A-4(6.7)	9507019-01C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	1300	U
GPT41A-4(6.7)	9507019-01C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	1300	U
GPT41A-4(6.7)	9507019-01C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	82000	U
GPT41A-4(6.7)	9507019-01C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	TPH - JP-5 (C8-C16)	1300	U
GPT41A-4(6.7)	9507019-01C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	OTHER COMPONENTS *	1300	U
GPT57-1(6.0)	9507018-05C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	1400	U
GPT57-1(6.0)	9507018-05C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	14000	U
GPT57-1(6.0)	9507018-05C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	1400	U
GPT57-1(6.0)	9507018-05C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	1200	U
GPT57-1(8.5)	9507018-06C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	1200	U
GPT57-1(8.5)	9507018-06C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	12000	U
GPT57-1(8.5)	9507018-06C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	1200	U
GPT57-1(8.5)	9507018-06C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	1200	U
GPT57-2(4.5)	9507020-03C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	1300	U
GPT57-2(4.5)	9507020-03C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	13000	U
GPT57-2(4.5)	9507020-03C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	1300	U
GPT57-2(4.5)	9507020-03C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	OTHER COMPONENTS *	1300	U
GPT57-3(5.0)	9507018-02C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	1300	U
GPT57-3(5.0)	9507018-02C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	1300	U
GPT57-3(5.0)	9507018-02C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	75000	U
GPT57-3(5.0)	9507018-02C	SOIL	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	1300	U
GPT57-4(4.5)	9507020-01C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	1400	U
GPT57-4(4.5)	9507020-01C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	1400	U
GPT57-4(4.5)	9507020-01C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	83000	U
GPT57-4(4.5)	9507020-01C	SOIL	ORIG	07/06/95	07/11/95	07/10/95	OTHER COMPONENTS *	1400	U
GPT69-2(6.5)	9507020-09C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	1300	U
GPT69-2(6.5)	9507020-09C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	1300	U
GPT69-2(6.5)	9507020-09C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	13000	U
GPT69-2(6.5)	9507020-09C	SOIL	ORIG	07/07/95	07/11/95	07/10/95	OTHER COMPONENTS *	1300	U
GWT22-2	9507020-05B	WATER	ORIG	07/06/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT22-2	9507020-05B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT22-2	9507020-05B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	500	U
GWT22-2	9507020-05B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	50	U
GWT41A-4	9507019-02C	WATER	ORIG	07/07/95	07/11/95	07/10/95	OTHER COMPONENTS *	450	Y
GWT41A-4	9507019-02C	WATER	ORIG	07/07/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT41A-4	9507019-02C	WATER	ORIG	07/07/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT41A-4	9507019-02C	WATER	ORIG	07/07/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	3300	U
GWT55-1	9507020-07B	WATER	ORIG	07/06/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT55-1	9507020-07B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT55-1	9507020-07B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	500	U
GWT55-1	9507020-07B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	50	U
GWT55-2	9507020-08B	WATER	ORIG	07/06/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT55-2	9507020-08B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT55-2	9507020-08B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT55-2	9507020-08B	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	1600	U
GWT57-1	9507018-07C	WATER	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT57-1	9507018-07C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT57-1	9507018-07C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT57-1	9507018-07C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	50	U

GWT57-1	9507018-07C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT57-1	9507018-07C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - JP-5 (C8-C16)	50	U
GWT57-1	9507018-07C	WATER	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT57-2	9507020-04C	WATER	ORIG	07/06/95	07/11/95	07/10/95	DIESEL (C8-C28)	50	U
GWT57-2	9507020-04C	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT57-2	9507020-04C	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT57-2	9507020-04C	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - JP-5 (C8-C16)	50	U
GWT57-3	9507018-04C	WATER	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT57-3	9507018-04C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT57-3	9507018-04C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT57-3	9507018-04C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT57-3	9507018-04C	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - JP-5 (C8-C16)	50	U
GWT57-4	9507020-02C	WATER	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT57-4	9507020-02C	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT57-4	9507020-02C	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT57-4	9507020-02C	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	1900	U
GWT57-4	9507020-02C	WATER	ORIG	07/06/95	07/11/95	07/10/95	TPH - JP-5 (C8-C16)	50	U
GWT69-2	9507020-10C	WATER	ORIG	07/06/95	07/11/95	07/10/95	OTHER COMPONENTS *	350	Y
GWT69-2	9507020-10C	WATER	ORIG	07/07/95	07/11/95	07/10/95	TPH - DIESEL (C8-C28)	50	U
GWT69-2	9507020-10C	WATER	ORIG	07/07/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT69-2	9507020-10C	WATER	ORIG	07/07/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT69-2	9507020-10C	WATER	ORIG	07/07/95	07/11/95	07/10/95	TPH - JP-5 (C8-C16)	50	U
GWT69-2	9507020-10C	WATER	ORIG	07/07/95	07/11/95	07/10/95	OTHER COMPONENTS *	50	U
GWT87-1	9507018-01B	WATER	ORIG	07/05/95	07/11/95	07/10/95	DIESEL (C8-C28)	50	U
GWT87-1	9507018-01B	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - KEROSENE (C8-C18)	50	U
GWT87-1	9507018-01B	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - MOTOR OIL (C16-C32)	3400	U
GWT87-1	9507018-01B	WATER	ORIG	07/05/95	07/11/95	07/10/95	TPH - JP-5 (C8-C16)	50	U
GWT87-1	9507018-01B	WATER	ORIG	07/05/95	07/11/95	07/10/95	OTHER COMPONENTS *	88	Z



INORGANIC ANALYSIS -- METALS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:42:23

PRC Sample ID Lab Sample ID SDG # Matrix Units Date Received Date Extracted Date Analyzed Analysis Type	GWT57-3 950701804D V7018 WATER UG/L 07/07/95 07/13/95 07/14/95 TOTAL			GWT57-4 950702002D V7018 WATER UG/L 07/07/95 07/13/95 07/14/95 TOTAL			GWT69-2 950702010D V7018 WATER UG/L 07/07/95 07/13/95 07/14/95 TOTAL		
	Result	Val	Com	Result	Val	Com	Result	Val	Com
ANALYTE	Result	Val	Com	Result	Val	Com	Result	Val	Com
ALUMINUM	475 *	365 *		365 *	1030 *		1030 *		
ANTIMONY	28.6 U	28.6 U		28.6 U	28.6 U		28.6 U		
ARSENIC	5.7 B	3.1 U		3.1 U	3.1 U		3.1 U		
BARIUM	157 BE	50.2 BE		50.2 BE	54.2 BE		54.2 BE		
BERYLLIUM	0.40 U	0.40 U		0.40 U	0.40 U		0.40 U		
CADMIUM	0.60 U	0.60 U		0.60 U	0.60 U		0.60 U		
CALCIUM	151000	77600		77600	120000		120000		
CHROMIUM	3.0 B	18.6		18.6	7.4 B		7.4 B		
COBALT	2.3 U	2.6 B		2.6 B	2.8 B		2.8 B		
COPPER	0.94 B	4.5 B		4.5 B	0.40 U		0.40 U		
IRON	498 N*	27.7 UN*		27.7 UN*	1370 N*		1370 N*		
LEAD	3.1	1.8 B		1.8 B	3.5		3.5		
MAGNESIUM	38200 E	290 BE		290 BE	58500 E		58500 E		
MANGANESE	208	3.6 B		3.6 B	36.1		36.1		
MERCURY	0.10 U	0.10 U		0.10 U	0.10 U		0.10 U		
NICKEL	11.9 B	3.6 B		3.6 B	41.5		41.5		
POTASSIUM	1830 B	1030 B		1030 B	1070 B		1070 B		
SELENIUM	3.6 B	3.0 B		3.0 B	3.9 B		3.9 B		
SILVER	2.0 UN	2.1 BN		2.1 BN	2.0 UN		2.0 UN		
SODIUM	9530	5270		5270	50700		50700		
THALLIUM	9.1 B	20.5		20.5	3.9 B		3.9 B		
VANADIUM	3.5 B	5.7 B		5.7 B	5.4 B		5.4 B		
ZINC	10.3 B	10.5 B		10.5 B	11.4 B		11.4 B		

U - Undetected at the concentration reported.  
 B - Reported value is greater than the Instrument Detection Limit (IDL), but less than the Contract Required Detection Limit (CRDL).  
 W - Post digestion spike for Furnace Atomic Absorption (AA) analysis is out of control limits.  
 E - Reported value is estimated because of the presence of interference.  
 N - Spiked sample recovery not within control limits.  
 S - Determined by Method of Standard Additions (MSA).  
 \* - Duplicate analysis precision is not within control limits.  
 + - Correlation coefficient is less than 0.995 for the MSA.  
 M - Duplicate injection precision was not met for AA analysis.

INORGANIC ANALYSIS -- METALS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:42:23

PRC Sample ID Lab Samp Id SDG # Matrix Units Date Received Date Extracted Date Analyzed Analysis Type	GPT41A-4(6.7)		GPT57-1(6.0)		GPT57-1(8.5)		GPT57-2(4.5)		GPT57-3(5.0)	
	Result	Com	Result	Com	Result	Com	Result	Com	Result	Com
ALUMINUM	21800		31500		28700		26500		34300	
ANTIMONY	7.3 UN		7.7 UN		7.2 UN		7.5 UN		7.4 UN	
ARSENIC	5.7		1.8 B		1.2 B		21.6 B		5.3	
BARIUM	362		368		333		913		459	
BERYLLIUM	0.66 B		1.0 B		0.93 B		0.98 B		1.1 B	
CADMIUM	0.32 B		0.59 B		0.54 B		0.42 B		0.52 B	
CALCIUM	107000		75600		44800		47100		24200	
CHROMIUM	65.9 E		100 E		92.5 E		85.9 E		107 E	
COBALT	16.7		21.2		21.4		28.7		26.6	
COPPER	27.6 E		49.3 E		51.9 E		46.7 E		55.8 E	
IRON	29200		44200		41800		42000		51000	
LEAD	9.4		13.0		12.4		12.7		15.1	
MAGNESIUM	13000		15700		14500		14300		17200	
MANGANESE	858 E		423 E		355 E		3320 E		367 E	
MERCURY	0.06 U		0.07 U		0.20		0.08 B		0.10 B	
NICKEL	65.5 E		97.6 E		96.7 E		117 E		116 E	
POTASSIUM	1790		2780		2170		2030		2300	
SELENIUM	0.59 U		0.62 U		0.58 U		0.60 U		0.59 U	
SILVER	0.51 UN		0.54 U		0.50 UN		0.52 UN		0.52 UN	
SODIUM	252 B		180 B		143 B		163 B		166 B	
THALLIUM	0.51 U		0.54 U		0.50 U		0.52 U		1.3 B	
VANADIUM	53.9 E		88.0 E		78.3 E		96.2 E		84.4 E	
ZINC	56.7 E		86.0 E		83.1 E		80.1 E		98.7 E	

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 E - Reported value is estimated because of the presence of interference.  
 N - Spiked sample recovery not within control limits.  
 \* - Determined by Method of Standard Additions (MSA).  
 + - Duplicate analysis precision is not within control limits.  
 + - Correlation coefficient is less than 0.995 for the MSA.  
 M - Duplicate injection precision was not met for AA analysis.

INORGANIC ANALYSIS -- METALS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:42:23

PRC Sample ID Lab Samp Id SDG # Matrix Units Date Received Date Extracted Date Analyzed Analysis Type	GPT57-4(4.5) 950702001D V7018 MG/KG 07/07/95 07/13/95 07/14/95 TOTAL		GPT69-2(6.5) 950702009D V7018 SOIL MG/KG 07/07/95 07/13/95 07/14/95 TOTAL		GMT41A-4 950701902D V7018 WATER UG/L 07/07/95 07/13/95 07/14/95 TOTAL		GMT57-1 950701807D V7018 WATER UG/L 07/07/95 07/13/95 07/14/95 TOTAL		GMT57-2 950702004D V7018 WATER UG/L 07/07/95 07/13/95 07/14/95 TOTAL		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val
ALUMINIUM	40500			20600			897 *	664 *	2300 *		
ANTIMONY	7.7 UN		7.2 UN	7.2 UN			28.6 U	28.6 U	28.6 U		
ARSENIC	8.5		3.9	3.9			3.1 U	3.1 U	3.1 U		
BARIUM	301		158	158			35.9 BE	52.8 BE	78.3 BE		
BERYLLIUM	1.3 B		0.68 B	0.68 B			0.40 U	0.40 U	0.40 U		
CADMIUM	0.42 B		0.26 B	0.26 B			0.61 B	0.60 U	0.60 U		
CALCIUM	25800		32400	32400			538000	78900	142000		
CHROMIUM	122 E		76.3 E	76.3 E			6.9 B	3.7 B	7.6 B		
COBALT	30.7		18.6	18.6			5.5 B	2.5 B	2.5 B		
COPPER	64.6 E		32.8 E	32.8 E			3.4 B	0.40 U	3.7 B		
IRON	58100		31200	31200			982 N*	1130 N*	2770 N*		
LEAD	15.3		8.2	8.2			1.7 B	3.0	2.5 B		
MAGNESIUM	19100		15200	15200			236000 E	21100 E	37800 E		
MANGANESE	379 E		492 E	492 E			1340	104	151		
MERCURY	0.23		0.06 U	0.06 U			0.10 U	0.10 U	0.10 U		
NICKEL	128 E		89.6 E	89.6 E			32.9 B	207	50.0		
POTASSIUM	3120		2020	2020			2350 B	2400 B	1440 B		
SELENIUM	0.62 U		0.58 U	0.58 U			4.4 B	4.3 B	2.3 U		
SILVER	0.54 UN		0.50 UN	0.50 UN			2.0 UN	2.0 UN	2.0 UN		
SODIUM	230 B		206 B	206 B			49100	11700	17400		
THALLIUM	0.54 U		0.50 U	0.50 U			13.2	15.2	2.1 B		
VANADIUM	104 E		69.0 E	69.0 E			6.4 B	1.5 B	8.4 B		
ZINC	110 E		63.7 E	63.7 E			17.2 B	14.4 B	15.4 B		

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 W - Post digestion spike for Furnace Atomic Absorption (AA) analysis is out of control limits.  
 E - Reported value is estimated because of the presence of interference.  
 N - Spiked sample recovery not within control limits.  
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 \* - Duplicate analysis precision is not within control limits.  
 + - Correlation coefficient is less than 0.995 for the MSA.  
 M - Duplicate injection precision was not met for AA analysis.



D..... July 14, 95

**CHAIN-OF-CUSTODY RECORD**

17040 DESTINATION PAGE/MP

PROJECT NAME	PROJECT JOB #	SAMPLING TEAM #		SAMPLE MEDIUM (MATRIX)	TIME OF COLLECTION	DATE OF COLLECTION	SAMPLE LOCATION	NUMBERSIZE OF CONTAINERS	ANALYSES REQUIRED				REMARKS
		1	2						3	4	TPH	TPH extractable	
Investigation - Tank 69	044-0267IR5IFW			SOIL	1530	7/14/95	Tank 69 South Side	4 x 4oz	U	U	U	U	USE ANY ADDITIONAL VOLUME FOR TPH & MS/MSH
	GPT69-01(60)	X		WATER	1615	7/14/95	Tank 69 South Side	6x40mL 2x17.5mL number: 1A12 Poly	P	U	B		
	GWT69-01	X		SOIL	1700	7/14/95	Tank 69 North Side	3x 4oz	U	U	U		
	GPT69-03(65)	X		WATER	1745	7/14/95	Tank 69 North Side	6x40mL 2x17.5mL number: 1A12 Poly	P	U	B		
	GWT69-03	X		WATER	---	7/14/95	Trip Blank	3x 40mL	P				
	TB-3												

RELINQUISHED BY:	SIGNATURE	NAME (print)	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	<i>Brian Schulz</i>	BRIAN L. SCHULZ	PRC Hydrogeslogist	7/17/95	0850
RECEIVED BY:	<i>Don L. Lee</i>	Don C. Cole	PRC	7/17/95	0810
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

REMARKS: Rec'd cool at 4°C #3167  
 J.C. 7/17/95 9:12am

INSTRUCTIONS: Enter only one of the following four codes for each analysis required & for each sample listed. The codes should be entered under the columns labeled "ANALYSES REQUIRED".  
**U = UNPRESERVED AND UNFILTERED SAMPLE** **P = PRESERVED SAMPLE** **F = FILTERED SAMPLE** **B = BOTH PRESERVED & FILTERED SAMPLE**



VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:42:44

Compound	GPT69-01(6.0) 9507040-01A V7040 SOIL UG/KG 07/17/95 07/25/95		GPT69-03(6.5) 9507040-03A V7040 SOIL UG/KG 07/17/95 07/24/95		GPT69-04(5.0) 9507041-01A V7040 SOIL UG/KG 07/17/95 07/24/95		GPT69-01 9507040-02A V7040 WATER UG/L 07/17/95 07/19/95		GPT69-03 9507040-04A V7040 WATER UG/L 07/17/95 07/19/95			
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
CHLOROMETHANE	12 U			12 U			2 U			2 U		
BROMOMETHANE	12 U			12 U			2 U			2 U		
VINYL CHLORIDE	12 U			12 U			2 U			2 U		
CHLOROETHANE	12 U			12 U			2 U			2 U		
METHYLENE CHLORIDE	1 BJ			0.6 BJ			2 U			2 U		
ACETONE	4 BJ			12 U			0.2 BJ			0.3 BJ		
CARBON DISULFIDE	12 U			12 U			3 B			4 B		
1,1-DICHLOROETHANE	12 U			12 U			2 U			2 U		
1,1-DICHLOROETHANE	12 U			12 U			2 U			2 U		
1,2-DICHLOROETHANE (TOTAL)	12 U			12 U			0.06 J			2 U		
CHLOROFORM	12 U			12 U			2 U			2 U		
1,2-DICHLOROETHANE	12 U			12 U			2 U			2 U		
2-BUTANONE	12 U			12 U			2 U			2 U		
1,1,1-TRICHLOROETHANE	12 U			12 U			2 U			2 U		
CARBON TETRACHLORIDE	12 U			12 U			2 U			2 U		
BROMODICHLOROMETHANE	12 U			12 U			2 U			2 U		
1,2-DICHLOROPROPANE	12 U			12 U			2 U			2 U		
CIS-1,3-DICHLOROPROPENE	12 U			12 U			2 U			2 U		
TRICHLOROETHENE	12 U			12 U			2 U			2 U		
DIBROMOCHLOROMETHANE	12 U			12 U			2 U			2 U		
1,1,2-TRICHLOROETHANE	12 U			12 U			2 U			2 U		
BENZENE	12 U			12 U			2 U			2 U		
TRANS-1,3-DICHLOROPROPENE	0.4 BJ			12 U			2 U			2 U		
BROMOFORM	12 U			0.7 J			2 U			2 U		
4-METHYL-2-PENTANONE	12 U			12 U			0.06 J			2 U		
2-HEXANONE	12 U			12 U			2 U			2 U		
TETRACHLOROETHENE	12 U			12 U			2 U			2 U		
1,1,2,2-TETRACHLOROETHANE	12 U			12 U			2 U			2 U		
TOLUENE	12 U			12 U			2 U			2 U		
CHLOROBENZENE	0.7 J			12 U			2 U			2 U		
ETHYLBENZENE	12 U			1 J			2 U			2 U		
STYRENE	12 U			12 U			2 U			2 U		
XYLENE (TOTAL)	12 U			12 U			2 U			2 U		

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 MA - Not Analyzed

VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:42:44

Compound	GHT69-04 9507041-02A V7040 WATER UG/L 07/17/95 07/19/95		RINS-1 9507041-04A V7040 WATER UG/L 07/17/95 07/19/95		TB-3 9507040-05A V7040 WATER UG/L 07/17/95 07/19/95		TB-4 9507041-03A V7040 WATER UG/L 07/17/95 07/19/95	
	Result	Val	Com	Result	Val	Com	Result	Val
CHLOROMETHANE	2 U			2 U			2 U	
BROMOMETHANE	2 U			2 U			2 U	
VINYL CHLORIDE	2 U			2 U			2 U	
CHLOROETHANE	2 U			2 U			2 U	
METHYLENE CHLORIDE	0.3 BJ			0.6 BJ			0.5 BJ	
ACETONE	3 B			4 B			3 B	
CARBON DISULFIDE	0.02 J			2 U			0.1 J	
1,1-DICHLOROETHENE	2 U			2 U			2 U	
1,1-DICHLOROETHANE	2 U			2 U			2 U	
1,2-DICHLOROETHENE (TOTAL)	2 U			2 U			2 U	
CHLOROFORM	2 U			2 U			2 U	
1,2-DICHLOROETHANE	2 U			2 U			2 U	
2-BUTANONE	2 U			2 U			2 U	
1,1,1-TRICHLOROETHANE	2 U			2 U			2 U	
CARBON TETRACHLORIDE	2 U			2 U			2 U	
BROMODICHLOROMETHANE	2 U			2 U			2 U	
1,2-DICHLOROPROPANE	2 U			2 U			2 U	
CIS-1,3-DICHLOROPROPENE	2 U			2 U			2 U	
TRICHLOROETHENE	2 U			2 U			2 U	
DIBROMOCHLOROMETHANE	2 U			2 U			2 U	
1,1,2-TRICHLOROETHANE	2 U			2 U			2 U	
BENZENE	2 U			2 U			2 U	
TRANS-1,3-DICHLOROPROPENE	2 U			2 U			2 U	
BROMOFORM	2 U			2 U			2 U	
4-METHYL-2-PENTANONE	2 U			2 U			2 U	
2-HEXANONE	2 U			2 U			2 U	
TETRACHLOROETHENE	2 U			2 U			2 U	
1,1,2,2-TETRACHLOROETHANE	2 U			2 U			2 U	
TOLUENE	2 U			2 U			2 U	
CHLOROBENZENE	2 U			2 U			2 U	
ETHYLBENZENE	2 U			2 U			2 U	
STYRENE	2 U			2 U			2 U	
XYLENE (TOTAL)	2 U			2 U			2 U	

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed



SDG V7040 \*\*\* PCTWST \*\*\* 08/18/95 08:44:12

CLIENTSID

GPT69-01(6.0)

GPT69-03(6.5)

GPT69-04(5.0)

LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE
9507040-01E	SOIL	ORIG	07/14/95	07/21/95	07/20/95	PERCENT MOISTURE
9507040-03E	SOIL	ORIG	07/14/95	07/21/95	07/20/95	PERCENT MOISTURE
9507041-01E	SOIL	ORIG	07/17/95	07/21/95	07/20/95	PERCENT MOISTURE

RESULT

18

19

18

QUAL

SDG V7040 \*\*\* TPHPRG \*\*\* 08/18/95 08:44:13

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT169-01(6.0)	9507040-01B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - BENZENE	6	U
GPT169-01(6.0)	9507040-01B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - TOLUENE	6	U
GPT169-01(6.0)	9507040-01B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - ETHYLBENZENE	6	U
GPT169-01(6.0)	9507040-01B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - TOTAL XYLENES	6	U
GPT169-01(6.0)	9507040-01B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - GASOLINE	1200	U
GPT169-01(6.0)	9507040-01B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	OTHER COMPONENTS *	1200	U
GPT169-03(6.5)	9507040-03B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - BENZENE	6	U
GPT169-03(6.5)	9507040-03B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - TOLUENE	6	U
GPT169-03(6.5)	9507040-03B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - ETHYLBENZENE	6	U
GPT169-03(6.5)	9507040-03B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - TOTAL XYLENES	6	U
GPT169-03(6.5)	9507040-03B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	TPH - GASOLINE	1200	U
GPT169-03(6.5)	9507040-03B	SOIL	ORIG	07/14/95	07/20/95	07/18/95	OTHER COMPONENTS *	1200	U
GPT169-04(5.0)	9507041-01B	SOIL	ORIG	07/17/95	07/20/95	07/20/95	TPH - BENZENE	6	U
GPT169-04(5.0)	9507041-01B	SOIL	ORIG	07/17/95	07/20/95	07/20/95	TPH - TOLUENE	6	U
GPT169-04(5.0)	9507041-01B	SOIL	ORIG	07/17/95	07/20/95	07/20/95	TPH - ETHYLBENZENE	6	U
GPT169-04(5.0)	9507041-01B	SOIL	ORIG	07/17/95	07/20/95	07/20/95	TPH - TOTAL XYLENES	6	U
GPT169-04(5.0)	9507041-01B	SOIL	ORIG	07/17/95	07/20/95	07/20/95	TPH - GASOLINE	1200	U
GPT169-04(5.0)	9507041-01B	SOIL	ORIG	07/17/95	07/20/95	07/20/95	OTHER COMPONENTS *	1200	U
GMT69-01	9507040-02B	WATER	ORIG	07/14/95	07/20/95		TPH - BENZENE	0.5	U
GMT69-01	9507040-02B	WATER	ORIG	07/14/95	07/20/95		TPH - TOLUENE	0.5	U
GMT69-01	9507040-02B	WATER	ORIG	07/14/95	07/20/95		TPH - ETHYLBENZENE	0.5	U
GMT69-01	9507040-02B	WATER	ORIG	07/14/95	07/20/95		TPH - TOTAL XYLENES	0.5	U
GMT69-01	9507040-02B	WATER	ORIG	07/14/95	07/20/95		TPH - GASOLINE	50	U
GMT69-01	9507040-02B	WATER	ORIG	07/14/95	07/20/95		OTHER COMPONENTS *	50	U
GMT69-03	9507040-04B	WATER	ORIG	07/14/95	07/20/95		TPH - BENZENE	0.5	U
GMT69-03	9507040-04B	WATER	ORIG	07/14/95	07/20/95		TPH - TOLUENE	0.5	U
GMT69-03	9507040-04B	WATER	ORIG	07/14/95	07/20/95		TPH - ETHYLBENZENE	0.5	U
GMT69-03	9507040-04B	WATER	ORIG	07/14/95	07/20/95		TPH - TOTAL XYLENES	0.5	U
GMT69-03	9507040-04B	WATER	ORIG	07/14/95	07/20/95		TPH - GASOLINE	50	U
GMT69-03	9507040-04B	WATER	ORIG	07/14/95	07/20/95		OTHER COMPONENTS *	50	U
GMT69-04	9507041-02B	WATER	ORIG	07/17/95	07/20/95		TPH - BENZENE	0.5	U
GMT69-04	9507041-02B	WATER	ORIG	07/17/95	07/20/95		TPH - TOLUENE	0.5	U
GMT69-04	9507041-02B	WATER	ORIG	07/17/95	07/20/95		TPH - ETHYLBENZENE	0.5	U
GMT69-04	9507041-02B	WATER	ORIG	07/17/95	07/20/95		TPH - TOTAL XYLENES	0.5	U
GMT69-04	9507041-02B	WATER	ORIG	07/17/95	07/20/95		TPH - GASOLINE	50	U
GMT69-04	9507041-02B	WATER	ORIG	07/17/95	07/20/95		OTHER COMPONENTS *	50	U
RINS-1	9507041-04B	WATER	ORIG	07/17/95	07/20/95		TPH - BENZENE	0.5	U
RINS-1	9507041-04B	WATER	ORIG	07/17/95	07/20/95		TPH - TOLUENE	0.5	U
RINS-1	9507041-04B	WATER	ORIG	07/17/95	07/20/95		TPH - ETHYLBENZENE	0.5	U
RINS-1	9507041-04B	WATER	ORIG	07/17/95	07/20/95		TPH - TOTAL XYLENES	0.5	U
RINS-1	9507041-04B	WATER	ORIG	07/17/95	07/20/95		TPH - GASOLINE	50	U
RINS-1	9507041-04B	WATER	ORIG	07/17/95	07/20/95		OTHER COMPONENTS *	50	U

SDG V7040 \*\*\* TPNEXT \*\*\* 08/18/95 08:44:13

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPI69-01(6.0)	9507040-01C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - DIESEL (C8-C28)	1200	U
GPI69-01(6.0)	9507040-01C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - KEROSENE (C8-C18)	1200	U
GPI69-01(6.0)	9507040-01C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPI69-01(6.0)	9507040-01C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - JP-5 (C8-C16)	1200	U
GPI69-01(6.0)	9507040-01C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	OTHER COMPONENTS *	1200	U
GPI69-03(6.5)	9507040-03C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - DIESEL (C8-C28)	1200	U
GPI69-03(6.5)	9507040-03C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - KEROSENE (C8-C18)	1200	U
GPI69-03(6.5)	9507040-03C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPI69-03(6.5)	9507040-03C	SOIL	ORIG	07/14/95	07/21/95	07/19/95	TPH - JP-5 (C8-C16)	1200	U
GPI69-04(5.0)	9507041-01C	SOIL	ORIG	07/17/95	07/21/95	07/19/95	OTHER COMPONENTS *	1200	U
GPI69-04(5.0)	9507041-01C	SOIL	ORIG	07/17/95	07/21/95	07/19/95	TPH - DIESEL (C8-C28)	1200	U
GPI69-04(5.0)	9507041-01C	SOIL	ORIG	07/17/95	07/21/95	07/19/95	TPH - KEROSENE (C8-C18)	1200	U
GPI69-04(5.0)	9507041-01C	SOIL	ORIG	07/17/95	07/21/95	07/19/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPI69-04(5.0)	9507041-01C	SOIL	ORIG	07/17/95	07/21/95	07/19/95	TPH - JP-5 (C8-C16)	1200	U
GWT69-01	9507040-02C	WATER	ORIG	07/17/95	07/21/95	07/19/95	OTHER COMPONENTS *	50	U
GWT69-01	9507040-02C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - DIESEL (C8-C28)	50	U
GWT69-01	9507040-02C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - KEROSENE (C8-C18)	50	U
GWT69-01	9507040-02C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT69-03	9507040-02C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - JP-5 (C8-C16)	50	U
GWT69-03	9507040-04C	WATER	ORIG	07/14/95	07/20/95	07/19/95	OTHER COMPONENTS *	50	U
GWT69-03	9507040-04C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - DIESEL (C8-C28)	50	U
GWT69-03	9507040-04C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - KEROSENE (C8-C18)	50	U
GWT69-03	9507040-04C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT69-03	9507040-04C	WATER	ORIG	07/14/95	07/20/95	07/19/95	TPH - JP-5 (C8-C16)	50	U
GWT69-04	9507041-02C	WATER	ORIG	07/17/95	07/20/95	07/19/95	OTHER COMPONENTS *	50	U
GWT69-04	9507041-02C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - DIESEL (C8-C28)	50	U
GWT69-04	9507041-02C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - KEROSENE (C8-C18)	50	U
GWT69-04	9507041-02C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT69-04	9507041-02C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - JP-5 (C8-C16)	50	U
RINS-1	9507041-04C	WATER	ORIG	07/17/95	07/20/95	07/19/95	OTHER COMPONENTS *	50	U
RINS-1	9507041-04C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - DIESEL (C8-C28)	50	U
RINS-1	9507041-04C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - KEROSENE (C8-C18)	50	U
RINS-1	9507041-04C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - MOTOR OIL (C16-C32)	500	U
RINS-1	9507041-04C	WATER	ORIG	07/17/95	07/20/95	07/19/95	TPH - JP-5 (C8-C16)	50	U
RINS-1	9507041-04C	WATER	ORIG	07/17/95	07/20/95	07/19/95	OTHER COMPONENTS *	50	U

INORGANIC ANALYSIS -- METALS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:43:12

PRC Sample ID Lab Samp Id SDG # Matrix Units Date Received Date Extracted Date Analyzed Analysis Type	GPT69-01(6.0)			GPT69-03(6.5)			GPT69-04(5.0)			GPT69-01			GPT69-03		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
950704001D V7040 SOIL MG/KG 07/17/95 07/27/95 08/01/95 TOTAL	17000 7.0 UN 4.0 132 E 0.40 B 0.15 U 39400 63.8 EN 16.5 29.3 E 28000 6.6 14800 420 E 0.08 B 74.7 E 1560 0.56 U 0.49 UN 256 B 0.49 U 62.8 E 51.0 E			18700 7.0 UN 5.8 113 E 0.51 B 0.15 U 58200 69.1 EN 17.9 35.0 E 31600 8.4 18000 451 E 0.11 B 86.1 E 1240 0.57 U 0.63 BN 324 B 0.49 U 65.1 E 60.2 E			21100 6.9 UN 4.0 186 E 0.52 B 0.15 U 37500 64.1 EN 17.0 34.8 E 31900 9.4 15500 484 E 0.10 B 70.9 E 1810 0.56 U 0.49 UN 186 B 0.49 U 67.1 E 59.1 E			2650 28.6 U 3.1 U 66.0 B 0.40 U 0.60 U 131000 7.0 B 2.3 U 1.8 B 2690 0.80 U 65600 41.3 0.16 B 105 1260 B 3.5 B 2.0 UN 53400 2.0 U 7.0 B 8.3 B			3280 28.6 U 3.1 U 67.5 B 0.40 U 0.60 U 150000 11.2 2.3 U 1.9 B 3320 0.80 U 80700 38.2 0.12 B 73.9 1410 B 2.3 U 2.0 UN 59400 2.0 U 9.8 B 11.9 B		

U - Undetected at the concentration reported.  
 B - Reported value is greater than the Instrument Detection Limit (IDL), but less than the Contract Required Detection Limit (CRDL).  
 W - Post digestion spike for Furnace Atomic Absorption (AA) analysis is out of control limits.  
 E - Reported value is estimated because of the presence of interference.  
 S - Determined by Method of Standard Additions (MSA).  
 N - Spiked sample recovery not within control limits.  
 \* - Duplicate analysis precision is not within control limits.  
 + - Correlation coefficient is less than 0.995 for the MSA.  
 M - Duplicate injection precision was not met for AA analysis.

INORGANIC ANALYSIS -- METALS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/18/95 08:43:12

Analyte	Result		Com		Result		Com		Result		Com	
	Val	Com	Val	Com	Result	Com	Val	Com	Result	Com	Val	Com
PRC Sample ID	GMT69-04											
Lab Samp Id	950704102D											
SDG #	V7040											
Matrix	WATER											
Units	UG/L											
Date Received	07/17/95											
Date Extracted	07/27/95											
Date Analyzed	08/01/95											
Analysis Type	TOTAL											
ALUMINIUM	1430											
ANTIMONY	28.6 U											
ARSENIC	3.1 U											
BARIUM	67.3 B											
BERYLLIUM	0.40 U											
CADMIUM	0.60 U											
CALCIUM	129000											
CHROMIUM	6.2 B											
COBALT	2.3 U											
COPPER	0.40 U											
IRON	1400											
LEAD	0.80 U											
MAGNESIUM	62600											
MANGANESE	21.9											
MERCURY	0.10 B											
NICKEL	17.6 B											
POTASSIUM	1320 B											
SELENIUM	2.3 U											
SILVER	2.0 UN											
SODIUM	52800											
THALLIUM	2.0 B											
VANADIUM	6.3 B											
ZINC	5.3 B											

U - Undetected at the concentration reported.  
 B - Reported value is greater than the Instrument Detection Limit (IDL), but less than the Contract Required Detection Limit (CRDL).  
 W - Post digestion spike for Furnace Atomic Absorption (AA) analysis is out of control limits.  
 E - Reported value is estimated because of the presence of interference.  
 N - Spiked sample recovery not within control limits.  
 S - Determined by Method of Standard Additions (MSA).  
 \* - Duplicate analysis precision is not within control limits.  
 + - Correlation coefficient is less than 0.995 for the MSA.  
 M - Duplicate injection precision was not met for AA analysis.

Date: 8-18-95  
 SDG Nos.: V7036

Pet. Tank Sider

Page: 1 of 2  
 Case Narrative Included (Y/N): Y

# PRC CHEMICAL DATA TRANSFER LIST

METHOD CODES

PRC/JMM SAMPLE ID	SAMPLE DATE	CLP VOC	CLP SUUC	TPHG MdsBIS	TPHD MdsFOS	CLP Metals	CLP VOC TIC	VALIDATION COMPANY	COMMENTS
GPT41A-01(5.0)	7-11-95	N	N	N	N	N	N	NA	
GPT41A-01(7.5)		N	N	N	N	N	N		
GWT41A-01		N	N	N	N	N	N		
GPT41A-03(5.0)		N	N	N	N	N	N		
GPT41A-03(8.0)		N	N	N	N	N	N		
GWT41A-03		N	N	N	N	N	N		
GPT41A-02(5.0)		N	N	N	N	N	N		
GPT41A-02(8.5)		N	N	N	N	N	N		
GWT41A-02		N	N	N	N	N	N		
GWT99-01	41A-03	N	N	N	N	N	N		
TB-2	✓	N	N	N	N	N	N		
VBLKAI	7-13-95	N	N	N	N	N	N		
VBLKAJ	7-14-95	N	N	N	N	N	N		
VBLKAK	7-17-95	N	N	N	N	N	N		
VBLKAL	7-18-95	N	N	N	N	N	N		
VBLKAN	7-19-95	N	N	N	N	N	N		
SBLKJUV	7-20-95	N	N	N	N	N	N		
GBLKWS	7-13-95	N	N	N	N	N	N		
GBLKSF	7-14-95	N	N	N	N	N	N		
DBLKSE	7-14-95	N	N	N	N	N	N		
TOTAL NO. OF SAMPLES: _____								TOTAL PAGES: _____	

Originated by: Jean L. Gorman Date: 8-18-95  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Entered to database by: \_\_\_\_\_ Date: \_\_\_\_\_

P = PENDING VALID. C = VALID. COMPLETE U = VALID. STATUS UNKNOWN R = RETURNED TO LAB. N = NO VALID. CONDUCTED  
 1 = NEESA LEVEL A 2 = NEESA LEVEL B 3 = NEESA LEVEL C 4 = NEESA LEVEL D 5 = NEESA LEVEL E

NOTE: Please return this form signed and dated to: PRC Denver, attn: Moffett Field Document Control, after the data has been entered into the Moffett database.  
 C:\FORMS\TRANSFER.FRM rev 03-08-92

9507036

**CHAIN-OF-CUSTODY RECORD**

V 7/11/95

DESTINATION

FACE MF

DATE: 7/1/95

SAMPLE I.D.	DATE OF COLLECTION	TIME OF COLLECTION	SAMPLE MEDIUM (MATRIX)	PROJECT JOB #	SAMPLING TEAM #	SAMPLE LOCATION	NUMBERSIZE OF CONTAINERS	ANALYSES REQUIRED				REMARKS
								FIELD SAMPLE PREPARATION	SVC	VOC	Metals	
GPT41A-01(5.0)	7/11/95	1250	SOIL	044-0267	IRSI	Tank 41A, South-side of excavation	3x 4oz.; 1x 16oz. glass	U	U	U	U	
GPT41A-01(7.5)	7/11/95	1310	SOIL			Tank 41A, South-side of excavation	3x 4oz.; 1x 16oz.	U	U	U	U	
GWT41A-01	7/11/95	1340	WATER			Tank 41A South-side	4x 40mL; 1x 12 oz.; 1x 16oz. Poly	P	U	P	B	
GPT41A-03(5.0)	7/11/95	1440	SOIL			Tank 41A North-side	2x 4oz.	U	U	U	U	Limited Sample Volume Available
GPT41A-03(8.0)	7/11/95	1500	SOIL			Tank 41A North-side	6x 40mL; 1x 12 oz. Poly	P	U	P	B	
GWT41A-03	7/11/95	1620	WATER			Tank 41A North-side	5x 4oz.; 1x 16oz.	U	U	U	U	Additional Volume Collected for MS/MSD
GPT41A-02(5.0)	7/11/95	1720	SOIL			Tank 41A East-side	2x 4oz.	U	U	U	U	Limited Sample Volume Available
GPT41A-02(8.5)	7/11/95	1740	SOIL			Tank 41A East-side	6x 40mL; 1x 12 oz. Poly	P	U	P	B	
GWT41A-02	7/11/95	1800	WATER			Tank 41A East-side		U	U	U	U	
GWT99-01	7/11/95	1700	WATER					P	U	P	B	

RELINQUISHED BY:	SIGNATURE	NAME (print)	COMPANY/TITLE	DATE	TIME
	<i>Brian Schuller</i>	Brian Schuller	RRC, Hydrogeologist	7/12/95	1210
RECEIVED BY:	<i>John E. ...</i>	John E. ...		7/12/95	
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

REMARKS: Additional Volume Collected for ms/msd for Sample GPT41A-02(5.0) Please provide 10-day verbal on results. For MS/MSD-BLS Copy Placed in Second (Green) Cooler.

INSTRUCTIONS: Enter only one of the following four codes for each analysis required & for each sample listed. The codes should be entered under the columns labeled "ANALYSES REQUIRED".  
**U = UNPRESERVED AND UNFILTERED SAMPLE**    **P = PRESERVED SAMPLE**    **F = FILTERED SAMPLE**    **B = BOTH PRESERVED & FILTERED SAMPLE**





VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 09/18/95 13:26:07

Compound	GPT41A-01(5.0)		GPT41A-01(7.5)		GPT41A-02(5.0)		GPT41A-02(8.5)		GPT41A-03(5.0)		
	Result	Val	Result	Com	Result	Val	Result	Com	Result	Val	Com
PRC Sample ID	GPT41A-01(5.0)		GPT41A-01(7.5)		GPT41A-02(5.0)		GPT41A-02(8.5)		GPT41A-03(5.0)		
Lab Samp Id	9507036-01A		9507036-02A		9507036-07A		9507036-08A		9507036-04A		
SDG #	V7036		V7036		V7036		V7036		V7036		
Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		
Units	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		
Date Received	07/12/95		07/12/95		07/12/95		07/12/95		07/12/95		
Date Analyzed	07/13/95		07/13/95		07/13/95		07/13/95		07/14/95		
CHLOROMETHANE	13 U		12 U		13 U		12 U		13 U		
BROMOMETHANE	13 U		12 U		13 U		12 U		13 U		
VINYL CHLORIDE	13 U		12 U		13 U		12 U		13 U		
CHLOROETHANE	13 U		12 U		13 U		12 U		13 U		
METHYLENE CHLORIDE	2 BJ		2 BJ		3 BJ		1 BJ		2 BJ		
ACETONE	10 BJ		10 BJ		13 B		7 BJ		6 BJ		
CARBON DISULFIDE	13 U		12 U		0.3 J		12 U		13 U		
1,1-DICHLOROETHENE	13 U		12 U		13 U		0.5 J		13 U		
1,1-DICHLOROETHANE	13 U		1 J		13 U		2 J		13 U		
1,2-DICHLOROETHENE (TOTAL)	0.6 BJ		28 B		13 U		34 B		13 U		
CHLOROFORM	13 U		12 U		13 U		12 U		13 U		
1,2-DICHLOROETHANE	13 U		12 U		13 U		12 U		13 U		
2-BUTANONE	13 U		12 U		13 U		12 U		13 U		
1,1,1-TRICHLOROETHANE	13 U		12 U		13 U		12 U		13 U		
CARBON TETRACHLORIDE	13 U		12 U		13 U		12 U		13 U		
BROMODICHLOROMETHANE	13 U		12 U		13 U		12 U		13 U		
1,2-DICHLOROPROPANE	13 U		12 U		13 U		12 U		13 U		
CIS-1,3-DICHLOROPROPENE	13 U		12 U		13 U		12 U		13 U		
TRICHLOROETHENE	13 U		11 J		13 U		8 J		13 U		
DIBROMOCHLOROMETHANE	13 U		12 U		13 U		12 U		13 U		
1,1,2-TRICHLOROETHANE	13 U		12 U		13 U		12 U		13 U		
BENZENE	13 U		12 U		13 U		12 U		13 U		
TRANS-1,3-DICHLOROPROPENE	13 U		12 U		13 U		12 U		13 U		
BROMOFORM	13 U		12 U		13 U		12 U		13 U		
4-METHYL-2-PENTANONE	13 U		12 U		13 U		12 U		13 U		
2-HEXANONE	13 U		12 U		13 U		12 U		13 U		
TETRACHLOROETHENE	13 U		12 U		13 U		12 U		13 U		
1,1,2,2-TETRACHLOROETHANE	13 U		12 U		13 U		12 U		13 U		
TOLUENE	13 U		12 U		13 U		12 U		13 U		
CHLOROBENZENE	13 U		12 U		13 U		12 U		13 U		
ETHYLBENZENE	13 U		12 U		13 U		12 U		13 U		
STYRENE	13 U		12 U		13 U		12 U		13 U		
XYLENE (TOTAL)	13 U		12 U		13 U		12 U		13 U		

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 09/18/95 13:26:07

Compound	GPT41A-03(8.0) 9507036-05A V7036 SOIL UG/KG Date Received 07/12/95 Date Analyzed 07/13/95		GPT41A-01 9507036-03A V7036 WATER UG/L Date Received 07/12/95 Date Analyzed 07/19/95		GPT41A-02 9507036-09A V7036 WATER UG/L Date Received 07/12/95 Date Analyzed 07/18/95		GPT41A-03 9507036-06A V7036 WATER UG/L Date Received 07/12/95 Date Analyzed 07/17/95		GPT99-01 9507036-10A V7036 WATER UG/L Date Received 07/12/95 Date Analyzed 07/17/95		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val
CHLOROMETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
BROMOMETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
VINYL CHLORIDE	12 U	10 U		5 U	2 U		2 U		0.3 J	2 U	
CHLOROETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
METHYLENE CHLORIDE	2 BJ	5 BJ		2 BJ	0.2 BJ		0.2 BJ		0.2 BJ	2 U	
ACETONE	7 BJ	21 B		5 B	3 B		3 B		3 B	2 U	
CARBON DISULFIDE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
1,1-DICHLOROETHENE	12 U	9 J		5 U	4 J		0.2 J		2 U	2 U	
1,1-DICHLOROETHANE	12 U	21		17	4 J		2 U		2 U	2 U	
1,2-DICHLOROETHENE (TOTAL)	4 BJ	180		100	2 J		2 U		2 U	2 U	
CHLOROFORM	12 U	10 U		5 U	2 U		2 U		4	2 U	
1,2-DICHLOROETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
2-BUTANONE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
1,1,1-TRICHLOROETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
CARBON TETRACHLORIDE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
BROMODICHLOROMETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
1,2-DICHLOROPROPANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
CIS-1,3-DICHLOROPROPENE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
TRICHLOROETHENE	12 U	98		29	2 U		2 U		2 U	2 U	
DIBROMOCHLOROMETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
1,1,2-TRICHLOROETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
BENZENE	12 U	0.4 J		0.4 J	2 U		0.2 J		2 U	2 U	
TRANS-1,3-DICHLOROPROPENE	12 U	10 U		5 U	2 U		2 U		0.3 J	2 U	
BROMOFORM	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
4-METHYL-2-PENTANONE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
2-HEXANONE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
TETRACHLOROETHENE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
1,1,2,2-TETRACHLOROETHANE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
TOLUENE	12 U	10 U		5 U	2 U		2 U		0.2 J	2 U	
CHLOROBENZENE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
ETHYLBENZENE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
STYRENE	12 U	10 U		5 U	2 U		2 U		2 U	2 U	
XYLENE (TOTAL)	12 U	10 U		5 U	2 U		0.2 J		2 U	2 U	

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 JA - Not Analyzed

VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 09/18/95 13:26:07

Compound	TB-2 9507036-11A														
	Lab Samp Id	SDG #	Matrix	Units	Date Received	Date Analyzed	Result	Val	Com	Result	Val	Com	Result	Val	Com
CHLOROMETHANE				2 U											
BROMOMETHANE				2 U											
VINYL CHLORIDE				2 U											
CHLOROETHANE				2 U											
METHYLENE CHLORIDE				0.4 BJ											
ACETONE				2 B											
CARBON DISULFIDE				0.1 J											
1,1-DICHLOROETHENE				2 U											
1,1-DICHLOROETHANE				2 U											
1,2-DICHLOROETHENE (TOTAL)				0.6 J											
CHLOROFORM				2 U											
1,2-DICHLOROETHANE				2 U											
2-BUTANONE				2 U											
1,1,1-TRICHLOROETHANE				2 U											
CARBON TETRACHLORIDE				2 U											
BROMODICHLOROMETHANE				2 U											
1,2-DICHLOROPROPANE				2 U											
CIS-1,3-DICHLOROPROPENE				2 U											
TRICHLOROETHENE				2 U											
DIBROMOCHLOROMETHANE				2 U											
1,1,2-TRICHLOROETHANE				2 U											
BENZENE				0.1 J											
TRANS-1,3-DICHLOROPROPENE				2 U											
BROMOFORM				2 U											
4-METHYL-2-PENTANONE				2 U											
2-HEXANONE				2 U											
TETRACHLOROETHENE				2 U											
1,1,2,2-TETRACHLOROETHANE				2 U											
TOLUENE				0.2 J											
CHLOROBENZENE				2 U											
ETHYLBENZENE				0.1 J											
STYRENE				2 U											
XYLENE (TOTAL)				0.4 J											

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed





SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 09/18/95 13:21:40

Compound	GPT41A-03(5.0) 9507036-04C		GPT41A-03(8.0) 9507036-05C		GPT41A-03(5.0) 9507036-04C		GPT41A-03(8.0) 9507036-05C	
	Result	Val	Com	Result	Val	Com	Result	Val
PHENOL	420 U			400 U			1000 U	
BIS(2-CHLOROETHYL)ETHER	420 U			400 U			1000 U	
2-CHLOROPHENOL	420 U			400 U			420 U	
1,3-DICHLOROBENZENE	420 U			400 U			420 U	
1,4-DICHLOROBENZENE	420 U			400 U			420 U	
1,2-DICHLOROBENZENE	420 U			400 U			420 U	
2-METHYLPHENOL	420 U			400 U			420 U	
2,2-DIMETHYLPROPANE	420 U			400 U			420 U	
4-METHYLPHENOL	420 U			400 U			420 U	
N-NITROSO-DI-N-PROPYLAMINE	420 U			400 U			420 U	
HEXACHLOROETHANE	420 U			400 U			420 U	
NITROBENZENE	420 U			400 U			420 U	
ISOPHORONE	420 U			400 U			420 U	
2-NITROPHENOL	420 U			400 U			420 U	
2,4-DIMETHYLPHENOL	420 U			400 U			420 U	
BIS(2-CHLOROETHOXY)METHANE	420 U			400 U			420 U	
2,4-DICHLOROPHENOL	420 U			400 U			420 U	
1,2,4-TRICHLOROBENZENE	420 U			400 U			420 U	
NAPHTHALENE	420 U			400 U			420 U	
4-CHLOROANILINE	420 U			400 U			420 U	
HEXACHLOROBUTADIENE	420 U			400 U			420 U	
4-CHLORO-3-METHYLPHENOL	420 U			400 U			420 U	
2-METHYLNAPHTHALENE	420 U			400 U			420 U	
HEXACHLOROCYCLOPENTADIENE	420 U			400 U			420 U	
2,4,6-TRICHLOROPHENOL	420 U			400 U			420 U	
2,4,5-TRICHLOROPHENOL	1000 U			980 U			420 U	
2-CHLORONAPHTHALENE	420 U			400 U			420 U	
2-NITROANILINE	1000 U			980 U			420 U	
1-METHYLPHthalate	420 U			400 U			420 U	
1-CENAPHTHYLENE	420 U			400 U			420 U	
2,6-DINITROTOLUENE	420 U			400 U			420 U	
2-NITROANILINE	1000 U			980 U			420 U	
1-CENAPHTHENE	420 U			400 U			420 U	

1 - Validity Refer to data qualifier definitions.  
 m - Comments  
 - Not Analyzed



INORGANIC ANALYSIS -- METALS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 09/18/95 13:22:13

PRC Sample ID Lab Samp Id SDG # Matrix Units Date Received Date Extracted Date Analyzed Analysis Type	GPT41A-03(8.0) 950703605D V7036 SOIL MG/KG		GWT41A-01 950703603D V7036 WATER UG/L		GWT41A-02 950703609D V7036 WATER UG/L		GWT41A-03 950703606D V7036 WATER UG/L		GWT99-01 950703610D V7036 WATER UG/L			
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
ALUMINUM	15100 *			1150	219		98.7 B	545		370000		
ANTIMONY	7.0 UN			28.6 U	28.6 U		28.6 U	28.6 U		5.2 B		
ARSENIC	5.3			3.1 U	8.5 B		7.5 B	3.1 U		7.2 B		
BARIIUM	211 N*			87.8 B	30.7 B		46.2 B	70.0 B		1.8 B		
BERYLLIUM	0.53 B			0.40 U	0.40 U		0.40 U	0.40 U		724		
CADMIUM	0.15 U			0.73 B	0.68 B		0.60 U	0.96 B		2.9 B		
CALCIUM	107000 *			538000	562000		384000	370000		187000		
CHROMIUM	50.6 N*			7.4 B	4.7 B		2.4 B	5.2 B		902		
COBALT	11.0 B			11.1 B	4.7 B		3.6 B	7.2 B		0.10 U		
COPPER	31.6			0.64 B	0.93 B		0.40 U	1.8 B		713		
IRON	19300			1160	157		27.7 U	724		1830 B		
LEAD	5.9			2.3 B	0.80 U		2.1 B	2.9 B		2.0 U		
MAGNESIUM	11000			282000	263000		210000	49200		8.2 B		
MANGANESE	425 *			1490	300		619	8.2 B		6.7 B		
MERCURY	0.09 B			0.10 U	0.10 U		0.10 U	6.7 B		18.6 B		
NICKEL	55.6			1070	289		350					
POTASSIUM	1370 *			1900 B	1380 B		1290 B					
SELENIUM	0.56 U			2.3 U	5.1		2.3 U					
SILVER	0.59 B			2.0 U	2.0 U		2.0 U					
SODIUM	191 B			50700	61300		56100					
THALLIUM	0.49 U			6.5 B	4.8 B		2.0 U					
VANADIUM	62.1 *			5.0 B	14.3 B		8.7 B					
ZINC	41.9			27.0	12.5 B		12.7 B					

- J - Undetected at the concentration reported.
- B - Reported value is greater than the Instrument Detection Limit (IDL), but less than the Contract Required Detection Limit (CRDL).
- U - Post digestion spike for Furnace Atomic Absorption (AA) analysis is out of control limits.
- E - Reported value is estimated because of the presence of interference.
- V - Spiked sample recovery not within control limits.
- S - Determined by Method of Standard Additions (MSA).
- D - Duplicate analysis precision is not within control limits.
- C - Correlation coefficient is less than 0.995 for the MSA.
- I - Duplicate injection precision was not met for AA analysis.



CLIENTSID  
GPT41A-01(5.0)  
GPT41A-01(7.5)  
GPT41A-02(5.0)  
GPT41A-02(8.5)  
GPT41A-03(5.0)  
GPT41A-03(8.0)

LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
9507036-01E	SOIL	ORIG	07/11/95	07/14/95	07/13/95	PERCENT MOISTURE	22	
9507036-02E	SOIL	ORIG	07/11/95	07/14/95	07/13/95	PERCENT MOISTURE	19	
9507036-07E	SOIL	ORIG	07/11/95	07/14/95	07/13/95	PERCENT MOISTURE	21	
9507036-08E	SOIL	ORIG	07/11/95	07/14/95	07/13/95	PERCENT MOISTURE	18	
9507036-04E	SOIL	ORIG	07/11/95	07/14/95	07/13/95	PERCENT MOISTURE	21	
9507036-05E	SOIL	ORIG	07/11/95	07/14/95	07/13/95	PERCENT MOISTURE	18	

JDG V7036 \*\*\* TPHEXT \*\*\* 09/18/95 13:23:14

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT41A-01(5.0)	9507036-01C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - DIESEL (C8-C28)	1300	U
GPT41A-01(5.0)	9507036-01C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - KEROSENE (C8-C18)	1300	U
GPT41A-01(5.0)	9507036-01C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - MOTOR OIL (C16-C32)	13000	U
GPT41A-01(5.0)	9507036-01C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - JP-5 (C8-C16)	13000	U
GPT41A-01(5.0)	9507036-01C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	OTHER COMPONENTS *	1300	U
GPT41A-01(7.5)	9507036-02C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - DIESEL (C8-C28)	1200	U
GPT41A-01(7.5)	9507036-02C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - KEROSENE (C8-C18)	1200	U
GPT41A-01(7.5)	9507036-02C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT41A-01(7.5)	9507036-02C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - JP-5 (C8-C16)	1200	U
GPT41A-02(5.0)	9507036-07C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	OTHER COMPONENTS *	1200	U
GPT41A-02(5.0)	9507036-07C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - DIESEL (C8-C28)	1300	U
GPT41A-02(5.0)	9507036-07C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - KEROSENE (C8-C18)	1300	U
GPT41A-02(5.0)	9507036-07C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - MOTOR OIL (C16-C32)	13000	U
GPT41A-02(5.0)	9507036-07C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - JP-5 (C8-C16)	1300	U
GPT41A-02(8.5)	9507036-08C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	OTHER COMPONENTS *	1200	U
GPT41A-02(8.5)	9507036-08C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - DIESEL (C8-C28)	1200	U
GPT41A-02(8.5)	9507036-08C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - KEROSENE (C8-C18)	1200	U
GPT41A-02(8.5)	9507036-08C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT41A-02(8.5)	9507036-08C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - JP-5 (C8-C16)	1200	U
GPT41A-03(5.0)	9507036-04C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	OTHER COMPONENTS *	1200	U
GPT41A-03(5.0)	9507036-04C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - DIESEL (C8-C28)	1300	U
GPT41A-03(5.0)	9507036-04C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - KEROSENE (C8-C18)	1300	U
GPT41A-03(5.0)	9507036-04C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - MOTOR OIL (C16-C32)	13000	U
GPT41A-03(5.0)	9507036-04C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - JP-5 (C8-C16)	1300	U
GPT41A-03(8.0)	9507036-05C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	OTHER COMPONENTS *	1200	U
GPT41A-03(8.0)	9507036-05C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - DIESEL (C8-C28)	1200	U
GPT41A-03(8.0)	9507036-05C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - KEROSENE (C8-C18)	1200	U
GPT41A-03(8.0)	9507036-05C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT41A-03(8.0)	9507036-05C	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - JP-5 (C8-C16)	1200	U
GWT41A-01	9507036-03C	WATER	ORIG	07/11/95	07/15/95	07/13/95	OTHER COMPONENTS *	50	U
GWT41A-01	9507036-03C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - DIESEL (C8-C28)	50	U
GWT41A-01	9507036-03C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - KEROSENE (C8-C18)	50	U
GWT41A-01	9507036-03C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT41A-01	9507036-03C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - JP-5 (C8-C16)	50	U
GWT41A-02	9507036-09C	WATER	ORIG	07/11/95	07/15/95	07/13/95	OTHER COMPONENTS *	50	U
GWT41A-02	9507036-09C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - DIESEL (C8-C28)	50	U
GWT41A-02	9507036-09C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - KEROSENE (C8-C18)	50	U
GWT41A-02	9507036-09C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT41A-02	9507036-09C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - JP-5 (C8-C16)	50	U
GWT41A-03	9507036-06C	WATER	ORIG	07/11/95	07/15/95	07/13/95	OTHER COMPONENTS *	50	U
GWT41A-03	9507036-06C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - DIESEL (C8-C28)	50	U
GWT41A-03	9507036-06C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - KEROSENE (C8-C18)	50	U
GWT41A-03	9507036-06C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - MOTOR OIL (C16-C32)	500	U
GWT41A-03	9507036-06C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - JP-5 (C8-C16)	50	U
WT99-01	9507036-10C	WATER	ORIG	07/11/95	07/15/95	07/13/95	OTHER COMPONENTS *	50	U
WT99-01	9507036-10C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - DIESEL (C8-C28)	50	U
WT99-01	9507036-10C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - KEROSENE (C8-C18)	50	U
WT99-01	9507036-10C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - MOTOR OIL (C16-C32)	500	U
WT99-01	9507036-10C	WATER	ORIG	07/11/95	07/15/95	07/13/95	TPH - JP-5 (C8-C16)	50	U

SDG V7036 \*\*\* TPHPRG \*\*\* 09/18/95 13:23:19

CLIENTSID	LABSID	MATRIX	SHPYTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT41A-01(5.0)	9507036-01B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - BENZENE	6	U
GPT41A-01(5.0)	9507036-01B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOLUENE	6	U
GPT41A-01(5.0)	9507036-01B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - ETHYLBENZENE	6	U
GPT41A-01(5.0)	9507036-01B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOTAL XYLENES	6	U
GPT41A-01(5.0)	9507036-01B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - GASOLINE	1300	U
GPT41A-01(5.0)	9507036-01B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	OTHER COMPONENTS *	1300	U
GPT41A-01(7.5)	9507036-02B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - BENZENE	6	U
GPT41A-01(7.5)	9507036-02B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - TOLUENE	6	U
GPT41A-01(7.5)	9507036-02B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - ETHYLBENZENE	6	U
GPT41A-01(7.5)	9507036-02B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - TOTAL XYLENES	6	U
GPT41A-01(7.5)	9507036-02B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - GASOLINE	1200	U
GPT41A-01(7.5)	9507036-02B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	OTHER COMPONENTS *	1200	U
GPT41A-02(5.0)	9507036-07B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - BENZENE	6	U
GPT41A-02(5.0)	9507036-07B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOLUENE	6	U
GPT41A-02(5.0)	9507036-07B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - ETHYLBENZENE	6	U
GPT41A-02(5.0)	9507036-07B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOTAL XYLENES	6	U
GPT41A-02(5.0)	9507036-07B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - GASOLINE	1300	U
GPT41A-02(5.0)	9507036-07B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	OTHER COMPONENTS *	1300	U
GPT41A-02(8.5)	9507036-08B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - BENZENE	6	U
GPT41A-02(8.5)	9507036-08B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - TOLUENE	6	U
GPT41A-02(8.5)	9507036-08B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - ETHYLBENZENE	6	U
GPT41A-02(8.5)	9507036-08B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - TOTAL XYLENES	6	U
GPT41A-02(8.5)	9507036-08B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	TPH - GASOLINE	1200	U
GPT41A-02(8.5)	9507036-08B	SOIL	ORIG	07/11/95	07/14/95	07/13/95	OTHER COMPONENTS *	1200	U
GPT41A-03(5.0)	9507036-04B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - BENZENE	6	U
GPT41A-03(5.0)	9507036-04B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOLUENE	6	U
GPT41A-03(5.0)	9507036-04B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - ETHYLBENZENE	6	U
GPT41A-03(5.0)	9507036-04B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOTAL XYLENES	6	U
GPT41A-03(5.0)	9507036-04B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - GASOLINE	1300	U
GPT41A-03(5.0)	9507036-04B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	OTHER COMPONENTS *	1300	U
GPT41A-03(8.0)	9507036-05B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - BENZENE	6	U
GPT41A-03(8.0)	9507036-05B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOLUENE	6	U
GPT41A-03(8.0)	9507036-05B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - ETHYLBENZENE	6	U
GPT41A-03(8.0)	9507036-05B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - TOTAL XYLENES	6	U
GPT41A-03(8.0)	9507036-05B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	TPH - GASOLINE	1200	U
GPT41A-03(8.0)	9507036-05B	SOIL	ORIG	07/11/95	07/17/95	07/13/95	OTHER COMPONENTS *	1200	U
GWT41A-01	9507036-03B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - BENZENE	0.5	U
GWT41A-01	9507036-03B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - TOLUENE	0.5	U
GWT41A-01	9507036-03B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - ETHYLBENZENE	0.5	U
GWT41A-01	9507036-03B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - TOTAL XYLENES	0.5	U
GWT41A-01	9507036-03B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - GASOLINE	50	U
GWT41A-01	9507036-03B	WATER	ORIG	07/11/95	07/13/95	07/13/95	OTHER COMPONENTS *	130	Z
GWT41A-02	9507036-09B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - BENZENE	0.5	U
GWT41A-02	9507036-09B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - TOLUENE	0.5	U
GWT41A-02	9507036-09B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - ETHYLBENZENE	0.5	U
GWT41A-02	9507036-09B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - TOTAL XYLENES	0.5	U
GWT41A-02	9507036-09B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - GASOLINE	50	U
GWT41A-02	9507036-09B	WATER	ORIG	07/11/95	07/13/95	07/13/95	OTHER COMPONENTS *	64	Z
GWT41A-03	9507036-06B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - BENZENE	0.5	U
GWT41A-03	9507036-06B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - TOLUENE	0.5	U
GWT41A-03	9507036-06B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - ETHYLBENZENE	0.5	U
GWT41A-03	9507036-06B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - TOTAL XYLENES	0.5	U
GWT41A-03	9507036-06B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - GASOLINE	50	U
GWT41A-03	9507036-06B	WATER	ORIG	07/11/95	07/13/95	07/13/95	OTHER COMPONENTS *	50	U
GWT99-01	9507036-10B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - BENZENE	0.5	U
GWT99-01	9507036-10B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - TOLUENE	0.5	U
GWT99-01	9507036-10B	WATER	ORIG	07/11/95	07/13/95	07/13/95	TPH - ETHYLBENZENE	0.5	U

GWT99-01  
GWT99-01  
GWT99-01

9507036-10B WATER ORIG  
9507036-10B WATER ORIG  
9507036-10B WATER ORIG

07/11/95 07/13/95  
07/11/95 07/13/95  
07/11/95 07/13/95

TPH - TOTAL XYLENES  
TPH - GASOLINE  
OTHER COMPONENTS \*

0.5  
50  
50

U  
U  
U

# PRC CHEMICAL DATA TRANSFER LIST

METHOD CODES

PRC/JMM SAMPLE ID	SAMPLE DATE	SWP SWCC	TPHG M-d-d/95	TPHD M-d-d/95	VALIDATION STATUS / LEVEL					VALIDATION COMPANY	COMMENTS
GWT86B-2	6-28-95	P									Triangle
GWT86B-1		P									
GWT17-5		P	P	P							
GPT17-5(5.5)			P	P							
GPT17-5(6.9)			P	P							reanalysis use original
GPT22-1(5.1)	6-29-95		P	P							
GPT22-1(6.7)			P	P							
GPT22-2(5.4)			P	P							reanalysis use original
GPT22-2(7.0)	6-29-95		P	P							
Pipe Rinsate	6-30-95		P	P							
SBLKWG	6-30-95	N									
GBLKWM	6-30-95		N								
GBLKSS	6-30-95		N								
GBLKWU	7-5-95		N								
GBLKSV	7-5-95		N								
DBLKWC	6-30-95			W							
DBLKSY	6-30-95			W							
DBLKSA	7-6-95			W							
DBLKWII	7-6-95			N							✓

TOTAL NO. OF SAMPLES: \_\_\_\_\_ TOTAL PAGES: \_\_\_\_\_

Originated by: Jean L. Barron Date: 8-8-95  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Entered to database by: \_\_\_\_\_ Date: \_\_\_\_\_

P = PENDING VALID. C = VALID. COMPLETE U = VALID. STATUS UNKNOWN R = RETURNED TO LAB. N = NO VALID. CONDUCTED  
 1 = NEESA LEVEL A 2 = NEESA LEVEL B 3 = NEESA LEVEL C 4 = NEESA LEVEL D 5 = NEESA LEVEL E

NOTE: Please return this form signed and dated to: PRC Denver, attn: Moffett Field Document Control, after the data has been entered into the Moffett database.

**CHAIN-OF-CUSTODY RECORD**

DESTINATION

6/29/95

V6107

PROJECT NAME	PROJECT JOB #	SAMPLER(S): PRINTED NAME AND SIGNATURE		DATE OF COLLECTION	TIME OF COLLECTION	SAMPLE MEDIUM (MATRIX)	SAMPLE LOCATION	SAMPLING TEAM #	NUMBERSIZE OF CONTAINERS	ANALYSES REQUIRED		REMARKS
		DATE OF COLLECTION	SIGNATURE							FIELD SAMPLE PREPARATION	LABORATORY ANALYSES	
Petroleum Tank Gills Invest	100A08067JRS1FD	John Menatti	John Menatti	6/29/95	1340	Soil	Tank 22	NA	2-4oz.	U		
		John Menatti	John Menatti	6/29/95	1410	Soil	Tank 22		2-4oz.	U		
		John Menatti	John Menatti	6/29/95	1230	Soil	Tank 22		2-4oz.	U		
		John Menatti	John Menatti	6/29/95	1325	Soil	Tank 22		2-4oz.	U		
		John Menatti	John Menatti	6/30/95	1150	Water	Pipe Rinsel		3-40mL Vials 4-1L Hubs	U		

RELINQUISHED BY:	SIGNATURE	NAME (print)	COMPANY/TITLE	DATE	TIME
John Menatti	<i>John Menatti</i>	JOHN A. MENATTI	PRC - EMI / Soil Scientist	6/29/95	1340
Patricia Hunter	<i>Patricia Hunter</i>	Patricia Hunter	FACE / QA-Asst. / Invoicing Mgr	6/29/95	1340
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

REMARKS: 10 day verbal rush cooler / soil received 6/29/95 then # 9066

REG. TURN AROUND

INSTRUCTIONS: Enter only one of the following four codes for each analysis required & for each sample listed. The codes should be entered under the columns labeled "ANALYSES REQUIRED".  
 U = UNPRESERVED AND UNFILTERED SAMPLE P = PRESERVED SAMPLE F = FILTERED SAMPLE B = BOTH PRESERVED & FILTERED SAMPLE

Laboratory, Please distinguish. Call if you are uncertain. The number zero is 0 and CM letters O or 0.



V6107

PROJECT NAME	PROJECT JOB #	PROJECT JOB #		ANALYSES REQUIRED	REMARKS	
		MOFFETT	PETROLEUM TANK SITES INVEST			
SAMPLER(S): PRINTED NAME AND SIGNATURE		SAMPLING TEAM #		NUMBER/SIZE OF CONTAINERS	FIELD SAMPLE PREPARATION	
John A. Menatti / John A. Menatti		NA				
SAMPLE ID.	DATE OF COLLECTION	TIME OF COLLECTION	SAMPLE MEDIUM (MATRIX)	SAMPLE LOCATION	ANALYSES REQUIRED	REMARKS
GPT17-5(5.5)	6-28-95	1245	SOIL	TANK 17	TPH TPHE SVOC	-01A
GPT17-5(5.5)	6-28-95	1245	SOIL	TANK 17	U	-01B
GPT17-5(6.9)	6-28-95	1300	SOIL	TANK 17	U	-02A
GPT17-5(6.9)	6-28-95	1245	SOIL	TANK 17	U	-02B JAM 6/28/95
GWT17-5	6-28-95	1345	WATER	TANK 17	P	-03A
GWT17-5	6-28-95	1345	WATER	TANK 17	U	-03B
GWT17-5	6-28-95	1345	WATER	TANK 17	U	EXTRA VOLUME -03C FOR M/SMSD

SIGNATURE	NAME (print)	COMPANY/TITLE	DATE	TIME
John A. Menatti	John A. Menatti	PRC-EM	6-28-95	1720
Clare A. Kinder	Clare A. Kinder	PRC MID-PACIFIC / CHEMIST	4/28/95	1720

RELINQUISHED BY: John A. Menatti  
 RECEIVED BY: Clare A. Kinder  
 RELINQUISHED BY:  
 RECEIVED BY:  
 RELINQUISHED BY:  
 RECEIVED BY:

REMARKS:  
 TEN DAY VERBAL RUSH  
 Rec'd @ 4:20, Rec # 3415

REC. TURN AROUND

INSTRUCTIONS: Enter only one of the following four codes for each analysis required & for each sample listed. The codes should be entered under the columns labeled "ANALYSES REQUIRED".  
 U = UNPRESERVED AND UNFILTERED SAMPLE P = PRESERVED SAMPLE F = FILTERED SAMPLE B = BOTH PRESERVED & FILTERED SAMPLE





SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : ETCMP  
 Date : 08/08/95 14:17:04

Compound	GHT868-2 9506107-01A V6107 WATER UG/L 06/28/95 06/29/95 06/30/95		GHT868-2 9506107-01A V6107 WATER UG/L 06/28/95 06/29/95 06/30/95		Result	Com	Val	Result	Com	Val	Result	Com	Val	Com
	Result	Com	Result	Com										
PHENOL	10 U		25 U											
BIS(2-CHLOROETHYL)ETHER	10 U		25 U											
2-CHLOROPHENOL	10 U		10 U											
1,3-DICHLOROBENZENE	10 U		10 U											
1,4-DICHLOROBENZENE	10 U		10 U											
1,2-DICHLOROBENZENE	10 U		10 U											
2-METHYLPHENOL	10 U		10 U											
2,21-OXYBIS(1-CHLOROPROPANE)	10 U		25 U											
4-METHYLPHENOL	10 U		25 U											
N-NITROSO-DI-N-PROPYLAMINE	10 U		10 U											
HEXACHLOROETHANE	10 U		10 U											
NITROBENZENE	10 U		10 U											
ISOPHORONE	10 U		25 U											
2-NITROPHENOL	10 U		10 U											
2,4-DIMETHYLPHENOL	10 U		10 U											
BIS(2-CHLOROETHOXY)METHANE	10 U		10 U											
2,4-DICHLOROPHENOL	10 U		10 U											
1,2,4-TRICHLOROBENZENE	10 U		10 U											
NAPHTHALENE	10 U		10 U											
4-CHLOROANILINE	10 U		10 U											
HEXACHLOROBUTADIENE	10 U		10 U											
4-CHLORO-3-METHYLPHENOL	10 U		10 U											
2-METHYLNAPHTHALENE	10 U		10 U											
HEXACHLOROCYCLOPENTADIENE	10 U		10 U											
2,4,6-TRICHLOROPHENOL	25 U		10 U											
2,4,5-TRICHLOROPHENOL	25 U		10 U											
2-CHLORONAPHTHALENE	10 U		10 U											
2-NITROANILINE	10 U		10 U											
DIMETHYLPHTHALATE	10 U		10 U											
ACENAPHTHYLENE	10 U		10 U											
2,6-DINITROTOLUENE	10 U		10 U											
3-NITROANILINE	25 U		10 U											
ACENAPHTHENE	10 U		10 U											
2,4-DINITROPHENOL	10 U		10 U											
DIBENZOFURAN	10 U		10 U											
2,4-DINITROTOLUENE	10 U		10 U											
DIETHYLPHTHALATE	10 U		10 U											
4-CHLOROPHENYL-PHENYLETHER	10 U		10 U											
FLUORENE	10 U		10 U											
4-NITROANILINE	25 U		25 U											
4,6-DINITRO-2-METHYLPHENOL	25 U		25 U											
N-NITROSDIPHENYLAMINE (1)	10 U		10 U											
4-BROMOPHENYL-PHENYLETHER	10 U		10 U											
HEXACHLOROBENZENE	10 U		10 U											
PENTACHLOROPHENOL	25 U		25 U											
PHENANTHRENE	10 U		10 U											
ANTHRACENE	10 U		10 U											
CARBAZOLE	10 U		10 U											
DI-N-BUTYLPHTHALATE	10 U		10 U											
FLUORANTHENE	10 U		10 U											
PYRENE	10 U		10 U											
BUTYLBENZYLPHTHALATE	10 U		10 U											
3,3'-DICHLOROBENZIDINE	10 U		10 U											
BENZOC(A)ANTHRACENE	10 U		10 U											
CHRYSENE	10 U		10 U											
BIS(2-ETHYLHEXYL)PHTHALATE	10 U		10 U											
DI-N-OCTYLPHTHALATE	10 U		10 U											
BENZO(B)FLUORANTHENE	10 U		10 U											
BENZO(K)FLUORANTHENE	10 U		10 U											
BENZO(A)PYRENE	10 U		10 U											
INDENO(1,2,3-CD)PYRENE	10 U		10 U											
DIBENZ(A,H)ANTHRACENE	10 U		10 U											
BENZO(G,H,I)PERYLENE	10 U		10 U											

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

SDG v6107 \*\*\* TPRGRG \*\*\* 08/08/95 14:17:38

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT17-5(5.5)	9506112-01A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - BENZENE	6	U
GPT17-5(5.5)	9506112-01A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - TOLUENE	6	U
GPT17-5(5.5)	9506112-01A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - ETHYLBENZENE	6	U
GPT17-5(5.5)	9506112-01A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - TOTAL XYLENES	6	U
GPT17-5(5.5)	9506112-01A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - GASOLINE	1200	U
GPT17-5(5.5)	9506112-01A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	OTHER COMPONENTS *	1200	U
GPT17-5(6.9)	9506112-02A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - BENZENE	6	U
GPT17-5(6.9)	9506112-02A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - TOLUENE	6	U
GPT17-5(6.9)	9506112-02A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - ETHYLBENZENE	6	U
GPT17-5(6.9)	9506112-02A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - TOTAL XYLENES	6	U
GPT17-5(6.9)	9506112-02A	SOIL	ORIG	06/28/95	06/30/95	06/30/95	TPH - GASOLINE	1200	U
GPT22-1(5.1)	9506124-01A	SOIL	ORIG	06/28/95	07/05/95	07/05/95	OTHER COMPONENTS *	6	U
GPT22-1(5.1)	9506124-01A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - BENZENE	6	U
GPT22-1(5.1)	9506124-01A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOLUENE	6	U
GPT22-1(5.1)	9506124-01A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - ETHYLBENZENE	6	U
GPT22-1(5.1)	9506124-01A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOTAL XYLENES	6	U
GPT22-1(5.1)	9506124-01A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - GASOLINE	1200	U
GPT22-1(5.1)	9506124-01A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	OTHER COMPONENTS *	1200	U
GPT22-1(6.7)	9506124-02A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - BENZENE	6	U
GPT22-1(6.7)	9506124-02A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOLUENE	6	U
GPT22-1(6.7)	9506124-02A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - ETHYLBENZENE	6	U
GPT22-1(6.7)	9506124-02A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOTAL XYLENES	6	U
GPT22-1(6.7)	9506124-02A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - GASOLINE	1200	U
GPT22-1(6.7)	9506124-02A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	OTHER COMPONENTS *	1200	U
GPT22-2(5.4)	9506124-03A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - BENZENE	6	U
GPT22-2(5.4)	9506124-03A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOLUENE	6	U
GPT22-2(5.4)	9506124-03A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - ETHYLBENZENE	6	U
GPT22-2(5.4)	9506124-03A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOTAL XYLENES	6	U
GPT22-2(5.4)	9506124-03A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - GASOLINE	1200	U
GPT22-2(5.4)	9506124-03A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	OTHER COMPONENTS *	1200	U
GPT22-2(7.0)	9506124-04A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - BENZENE	6	U
GPT22-2(7.0)	9506124-04A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOLUENE	6	U
GPT22-2(7.0)	9506124-04A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - ETHYLBENZENE	6	U
GPT22-2(7.0)	9506124-04A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - TOTAL XYLENES	6	U
GPT22-2(7.0)	9506124-04A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	TPH - GASOLINE	1200	U
GPT22-2(7.0)	9506124-04A	SOIL	ORIG	06/29/95	07/05/95	07/05/95	OTHER COMPONENTS *	1200	U
GHT17-5	9506112-03A	WATER	ORIG	06/28/95	06/30/95	06/30/95	TPH - BENZENE	2	U
GHT17-5	9506112-03A	WATER	ORIG	06/28/95	06/30/95	06/30/95	TPH - TOLUENE	2	U
GHT17-5	9506112-03A	WATER	ORIG	06/28/95	06/30/95	06/30/95	TPH - ETHYLBENZENE	2	U
GHT17-5	9506112-03A	WATER	ORIG	06/28/95	06/30/95	06/30/95	TPH - TOTAL XYLENES	4	X
GHT17-5	9506112-03A	WATER	ORIG	06/28/95	06/30/95	06/30/95	TPH - GASOLINE	250	U
GHT17-5	9506112-03A	WATER	ORIG	06/28/95	06/30/95	06/30/95	OTHER COMPONENTS *	8200	Y
PIPE RINSATE	9506124-05A	WATER	ORIG	06/30/95	07/05/95	07/05/95	TPH - BENZENE	0.5	U
PIPE RINSATE	9506124-05A	WATER	ORIG	06/30/95	07/05/95	07/05/95	TPH - TOLUENE	0.5	U
PIPE RINSATE	9506124-05A	WATER	ORIG	06/30/95	07/05/95	07/05/95	TPH - ETHYLBENZENE	0.5	U
PIPE RINSATE	9506124-05A	WATER	ORIG	06/30/95	07/05/95	07/05/95	TPH - TOTAL XYLENES	0.5	U
PIPE RINSATE	9506124-05A	WATER	ORIG	06/30/95	07/05/95	07/05/95	TPH - GASOLINE	50	U
PIPE RINSATE	9506124-05A	WATER	ORIG	06/30/95	07/05/95	07/05/95	OTHER COMPONENTS *	50	U

SD6 V6107 \*\*\* TPHEXT \*\*\* 08/08/95 14:17:37

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT17-5(5.5)	9506112-01B	SOIL	ORIG	06/28/95	06/30/95	06/29/95	TPH - DIESEL (C8-C28)	1200	U
GPT17-5(5.5)	9506112-01B	SOIL	ORIG	06/28/95	06/30/95	06/29/95	TPH - KEROSENE (C8-C18)	1200	U
GPT17-5(5.5)	9506112-01B	SOIL	ORIG	06/28/95	06/30/95	06/29/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT17-5(5.5)	9506112-01B	SOIL	ORIG	06/28/95	06/30/95	06/29/95	TPH - JP-5 (C8-C16)	1200	U
GPT17-5(6.9)	9506112-02B	SOIL	ORIG	06/28/95	07/01/95	06/29/95	OTHER COMPONENTS *	1200	U
GPT17-5(6.9)	9506112-02B	SOIL	ORIG	06/28/95	07/01/95	06/29/95	TPH - DIESEL (C8-C28)	1200	U
GPT17-5(6.9)	9506112-02B	SOIL	ORIG	06/28/95	07/01/95	06/29/95	TPH - KEROSENE (C8-C18)	1200	U
GPT17-5(6.9)	9506112-02B	SOIL	ORIG	06/28/95	07/01/95	06/29/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT17-5(6.9)	9506112-02B	SOIL	ORIG	06/28/95	07/01/95	06/29/95	TPH - JP-5 (C8-C16)	1200	U
GPT22-1(5.1)	9506124-01B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	OTHER COMPONENTS *	1200	U
GPT22-1(5.1)	9506124-01B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - DIESEL (C8-C28)	1200	U
GPT22-1(6.7)	9506124-02B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - KEROSENE (C8-C18)	1200	U
GPT22-1(6.7)	9506124-02B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT22-1(6.7)	9506124-02B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - JP-5 (C8-C16)	1200	U
GPT22-1(6.7)	9506124-02B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	OTHER COMPONENTS *	1200	U
GPT22-2(5.4)	9506124-03B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - DIESEL (C8-C28)	1200	U
GPT22-2(5.4)	9506124-03B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - KEROSENE (C8-C18)	1200	U
GPT22-2(5.4)	9506124-03B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT22-2(5.4)	9506124-03B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - JP-5 (C8-C16)	1200	U
GPT22-2(7.0)	9506124-04B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	OTHER COMPONENTS *	38000	Y
GPT22-2(7.0)	9506124-04B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - DIESEL (C8-C28)	1200	U
GPT22-2(7.0)	9506124-04B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - KEROSENE (C8-C18)	1200	U
GPT22-2(7.0)	9506124-04B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - MOTOR OIL (C16-C32)	12000	U
GPT22-2(7.0)	9506124-04B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	TPH - JP-5 (C8-C16)	1200	U
GPT22-2(7.0)	9506124-04B	SOIL	ORIG	06/29/95	07/06/95	07/05/95	OTHER COMPONENTS *	1200	U
GWT17-5	9506112-03B	WATER	ORIG	06/28/95	07/06/95	06/29/95	TPH - DIESEL (C8-C28)	100	U
GWT17-5	9506112-03B	WATER	ORIG	06/28/95	07/06/95	06/29/95	TPH - KEROSENE (C8-C18)	100	U
GWT17-5	9506112-03B	WATER	ORIG	06/28/95	07/06/95	06/29/95	TPH - MOTOR OIL (C16-C32)	100	U
GWT17-5	9506112-03B	WATER	ORIG	06/28/95	07/06/95	06/29/95	TPH - JP-5 (C8-C16)	100	U
GWT17-5	9506112-03B	WATER	ORIG	06/28/95	07/06/95	06/29/95	OTHER COMPONENTS *	10000	Y
PIPE RINSATE	9506124-05B	WATER	ORIG	06/30/95	07/06/95	07/05/95	TPH - DIESEL (C8-C28)	50	U
PIPE RINSATE	9506124-05B	WATER	ORIG	06/30/95	07/06/95	07/05/95	TPH - KEROSENE (C8-C18)	50	U
PIPE RINSATE	9506124-05B	WATER	ORIG	06/30/95	07/06/95	07/05/95	TPH - MOTOR OIL (C16-C32)	500	U
PIPE RINSATE	9506124-05B	WATER	ORIG	06/30/95	07/06/95	07/05/95	TPH - JP-5 (C8-C16)	50	U
PIPE RINSATE	9506124-05B	WATER	ORIG	06/30/95	07/06/95	07/05/95	OTHER COMPONENTS *	50	U

SDG V6107 \*\*\* PCTNST \*\*\* 08/08/95 14:17:37

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GPT17-5(5.5)	9506112-01A	SOIL	ORIG	06/28/95	06/30/95	06/29/95	PERCENT MOISTURE	17	
GPT17-5(6.9)	9506112-02A	SOIL	ORIG	06/28/95	06/30/95	06/29/95	PERCENT MOISTURE	17	
GPT22-1(5.1)	9506124-01C	SOIL	ORIG	06/29/95	07/06/95	07/05/95	PERCENT MOISTURE	19	
GPT22-1(6.7)	9506124-02C	SOIL	ORIG	06/29/95	07/06/95	07/05/95	PERCENT MOISTURE	20	
GPT22-2(5.4)	9506124-03C	SOIL	ORIG	06/29/95	07/06/95	07/05/95	PERCENT MOISTURE	19	
GPT22-2(7.0)	9506124-04C	SOIL	ORIG	06/29/95	07/06/95	07/05/95	PERCENT MOISTURE	20	

# PRC CHEMICAL DATA TRANSFER LIST

METHOD CODES

PRC/JMM SAMPLE ID	SAMPLE DATE	TPHG Mod. 8/15	TPHO Mod. 8/15	VALIDATION STATUS / LEVEL					VALIDATION COMPANY	COMMENTS
GPT17-10(7.5)	8-29-95	N	N	/	/	/	/	/	NA	
GPT17-6(6.0)	8-28-95	N	N	/	/	/	/	/		reanalysis use original
GPT17-7(7.5)	↓	N	N	/	/	/	/	/		
GPT17-9(8.0)	↓	N	N	/	/	/	/	/		
GWT17-10	8-29-95	N	N	/	/	/	/	/		
GWT99-11	↓	N	N	/	/	/	/	/		
GWT17-6	8-28-95	N	N	/	/	/	/	/		
GWT17-7	↓	N	N	/	/	/	/	/		
GWT17-8	↓	N	N	/	/	/	/	/		
GWT17-9	↓	N	N	/	/	/	/	/		
WTTB-1	8-28-95	N	N	/	/	/	/	/		
WTTB-2	8-29-95	N	N	/	/	/	/	/		
F016P10	8-30-95	N	N	/	/	/	/	/		
F016P11	8-31-95	N	N	/	/	/	/	/		
F016P1	8-31-95	N	N	/	/	/	/	/		
F016P2	8-31-95	N	N	/	/	/	/	/		
F016P3	8-31-95	N	N	/	/	/	/	/		
F016P4	9-1-95	N	N	/	/	/	/	/		
F016P5	9-1-95	N	N	/	/	/	/	/		
F016P6	9-5-95	N	N	/	/	/	/	/		
TOTAL NO. OF SAMPLES: _____									TOTAL PAGES: _____	

Originated by: Jean L. Baran Date: 9-26-95  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Entered to database by: \_\_\_\_\_ Date: \_\_\_\_\_

P = PENDING VALID. C = VALID. COMPLETE U = VALID. STATUS UNKNOWN R = RETURNED TO LAB. N = NO VALID. CONDUCTED  
 1 = NEESA LEVEL A 2 = NEESA LEVEL B 3 = NEESA LEVEL C 4 = NEESA LEVEL D 5 = NEESA LEVEL E

NOTE: Please return this form signed and dated to: PRC Denver, attn: Moffett Field Document Control, after the data has been entered into the Moffett database.  
 C:\FORMS\TRANSFER.FRM rev 02-08-92



Environmental Management Inc.

10700 West Street, Suite 200  
San Diego, CA 92110  
617-225-1809  
619-225-9985

### Chain of Custody Record

9508307 (27)

(18) (19/32)

4442

Page 1 of 1

Project name:	PRC technical contact:	Field samplers:	No./Container Types				Analysis Required											
			40 ml VOA	1 Liter Amb	1 Liter Pys	Class Jar (16oz)	GP VOA	GP SVA	GP Pys/PCBs	GP Metals	TPH Purgeables	TPH Extractables	BTEX (8020)	TRPH (418.1)				
Project name: <b>UST SITES</b>	PRC technical contact: <b>FRED ALLEE</b>	Field samplers: <b>LAW/ALLEE</b>																
Project number: <b>WAFER FEDERAL ARMS</b>	PRC project manager: <b>PETE STANG</b>	Field samplers' signatures: <i>Fred Allee</i>																
<b>044-0267IRSIFW</b>																		
<b>SPT17-6 (60)</b>	<b>HIGH SPEED FUEL FARM</b>	<b>B.28.95 1345</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SWT17-6</b>	<b>WEST OF SAMPLE 2</b>	<b>B.28.95 1545</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SPT17-7 (15)</b>	<b>WEST OF FARMER</b>	<b>B.28.95 1545</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SNT17-7</b>	<b>TANK 17 LOCATION</b>	<b>B.28.95 1600</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SNT17-8</b>	<b>BETWEEN AG PIPES</b>	<b>B.28.95 1730</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SPT17-9 (8)</b>	<b>25' WEST OF SAMPLE</b>	<b>B.28.95 1750</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SWT17-9</b>	<b>G AND 7</b>	<b>B.28.95 1830</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SPT17-10 (15)</b>	<b>SOUTH OF SAMPLE B</b>	<b>B.29.95 1105</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SNT17-10</b>	<b>AND CONAM. FUEL AST</b>	<b>B.29.95 1200</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SNT99-11</b>	<b>"</b>	<b>B.29.95 1200</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SWT10-1</b>	<b>TRIP BLANK #1</b>	<b>B.28.95</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												
<b>SWT10-2</b>	<b>TRIP BLANK #2</b>	<b>B.29.95</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>												

Relinquished by:	Received by:	Relinquished by:	Received by:	Relinquished by:	Received by:	Company Name	Date	Time
<i>Fred Allee</i>	<i>Fred Allee</i>					PRC - EMI	8-29-95	1050
<i>Al Lee</i>	<i>Al Lee</i>					PRC - EMI	8-29-95	1050
<i>Al Lee</i>	<i>Al Lee</i>					PRC - EMI	8-29-95	1400
<i>Benjamin S. Carrizosa</i>	<i>Benjamin S. Carrizosa</i>					ITS	8-29-95	1400
<i>Benjamin S. Carrizosa</i>	<i>Benjamin S. Carrizosa</i>					ITS	8-29-95	1500
<i>Jose Perez</i>	<i>Jose Perez</i>					ITS	8/29/95	6500

10 DAY VERBAL RESULTS REQUESTED

40ml VOA PRESERVED w/HCL

SEP-14-1995 12:29

SDG m0016 \*\*\* AROMV \*\*\* 09/26/95 11:27:00

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GP17-10(7.5)A	9508307-08	SOIL	ORIG	08/29/95	09/01/95	09/01/95	TPHGBTEX TOTAL XYLENES	1300.	
GP17-10(7.5)Q	9508307-08	SOIL	ORIG	08/29/95	09/01/95	09/01/95	TPHGBTEX ETHYLBENZENE	1800.	
GP17-10(7.5)Q	9508307-08	SOIL	ORIG	08/29/95	09/01/95	09/01/95	TPHGBTEX TOLUENE	610. U	
GP17-10(7.5)Q	9508307-08	SOIL	ORIG	08/29/95	09/01/95	09/01/95	TPHGBTEX BENZENE	610. U	
GPT17-6(6.0)A	9508307-01	SOIL	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOLUENE	150. U	
GPT17-6(6.0)A	9508307-01	SOIL	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOTAL XYLENES	1300.	
GPT17-6(6.0)A	9508307-01	SOIL	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX ETHYLBENZENE	1500.	
GPT17-7(7.5)A	9508307-03	SOIL	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX TOTAL XYLENES	2300.	
GPT17-7(7.5)A	9508307-03	SOIL	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX ETHYLBENZENE	920.	
GPT17-7(7.5)A	9508307-03	SOIL	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX TOLUENE	150. U	
GPT17-9(8.0)A	9508307-06	SOIL	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX BENZENE	150. U	
GPT17-9(8.0)A	9508307-06	SOIL	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX TOTAL XYLENES	0.61 U	
GPT17-9(8.0)A	9508307-06	SOIL	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX ETHYLBENZENE	0.61 U	
GPT17-9(8.0)A	9508307-06	SOIL	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX TOLUENE	0.61 U	
GWT17-10A	9508307-09	WATER	ORIG	08/29/95	09/06/95	09/06/95	TPHGBTEX TOTAL XYLENES	3.3	
GWT17-10A	9508307-09	WATER	ORIG	08/29/95	09/06/95	09/06/95	TPHGBTEX ETHYLBENZENE	5.	
GWT17-10A	9508307-09	WATER	ORIG	08/29/95	09/06/95	09/06/95	TPHGBTEX BENZENE	2.5 U	
GWT17-10A	9508307-09	WATER	ORIG	08/29/95	09/06/95	09/06/95	TPHGBTEX TOLUENE	2.5 U	
GWT17-6A	9508307-02	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX TOTAL XYLENES	25. U	
GWT17-6A	9508307-02	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX ETHYLBENZENE	25. U	
GWT17-6A	9508307-02	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX BENZENE	25. U	
GWT17-6A	9508307-02	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX TOLUENE	25. U	
GWT17-7A	9508307-04	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOTAL XYLENES	500. U	
GWT17-7A	9508307-04	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX ETHYLBENZENE	500. U	
GWT17-7A	9508307-04	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX BENZENE	500. U	
GWT17-7A	9508307-04	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOLUENE	500. U	
GWT17-8A	9508307-05	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOTAL XYLENES	120. U	
GWT17-8A	9508307-05	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX ETHYLBENZENE	120. U	
GWT17-8A	9508307-05	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX BENZENE	120. U	
GWT17-8A	9508307-05	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOLUENE	120. U	
GWT17-9A	9508307-07	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOTAL XYLENES	0.5 U	
GWT17-9A	9508307-07	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX ETHYLBENZENE	0.5 U	
GWT17-9A	9508307-07	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX BENZENE	0.5 U	
GWT17-9A	9508307-07	WATER	ORIG	08/28/95	09/01/95	09/01/95	TPHGBTEX TOLUENE	0.5 U	
GWT17-9A	9508307-10	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX TOTAL XYLENES	120. U	
GWT17-9A	9508307-10	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX ETHYLBENZENE	120. U	
GWT17-9A	9508307-10	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX BENZENE	280.	
GWT17-9A	9508307-10	WATER	ORIG	08/28/95	09/05/95	09/05/95	TPHGBTEX TOLUENE	1000.	
GWT17-9A	9508307-11	WATER	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX TOTAL XYLENES	0.5 U	
GWT17-9A	9508307-11	WATER	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX ETHYLBENZENE	0.5 U	
GWT17-9A	9508307-11	WATER	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX BENZENE	0.5 U	
GWT17-9A	9508307-11	WATER	ORIG	08/28/95	08/31/95	08/31/95	TPHGBTEX TOLUENE	0.5 U	
GWT17-9A	9508307-12	WATER	ORIG	08/29/95	08/31/95	08/31/95	TPHGBTEX TOTAL XYLENES	0.5 U	
GWT17-9A	9508307-12	WATER	ORIG	08/29/95	08/31/95	08/31/95	TPHGBTEX ETHYLBENZENE	0.5 U	
GWT17-9A	9508307-12	WATER	ORIG	08/29/95	08/31/95	08/31/95	TPHGBTEX BENZENE	0.5 U	
GWT17-9A	9508307-12	WATER	ORIG	08/29/95	08/31/95	08/31/95	TPHGBTEX TOLUENE	0.5 U	



CLIENTSID	LABSID	MATRIX	SMPYTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
SDG m016	09/26/95 11:27:01	9508307-08	SOIL	08/29/95	09/01/95	08/31/95	TPH -JP5	730000.	U
GP17-10(7.5)0		9508307-08	SOIL	08/29/95	09/01/95	08/31/95	TPH MOTOR OIL	61000.	U
GP17-10(7.5)0		9508307-08	SOIL	08/29/95	09/01/95	08/31/95	TPH DIESEL	61000.	U
GP17-10(7.5)0		9508307-08	SOIL	08/29/95	09/01/95	08/31/95	TPH-KEROSENE	61000.	U
GP17-6(6.0)0		9508307-01	SOIL	08/28/95	09/01/95	08/31/95	TPH MOTOR OIL	12000.	U
GP17-6(6.0)0		9508307-01	SOIL	08/28/95	09/01/95	08/31/95	TPH DIESEL	47000.	U
GP17-6(6.0)0		9508307-01	SOIL	08/28/95	09/01/95	08/31/95	TPH-KEROSENE	12000.	U
GP17-7(7.5)0		9508307-03	SOIL	08/28/95	09/01/95	08/31/95	TPH MOTOR OIL	12000.	U
GP17-7(7.5)0		9508307-03	SOIL	08/28/95	09/01/95	08/31/95	TPH-KEROSENE	12000.	U
GP17-7(7.5)0		9508307-03	SOIL	08/28/95	09/01/95	08/31/95	TPH -JP5	60000.	U
GP17-7(7.5)0		9508307-03	SOIL	08/28/95	09/01/95	08/31/95	TPH DIESEL	12000.	U
GP17-9(8.0)0		9508307-06	SOIL	08/28/95	09/01/95	08/31/95	TPH DIESEL	12000.	U
GP17-9(8.0)0		9508307-06	SOIL	08/28/95	09/01/95	08/31/95	TPH MOTOR OIL	12000.	U
GP17-9(8.0)0		9508307-06	SOIL	08/28/95	09/01/95	08/31/95	TPH -JP5	12000.	U
GP17-9(8.0)0		9508307-06	SOIL	08/28/95	09/01/95	08/31/95	TPH-KEROSENE	12000.	U
GM17-100		9508307-09	WATER	08/29/95	09/03/95	08/31/95	TPH MOTOR OIL	500.	U
GM17-100		9508307-09	WATER	08/29/95	09/03/95	08/31/95	TPH DIESEL	500.	U
GM17-100		9508307-09	WATER	08/29/95	09/03/95	08/31/95	TPH -JP5	500.	U
GM17-60		9508307-02	WATER	08/28/95	09/03/95	08/31/95	TPH DIESEL	8800.	U
GM17-60		9508307-02	WATER	08/28/95	09/03/95	08/31/95	TPH MOTOR OIL	10000.	U
GM17-60		9508307-02	WATER	08/28/95	09/03/95	08/31/95	TPH-KEROSENE	10000.	U
GM17-60		9508307-02	WATER	08/28/95	09/03/95	08/31/95	TPH -JP5	85000.	U
GM17-70		9508307-04	WATER	08/28/95	09/03/95	08/31/95	TPH -JP5	10000.	U
GM17-70		9508307-04	WATER	08/28/95	09/03/95	08/31/95	TPH-KEROSENE	10000.	U
GM17-70		9508307-04	WATER	08/28/95	09/03/95	08/31/95	TPH MOTOR OIL	32000.	U
GM17-70		9508307-04	WATER	08/28/95	09/03/95	08/31/95	TPH -JP5	5000.	U
GM17-80		9508307-05	WATER	08/28/95	09/03/95	08/31/95	TPH DIESEL	5000.	U
GM17-80		9508307-05	WATER	08/28/95	09/03/95	08/31/95	TPH DIESEL	5000.	U
GM17-80		9508307-05	WATER	08/28/95	09/03/95	08/31/95	TPH MOTOR OIL	5000.	U
GM17-80		9508307-05	WATER	08/28/95	09/03/95	08/31/95	TPH-KEROSENE	5000.	U
GM17-90		9508307-07	WATER	08/28/95	09/01/95	08/31/95	TPH -JP5	79000.	U
GM17-90		9508307-07	WATER	08/28/95	09/01/95	08/31/95	TPH -JP5	100.	U
GM17-90		9508307-07	WATER	08/28/95	09/01/95	08/31/95	TPH DIESEL	100.	U
GM17-90		9508307-07	WATER	08/28/95	09/01/95	08/31/95	TPH MOTOR OIL	100.	U
GM199-110		9508307-10	WATER	08/29/95	09/03/95	08/31/95	TPH -JP5	1000.	U
GM199-110		9508307-10	WATER	08/29/95	09/03/95	08/31/95	TPH MOTOR OIL	1000.	U
GM199-110		9508307-10	WATER	08/29/95	09/03/95	08/31/95	TPH-KEROSENE	13000.	U
GM199-110		9508307-10	WATER	08/29/95	09/03/95	08/31/95	TPH DIESEL	1000.	U

SDG mf016 \*\*\* TPIPRG \*\*\* 09/26/95 11:27:02

CLIENTSID	LABSID	MATRIX	SMTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
GP17-10(7.5)	9508307-08	SOIL	ORIG	08/29/95	09/01/95		TPH GASOLINE	690000.	Y
GPT17-6(6.0)	9508307-01	SOIL	ORIG	08/28/95	09/01/95		TPH GASOLINE	190000.	Y
GPT17-7(7.5)	9508307-03	SOIL	ORIG	08/28/95	08/31/95		TPH GASOLINE	170000.	Y
GPT17-9(8.0)	9508307-06	SOIL	ORIG	08/28/95	08/31/95		TPH GASOLINE	610.	U
GW17-10B	9508307-09	WATER	ORIG	08/29/95	09/06/95		TPH GASOLINE	910.	Y
GW17-6A	9508307-02	WATER	ORIG	08/28/95	09/05/95		TPH GASOLINE	10000.	Y
GW17-7A	9508307-04	WATER	ORIG	08/28/95	09/01/95		TPH GASOLINE	460000.	Y
GW17-8B	9508307-05	WATER	ORIG	08/28/95	09/01/95		TPH GASOLINE	53000.	Y
GW17-9A	9508307-07	WATER	ORIG	08/28/95	09/01/95		TPH GASOLINE	50.	U
WTTB-11	9508307-10	WATER	ORIG	08/29/95	09/05/95		TPH GASOLINE	36000.	Y
WTTB-1A	9508307-11	WATER	ORIG	08/28/95	08/31/95		TPH GASOLINE	50.	U
WTTB-2A	9508307-12	WATER	ORIG	08/29/95	08/31/95		TPH GASOLINE	50.	U

Date: 9-8-95

Pet. Tank Site

Page: 1 of 2

SDG Nos.: MFO10

Case Narrative Included (Y/N): Y

# PRC CHEMICAL DATA TRANSFER LIST

METHOD CODES

PRC/JMM SAMPLE ID	SAMPLE DATE	CUP VEC	TPHG/STPA M-d-95	TPHD M-d-95	Metals	CUP VEC TIC	ORGANIC LEAD	VALIDATION STATUS / LEVEL	VALIDATION COMPANY	COMMENTS
WTB-1	8-9-95	N	N	N	N	N	N		NA	
WTB-2	8-10-95	N	N	N	N	N	N			
WTB-3	8-11-95	N	N	N	N	N	N			
WT41A-1	8-9-95	N	N	N	N	N	N			reanalysis use original
WT69-1	8-11-95	N	N	N	N	N	N			↓
WT87-1	8-10-95	N	N	N	N	N	N			↓
SBT17-1(8.0)	8-7-95	N	N	N	N	N	N			
SBT17-2(8.5)	8-7-95	N	N	N	N	N	N			
SBT17-3(7.0)	8-7-95	N	N	N	N	N	N			
SBT41A-1(5.5)	8-8-95	N	N	N	N	N	N			
SBT22-1(8.0)	8-8-95	N	N	N	N	N	N			
SBT55-1(7.0)	8-8-95	N	N	N	N	N	N			reanalysis use original
SBT57-1(5.5)	8-8-95	N	N	N	N	N	N			↓
SBT69-2(8.0)	8-8-95	N	N	N	N	N	N			
SBT87-1(8.5)	8-8-95	N	N	N	N	N	N			reanalysis use original
WT17-1	8-11-95	N	N	N	N	N	N			
WT17-2	8-10-95	N	N	N	N	N	N			reanalysis use original
WT17-3	8-10-95	N	N	N	N	N	N			↓
WT22-1	8-11-95	N	N	N	N	N	N			↓
WT55-1	8-11-95	N	N	N	N	N	N			✓
TOTAL NO. OF SAMPLES: _____									TOTAL PAGES: _____	

Originated by: Jean L. Barrow Date: 9-8-95  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Received in full by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Entered to database by: \_\_\_\_\_ Date: \_\_\_\_\_

P = PENDING VALID. C = VALID. COMPLETE U = VALID. STATUS UNKNOWN R = RETURNED TO LAB. N = NO VALID. CONDUCTED  
 1 = NEESA LEVEL A 2 = NEESA LEVEL B 3 = NEESA LEVEL C 4 = NEESA LEVEL D 5 = NEESA LEVEL E

NOTE: Please return this form signed and dated to: PRC Denver, attn: Moffett Field Document Control, after the data has been entered into the Moffett database.



9500 100 (2-11) (10/30) (11/21) (18)

**Environmental Management Inc.**  
120 Howard Street, Suite 700  
San Francisco, CA 94105  
415-543-4880 - 619-225-1883  
Fax 415-543-5480 619-225-9980

### Chain of Custody Record

Page 1 of 1

Project name: <b>UST SITES</b>		PRC technical contact: <b>FRED ALLEE</b>		Lab: <b>ANAMETRIX</b>		Preservative Added	
Project number: <b>044-0267IRSIFW</b>		PRC project manager: <b>PETE STANG</b>		Field samplers: <b>McHUGH/LAU/ALLEE</b>		Analysis Required	
Sample ID		Sample Description/Notes		Field samples' signatures: <i>Fred Allee</i>		<input type="checkbox"/> CLP YOA <input type="checkbox"/> CLP SVA <input type="checkbox"/> CLP Pest/PCBs <input type="checkbox"/> CLP Metals <input type="checkbox"/> TPH Purgeables <input type="checkbox"/> TPH Extractables <input type="checkbox"/> BTEX (8020) <input type="checkbox"/> TRPH (418.1)	
1) ✓ SBT17-1 (8.0)	TANK 17-RAPID	8-7-95	1400	SOIL	1 Liter Amber		
2) ✓ SBT17-2 (8.5)	FUEL FARM	8-7-95	1546	SOIL	1 Liter Poly		
3) ✓ SBT17-3 (7.0)	↓	8-7-95	1646	SOIL	Brass Tube #2		
4) ✓ SBT22-1 (8.0)	AMP10 BUNKER-TANK 22	8-8-95	0956	SOIL	Glass Jar		
5) ✓ SBT55-1 (7.0)	RUNWAY RADAR-TANK 55	8-8-95	1202	SOIL			
6) ✓ SBT87-1 (8.5)	BLDG. 15 - TANK 87	8-8-95	1618	SOIL			
7) ✓ SBT69-2 (8.0)	HANGAR 3 - TANK 69	8-8-95	1714	SOIL			
8) ✓ WT41A-1	NEX SERVICE STA. - TANK 41A	8-9-95	1930	WATER			
9) SBT41A-1 (8.5)	↓	8-8-95	1359	SOIL			
10) SBT57-1 (8.5)	AUTO HOBBY SHOP-TANK 57	8-8-95	1517	SOIL			
11) WTB-1	TRIP BLANK	8-9-95	n/a	WATER			

Relinquished by:	<i>Fred Allee</i>	Company Name	PRE-EMI (SD)	Date	8-10-95	Time	11:55
Received by:	<i>Calvin Robinson</i>	Company Name	ANAMETRIX	Date	8-10-95	Time	11:55
Relinquished by:							
Received by:							
Relinquished by:							
Received by:							
Relinquished by:							
Received by:							

Turnaround time/remarks: **10-DAY VERBAL REQUESTED. EXTRA WATER VOLUME IS FOR MS/MSD. 3-40ml NOA TRIP BLANK SET ACCOMPANIED SAMPLES TO LAB.**

*Run all samples for TPH & HUI PTHC per Jean-Pierre 8/15/95*



# Environmental Management Inc.

120 Howard Street, Suite 700  
San Francisco, CA 94105  
415-543-4880 - 619-225-1883  
Fax 415-543-5480 - 619-225-9985

# Chain of Custody Record

Lab: ANAMETRIX  
SAN JOSE, CA

Project name: **UST SITES**  
MOFFETT FEDERAL AIRFIELD  
PRC technical contact: **FRED ALLEE**

Project number: **Φ44-Φ267IRSI-FW**  
PRC project manager: **PETE STANG**

Sample ID	Sample Description/Notes	Date	Time	Matrix
WT17-3	RAPID FUEL FARM	8.10.95	1400	WATER
WT17-2	- TANK 17	8.10.95	1515	WATER
WTB7-1	BLOG. 15- TANK 87	8.10.95	1905	WATER
WTB-2	TRIP BLANK	8.10.95	n/a	WATER/AIR
WT17-1	RAPID FUEL FARM-TANK 17	8.11.95	0810	WATER
WT22-1	AMMD AREA 3-TANK 22	8.11.95	0935	WATER
WT69-1	HANGAR 3-TANK 69	8.11.95	1040	WATER
WT55-1	RUNWAY RADAR-TANK 55	8.11.95	1210	WATER
WTB-3	TRIP BLANK	8.11.95	n/a	WATER/AIR

Field samplers: LAU/ALEE

Field samplers' signatures: *Fred Allee*

No./Container Types

40 ml VOA	6
1 Liter Amber	2
1 Liter Poly	1
Brass Tube	
Glass Jar	

Analysis Required

CLP VOA	U
CLP SVOA	U
CLP Pest/PCBs	U
CLP Metals	U
TPH Purgeables	U
TPH Extractables	U
BTEX (8020)	U
TRPH (418.1)	U
ORGANIC LEAD	F

Preservative Added

NONE

Relinquished by:	Name (print)	Company Name	Date	Time
<i>Fred Allee</i>	FRED ALLEE	PRC - EMI (SD)	8-11-95	1440
<i>Benny S. Carrizosa</i>	BENNY S. CARRIZOSA	ITS ANAMETRIX	8-11-95	1940
<i>Benny S. Carrizosa</i>	BENNY S. CARRIZOSA	ITS ANAMETRIX	8-11-95	1550
<i>John P. ...</i>	John P. ...	ITS Anametric	8-11-95	1550
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

For all samples for TDIg April PRC per Joe. Baranow 8/15/95

SDG mf010 \*\*\* TMETAL \*\*\* 09/07/95 13:46:34

CLIENTID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	ALUMINUM	132	1.8 U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	ANTIMONY	2.1 U	2.3 B
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	ARSENIC	2.8 U	3.1 B
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	BARIUM	16.4 NB	256
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	BERYLLIUM	0.10 U	1.5 U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	CADMIUM	0.29 B	129000
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	CALCIUM	335000 E	3120
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	CHROMIUM	1.8 U	0.10 U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	COBALT	2.3 B	0.90 U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	COPPER	3.1 B	20.9 B
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	IRON	8070 E	8070 E
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	LEAD	3.4 U	3.4 U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	MAGNESIUM	0.60 U	74400
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	MANGANESE	4.5	4.5
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	MERCURY	1.6 B	1.6 B
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	NICKEL	21.9 E	21.9 E
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	POTASSIUM	1200	1200
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	SELENIUM	2.1 U	2.1 U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/21/95	08/16/95	SILVER	2.8 U	2.8 U
WT69-1	9508103-18	WATER	DL	08/11/95	08/21/95	08/16/95	SODIUM	32.5 NB	32.5 NB
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	THALLIUM	0.10 U	0.10 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	VANADIUM	0.20 U	0.20 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	ZINC	138000 E	5.5 B
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	ALUMINUM	0.91 B	0.91 B
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	ANTIMONY	11.1 B	11.1 B
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	ARSENIC	1760	1760
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	BARIUM	1.5 U	1.5 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	BERYLLIUM	74200	74200
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	CHROMIUM	45.1	45.1
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	COBALT	0.10 U	0.10 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	COPPER	3.4 B	3.4 B
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	IRON	5.2 B	5.2 B
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	LEAD	4140 EB	4140 EB
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	MAGNESIUM	6.9	6.9
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	MANGANESE	0.60 U	0.60 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	MERCURY	86300	86300
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	MOLYBDENUM	2.0 U	2.0 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	NICKEL	6.6 B	6.6 B
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	POTASSIUM	63.8 E	63.8 E
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	SELENIUM		
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	SILVER		
WT69-1	9508103-18	WATER	DL	08/11/95	08/21/95	08/16/95	SODIUM		
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	THALLIUM		
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	VANADIUM		
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/21/95	08/16/95	ZINC		



SDG mf010 \*\*\* TPHEXT \*\*\* 09/07/95 13:45:12

CLIENTSID	LABSID	MATRIX	SMTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95	08/15/95	TPH MOTOR OIL	30000. U	30000. U
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95	08/15/95	TPH -JP5	390000.	390000.
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95	08/15/95	TPH-KEROSENE	30000. U	30000. U
SBT17-1	9508103-02	SOIL	ORIG	08/07/95	08/16/95	08/15/95	TPH DIESEL	30000. U	30000. U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/25/95	08/15/95	TPH MOTOR OIL	11000. U	11000. U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/25/95	08/15/95	TPH-KEROSENE	11000. U	11000. U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/25/95	08/15/95	TPH DIESEL	11000. U	11000. U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/16/95	08/15/95	TPH-KEROSENE	12000. U	12000. U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/16/95	08/15/95	TPH MOTOR OIL	12000. U	12000. U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/16/95	08/15/95	TPH DIESEL	12000. U	12000. U
SBT17-3	9508103-04	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH -JP5	12000. U	12000. U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH-KEROSENE	12000. U	12000. U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH MOTOR OIL	12000. U	12000. U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH DIESEL	12000. U	12000. U
SBT22-1	9508103-09	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH MOTOR OIL	13000. U	13000. U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH -JP5	13000. U	13000. U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH-KEROSENE	13000. U	13000. U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH DIESEL	13000. U	13000. U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH-KEROSENE	49000.	49000.
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH-KEROSENE	28000. U	28000. U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH -JP5	28000. U	28000. U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH MOTOR OIL	440000.	440000.
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH DIESEL	12000. U	12000. U
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH MOTOR OIL	16000.	16000.
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH -JP5	12000. U	12000. U
SBT57-1	9508103-07	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH-KEROSENE	12000. U	12000. U
SBT69-2	9508103-07	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH-KEROSENE	12000. U	12000. U
SBT69-2	9508103-07	SOIL	ORIG	08/08/95	08/17/95	08/15/95	TPH MOTOR OIL	12000. U	12000. U
SBT69-2	9508103-06	SOIL	ORIG	08/08/95	08/25/95	08/15/95	TPH MOTOR OIL	12000. U	12000. U
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/25/95	08/15/95	TPH DIESEL	180000.	180000.
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/25/95	08/15/95	TPH-KEROSENE	110000. U	110000. U
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/25/95	08/15/95	TPH -JP5	110000. U	110000. U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH DIESEL	100. U	100. U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH MOTOR OIL	100. U	100. U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH-KEROSENE	100. U	100. U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH -JP5	150.	150.
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH DIESEL	100. U	100. U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH -JP5	100. U	100. U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH MOTOR OIL	100. U	100. U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/18/95	08/16/95	TPH-KEROSENE	100. U	100. U
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH-KEROSENE	280.	280.
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH MOTOR OIL	120.	120.
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH DIESEL	100. U	100. U
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH-KEROSENE	100. U	100. U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/18/95	08/16/95	TPH -JP5	100. U	100. U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/18/95	08/16/95	TPH-KEROSENE	100. U	100. U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/18/95	08/16/95	TPH MOTOR OIL	100. U	100. U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/18/95	08/16/95	TPH DIESEL	290.	290.
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH DIESEL	440.	440.
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH MOTOR OIL	62. J	62. J
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH -JP5	63. J	63. J
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH MOTOR OIL	100. U	100. U
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH-KEROSENE	100. U	100. U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/18/95	08/16/95	TPH DIESEL	100. U	100. U



100. U  
100. U  
52. J  
140.  
100. U  
380.  
100. U

9508103-18 WATER ORIG 08/11/95 08/18/95 08/16/95 TPH-KEROSENE  
9508103-18 WATER ORIG 08/11/95 08/18/95 08/16/95 TPH -JP5  
9508103-18 WATER ORIG 08/11/95 08/18/95 08/16/95 TPH MOTOR OIL  
9508103-14 WATER ORIG 08/10/95 08/18/95 08/16/95 TPH MOTOR OIL  
9508103-14 WATER ORIG 08/10/95 08/18/95 08/16/95 TPH-KEROSENE  
9508103-14 WATER ORIG 08/10/95 08/18/95 08/16/95 TPH DIESEL  
9508103-14 WATER ORIG 08/10/95 08/18/95 08/16/95 TPH -JP5

WT69-1  
WT69-1  
WT69-1  
WT87-1  
WT87-1  
WT87-1



VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : AMTRX  
 Date : 09/07/95 13:45:39

Compound	WT41A-1 9508103-08 MF010 WATER UG/L 08/09/95 08/22/95		WT69-1 9508103-18 MF010 WATER UG/L 08/11/95 08/22/95		WT87-1 9508103-14 MF010 WATER UG/L 08/10/95 08/22/95		WTB-1 9508103-11 MF010 WATER UG/L 08/09/95 08/22/95		WTB-2 9508103-15 MF010 WATER UG/L 08/10/95 08/22/95			
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
CHLOROMETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
BROMOMETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
VINYL CHLORIDE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
CHLOROETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
METHYLENE CHLORIDE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
ACETONE	10. U	10. U		100. U	14. U		10. U	10. U		10. U	7. U	
CARBON DISULFIDE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
1,1-DICHLOROETHENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
1,1-DICHLOROETHANE	10. U	10. U		51. U	10. U		10. U	10. U		10. U	10. U	
1,2-DICHLOROETHENE (TOTAL)	10. U	10. U		2400. U	10. U		10. U	10. U		10. U	10. U	
CHLOROFORM	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
1,2-DICHLOROETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
2-BUTANONE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
1,1,1-TRICHLOROETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
CARBON TETRACHLORIDE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
BROMODICHLOROMETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
1,2-DICHLOROPROPANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
CIS-1,3-DICHLOROPROPENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
TRICHLOROETHENE	10. U	10. U		61. U	10. U		10. U	10. U		10. U	10. U	
DIBROMOCHLOROMETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
1,1,2-TRICHLOROETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
BENZENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
TRANS-1,3-DICHLOROPROPENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
BROMOFORM	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
4-METHYL-2-PENTANONE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
2-HEXANONE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
TETRACHLOROETHENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
1,1,2,2-TETRACHLOROETHANE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
TOLUENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
CHLOROBENZENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
ETHYLBENZENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
STYRENE	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	
XYLENE (TOTAL)	10. U	10. U		100. U	10. U		10. U	10. U		10. U	10. U	

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

VOLATILE ORGANIC ANALYSIS

Project : MOFFETT  
 Lab. : AMTRX  
 Date : 09/07/95 13:45:39

Compound	WTB-3			9508103-20			MF010			WATER			UG/L			08/11/95			08/22/95		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com			
CHLOROMETHANE	10. U																				
BROMOMETHANE	10. U																				
VINYL CHLORIDE	10. U																				
CHLOROETHANE	10. U																				
METHYLENE CHLORIDE	10. U																				
ACETONE	10. U																				
CARBON DISULFIDE	10. U																				
1,1-DICHLOROETHENE	10. U																				
1,1-DICHLOROETHANE	10. U																				
1,2-DICHLOROETHENE (TOTAL)	10. U																				
CHLOROFORM	10. U																				
1,2-DICHLOROETHANE	10. U																				
2-BUTANONE	10. U																				
1,1,1-TRICHLOROETHANE	10. U																				
CARBON TETRACHLORIDE	10. U																				
BROMODICHLOROMETHANE	10. U																				
1,2-DICHLOROPROPANE	10. U																				
CIS-1,3-DICHLOROPROPENE	10. U																				
TRICHLOROETHENE	10. U																				
DIBROMOCHLOROMETHANE	10. U																				
1,1,2-TRICHLOROETHANE	10. U																				
BENZENE	10. U																				
TRANS-1,3-DICHLOROPROPENE	10. U																				
BROMOFORM	10. U																				
4-METHYL-2-PENTANONE	10. U																				
2-HEXANONE	10. U																				
TETRACHLOROETHENE	10. U																				
1,1,2,2-TETRACHLOROETHANE	10. U																				
TOLUENE	10. U																				
CHLOROBENZENE	10. U																				
ETHYLBENZENE	10. U																				
STYRENE	10. U																				
XYLENE (TOTAL)	10. U																				

Val - Validity Refer to data qualifier definitions.  
 Com - Comments  
 NA - Not Analyzed

SDG mf010 \*\*\* AROMV \*\*\* 09/07/95 13:45:10

CLIENTSID	LABSID	MATRIX	SMPTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95		TPHGBTEX ETHYLBENZENE	16000.	U
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95		TPHGBTEX BENZENE	1500.	U
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95		TPHGBTEX TOLUENE	1800.	U
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95		TPHGBTEX TOTAL XYLENES	9100.	U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX BENZENE	0.53	U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX TOLUENE	0.53	U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX ETHYLBENZENE	0.53	U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX TOTAL XYLENES	3.3	U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX TOLUENE	0.6	U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX BENZENE	0.6	U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX ETHYLBENZENE	0.6	U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/14/95		TPHGBTEX TOTAL XYLENES	0.6	U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/14/95		TPHGBTEX TOLUENE	0.61	U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/14/95		TPHGBTEX BENZENE	0.61	U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/14/95		TPHGBTEX ETHYLBENZENE	0.61	U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/14/95		TPHGBTEX TOTAL XYLENES	0.61	U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX BENZENE	0.63	U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOLUENE	0.63	U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX ETHYLBENZENE	0.63	U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOTAL XYLENES	0.63	U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOLUENE	0.56	U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX BENZENE	0.56	U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX ETHYLBENZENE	0.56	U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOTAL XYLENES	0.56	U
SBT55-1RE	9508103-05	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOLUENE	0.56	U
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX BENZENE	0.62	U
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOLUENE	0.62	U
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX ETHYLBENZENE	0.62	U
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOTAL XYLENES	0.62	U
SBT69-2	9508103-07	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOLUENE	0.61	U
SBT69-2	9508103-07	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX BENZENE	0.61	U
SBT69-2	9508103-07	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX ETHYLBENZENE	0.61	U
SBT69-2	9508103-07	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOTAL XYLENES	0.61	U
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOLUENE	0.57	U
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX BENZENE	0.57	U
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX ETHYLBENZENE	0.57	U
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/15/95		TPHGBTEX TOTAL XYLENES	0.57	U
WT17-1	9508103-16	WATER	ORIG	08/11/95	08/17/95		TPHGBTEX TOLUENE	1.	U
WT17-1	9508103-16	WATER	ORIG	08/11/95	08/17/95		TPHGBTEX BENZENE	1.	U
WT17-1	9508103-16	WATER	ORIG	08/11/95	08/17/95		TPHGBTEX ETHYLBENZENE	2.5	U
WT17-1	9508103-16	WATER	ORIG	08/11/95	08/17/95		TPHGBTEX TOTAL XYLENES	3.9	U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/16/95		TPHGBTEX TOLUENE	1.6	U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/16/95		TPHGBTEX BENZENE	0.5	U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/16/95		TPHGBTEX ETHYLBENZENE	0.5	U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/16/95		TPHGBTEX TOTAL XYLENES	0.5	U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/14/95		TPHGBTEX TOLUENE	0.5	U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/14/95		TPHGBTEX BENZENE	0.5	U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/14/95		TPHGBTEX ETHYLBENZENE	0.5	U
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/14/95		TPHGBTEX TOTAL XYLENES	0.5	U
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/14/95		TPHGBTEX TOLUENE	0.5	U
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/14/95		TPHGBTEX BENZENE	0.5	U
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/14/95		TPHGBTEX ETHYLBENZENE	0.5	U
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/14/95		TPHGBTEX TOTAL XYLENES	0.5	U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/11/95		TPHGBTEX TOLUENE	0.5	U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/11/95		TPHGBTEX BENZENE	0.5	U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/11/95		TPHGBTEX ETHYLBENZENE	0.5	U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/11/95		TPHGBTEX TOTAL XYLENES	0.5	U

WT55-1	9508103-19	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX TOTAL XYLENES	1.1
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX ETHYLBENZENE	0.5 U
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX TOLUENE	0.5 U
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX BENZENE	0.5 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX BENZENE	0.5 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX TOLUENE	0.5 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX ETHYLBENZENE	0.5 U
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX TOTAL XYLENES	0.5 U
WTB-1	9508103-11	WATER	ORIG	08/09/95	08/11/95	TPHGBTEX BENZENE	0.5 U
WTB-1	9508103-11	WATER	ORIG	08/09/95	08/11/95	TPHGBTEX TOLUENE	0.5 U
WTB-1	9508103-11	WATER	ORIG	08/09/95	08/11/95	TPHGBTEX ETHYLBENZENE	0.5 U
WTB-1	9508103-11	WATER	ORIG	08/09/95	08/11/95	TPHGBTEX TOTAL XYLENES	0.5 U
WTB-2	9508103-15	WATER	ORIG	08/10/95	08/14/95	TPHGBTEX TOLUENE	0.5 U
WTB-2	9508103-15	WATER	ORIG	08/10/95	08/14/95	TPHGBTEX BENZENE	0.5 U
WTB-2	9508103-15	WATER	ORIG	08/10/95	08/14/95	TPHGBTEX TOLUENE	0.5 U
WTB-3	9508103-20	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX BENZENE	0.5 U
WTB-3	9508103-20	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX ETHYLBENZENE	0.5 U
WTB-3	9508103-20	WATER	ORIG	08/11/95	08/14/95	TPHGBTEX TOTAL XYLENES	0.5 U

SDG mf010 \*\*\* TPIPRG \*\*\* 09/07/95 13:45:13

CLIENTSID	LABSID	MATRIX	SHPYTYPE	SAMPDATE	ANLYDATE	EXTDATE	ANALYTE	RESULT	QUAL
SBT17-1	9508103-01	SOIL	ORIG	08/07/95	08/16/95		TPH GASOLINE	1000000.	U
SBT17-2	9508103-02	SOIL	ORIG	08/07/95	08/14/95		TPH GASOLINE	530.	U
SBT17-3	9508103-03	SOIL	ORIG	08/07/95	08/14/95		TPH GASOLINE	600.	U
SBT22-1	9508103-04	SOIL	ORIG	08/08/95	08/14/95		TPH GASOLINE	610.	U
SBT41A-1	9508103-09	SOIL	ORIG	08/08/95	08/15/95		TPH GASOLINE	630.	U
SBT55-1	9508103-05	SOIL	ORIG	08/08/95	08/14/95		TPH GASOLINE	560.	U
SBT57-1	9508103-10	SOIL	ORIG	08/08/95	08/15/95		TPH GASOLINE	620.	U
SBT69-2	9508103-07	SOIL	ORIG	08/08/95	08/15/95		TPH GASOLINE	610.	U
SBT87-1	9508103-06	SOIL	ORIG	08/08/95	08/15/95		TPH GASOLINE	570.	U
WT17-1	9508103-16	WATER	ORIG	08/11/95	08/17/95		TPH GASOLINE	400.	U
WT17-2	9508103-13	WATER	ORIG	08/10/95	08/16/95		TPH GASOLINE	100.	Y
WT17-3	9508103-12	WATER	ORIG	08/10/95	08/14/95		TPH GASOLINE	50.	U
WT22-1	9508103-17	WATER	ORIG	08/11/95	08/14/95		TPH GASOLINE	50.	U
WT41A-1	9508103-08	WATER	ORIG	08/09/95	08/11/95		TPH GASOLINE	38.	J
WT55-1	9508103-19	WATER	ORIG	08/11/95	08/14/95		TPH GASOLINE	43.	J
WT69-1	9508103-18	WATER	ORIG	08/11/95	08/14/95		TPH GASOLINE	50.	U
WTB-1	9508103-11	WATER	ORIG	08/09/95	08/11/95		TPH GASOLINE	50.	U
WTB-2	9508103-15	WATER	ORIG	08/10/95	08/14/95		TPH GASOLINE	50.	U
WTB-3	9508103-20	WATER	ORIG	08/11/95	08/14/95		TPH GASOLINE	50.	U

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**APPENDIX C**

**BORING AND MONITORING WELL COMPLETION LOGS**



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**BOREHOLE LOG**

**PRC ENVIRONMENTAL MANAGEMENT, INC.**

Job Number: 044-0267IRSIFW Well Designation: MWT17-1 Borehole Designation: SBT17-1  
 Client: U.S. NAVY Surface Elevation:  
 Site: Moffett Federal Airfield Subsite: High Speed Fuel Farm Geologist: Don McHugh  
 Drilling Date (s): 8-7-95 Well Installation Date (s): 8-7-95

Drilling Company: SES Personnel: Paul & Thomas

Drilling Method: HSA with 18-inch split spoon sampler

Borehole Diameter: 6 inches Casing Diameter: 2 inches Casing Material: Schedule 40 PVC

Screen Diameter: 2 inches Screen Opening: 0.02 inches Screen Material: Schedule 40 PVC

Screen Interval: 5 to 10 feet bgs Filterpack Interval: 3.5 to 10 feet bgs Bentonite Seal: 2 to 3.5 feet bgs

Grout Interval: 0 to 2 feet bgs Protective Cover: Flush Mount Elevation of TOC: 5.28

Latitude: 338957.70 Longitude: 1551754.97

DEPTH (FT)	BLOWS/6 in	RECOVERY	TIME	FIELD SCREENING	ANALYSIS	START OF CORE INTERVAL	GRAPHIC LOG	SOIL DESCRIPTION	WELL DIAGRAM
			1350				CMB	BASE MATERIAL; for approx. 3".	
5	3/1/2	8/18	1355		Geotech.	5.0	SC	Moisture increasing, trace silt and gravel ends.	
	3/5/6	18/18	1400		TPH/BTEX	8.0		SANDY CLAY; becomes grey with a strong hydrocarbon odor.	
10								Becomes saturated.	
15								BORING TERMINATED at 10' bgs. Converted to 2" PVC Monitoring Well.	







Job Number: 044-0267IRSIFW Well Designation: MWT41A-1 Borehole Designation: SBT41A-1

Client: U.S. NAVY

Surface Elevation:

Site: Moffett Federal Airfield Subsite: NEX Service Station

Geologist: Don McHugh

Drilling Date (s): 8-8-95

Well Installation Date (s): 8-8-95

Drilling Company: SES Personnel: Paul & Thomas

Drilling Method: HSA with 18-inch split spoon sampler

Borehole Diameter: 8 inches Casing Diameter: 2 inches Casing Material: Schedule 40 PVC

Screen Diameter: 2 inches Screen Opening: 0.02 inches Screen Material: Schedule 40 PVC

Screen Interval: 5 to 12 feet bgs Filterpack Interval: 3.5 to 12 feet bgs Bentonite Seal: 2 to 3.5 feet bgs

Grout Interval: 0 to 2 feet bgs Protective Cover: Flush Mount Elevation of TOC: 23.38

Latitude: 335038.66 Longitude: 1549109.25

DEPTH (FT)	BLOWS/6 in	RECOVERY	TIME	FIELD SCREENING	ANALYSIS	START OF CORE INTERVAL	GRAPHIC LOG	SOIL DESCRIPTION	WELL DIAGRAM
			1355				GP	SANDY GRAVEL; tan to grey, slightly moist with some fines.	
5	3/4/6	18/18	1359		Geo/Chem	5.5	SC	SANDY CLAY; tan to brown, moist, trace silt and gravel, low plasticity.	
	2/2/4	3/18	1404		---	8.0		INADEQUATE SAMPLE RECOVERY - NO SAMPLE OBTAINED.	
10								Becomes saturated.	
15								BORING TERMINATED at 12' bgs. Converted to 2" PVC Monitoring Well.	









**BOREHOLE LOG**

**PRC ENVIRONMENTAL MANAGEMENT, INC.**

Job Number: 0440267IRSIFW Well Designation: MWT69-1 Borehole Designation: SBT69-2  
 Client: U.S. NAVY Surface Elevation:  
 Site: Moffett Federal Airfield Subsite: Hangar 3 East Parking Geologist: Don McHugh  
 Drilling Date (s): 8-8-95 Well Installation Date (s): 8-8-95

Drilling Company: SES Personnel: Paul & Thomas  
 Drilling Method: HSA with 18-inch split spoon sampler  
 Borehole Diameter: 6 inches Casing Diameter: 2 inches Casing Material: Schedule 40 PVC  
 Screen Diameter: 2 inches Screen Opening: 0.02 inches Screen Material: Schedule 40 PVC  
 Screen Interval: 5 to 10 feet bgs Filterpack Interval: 3.5 to 10 feet bgs Bentonite Seal: 2 to 3.5 feet bgs  
 Grout Interval: 0 to 2 feet bgs Protective Cover: Flush Mount Elevation of TOC: 10.68  
 Latitude: 337190.83 Longitude: 1552797.83

DEPTH (FT)	BLOWS/6 in	RECOVERY	TIME	FIELD SCREENING	ANALYSIS	START OF CORE INTERVAL	GRAPHIC LOG	SOIL DESCRIPTION	WELL DIAGRAM
			1707				RC	REINF. CONCRETE; for 6 inches.	
5							SC	SANDY CLAY; dark brown, moist, trace silt & gravel, low plasticity.	
	2/1/1	15/18	1714		TPH/BTEX	8.5		Becomes tan, moisture increasing.	
10								Becomes saturated.	
15								BORING TERMINATED at 10' bgs. Converted to 2" PVC Monitoring Well.	



**APPENDIX D**  
**GEOTECHNICAL LABORATORY REPORT**

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**BERLOGAR GEOTECHNICAL CONSULTANTS**  
**LETTER OF TRANSMITTAL**

PRC  
Attention: Mr. Willis Wilcoxon  
120 Howard Street, Suite 700  
San Francisco, CA 94105

August 21, 1995  
Job No. 1882.801


Subject: Laboratory Testing  
Requisition No. SF 950484

We enclose the following:

1. One copy of summary of Laboratory Dry Density, Moisture Content and Gradation Tests Result.
2. One copy of raw data of laboratory dry density, moisture content and gradation tests.

Remarks:

The tested sample will be returned to Mr. Fred Allan through Federal Express.

  
By: Philip Tse  
Principal Engineer

wp51/letter/2756

**SUMMARY OF LABORATORY DRY DENSITY  
AND MOISTURE CONTENT RESULTS**

<b>Sample No.</b>	<b>Depth (ft)</b>	<b>Dry Density (pcf)</b>	<b>Moisture Content (%)</b>
SBT17-1	5.0	107.4	16.7
SBT17-2	5.5	107.5	20.2
SBT17-3	5.5	96.6	25.5
SBT22-1	5.5	101.4	18.1
SBT41-A	5.5	93.7	29.5
SBT55-1	5.5	99.0	25.3
SBT57-1	5.5	86.2	33.8
SBT69-1	5.5	98.3	18.9
SBT87-1	5.5	84.0	27.6

**SUMMARY OF LABORATORY GRADATION TEST**

Sieve Size (U.S. Standard)	Particle Diameter (min)	Sample Number									
		SBT17-1	SBT17-2	SBT17-3	SBT22-1	SBT41-A	SBT55-1	SBT57-1	SBT69-1	SBT87-1	
¾"	18.85	100	100	--	100	--	--	--	100	--	--
⅝"	9.42	94.8	97.3	--	90.2	--	--	--	85.8	--	--
#4	4.699	82.8	90.3	100	82.2	100	100	100	70.2	100	100
#8	2.362	76.6	85.2	97.8	79.2	99.5	98.2	99.8	64.4	72.5	72.5
#16	1.168	71.5	83.2	96.7	75.0	97.5	97.6	99.6	59.2	64.1	64.1
#30	2.589	66.8	81.7	95.7	69.0	95.0	96.8	99.4	55.3	54.0	54.0
#50	0.295	61.5	80.0	94.1	49.3	92.0	95.8	99.0	51.5	39.7	39.7
#100	0.147	55.9	76.6	90.8	33.8	90.0	92.6	98.5	46.6	30.0	30.0
#200	0.074	50.6	71.6	85.9	29.2	87.6	88.5	98.4	41.8	25.9	25.9
	0.055	47.2	68.2	80.2	26.5	83.8	86.6	96.4	38.0	22.7	22.7
	0.037	44.7	65.0	74.7	23.9	81.9	84.7	94.5	35.4	21.6	21.6
	0.019	39.6	56.3	65.3	21.2	78.0	80.8	91.5	31.7	19.4	19.4
	0.009	35.4	49.4	59.7	19.9	72.3	76.9	84.6	29.1	17.2	17.2
	0.005	32.0	42.6	52.2	17.3	62.8	69.2	76.7	25.3	15.1	15.1
	0.002	27.0	30.7	42.9	14.6	47.6	57.7	59.0	21.5	10.8	10.8
	0.001	23.2	20.4	33.6	11.9	34.2	44.3	49.2	16.4	8.6	8.6



# DRY DENSITY AND MOISTURE CONTENT

PROJECT NAME: PRC

PROJECT NO. 1982831

DATE 8/15/81

TESTED BY DT

SBT

BORING / SAMPLE NO.	SBT 17	→ ②	③	SBT 22	SBT 69	SBT 55-1	41A	57-1	37-1
DEPTH (FEET)	5.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
DIAMETER (IN.)	1.90								→
LENGTH (IN.)	1.95	4.30	4.00	4.7	6	4.9	28	325	5.8
VOLUME (cc's) *	9060	19978	18584	2183	2788	2276	130.0	151.0	2695
WET WEIGHT (g)	1822	4147	3666	4194	5228	4531	2539	2799	4639
TARE NO.	403	402	411	406	408	NO MARK	400	1	15
WET WEIGHT + TARE (g)	2556	4901	4348	4982	5975	6109	3275	3840	5671
DRY WEIGHT + TARE (g)	2295	4201	3614	4281	5144	5193	2697	3131	5395
WEIGHT OF WATER (g)	261	700	734	641	831	916	578	708	
WEIGHT OF TARE (g)	73.7	74.4	731	730	74.6	158.1	737	1042	1035
WEIGHT OF DRY SOIL (g)	153.8	3457	2883	3543	4398	3612	1960	2090	4360
MOISTURE CONTENT (%)	16.7	20.2	25.5	18.1	18.9	25.3	29.5	33.8	27.6
WET DENSITY (pcf)	125.4	129.3	121.2	119.8	116.9	124.1	121.4	115.3	107.2
DRY DENSITY (pcf)	107.4	107.5	96.6	101.4	98.3	99.0	93.7	86.2	84.0
<p><math>f = 46.46</math></p> <p>SOIL DESCRIPTION:</p> <ul style="list-style-type: none"> <li>• VOLUME IN CC'S = <math>A \text{ in}^2 \times L \text{ in} \times 16.387</math></li> <li>WET DENSITY (pcf) = <math>\frac{\text{WET WT. (gms)}}{\text{VOL (CC'S)}} \times 62.4</math></li> <li>DRY DENSITY (pcf) = <math>\frac{\text{WET DENSITY}}{1 + \text{MC} (\%)}</math></li> </ul>									
<p>SANDY CLAY, DK BROWN</p> <p>SILTY CLAY, TAN, WITH CONCRETIONS</p> <p>SL/SANDY CLAY LT GRAY</p> <p>SANDY CLAY w/ SAND LAYER, BROWN</p> <p>SILTY CLAY, BLACK SANDY CLAY, BROWN</p> <p>SILTY CLAY, BROWN GRAY</p> <p>SILTY CLAY, MOTTLED LT GRAY, BROWN, GRAY</p> <p>SILTY CLAY, DK GRAY</p> <p>SILTY SAND, DK BROWN</p> <p>1/2 SANDY CLAY, DK BROWN WITH A/C</p>									



# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-801 DATE 9/19/95  
 BORING : SBT 17-1 DEPTH (FEET) 5 TESTED BY OT  
 SAMPLE DESCRIPTION SANDY CLAY DARK BROWN

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ grms  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS  
  
 DRY WT. TOTAL SAMPLE:  

$$= \frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}} = \text{_____ grms}$$

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCUM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				100
3/8"	0.371	9.42	17.5	17.5	5.2	94.8
# 4	0.185	4.699	39.9	57.4	17.2	82.8
# 8	0.093	2.362		3.86	7.5	92.5
# 16	0.046	1.168		7.13	13.6	86.4
# 30	0.0232	0.589		10.19	19.3	80.7
# 50	0.0116	0.295		13.55	25.7	74.3
# 100	0.0058	0.147		17.12	32.5	67.5
# 200	0.0029	0.074		20.51	38.9	61.1
# 270	0.0021	0.053				
PAN			27.63			
WT. WASHED THRU #200						
TOTAL				33.39		

WEIGHT WASHED THROUGH #200:  
 NO. OF PAN \_\_\_\_\_  
 WT. PAN + DRY SOIL \_\_\_\_\_  
 WT. OF PAN \_\_\_\_\_  
 WT. OF DRY SOIL 52.71

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882-301 DATE 8/17  
 BORING SOT 17-1 DEPTH (FEET) 8/16/95 TESTED BY DT  
 SAMPLE DESCRIPTION SANDY CLAY, DK BROWN

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED: 4% CALGON 125 ml

DRY WEIGHT USED IN HYDROMETER 52.71 (grams)  
 PERCENT PASSING NO. 200 50.6 (percent)  
 FACTOR F = NW<sub>s</sub> 1.607

+ 3/8 17.5  
 + 4 39.9  
 - 4 276.3

A

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
6	55	15	1/2 MIN.	35	+ 5	30	50.6	0.074
		30	1/2 MIN.	33		28	47.2	0.055
	56	06	1 MIN. 6 SEC.	31.5		26.5	44.7	0.037
	59	12	4 MIN. 12 SEC.	28.5		23.5	39.6	0.019
7	13	40	18 MIN. 40 SEC.	26		21	35.4	0.009
7	55	30	60 MIN. 30 SEC.	24		19	32.0	0.005
13	13		6 HRS. 18 MIN.	21		16	27.0	0.002
7	08		24 HRS. 13 MIN.	17		12	23.2	0.001

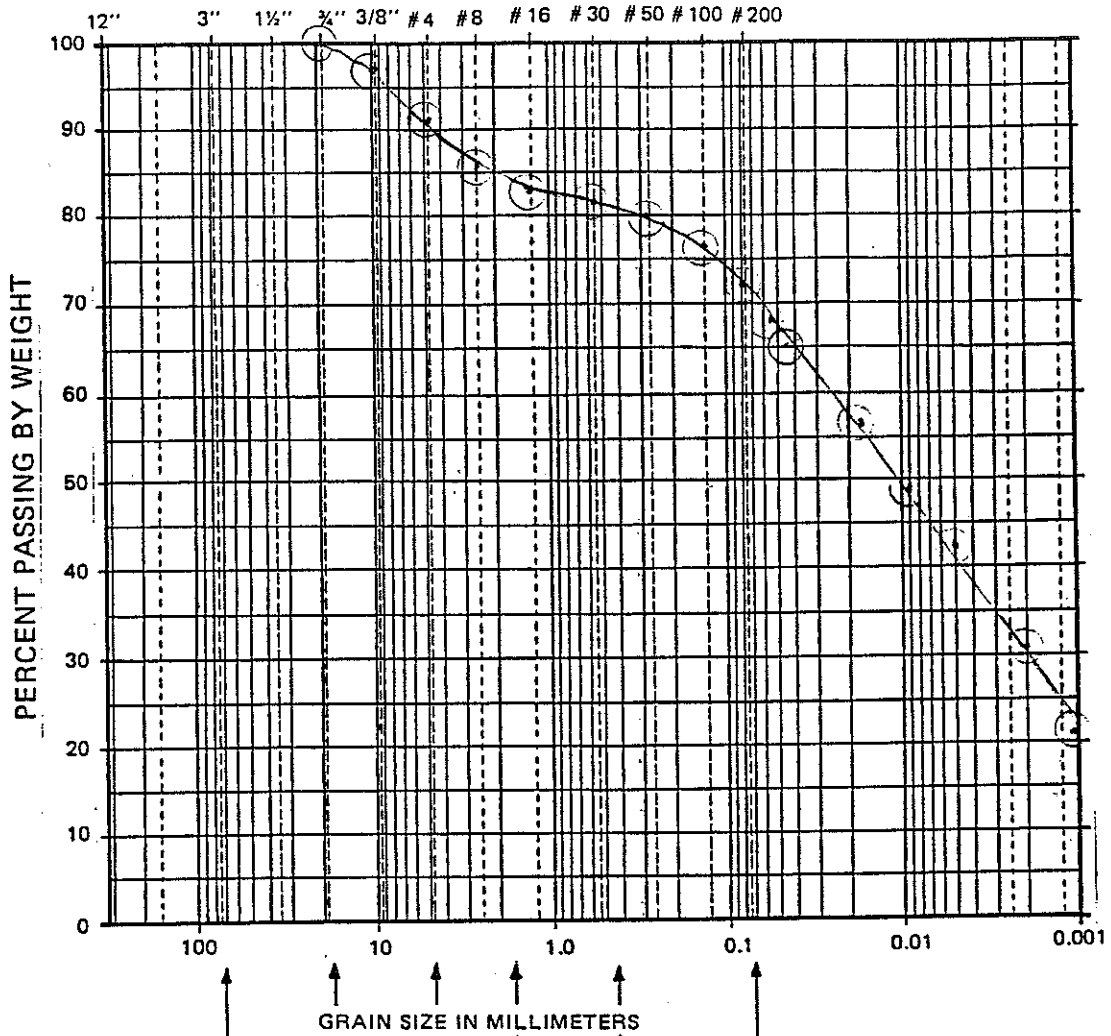
**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
1/2 MIN.	_____	_____	_____	_____
1/2 MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

U.S. STANDARD SIEVE SIZE



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

(UNIFIED SOIL CLASSIFICATION SYSTEM)

1882-801

SYMBOL	LOCATION	DEPTH FT.	DESCRIPTION
	SBT 17-2	5.5	SANDY CLAY, TAN, WITH CONCRETIONS

GRADATION TEST DATA

# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-301 DATE 9/19/95  
 BORING : SB7 17-2 DEPTH (FEET) 55 TESTED BY DT  
 SAMPLE DESCRIPTION SANDY CLAY, TAN w/ CONCRETIONS

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ gms  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS

DRY WT. TOTAL SAMPLE:

$$= \frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}} = \text{_____ gms}$$

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCUM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				100
3/8"	0.371	9.42	5.1	5.1	2.7	97.3
# 4	0.185	4.659	13.5	18.6	9.7	90.3
# 8	0.093	2.362		29.6	15.4	84.6
# 16	0.045	1.168		41.3	21.4	78.6
# 30	0.0232	0.589		49.8	25.8	74.2
# 50	0.0116	0.295		60.3	31.4	68.6
# 100	0.0058	0.147		70.1	36.2	63.8
# 200	0.0029	0.074		79.4	41.2	58.8
# 270	0.0021	0.053				
PAN			173.9			
WT. WASHED THRU # 200						
TOTAL				192.5		

WEIGHT WASHED THROUGH # 200:

NO. OF PAN \_\_\_\_\_

WT. PAN + DRY SOIL \_\_\_\_\_

WT. OF PAN \_\_\_\_\_

WT. OF DRY SOIL 52.68

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882-801 DATE 8/17  
 BORING SBT 17-2 DEPTH (FEET) 5.5 TESTED BY DT  
 SAMPLE DESCRIPTION SANDY CLAY TAN. w/ WAGGERS

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALGON 125 ml

DRY WEIGHT USED IN HYDROMETER 52.68 (grams)  
 PERCENT PASSING NO. 200 71.6 (percent)  
 FACTOR F = N/W<sub>s</sub> 1.705

+3/0 5.1  
 +4 13.5  
 -4 1739

13.

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
7	01	15	1/2 MIN.	47	+5	42	71.6	0.074
	01	30	1/2 MIN.	45		40	68.2	0.055
	02	06	1 MIN. 6 SEC.	42		37	65.0	0.037
	05	12	4 MIN. 12 SEC.	38		33	56.3	0.019
	10	40	18 MIN. 40 SEC.	34		29	49.4	0.009
8	01	30	60 MIN. 30 SEC.	30		25	42.6	0.005
12	19		6 HRS. 18 MIN.	23		18	30.7	0.002
7	14		24 HRS. 13 MIN.	17		12	20.4	0.001

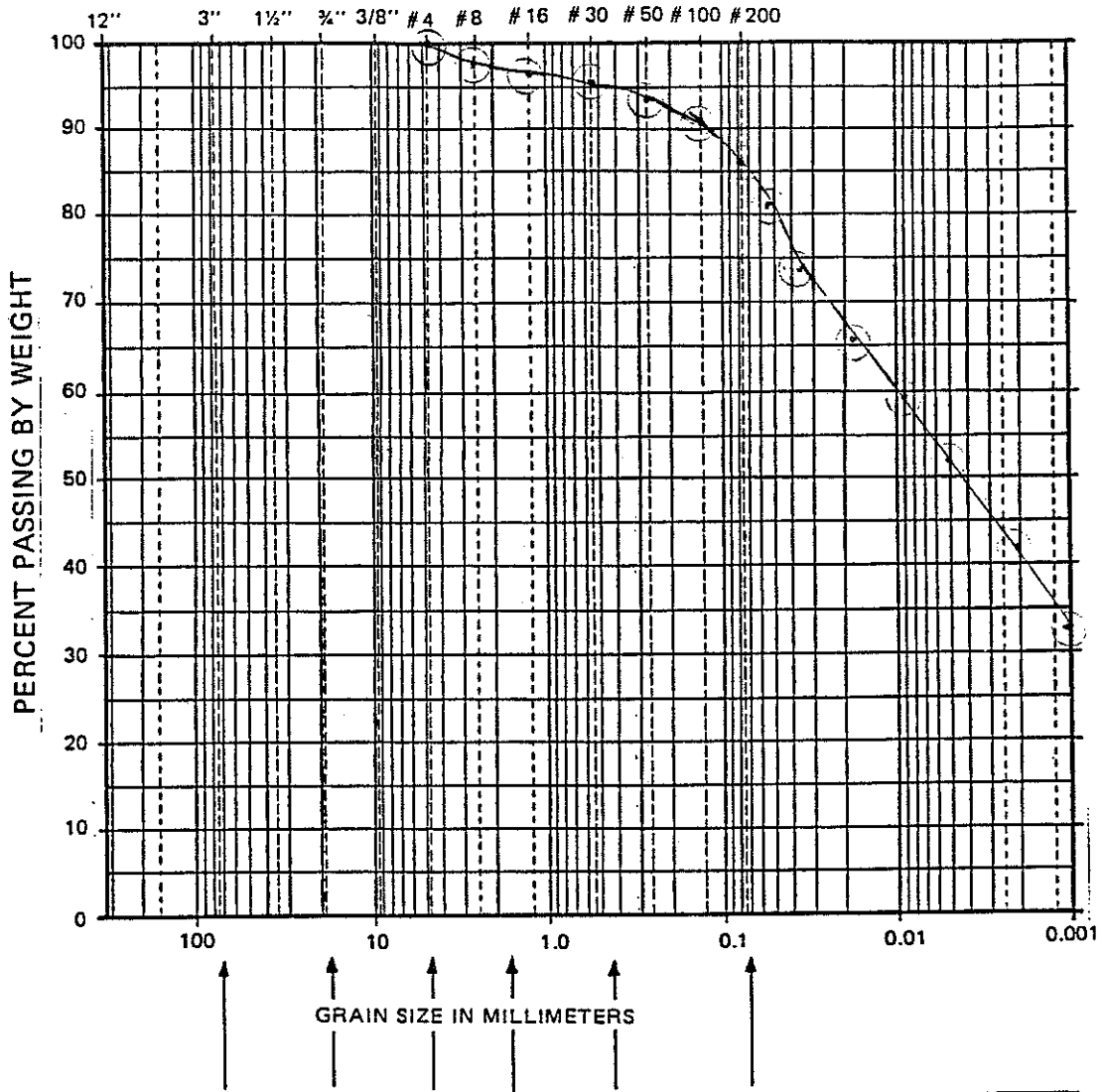
**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
1/2 MIN.	_____	_____	_____	_____
1/2 MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

U.S. STANDARD SIEVE SIZE



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

(UNIFIED SOIL CLASSIFICATION SYSTEM)

1882-801

SYMBOL	LOCATION	DEPTH FT.	DESCRIPTION
⊙	SBT 17-3	5.5	SL/SANDY CLAY, LIGHT GRAY

GRADATION TEST DATA



# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-301 DATE 9/19/75  
 BORING : SBT 17-3 DEPTH (FEET) 55 TESTED BY OT  
 SAMPLE DESCRIPTION SL/SANDY CLAY LT GRAY

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ grms  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS

DRY WT. TOTAL SAMPLE:  
 =  $\frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}}$  = \_\_\_\_\_ grms

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCUM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				
3/8"	0.371	9.42				
# 4	0.185	4.639				100
# 8	0.093	2.362		1.25	22	97.8
# 16	0.046	1.168		1.81	33	96.7
# 30	0.0232	0.589		2.35	43	95.7
# 50	0.0116	0.295		3.22	59	94.1
# 100	0.0058	0.147		5.02	92	90.8
# 200	0.0029	0.074		8.85	16.1	85.9
# 270	0.0021	0.053				
PAN						
WT. WASHED THRU # 200						
TOTAL						

**WEIGHT WASHED THROUGH # 200:**

NO. OF PAN \_\_\_\_\_  
 WT. PAN + DRY SOIL \_\_\_\_\_  
 WT. OF PAN \_\_\_\_\_  
 WT. OF SAND 54.66

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882-301 DATE 2/17  
 BORING SBT 17-3 DEPTH (FEET) 5.5 TESTED BY DT  
 SAMPLE DESCRIPTION SL SANDY CLAY LT GRAY

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALGON 125 m

DRY WEIGHT USED IN HYDROMETER 54.66 (grams)  
 PERCENT PASSING NO. 200 85.9 (percent)  
 FACTOR F = N/W<sub>s</sub> 1.067



TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
7	07	15	½ MIN.	51	+5	46	85.9	0.074
		30	½ MIN.	48		43	80.2	0.055
	08	06	1 MIN. 6 SEC.	45		40	74.7	0.037
	11	12	4 MIN. 12 SEC.	40		35	65.3	0.019
	25	40	18 MIN. 40 SEC.	37		32	59.7	0.009
8	07	30	60 MIN. 30 SEC.	33		28	52.2	0.005
13	25		6 HRS. 18 MIN.	28		23	42.9	0.002
8	20		24 HRS. 13 MIN.	23		18	33.6	0.001

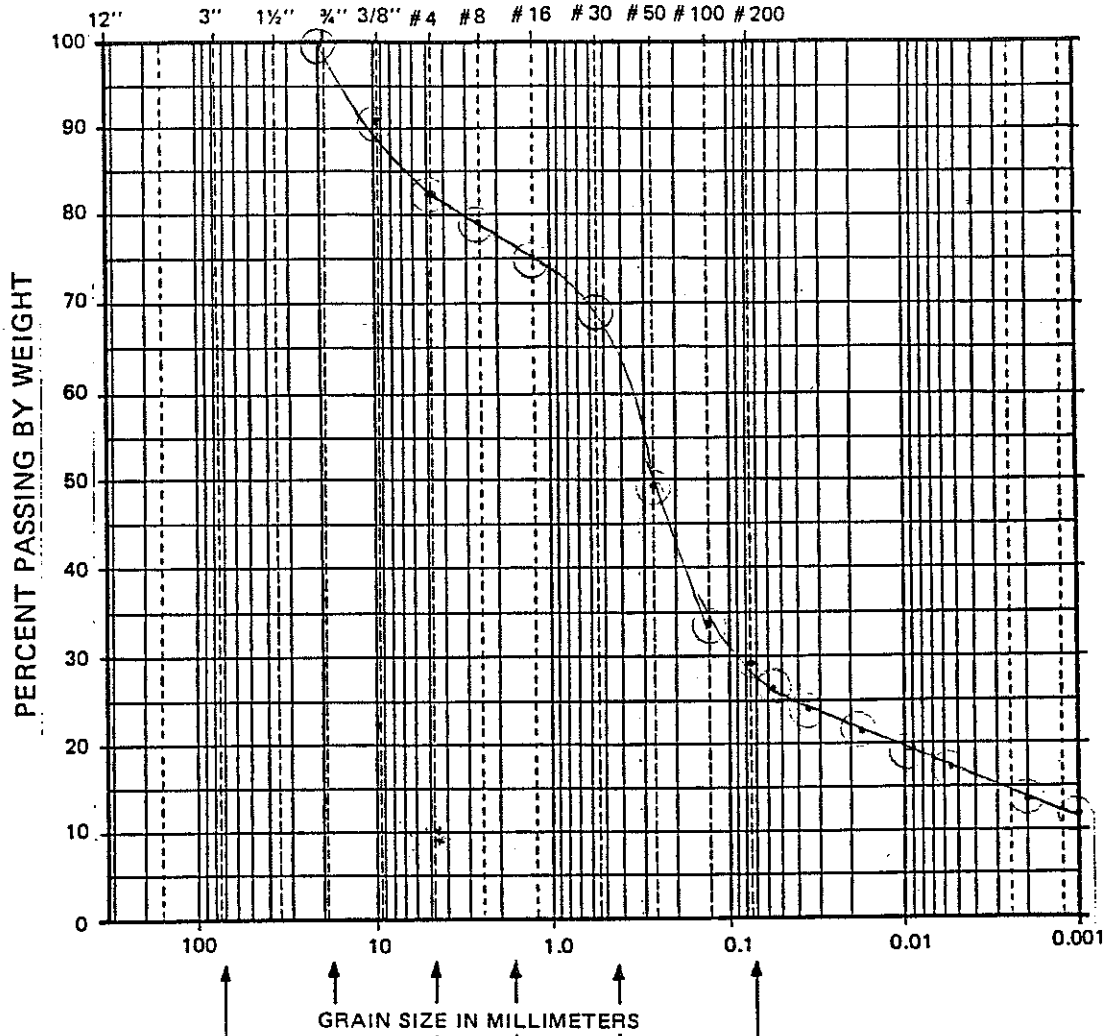
### MOISTURE CONTENT DETERMINATION:

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

### HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
½ MIN.	_____	_____	_____	_____
½ MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

U.S. STANDARD SIEVE SIZE



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

(UNIFIED SOIL CLASSIFICATION SYSTEM)

1882-801

SYMBOL	LOCATION	DEPTH FT.	DESCRIPTION
①	SET 22-1	5.5	SL/CLAYEY SAND, BROWN

GRADATION TEST DATA

# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-301 DATE 9/19/95  
 BORING : SBT 22-1 DEPTH (FEET) \_\_\_\_\_ TESTED BY OT  
 SAMPLE DESCRIPTION SL/CLAYEY SAND - BROWN

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ grms  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS

**DRY WT. TOTAL SAMPLE:**

$$= \frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}} = \text{_____ grms}$$

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCUM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				100
3/8"	0.371	9.42	41.9	41.9	9.8	90.2
# 4	0.185	4.699	34.1	76.0	17.8	82.2
# 8	0.093	2.362		208.35	96.9	74.2
# 16	0.046	1.168		513.87	91.2	75.0
# 30	0.0232	0.589		991.167	85.3	69.0
# 50	0.0116	0.295		2380.167	60.0	49.3
# 100	0.0058	0.147		3477.886	41.4	33.8
# 200	0.0029	0.074		3818.164	35.5	29.2
# 270	0.0021	0.053				
PAN			350.4			
WT. WASHED THRU #200						
TOTAL				426.3		

**WEIGHT WASHED THROUGH #200:**

NO. OF PAN \_\_\_\_\_  
 WT. PAN + DRY SOIL \_\_\_\_\_  
 WT. OF PAN \_\_\_\_\_  
 WT. OF DRY SOIL 59.16

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882-301 DATE 8/17  
 BORING SBT 22-1 DEPTH (FEET) 5.5 TESTED BY DT  
 SAMPLE DESCRIPTION SL / CLAYEY SAND, BROWN

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALGON 125 ml

DRY WEIGHT USED IN HYDROMETER 59.16 (grams)  
 PERCENT PASSING NO. 200 29.2 (percent)  
 FACTOR F =  $NW_s$  1.327

+3/8 41.9  
 +1 34.1  
 -4 350.4



9/17

8/17

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
7	13	15	¼ MIN.	27	+5	22	29.2	0.074
		30	¼ MIN.	25		20	26.5	0.055
	14	26	1 MIN. 6 SEC.	23		18	23.9	0.037
	17	12	4 MIN. 12 SEC.	21		16	21.2	0.019
	31	40	18 MIN. 40 SEC.	20		15	19.9	0.009
8	13	30	60 MIN. 30 SEC.	18		13	17.3	0.005
13	31		6 HRS. 18 MIN.	16		11	14.6	0.002
8	26		24 HRS. 13 MIN.	14		9	11.9	0.001

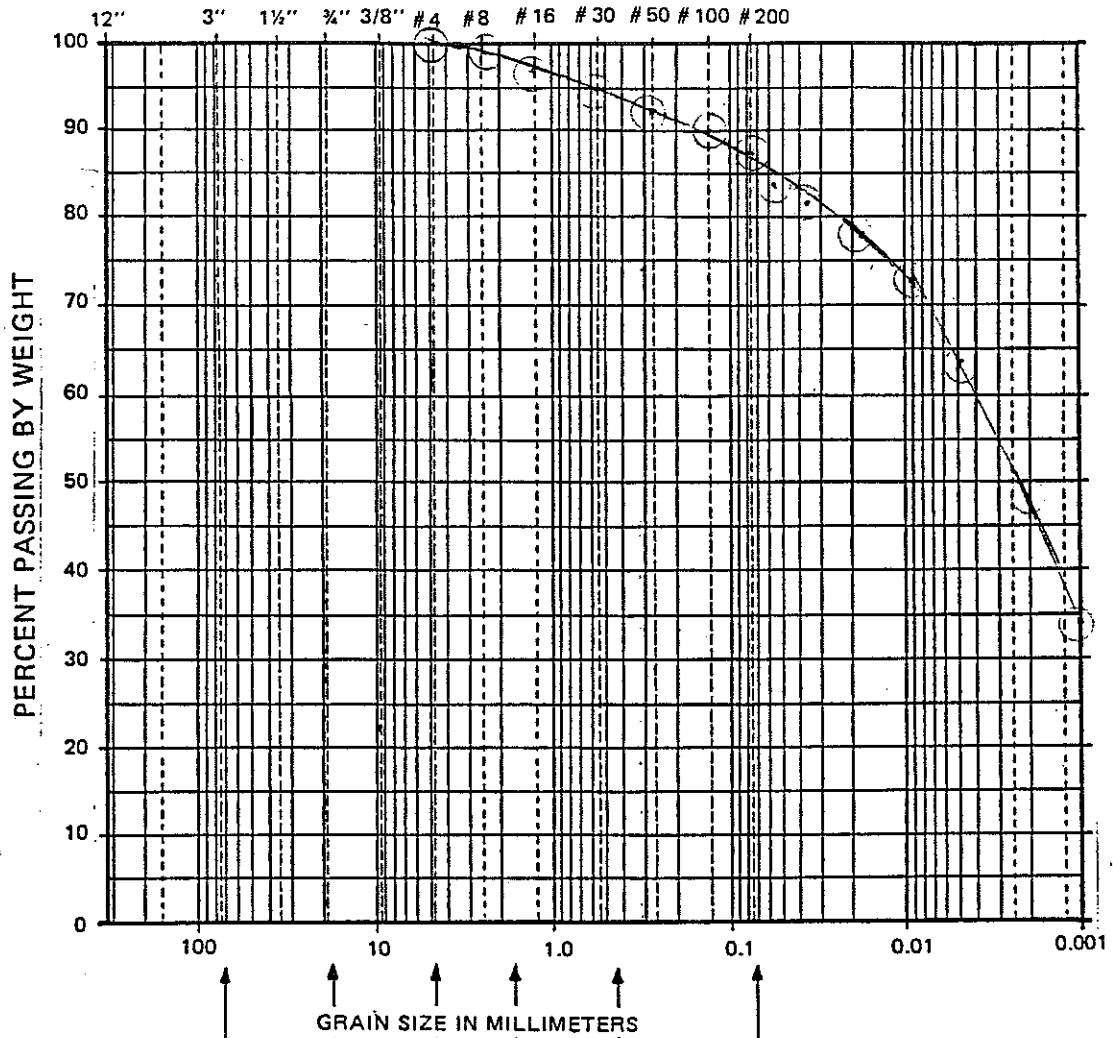
**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

**HYDROMETER TRIAL READING**

TRIAL NUMBER	1	2	3	4
¼ MIN.	_____	_____	_____	_____
½ MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

U.S. STANDARD SIEVE SIZE



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

(UNIFIED SOIL CLASSIFICATION SYSTEM)

1882-801

SYMBOL	LOCATION	DEPTH FT.	DESCRIPTION
⊙	SBT 41 A	5.5	SILTY CLAY, MOTTLED LIGHT BROWN & GRAY

GRADATION TEST DATA

# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-801 DATE 9/19/95  
 BORING SBT 41 A DEPTH (FEET) 53 TESTED BY OT  
 SAMPLE DESCRIPTION SILTY CLAY, MOTTLED LT BROWN & GRAY

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ gms  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS

**DRY WT. TOTAL SAMPLE:**

$$= \frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}} = \text{_____ gms}$$

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCLIM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				
3/8"	0.371	9.42				
# 4	0.185	4.699				100.0
# 8	0.093	2.362		0.02		99.5
# 16	0.046	1.168				97.5
# 30	0.0232	0.589				95.0
# 50	0.0116	0.295				92.0
# 100	0.0058	0.147				90.0
# 200	0.0029	0.074		6.57	12.4	87.6
# 270	0.0021	0.053				
PAN						
WT. WASHED THRU # 200						
TOTAL						

**WEIGHT WASHED THROUGH # 200:**

NO. OF PAN \_\_\_\_\_

WT. PAN + DRY SOIL \_\_\_\_\_

WT. OF PAN \_\_\_\_\_

WT. OF DRY SOIL 52.65

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882.301 DATE 5/19  
 BORING SBS 41A DEPTH (FEET) 55 TESTED BY DT  
 SAMPLE DESCRIPTION SILT CLAY MOTTLED LT BROWN & GRAY

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALBON 125 m

DRY WEIGHT USED IN HYDROMETER 5265 (grams)  
 PERCENT PASSING NO. 200 87.6 (percent)  
 FACTOR F=N/W<sub>s</sub> 1.904

(A) (G)

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R=R'-C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
8	17	15	½ MIN.	51	+5	46.	87.6	0.074
		30	½ MIN.	49		44.	83.8	0.055
	18	00	1 MIN. 6 SEC.	43		43	81.9	0.037
	21	12	4 MIN. 12 SEC.	46		41.	78.0	0.019
	35	40	18 MIN. 40 SEC.	43		38	72.3	0.009
9	17	30	60 MIN. 30 SEC.	38		33	62.8	0.005
14	35		6 HRS. 18 MIN.	30		25	47.6	0.002
8	30		24 HRS. 13 MIN.	23		18	34.2	0.001

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
½ MIN.	_____	_____	_____	_____
½ MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

9/19

2/19





# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-301 DATE 9/19/95  
 BORING SBT 55 DEPTH (FEET) 5.5 TESTED BY OT  
 SAMPLE DESCRIPTION SILTY CLAY, BROWN, GRAY

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ gms  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS

**DRY WT. TOTAL SAMPLE:**

$$= \frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}} = \text{_____ gms}$$

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCUM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				
3/8"	0.371	9.42				
# 4	0.185	4.699				100
# 8	0.093	2.362		0.92	1.8	98.2
# 16	0.046	1.168		1.26	2.4	97.6
# 30	0.0232	0.589		1.64	3.2	96.8
# 50	0.0116	0.295		2.20	4.3	95.7
# 100	0.0058	0.147		3.81	7.4	92.6
# 200	0.0029	0.074		5.82	11.5	88.5
# 270	0.0021	0.053				
PAN						
WT. WASHED THRU #200						
TOTAL						

**WEIGHT WASHED THROUGH # 200:**

NO. OF PAN \_\_\_\_\_  
 WT. PAN + DRY SOIL \_\_\_\_\_  
 WT. OF PAN \_\_\_\_\_  
 WT. OF DRY SOIL 51.64

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882.301 DATE 2/17  
 BORING SBT 55 DEPTH (FEET) 5.5 TESTED BY DT  
 SAMPLE DESCRIPTION SILTY CLAY; BROWN GRAY

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALGON 125 ml

DRY WEIGHT USED IN HYDROMETER 51.64 (grams)  
 PERCENT PASSING NO. 200 88.5 (percent)  
 FACTOR  $F = N/W_s$  1.223

F

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
7	26	15	1/2 MIN.	51	75	46	88.5	0.074
		30	1/2 MIN.	49		44	86.6	0.055
	26	06	1 MIN. 6 SEC.	48	1	43	84.7	0.037
	29	12	4 MIN. 12 SEC.	47		42	80.8	0.019
	48	40	18 MIN. 40 SEC.	45		40	76.9	0.009
8	25		60 MIN. 30 SEC.	41		36	69.2	0.005
12	43		6 HRS. 18 MIN.	35		30	57.7	0.002
8	38		24 HRS. 13 MIN.	24		23	44.3	0.001

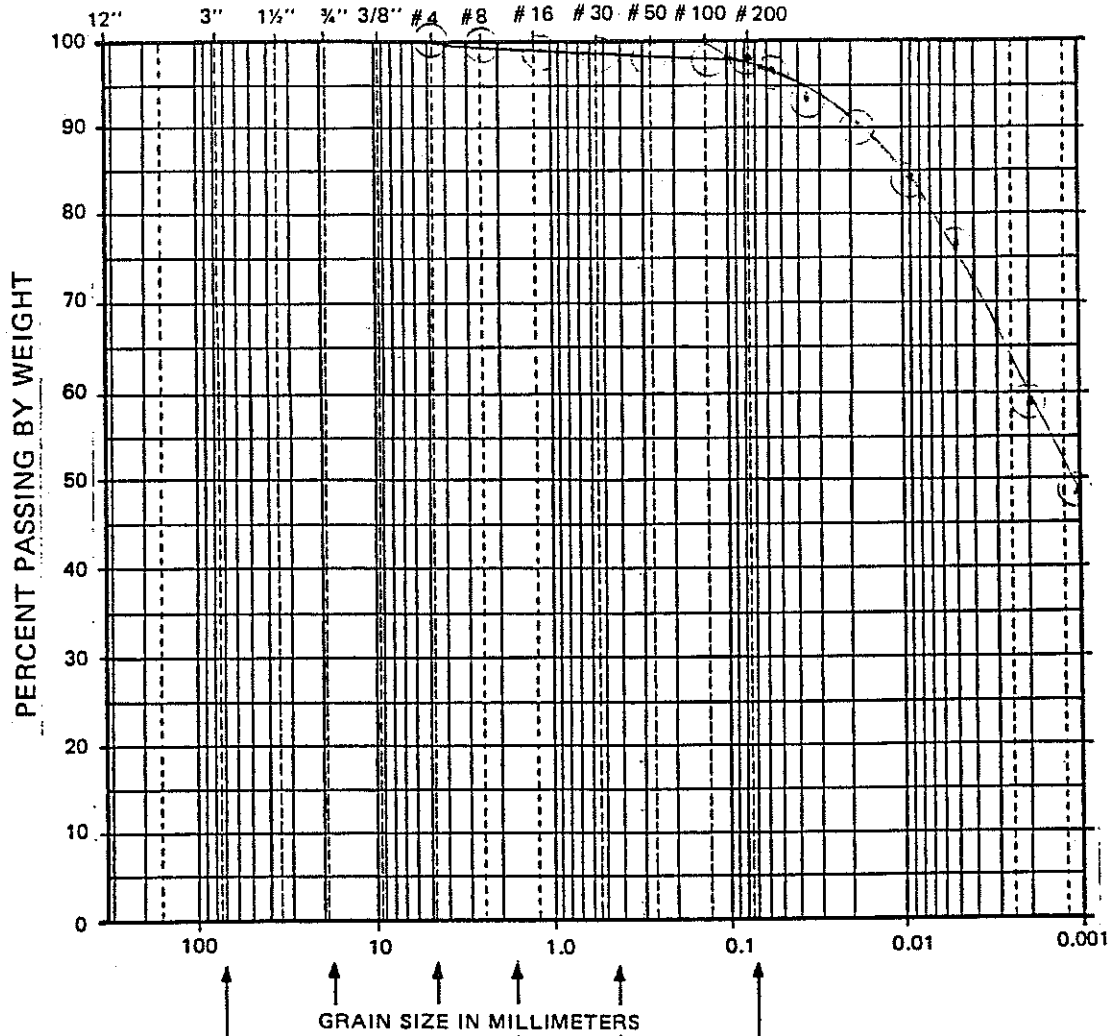
**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
1/2 MIN.	_____	_____	_____	_____
1/2 MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

# U.S. STANDARD SIEVE SIZE



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

(UNIFIED SOIL CLASSIFICATION SYSTEM)

1982-901

SYMBOL	LOCATION	DEPTH FT.	DESCRIPTION
○	SBT 57-1	5.5	SILTY CLAY, DARK GRAY

## GRADATION TEST DATA

# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-801 DATE 9/19/75  
 BORING : SBT 571 DEPTH (FEET) 5.5 TESTED BY OT  
 SAMPLE DESCRIPTION SILTY CLAY; DARK GRAY

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ gms  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS

**DRY WT. TOTAL SAMPLE:**

$$= \frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}} = \text{_____ gms}$$

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCUM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				
3/8"	0.371	9.42				
# 4	0.185	4.699				100.0
# 8	0.093	2.362				99.6
# 16	0.046	1.168				99.6
# 30	0.0232	0.589				99.4
# 50	0.0116	0.295				99.0
# 100	0.0058	0.147				98.8
# 200	0.0029	0.074		0.85	1.6	98.4
# 270	0.0021	0.053				
PAN						
WT. WASHED THRU # 200						
TOTAL						

**WEIGHT WASHED THROUGH # 200:**

NO. OF PAN \_\_\_\_\_

WT. PAN + DRY SOIL \_\_\_\_\_

WT. OF PAN \_\_\_\_\_

WT. OF DRY SOIL 50.87

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882-801 DATE 8/18  
 BORING SPT 57-1 DEPTH (FEET) 5.5 TESTED BY DT  
 SAMPLE DESCRIPTION SILTY CLAY, DARK GRAY

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALGON 125 m

DRY WEIGHT USED IN HYDROMETER 50.87 (grams)  
 PERCENT PASSING NO. 200 98.4 (percent)  
 FACTOR  $F = N/W_s$  1.968

14

B

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
8	23	15	½ MIN.	55	+5	50.0	98.4	0.074
		30	½ MIN.	54		49.0	96.4	0.055
	24	06	1 MIN. 6 SEC.	53		48.0	94.5	0.037
	27	12	4 MIN. 12 SEC.	51.5		46.5	91.5	0.019
	41	40	18 MIN. 40 SEC.	48		43	84.6	0.009
9	23	30	60 MIN. 30 SEC.	44		39	76.7	0.005
14	41		6 HRS. 18 MIN.	35		30	59.0	0.002
8	36		24 HRS. 13 MIN.	30		25	49.2	0.001

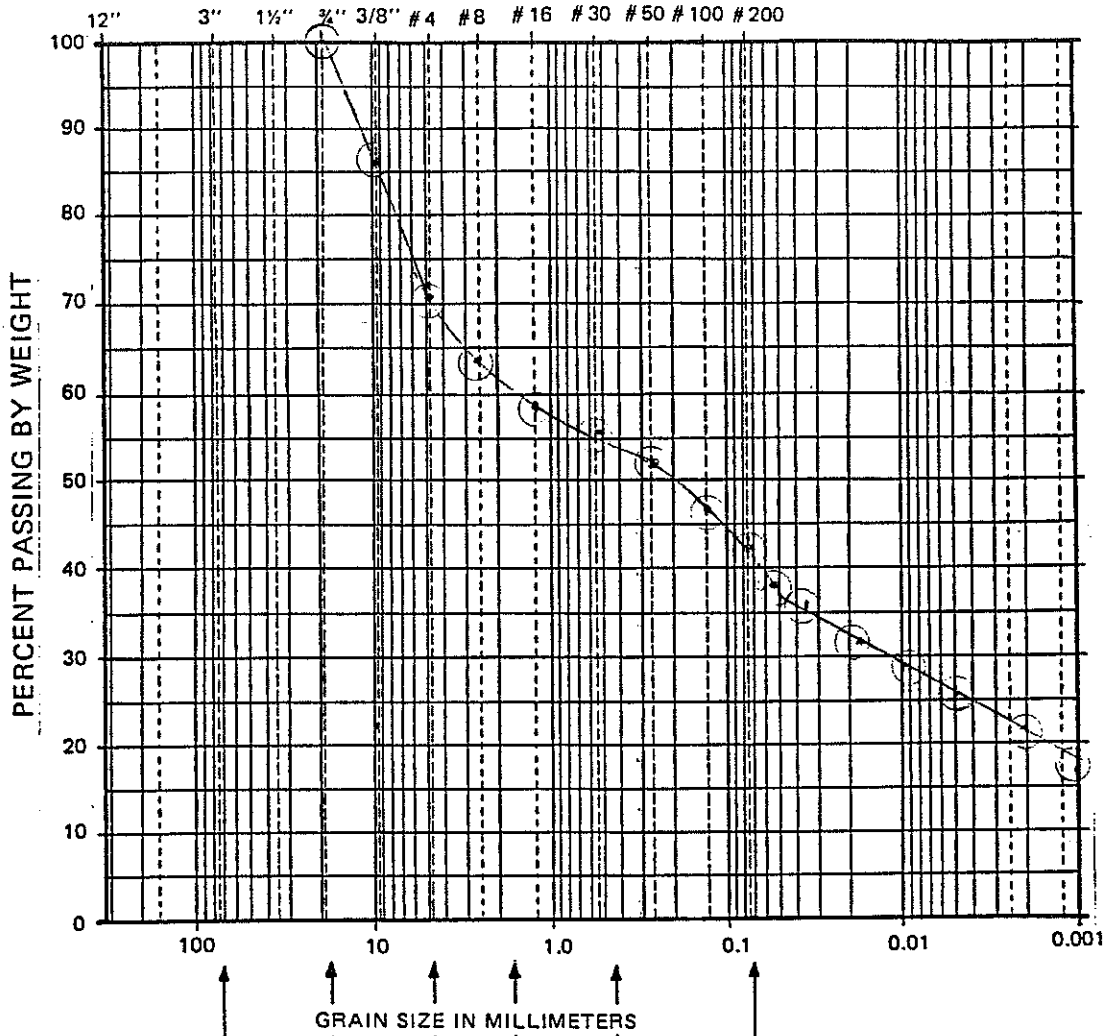
**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
½ MIN.	_____	_____	_____	_____
¼ MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

U.S. STANDARD SIEVE SIZE



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

(UNIFIED SOIL CLASSIFICATION SYSTEM)

1882-801

SYMBOL	LOCATION	DEPTH FT.	DESCRIPTION
○	SBT 69	5.5	CUMUL SILT & SAND, BLACK & BROWN, w/ GRAVEL

GRADATION TEST DATA

# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-301 DATE 9/19/95  
 BORING : SBT 69 DEPTH (FEET) 5.5 TESTED BY OT  
 SAMPLE DESCRIPTION CUMULATIVE SILT & SAND, SUZYK # BROWN  
W/GOAVIL

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ gms WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms DRY WT. TOTAL SAMPLE:  
 WT. OF MOISTURE \_\_\_\_\_ gms =  $\frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}}$  \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCUM. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---	---				
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				100
3/8"	0.371	9.42	62.2	62.2	14.2	85.8
# 4	0.185	4.699	68.0	130.2	29.8	70.2
# 8	0.093	2.362		431.2	91.8	64.4
# 16	0.046	1.168		821.5	84.4	59.2
# 30	0.0232	0.589		1116.2	78.8	55.3
# 50	0.0116	0.295		1405.7	73.3	51.5
# 100	0.0058	0.147		1774.3	66.4	46.6
# 200	0.0029	0.074		2133.0	59.6	41.8
# 270	0.0021	0.053				
PAN			305.8			
WT. WASHED THRU #200			-			
TOTAL				436		

**WEIGHT WASHED THROUGH #200:**

NO. OF PAN \_\_\_\_\_  
 WT. PAN + DRY SOIL \_\_\_\_\_  
 WT. OF PAN 52.67  
 WT. OF DRY SOIL \_\_\_\_\_



# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882-801 DATE 8/17  
 BORING SPT 69 DEPTH (FEET) 5.5 TESTED BY DT  
 SAMPLE DESCRIPTION CLAYEY SILT & SAND. ETC & GROWN w/ GARDER

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALGON 125 ml

DRY WEIGHT USED IN HYDROMETER 52.67 (grams)  
 PERCENT PASSING NO. 200 41.8 (percent)  
 FACTOR F = N/W<sub>s</sub> 1.267

+ 3/8 622  
 + 4 68.0  
 - 4 305.8

E

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
7	19	15	1/2 MIN.	39	+5	33	41.8	0.074
		30	1/2 MIN.	35		30	38.0	0.055
	20	06	1 MIN. 6 SEC.	32		28	35.4	0.037
	23	12	4 MIN. 12 SEC.	30		25	31.7	0.019
	37	40	18 MIN. 40 SEC.	28		23	29.1	0.009
8	19	30	60 MIN. 30 SEC.	25		20	25.3	0.005
13	37		6 HRS. 18 MIN.	22		17	21.5	0.002
8	32		24 HRS. 13 MIN.	18		13	16.4	0.001

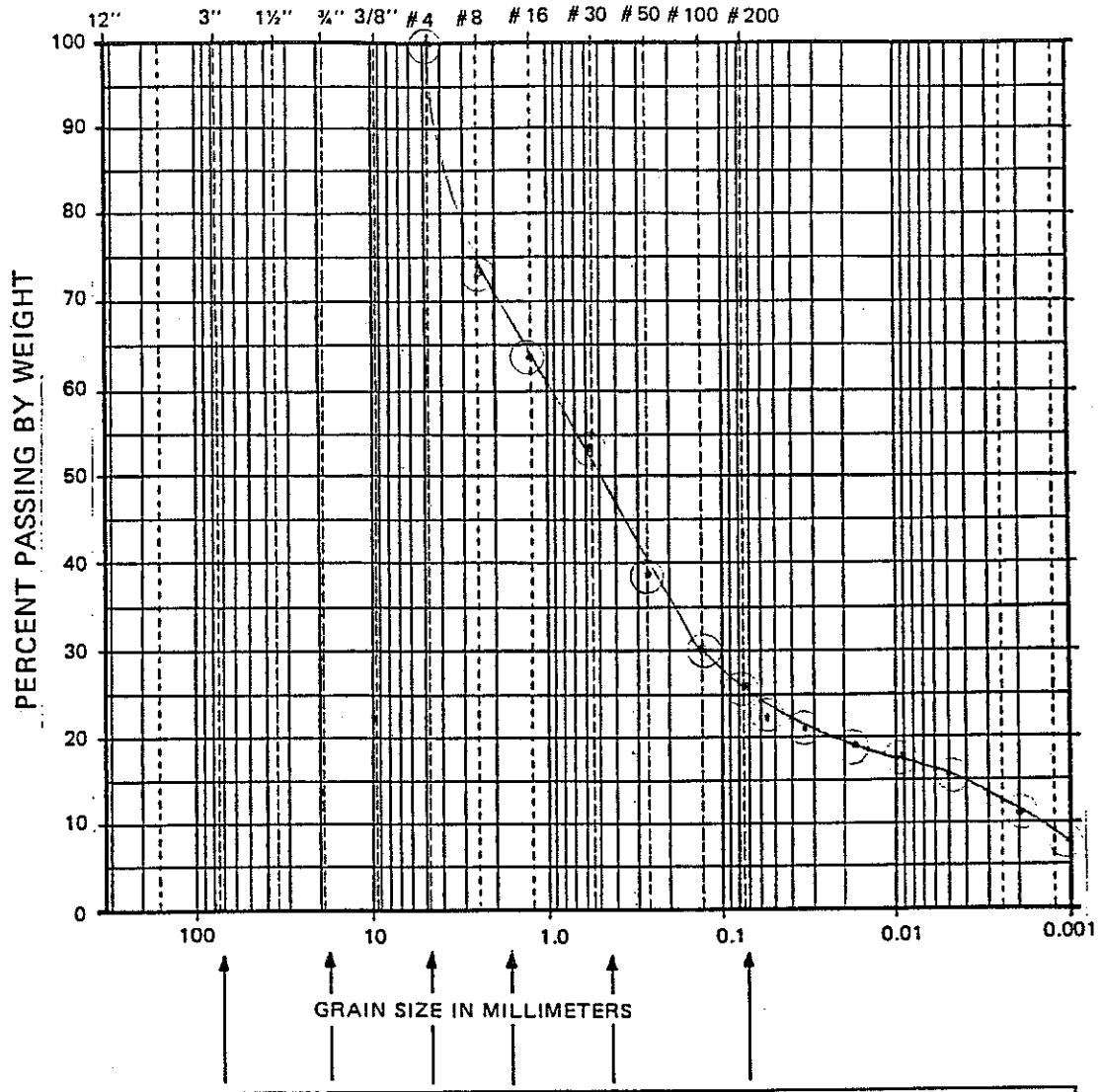
**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
1/2 MIN.	_____	_____	_____	_____
1/2 MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____

U.S. STANDARD SIEVE SIZE



# GRAIN SIZE DISTRIBUTION (MECHANICAL ANALYSIS)

PROJECT PRC PROJECT NO. 1882-801 DATE 9/19/95  
 BORING SBT 87-1 DEPTH (FEET) 5.5 TESTED BY OT  
 SAMPLE DESCRIPTION SILTY SAND DARK BROWN ASPHALT FRACTION

**MOISTURE CONTENT DETERMINATION:**

TARE NO. \_\_\_\_\_ grms  
 TARE + WET SOIL \_\_\_\_\_ grms  
 TARE + DRY SOIL \_\_\_\_\_ grms  
 WT. OF TARE \_\_\_\_\_ grms  
 WT. OF MOISTURE \_\_\_\_\_ grms  
 WT. OF DRY SOIL \_\_\_\_\_ grms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

WET WT. TOTAL SAMPLE \_\_\_\_\_ GMS

**DRY WT. TOTAL SAMPLE:**

$$= \frac{\text{WET WT. TOTAL SAMPLE}}{1 + \text{MOISTURE CONTENT}} = \text{_____ grms}$$

SIEVE SIZE (U.S. STANDARD)	PARTICLE DIAMETER		WEIGHT RETAINED (GMS)	ACCU. WT. RET. (GMS)	PERCENT RETAINED	PERCENT PASSING
	IN.	MM.				
5"	---					
3"	3.0	76.2				
1 1/2"	1.5	38.1				
3/4"	0.742	18.85				
3/8"	0.371	9.42				
# 4	0.185	4.699				100.0
# 8	0.093	2.362		1080	17.5	72.5
# 16	0.046	1.168		1900	36.9	64.1
# 30	0.0232	0.589		2834	46.0	54.0
# 50	0.0116	0.295		3714	60.3	39.7
# 100	0.0058	0.147		4311	70.0	30.0
# 200	0.0029	0.074		4569	74.1	25.9
# 270	0.0021	0.053				
PAN						
WT. WASHED THRU #200						
TOTAL						

**WEIGHT WASHED THROUGH #200:**

NO. OF PAN \_\_\_\_\_  
 WT. PAN + DRY SOIL \_\_\_\_\_  
 WT. OF PAN \_\_\_\_\_  
 WT. OF DRY SOIL 61.57

# HYDROMETER ANALYSIS

PROJECT PRC PROJECT NO. 1882-301 DATE 2/18  
 BORING SBT 87-1 DEPTH (FEET) 5.5 TESTED BY DT  
 SAMPLE DESCRIPTION SILTY SAND, DARK BROWN ASPHALT FRAGMENT

HYDROMETER NO. \_\_\_\_\_  
 STARTING TIME \_\_\_\_\_

DEFLOCCULATION AGENT USED:  
4% CALGON 125 ml

DRY WEIGHT USED IN HYDROMETER 61.57 (grams)  
 PERCENT PASSING NO. 200 25.9 (percent)  
 FACTOR  $F = N/W_s$  2.158

+ 3/8 37.7  
 + 4 96.0  
 - 4 270.4

(D)  
(C)

TIME			ELAPSED TIME	HYDROMETER READING (R)	HYDROMETER READING IN WATER (C)	CORRECTED HYDROMETER READING (R = R' - C)	PERCENT PASSING F x R	PARTICLE DIAMETER (mm)
H	M	S						
8	29	15	1/2 MIN.	17	75	12.0	25.9	0.074
		30	1/2 MIN.	15.5		10.5	22.7	0.055
	30	06	1 MIN. 6 SEC.	15		10.0	21.6	0.037
	33	12	4 MIN. 12 SEC.	14		9.0	19.4	0.019
	47	40	18 MIN. 40 SEC.	13		8.0	17.2	0.009
9	29	30	60 MIN. 30 SEC.	12		7.0	15.1	0.005
14	46		6 HRS. 18 MIN.	10		5.0	10.8	0.002
8	42		24 HRS. 13 MIN.	9		4.0	8.6	0.001

### MOISTURE CONTENT DETERMINATION:

TARE NO. \_\_\_\_\_  
 TARE + WET SOIL \_\_\_\_\_ gms  
 TARE + DRY SOIL \_\_\_\_\_ gms  
 WT. OF TARE \_\_\_\_\_ gms  
 WT. OF MOISTURE \_\_\_\_\_ gms  
 WT. OF DRY SOIL \_\_\_\_\_ gms  
 MOISTURE CONTENT \_\_\_\_\_ (%)

### HYDROMETER TRIAL READING

TRIAL NUMBER	1	2	3	4
1/2 MIN.	_____	_____	_____	_____
1/2 MIN.	_____	_____	_____	_____
1 MIN. 6 SEC.	_____	_____	_____	_____



**APPENDIX E**

**SAMPLE NOMENCLATURE TABLES**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**MOFFETT FEDERAL AIRFIELD  
PETROLEUM TANK SITES INVESTIGATION  
SOIL SAMPLE DESIGNATIONS**

Sample Designation		Sample Location	Anticipated Number of Samples		Analytical Suite
Geoprobe	Split Spoon		Geoprobe	Split Spoon	
GPT17-XX(x.x)	SBT17-XX(x.x)	UST 17 Area	4	2 <sup>2</sup>	SVOCs <sup>1</sup> , TPH purgeable and extractable
GPT22-XX(x.x)	SBT22-XX(x.x)	UST 22 Area	4	2 <sup>2</sup>	BTEX, SVOCs <sup>1</sup> , TPH extractable
GPT41A-XX(x.x)	SBT41A-XX(x.x)	UST 41A Area	9	2 <sup>2</sup>	VOCs, SVOCs <sup>1</sup> , TPH purgeable and extractable, metals
GPT57-XX(x.x)	SBT57-XX(x.x)	UST 57 Area	7	2 <sup>2</sup>	VOCs, SVOCs <sup>1</sup> , TPH purgeable and extractable, metals
GPT69-XX(x.x)	SBT69-XX(x.x)	UST 69 Area	8	2 <sup>2</sup>	VOCs, SVOCs <sup>1</sup> , TPH purgeable and extractable, metals
GPT86A-XX(x.x) GPT86B-XX(x.x)	SBT86A-XX(x.x) SBT86B-XX(x.x)	UST 86A and 86B Area	0	2 <sup>2</sup>	VOCs, SVOCs <sup>1</sup> , TPH purgeable, organic lead

Notes:

- <sup>1</sup> The sample with the highest apparent contamination (identified by field screening) will be targeted for SVOC analysis.
- <sup>2</sup> Samples analyzed for disposal characterization only (purgeable TPH and extractable TPH)
- X Digits representing corehole or borehole number
- x Digits representing sample depth (bgs)
- VOC Volatile organic compound
- SVOC Semivolatile organic compound
- TPH Total petroleum hydrocarbons
- BTEX Benzene, toluene, ethylbenzene, and total xylene



**MOFFETT FEDERAL AIRFIELD  
PETROLEUM TANK SITES INVESTIGATION  
GROUNDWATER SAMPLE DESIGNATIONS**

Sample Designation		Sample Location	Anticipated Number of Samples		Analytical Suite
Geoprobe	Monitoring Well		Geoprobe	Wells	
GWT17-XX	WT17-XX	UST 17 Area	4	1	TPH purgeable and extractable, organic lead, BTEX
GWT22-XX	WT22-XX	UST 22 Area	2	1	BTEX, TPH extractable
GWT41A-XX	WT41A-XX	UST 41A Area	5	1	VOCs, TPH purgeable and extractable, metals
GWT55-XX	To be determined	UST 55 Area	3	0	BTEX, TPH extractable
GWT57-XX	WT57-XX	UST 57 Area	4	1	VOCs, TPH purgeable and extractable, metals
GWT69-XX	WT69-XX	UST 69 Area	4	1	VOCs, TPH purgeable and extractable, metals
GWT86A-XX GWT86B-XX	WT86A-XX WT86B-XX	UST 86A and 86B Area	2	1	VOCs, TPH purgeable, organic lead
GWT87-XX	WT87-XX	UST 87 Area	1	1	VOCs, TPH extractable

Notes:

- X        Digits representing sample location number
- VOC     Volatile organic compounds
- TPH     Total petroleum hydrocarbons
- BTEX    Benzene, toluene, ethylbenzene, and total xylene

**APPENDIX F**  
**SURVEY REPORT**

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**HUNTER SURVEYING, INC.**

6216 Main Avenue, Suite A  
Orangevale, CA 95662  
Phone: (916) 988-5600  
Fax: (916) 988-5688

**LETTER OF TRANSMITTAL**

**TO:** Fred Ailee  
PRC EMI  
1099 18th St., Suite 1960  
Denver, CO 80202

**DATE:** 9/25/95 **JOB NO:** 95-443

**PROJECT:** Moffett Field

**REF. NO.:** \_\_\_\_\_

**SHIPPED VIA:** USMAIL

**SUBJECT:** \_\_\_\_\_  
\_\_\_\_\_

**Enclosed Please Find:**

QUANTITY	DESCRIPTION
1	Survey Report
1	Ascii File 3.5 Disk

**The Enclosed Material is:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> For your use | <input type="checkbox"/> As you requested      |
| <input type="checkbox"/> For your review         | <input type="checkbox"/> Return with comments  |
| <input type="checkbox"/> For your approval       | <input type="checkbox"/> Being returned to you |

**Remarks:** \_\_\_\_\_

**C.C.**

**SIGNED:** Janet Parnell

**IF ENCLOSURES ARE NOT AS NOTED, PLEASE NOTIFY US AT ONCE.**



# HUNTER SURVEYING, INC.

6216 Main Avenue, Suite A  
Orangevale, CA 95662  
Phone: (916) 988-5600  
Fax: (916) 988-5688

September 25, 1995

PRC EMI  
1099 18TH ST., SUITE 1960  
DENVER, CO 80202

Attn: Fred Allee  
Re: Survey Report 95-442

Location: Moffett Field

Point ID	-----COORDINATES-----		ELEVATIONS		Desc
	NORTH	EAST	PVC	GRND	
<b>UST 22 AREA</b>					
MWT22-1	340988.28	1559438.91	- 0.61	- 0.14	MW
GPT22-1	340975.40	1559441.92		- 0.18	GEOP
GPT22-2	340992.19	1559440.80		- 0.24	GEOP
<b>UST 17 AREA</b>					
MWT17-1	338957.70	1551754.97	5.28	5.40	MW
MWT17-2	339056.26	1551803.53	3.81	4.0	MW
MWT17-3	339052.51	1551700.02	4.13	4.4	MW
GPT17-1	338945.34	1551764.76		5.89	GEOP
GPT17-2	338961.20	1551744.45		5.22	GEOP
GPT17-3	338977.31	1551747.67		5.14	GEOP
GPT17-4	338976.43	1551767.24		4.98	GEOP
GPT17-5	339014.84	1551723.53		4.15	GEOP
GPT17-6	338972.79	1551723.07		5.19	GEOP
GPT17-7	338952.77	1551725.79		5.44	GEOP
GPT17-8	338933.25	1551741.47		5.53	GEOP
GPT17-9	338962.05	1551700.79		5.58	GEOP
GPT17-10	338912.34	1551732.02		5.76	GEOP

Point ID	-----COORDINATES-----		ELEVATIONS		Desc
	NORTH	EAST	PVC	GRND	
<b>UST 69 AREA</b>					
MWT69-1	337190.83	1552797.83	10.68	11.0	MW
GPT69-1	337169.08	1552806.28		10.99	GEOP
GPT69-2	337176.52	1552794.41		10.98	GEOP
GPT69-3	337191.15	1552799.76		11.0	GEOP
GPT69-4	337188.54	1552810.11		10.92	GEOP
<b>UST 57</b>					
MWT57-1	333337.92	1549688.30	30.77	31.0	MW
GPT57-1	333308.22	1549692.53		30.82	GEOP
GPT57-2	333323.44	1549720.40		31.17	GEOP
GPT57-3	333356.93	1549711.54		31.01	GEOP
GPT57-4	333337.90	1549687.30		31.0	GEOP
<b>UST 55</b>					
MWT55-1	335980.12	1550785.79	11.01	11.0	MW
GWT55-1	335953.71	1550768.73		11.39	GEOP
GWT55-2	335999.90	1550809.00		10.91	GEOP
<b>UST 41A</b>					
MWT41A-1	335038.66	1549109.25	23.38	23.6	MW
GPT41A-1	335016.35	1549123.42		23.8	GEOP
GPT41A-2	335034.89	1549124.90		23.71	GEOP
GPT41A-3A	335049.21	1549106.51		23.85	GEOP
GPT41A-3B	335048.13	1549107.03		23.84	GEOP
GPT41A-4	335036.51	1549103.35		23.91	GEOP
<b>UST 87</b>					
MWT87-1	335610.09	1548204.36	21.19	21.5	MW
GWT87-1	335608.82	1548202.69		21.49	GEOP

Point ID	-----COORDINATES-----		ELEVATIONS		Desc
	NORTH	EAST	PVC	GRND	
<b>UST 86</b>					
GWT86B-1	335038.02	1548174.07		25.47	GEOP
GWT86B-2	335058.89	1548177.17		25.39	GEOP

**BASIS OF HORIZONTAL COORDINATES:**

Coordinates based on Monuments H-111 and G-111 RM2.  
 NAD 27 - California State Plane, Zone 3, Coordinates.

H-111            335641.64   1549212.51   17.61  
 G-111 RM2      334044.86   1546623.47

Multiply ground distances by 0.9999471 for grid distances.

**VERTICAL ELEVATIONS:**

Mean Sea Level, NGVD 29, Vertical Elevations based on Total Station  
 Trigonometric Reciprocal Elevation Difference loops from H-111.