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SITE ASSESSMENT REPORT FEBRUARY 2001 FOR SHERMAN FIELD FORMER FUEL FARM UNDERGROUND STORAGE TANK SITE 24 NAS PENSACOLA FL
02/12/2001
TETRA TECH INC

Rev. 0
2/12/01

Site Assessment Report
for
SHERMAN FIELD
FORMER FUEL FARM
UST SITE 000024

Naval Air Station
Pensacola, Florida

Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order CTO-0132

February 2001

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February 12, 2001

Project Number 0516

Commanding Officer
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SOUTHDIVFACENGCOM
ATTN: Mr. Byas Glover
Remedial Project Manager
2155 Eagle Drive
North Charleston, South Carolina 29406

Reference: Clean Contract No. N62467-94-D-0888
Contract Task Order No. 0132

Subject: Site Assessment Report for Underground Storage Tank Site 000024, Former Sherman Field Fuel Farm, Naval Air Station Pensacola, Pensacola, Florida

Dear Mr. Glover:

Tetra Tech NUS is pleased to submit for your review the Draft Site Assessment Report for Underground Storage Tank Site 000024, Former Sherman Field Fuel Farm, Naval Air Station (NAS) Pensacola, Pensacola, Florida. Upon receipt of your comments and incorporation of the comments into the draft document, the report will be submitted to the Florida Department of Environmental Protection (FDEP). As indicated below, a copy of the draft report has also been forwarded to Mr. Greg Campbell at NAS Pensacola.

If you have any questions, please call me at (850) 385-9899.

Sincerely yours,

Gerald Walker

Gerald Walker, P.G.
Project Manager

GAW/gaw

Enclosure

c: Greg Campbell, NAS Pensacola PWC
Debbie Wroblewski (Cover Letter Only)
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SITE ASSESSMENT REPORT
FOR
SHERMAN FIELD
FORMER FUEL FARM
UST SITE 000024

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

Submitted by:
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CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0132

FEBRUARY 2001

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EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has been authorized by Southern Division, Naval Facilities Engineering Command to prepare site assessment reports for petroleum impacted sites at the Naval Air Station, Pensacola, in Escambia County, Florida. This Site Assessment Report (SAR) has been prepared to evaluate soil and groundwater conditions at Underground Storage Tank Site 00024 the former Sherman Field Fuel Farm.

Site Assessment Activities

- Reviewed available Navy documents to identify potential sources and receptors for petroleum hydrocarbons in the vicinity, to evaluate public and private potable water wells, to locate utility line areas, to locate nearby surface water bodies, and to determine surface hydrology and drainage;
- Conducted an assessment of soil and groundwater in the vicinity of Underground Storage Tank Site 000024 using direct push testing methods for soil sampling and monitoring well installation for groundwater sampling;
- Installed twenty-three shallow permanent monitoring wells to approximately 17 to 30 feet below land surface (bls), two intermediate monitoring wells to approximately 40 feet bls, and one deep monitoring well to approximately 75 feet bls;
- Collected groundwater samples from the permanent monitoring wells for laboratory analysis of volatile organic aromatics, polynuclear aromatic hydrocarbons, ethylene dibromide (EDB), total recoverable petroleum hydrocarbons, and lead;
- Conducted sampling for natural attenuation parameters from selected monitoring wells to provide data to evaluate the potential for naturally occurring biodegradation of petroleum constituents at the site; and
- Implemented an aquifer characterization program to evaluate the movement of groundwater at the site.

Conclusions

- Soils that are defined as "excessively contaminated" by 62-770 Florida Administrative Code are present in the vadose zone at the site,

- Free-product is present in at the site,
- Concentrations of petroleum contaminants of concern in site groundwater exceed GCTLs specified in Chapters 62-770 and 62-777, Florida Administrative Code (F.A.C.),
- Geochemical evidence (natural attenuation parameters) suggest that biodegredation of petroleum hydrocarbons may be occurring at the site,
- Downgradient horizontal extent of dissolved contamination is not defined, and
- Exposure pathways to human receptors via surface water or supply wells are not complete.

Recommendations

Based upon the hydrogeological and chemical data presented in this SAR and the requirements of Chapter 62-770 and 62-777, F.A.C., TtNUS recommends, that a Remedial Action Plan (RAP) be completed and active remediation of the free-product and soils be addressed. Following active remediation, natural attenuation of the onsite groundwater may be appropriate.

In addition, TtNUS recommends

- free product removal at the site should be initiated immediately and continued until active recovery system is installed,
- a complete horizontal delineation of the dissolved contaminant plume should be performed in the southeasterly direction, and
- monitoring wells installed prior to this SAR be either abandoned in place or completed with concrete pads and steel manhole vaults for well head protection.

PROFESSIONAL CERTIFICATION

Site Assessment Report
Underground Storage Tank Site 000024
Former Sherman Field Fuel Farm
Naval Air Station Pensacola, Pensacola, Florida

This Site Assessment Report was prepared under the direct supervision of the undersigned geologist using geologic and hydrogeologic principles standard to the profession at the time the report was prepared. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of additional information on the assessment described in this report. This report was developed specifically for the referenced site and should not be construed to apply to any other site.

_____
Gerald A. Walker, P.G.
Florida License No. PG-0001180

_____
Date

1.0 SITE DESCRIPTION AND BACKGROUND INFORMATION

Tetra Tech NUS, Inc. (TtNUS), under contract to the Department of Navy, Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), is submitting this Site Assessment Report (SAR) documenting the findings of the site assessment performed at underground storage tank (UST) Site 000024 located at the Naval Air Station (NAS) located in Pensacola, Florida (Figure 1-1). This SAR was prepared on behalf of the Navy under contract No. N62467-94-D-0888 and summarizes environmental assessment activities conducted by TtNUS at UST Site 000024.

1.1 SITE LOCATION AND CONDITIONS

UST Site 000024 is the former Fuel Farm facility at Sherman Field, NAS Pensacola. NAS Pensacola is located in northwest Florida on the western side of Pensacola Bay, approximately 2 miles south of Pensacola, Florida, on Navy Boulevard. The site is located on the western perimeter of the base approximately 2400 feet north of Radford Boulevard, as shown on the Fort Barrancas, Florida, US Geologic Survey Quadrangle Map (Figure 1-2). UST Site 000024 (Figure 1-3) consists of an approximately 3.5 acre fenced area around the former fuel farm including four cut-and-cover storage tanks (Tank No. 1884, 1886, 1887, and 1888). The petroleum storage tank system was installed in approximately 1945 and used to store JP-4 Jet Fuel. The fuel storage tanks were abandoned in place in approximately 1995 when a new fuel facility was constructed adjacent to the south side of the original fuel farm. It is unknown how much of the underground distribution piping is still in place, but it is assumed to be present based on the presence of exposed lines at several locations.

1.2 SITE HISTORY

An equipment malfunction in 1983 resulted in the release of approximately 48,000 gallons of JP-4 Jet Fuel. Initial recovery efforts by NAS Pensacola personnel included the installation of four recovery ditches along the fence line in the northwestern corner resulting in the recovery of approximately 600-700 gallons of free product. However, recovery efforts were discontinued by direction of the NAS Pensacola Fire Marshall due to the proximity of open excavations containing free product to the active fuel farm area. Additional recovery efforts in August of 1983 included the installation of a product/groundwater recovery well system from approximately 50 to 140 feet west-northwest of the fuel farm. The system proved unsatisfactory, apparently due to its location, and recovery operations were discontinued (E. C. Jordan, 1990).

2.0 SITE ASSESSMENT METHODOLOGY

Site assessment activities conducted at UST Site 000024 included a soil gas headspace investigation, subsurface soil sampling, monitoring well installation, groundwater sampling, and aquifer testing. A DPT investigation was conducted prior to monitoring well installation. Soil samples were collected during this investigation for headspace screening and laboratory analysis. Groundwater samples were collected from monitoring wells for laboratory analysis and evaluation of natural attenuation parameters. Data collected during the monitoring well elevation survey, static water level measurements, and specific capacity tests were used to evaluate aquifer properties at the site. The results of the site assessment are discussed in Chapters 3.0 and 4.0.

2.1 QUALITY ASSURANCE

The site assessment investigation was conducted in accordance with the Standard Operating Procedures (SOP) prescribed by the FDEP Quality Assurance Section Document DER-001/92, and adopted by the TtNUS Comprehensive Quality Assurance Plan (CompQAP) Number 980038. Equipment used to advance the soil borings, install monitoring wells, and collect soil or groundwater samples was decontaminated prior to and following each use according to TtNUS' CompQAP. Groundwater generated during well development and sampling was containerized in labeled 55-gallon drums and staged for proper disposal pending analytical results. Organic vapor measurements were made with a Heath Porta-FID II (FID). Prior to each day's activities, the FID was field calibrated with 100-parts per million (ppm) methane in air span gas, in accordance with the manufacturer directions.

Groundwater sampling activities were performed in accordance with the procedures prescribed in the FDEP Quality Assurance Section's Standard Operating Procedures for Laboratory Operations and Sample Collection Activities, (DER-001/92), adopted by TtNUS' CompQAP. Soil samples were collected in containers obtained from Accura Analytical Laboratory. Groundwater samples were collected in pre-preserved containers obtained from Accura Analytical Laboratory. As part of the groundwater sampling event, quality control samples (e.g. equipment blanks and trip blanks) were prepared and submitted to the laboratory as required by the approved CompQAP. Sampling activities were documented in a site-specific field logbook, and samples were transmitted under chain-of-custody protocols to the laboratory.

2.2 SOIL ASSESSMENT PROGRAM

The soil screening investigation was conducted at UST Site 000024 to evaluate the extent of petroleum impact on site soils previously detected during initial abatement activities. During the soil screening investigation, 41 soil borings (NASPFF-SB-1 through NASPFF-SB-41) were advanced using DPT methods (Figure 2-1). Soil samples from the borings were collected for headspace screening with a FID and laboratory analysis. During the DPT field investigation, each soil boring was advanced to the water table.

2.2.1 Soil Lithologic Descriptions

Soil borings for the preliminary assessment were advanced with a DPT rig utilizing soil core samplers. The soil core samplers were four feet long and were lined with disposable plastic sleeves. The soil borings were advanced continuously from ground surface to a depth ranging from approximately 12 to 28 feet at each soil boring location. The site geologist logged the soil properties, including texture, color and soil moisture, for each soil core and noted staining or odors. Soil boring logs are provided in Appendix A. Soil samples were also collected from the soil cores for headspace screening and laboratory analysis.

2.2.2 Soil Headspace Screening

Soil samples were collected from each four-foot interval of soil core for headspace screening in accordance with the procedures outlined in 62-770.200(8) F.A.C. From each four-foot interval, two 16-ounce glass jars were half-filled with soil, sealed with aluminum foil, and labeled. The soil samples were allowed to equilibrate to ambient air temperature. The FID response to total headspace organic vapors was measured by inserting the FID probe through the foil sample cover and recording the highest instrument reading. If a positive response was observed when screening the first sample jar, a filtered instrument reading was made from the second soil sample jar. A granular activated carbon (GAC) filter was attached to the instrument and a headspace organic vapor measurement was made from the second soil sample. The GAC filter adsorbs heavier organic vapors, such as petroleum hydrocarbons but allows lighter, naturally-occurring organic vapors, such as methane, to be detected by the FID. The filtered concentration was subtracted from the total vapor concentration to determine the corrected FID response.

2.2.3 Soil Sampling for Laboratory Analysis

Eleven soil samples were collected from UST Site 000024 for laboratory analysis to correlate the results of the headspace screening with laboratory analyses and to delineate soil contamination above the water table. Analytical samples were collected across the former Fuel Farm representative of low to medium to high FID responses and to determine the shallowest zones of contaminated soil in the source area (Figure 2-1). A soil sample was submitted from each boring location from either the vadose zone interval with highest FID response or the interval directly above water table. A second sample was submitted from boring SB-12, which was located in the source area (Figure 2-1).

The soil samples were analyzed for VOCs using SW-846 Method 8260B, PAHs using SW-846 Method 8310, TRPH using FL-PRO, RCRA Metals using SW-846 Method 6010A, Total Organic Carbon using Corps of Engineers Method 81, and for Grain Size using ASTM E422-63 analytical and reporting protocols. The laboratory analytical report is included in Appendix B.

2.3 MONITORING WELL INSTALLATION PROGRAM

Following the DPT activities, 23 shallow, 2 intermediate, and 1 deep vertical extent monitoring wells were installed at the site. The monitoring wells were used for groundwater sampling and collecting data to evaluate aquifer properties.

2.3.1 Monitoring Well Locations

Screening data obtained during the DPT investigation, liquid levels from previously existing monitoring wells (including free product thickness measurements) and topography were evaluated to determine the optimum number and location of the wells. Monitoring well placements were selected to provide spatial coverage around the area of the release (Figure 2-2).

2.3.2 Shallow and Intermediate Monitoring Well Installation

The monitoring well borings were drilled with a truck-mounted drill rig utilizing a 4.25-inch inside diameter (ID) hollow stem augers (HAS) creating a nominal borehole diameter of approximately 8.25-inches. Each well was constructed of 2-inch inside diameter ID, flush-threaded, schedule 40

polyvinyl chloride (PVC) riser and 0.010-inch slot well screen with a 6-inch point cap. The shallow wells were installed from approximately 20 to 30 feet bls with a 10-foot screen section that bracketed the water table. The intermediate monitoring wells were installed to approximately 40 feet bls and constructed of 2-inch ID, flush-threaded, schedule 40 polyvinyl chloride (PVC) riser and 5-feet of 0.010-inch slot well screen with a 6-inch point cap.

The annulus around each well was filled approximately two to three feet above the top of the screen with US Standard Sieve size 20/40 silica sand, followed by a two foot bentonite seal. The remainder of the annulus was grouted to the surface. Each well was secured with a locking, watertight cap within a steel, 8-inch diameter steel manhole. The manhole was set in a 24-inch square concrete apron finished slightly above grade. A typical shallow and intermediate well installation is illustrated on Figure 2-3. Monitoring well construction details are summarized on Table 2-1 and the monitoring well completion diagrams are provided in Appendix A.

2.3.3 Deep Monitoring Well Installation

A deep monitoring well was installed within the main area of contamination to provide water quality data from deeper within the surficial aquifer. To prevent cross contamination from shallower zones, a surface casing was installed from the ground surface to a total depth of 43.5 feet. The surface-casing boring was drilled with a truck-mounted drill rig using mud-rotary methods producing a nominal 10-inch borehole. The 6-inch, schedule 40 PVC surface casing was installed to 43.5 feet and grouted into place. The grout was allowed to cure for 24 hours before drilling was continued. The deep well boring was advanced through the surface casing to a total depth of approximately 75 feet using mud-rotary drilling techniques. The well was constructed of 2-inch inside diameter (ID), flush-threaded, schedule 40 polyvinyl chloride (PVC) riser and 5 –feet of 0.010-inch slot well screen with a 6-inch point cap.

The annulus around the well was filled to approximately 4.5 feet above the top of the screen with US Standard Sieve size 20/40 silica sand, followed by a five foot bentonite seal. The remainder of the annulus was grouted to the surface. The well was secured with a locking, watertight cap within a steel, 12-inch diameter steel manhole. The manhole is set within a 24-inch square concrete apron finished slightly above grade. A typical deep well installation is illustrated on Figure 2-4. Monitoring well construction details are summarized on Table 2-1 and the monitoring well completion diagrams are provided in Appendix A.

2.3.4 Monitoring Well Development

Each monitoring well was developed using a centrifugal pump. Groundwater physical parameters were monitored during development. The well was considered developed once three consecutive field readings of temperature, pH, specific conductivity stabilized within the required percentages, and turbidity had fallen to less than 10 NTUs. The static water level was continually monitored to ensure there was no significant decreases. Flow rates were typically 1-gallon per minute (gpm), and lower in some wells. The deep monitoring well was purged until the water was relatively clear (NTUs in the 100s) and approximately 650 gallons had been removed. Potentially contaminated development water from the site was stored in labeled 55-gallon drums for later disposal pending analytical results.

2.4 GROUNDWATER SAMPLING PROGRAM

During site assessment activities, groundwater samples were collected from monitoring wells installed after the DPT screening investigation. Groundwater samples collected from the monitoring wells were submitted to an offsite laboratory to be analyzed for petroleum constituents. Selected groundwater samples were analyzed for natural attenuation parameters in the field and at the offsite laboratory.

2.4.1 Monitoring Well Sampling

Groundwater samples were collected from newly installed site monitoring wells to evaluate groundwater quality in the shallow surficial aquifer in the vicinity of the UST's. The groundwater samples were collected using the low-flow quiescent purging and sampling method. New Teflon tubing was installed in each well for groundwater sampling. Approximately three well volumes were removed from each well using a peristaltic pump and Teflon tubing. Temperature, pH, specific conductance, dissolved oxygen concentration, salinity, and sample turbidity were monitored while the wells were purged. The field measurements and well purge volumes were recorded during well purging and at the time of sample collection. Groundwater sample log sheets are provided in Appendix A.

Groundwater samples were collected from each monitoring well to be analyzed for 1,2-Dibromoethane (ethylene dibromide or EDB) using SW-846 EPA Method 504.1, VOCs (EPA

Method 8260B), PAHs (EPA Method 8270C), TRPH (FL-PRO) and Lead (EPA Method 3010A/6010B). The groundwater samples were placed on ice and transported to Accura Analytical Laboratory, Inc. in Norcross, Georgia for analysis. Groundwater laboratory analytical reports are presented in Appendix B.

2.4.2 Natural Attenuation Parameter Sampling

During the groundwater sampling event, additional field measurements and laboratory samples were collected from selected monitoring wells to provide data to evaluate the potential for naturally occurring biodegradation of petroleum constituents at the site. Additional sampling and analysis were conducted for area wells, MW-1S, MW-2S, MW-3S, MW-4S, MW-9S, MW-11S, MW-12S, MW-14S, MW-16S, and MW-21S. Field measurements were made for each of the wells for dissolved oxygen, and ferrous iron. Laboratory samples were submitted for methane, sulfide, nitrate, nitrite, and sulfate analysis. The field data for natural attenuation parameters is included in Appendix A and the laboratory data for natural attenuation parameters is included in Appendix B.

2.5 AQUIFER CHARACTERIZATION

Data were collected during the site investigation to evaluate the movement of groundwater at the site. Groundwater elevations were determined from static water level measurements and a well top-of-casing (TOC) elevation survey. Hydraulic conductivity and transmissivity values for the shallow surficial aquifer were calculated from flow rate and drawdown measurements made during specific capacity tests in selected monitoring wells at the site.

2.5.1 Well TOC Survey

A reference point was marked on the top of each monitoring well casing on the north side. The elevations of the reference points were surveyed by a registered Florida surveyor to the nearest 0.01-foot, relative to the elevation above Mean Sea Level, North American Vertical Datum of 1988 (NAVD 88). The survey data are included in Appendix C.

2.5.2 Static Water Level Measurements

Depth-to-groundwater measurements were made in site monitoring wells during three gauging events, on July 19, 2000, September 6 to 26, 2000, and November 5, 2000. Measurements were made from the reference points marked on the tops of well casings using an electronic water level

indicator (interface probe where applicable). Static water level measurements were made to the nearest 0.01-foot. Groundwater elevations were calculated from the TOC survey elevations and the static water-level measurements.

2.5.3 Specific Capacity Tests

Specific capacity tests were conducted at one shallow monitoring well and one intermediate monitoring well at the site. The wells selected, NASP-FF-MW5S, and NASP-FF-MW5I (Figure 2-1) were selected because they were upgradient of the source area. A specific capacity test is a single-well pumping test that can be used to estimate hydraulic conductivity and transmissivity.

Prior to conducting the test, the monitoring wells were opened and allowed to equilibrate to ambient conditions. Once a well had stabilized, static water level and total well depth were recorded and used to calculate the height of the water column in the well. A pressure transducer and submersible pump were then installed in the well and the water level was allowed to restabilize. The pressure transducer was connected to a data logger to record water levels in the well. At the beginning of the test, the submersible pump and data logger were started. To minimize well bore losses due to turbulent groundwater flow, the flow rate was maintained to limit the stabilized drawdown in the well to ten per cent of the static water column in the well. Flow rate during the test was measured with a watch and calibrated beaker. Drawdown in the well was measured periodically with a water level indicator and recorded continuously on the data logger. The pumping portion of the test continued until the flow rate and drawdown were stable for a ten-minute interval. Once the flow rate and drawdown were stable, the pump was stopped and the data logger recorded the recovery of water level in the well back to the static level.

3.0 GEOLOGY AND HYDROGEOLOGY

Data collected during the site assessment were used to evaluate geologic and hydrogeologic conditions at the site that may influence the fate and transport of hydrocarbons released to the environment. Lithology and stratigraphy were described for the vadose zone and shallow surficial aquifer at the site. Aquifer properties evaluated as part of the site assessment included depth to groundwater and groundwater elevation, groundwater flow direction and gradient, hydraulic conductivity of the shallow water bearing zone, and groundwater flow velocity. Potable water supply and irrigation wells and surface water bodies in the vicinity of the site were investigated as potential groundwater exposure paths.

3.1 SITE STRATIGRAPHY

Interpretation of site lithology and stratigraphy was based on visual examination of soil cores collected from soil borings during the DPT investigation and drill cuttings observed during the monitoring well installation. Soil boring logs from the DPT investigation are included in Appendix A.

The typical lithology at the site is yellowish brown to light brown to white, silty fine to medium grained sand (Figure 3-1). This lithology was encountered across the site from ground surface to depths of approximately 38 feet at location NASP-FF-MW-5I where an approximately 1-foot thick peat layer was encountered. Peat layers were also encountered in deep monitoring well NASP-FF-MW-13D at depths of approximately 38 feet bls, and 65 feet bls. Since the USTs were installed upon a flat cut base and then covered, the material forming the mound of the former Fuel Farm is fill. Other than the peat layers, lithologies that would indicate potential confining layers were not encountered during the site assessment.

Regionally the surface lithology is consistent with correlation to the Pleistocene Terrace deposits and Citronelle Formation (Undifferentiated). This stratigraphic unit is described as sand with lenses of clay and gravel. The color is light-yellowish brown to reddish-brown, very fine to very coarse and poorly sorted. Logs and carbonaceous zones are present in places. Fossils are extremely rare except near the coast (Marsh, 1966). These formations together with the underlying Miocene Coarse Clastics make up the surficial sand and gravel aquifer. The Pensacola Clay Aquiclude, underlying the Miocene Coarse Clastics, would be the lower-confining unit for the area. The Clay is interpreted to be encountered approximately 400 to 600 feet below sea level in the vicinity of the Pensacola Naval Air Station (Marsh, 1966).

3.2 SITE HYDROGEOLOGY

Hydrogeologic data were collected during the site assessment to evaluate movement of groundwater in the shallow surficial aquifer at the site. Depth to groundwater and groundwater elevation were used to determine the groundwater flow direction and water table gradient at the site. Hydraulic conductivity and transmissivity for the shallow surficial aquifer were calculated from data collected during the specific capacity tests. Groundwater flow velocity at the site was estimated from the hydraulic conductivity and gradient data.

3.2.2 Free Product Thickness Measurements

Free product thickness measurements were recorded from site monitoring wells during three gauging events, on July 19, 2000, September 6 to 26, 2000, and November 5, 2000. The initial measurement period in July 2000 included all existing monitoring wells installed during previous investigations. The latter two events included only the monitoring wells installed as part of this SAR investigation. Free product measurements ranged from a visible sheen to 1.51 feet in thickness. Nine of the monitoring wells at the site contained measureable thickness of free product and two of the contained a visible sheen. Figure 3-2 presents the free product thickness measurements from the combined July and September 2000 measurement events.
A determination of free product contaminant mass was completed for the site. The determination was completed using the formula:

$$\text{Total free product mass} = A * T * n * Cf * 49.12\ \text{lb/ft}^3$$

where:

T = Average observed thickness (feet) = 1.07 ft
A = Total area of plume (feet^2) = 109,900 ft^2
n = Porosity = 0.30
Cf = Correction factor for soil type (0.50 for sand)

Based on the above assumptions the free product contaminant mass is estimated at 866,425 lbs.

3.2.1 Static Water Level and Groundwater Elevations

Static water level (SWL) measurement data were recorded from site monitoring wells during three gauging events, on July 19, 2000, September 6 to 26, 2000, and November 5, 2000. Although SWL measurements were recorded in existing monitoring wells in July 2000, these measurements were not used to develop potentiometric surface maps because a number of casings were broken and using historic Top of Casing survey data was not recommended. SWL measurements from the September 2000 event were not used to develop potentiometric surface maps because the measurements were recorded in newly installed monitoring prior to surface pad and protective casing construction and would not represent accurate TOC information.

The SWL measurements recorded on November 5, 2000 indicate water levels in the shallow wells ranged from 7.51 feet below top of casing (BTOC) in NASP-FF-MW-11S to 24.49 feet BTOC in NASP-FF-MW-4S (Table 3-1). The SWL measurements in the intermediate wells NASP-FF-MW-5I and MW-14I were 12.14 feet BTOC and 12.65 feet BTOC, respectively. The SWL measurement in the deep well, NASP-FF-MW-13D, was 28.21 feet BTOC.

The SWL measurement data and the relative elevations from the well TOC survey were used to determine relative groundwater elevations at each well for the November 5, 2000 gauging event (Table 3-1). The groundwater elevations in the shallow wells ranged from 18.16 feet in NASP-FF-MW-17S to 21.21 feet in NASP-FF-MW-3S (Table 3-1). The groundwater elevations in the intermediate wells, (NASP-FF-MW-5I and NASP-FF-MW-14I, respectively), were 19.51 feet and 19.62 feet. The groundwater elevation in the deep well, (NASP-FF-MW-13D), was 16.80 feet. The groundwater elevations in the intermediate depth wells do not appear to vary significantly from elevations in the adjacent shallow wells, particularly in NASP-FF-MW-14I and NASP-FF-MW-14S. The groundwater elevation in the deep well, however, appears to be approximately 4.41 feet lower in elevation than the nearby shallow well NASP-FF-MW-3S. During gauging events, groundwater elevations were generally highest to northwest and decreased to the southeast side of the site (Figure 3-3).

3.2.3 Groundwater Flow Direction

To evaluate the direction of groundwater flow at the site, the groundwater elevations were plotted on a site map for the November 5 gauging event (Figures 3-2). Groundwater elevation isocontours were drawn from the plotted data. Groundwater flow direction is predicted to be perpendicular to the elevation isocontours. Interpretation of data from the site gauging event

indicates that groundwater flow in the shallow surficial aquifer is in a radial pattern around the tank mounds and is generally to the south southeast, away from UST Site 000024 Area toward Big Lagoon, Sherman Cove, and Pensacola Bay (Figure 3-3).

3.2.4 Water Table Gradient

The average horizontal groundwater gradient across the site was calculated for the November gauging event from the groundwater elevations measured in shallow monitoring wells and the estimated groundwater flow direction.

The groundwater flow gradient was determined using the following equation:

$$I = \frac{h_1 - h_2}{d}$$

Where:

I = the hydraulic gradient
h_1 = the water elevation at point 1, the highest value
h_2 = the water elevation at point 2, the lowest value
d = the horizontal distance between point 1 and point 2 parallel to the direction of groundwater flow

The highest and lowest groundwater elevation values measured in shallow monitoring wells during each gauging event were used to determine the difference in groundwater elevation across the site. The horizontal distance between the high and low groundwater elevation points was measured parallel to the estimated groundwater flow direction.

On November 5, 2000, the groundwater elevation in NASP-FF-MW-3S, 21.21 feet, was the highest value and the groundwater elevation in NASP-FF-MW-17S, 18.16 feet, was the lowest value. The horizontal distance parallel to groundwater flow was 580 feet. These data indicate an average hydraulic gradient of 0.00526 feet/foot.

3.2.5 Hydraulic Conductivity

Hydraulic conductivity values for the site were calculated from the specific capacity test data from monitoring wells PEN-SFTF-MW5S (NASP-FF-MW-5S) and PEN-SFTF-MW5I (NASP-FF-MW-5I). Specific Capacity test data are summarized below and contained in Appendix D.

During the specific capacity tests, flow rate and drawdown data were recorded until stable drawdown conditions were achieved. The flow and draw down data from each test were input into two computer programs based on the Theiss equation (Bradbury and Rothschild, 1985; Kasenow and Pare, 1992). An estimated storage coefficient of 0.2 (Heath, 1983) and an estimated saturated thickness of 50 feet were assumed for the data analysis. Since MW5S had a well screen that bracketed the water table, the static water column was used as the screen length.

The hydraulic conductivity values calculated from the specific capacity test data ranged from 64.3 to 223.8 feet per day. The conductivity values for PEN-SFTF-MW5I, 64.3 and 78.0 feet per day, were the lowest and the values for PEN-SFTF-MW5S were the highest, 198.8 and 223.8 feet per day. The hydraulic conductivity values calculated by the Kasenow and Pare program were lower than the values calculated by the Bradbury and Rothschild program. This may be due to the correction applied to partially penetrating pumping wells in the Kasenow and Pare program. The arithmetic mean of hydraulic conductivity values calculated for PEN-SFTF-MW5I was 71.2 feet per day. The arithmetic mean of hydraulic conductivity values calculated for PEN-SFTF-MW5S was 211.3 feet per day.

Site specific transmissivity values were calculated from the hydraulic conductivity by the computer programs using the following equation:

$$T=Kb_e$$

Where:

T = transmissivity
K= hydraulic conductivity
b_e = affected aquifer thickness

The shallow surficial aquifer was estimated to have a saturated thickness of 50 feet. The transmissivity values calculated for PEN-SFTF-MW5I were 3,215 and 3,899 square feet per day. The transmissivity values calculated for PEN-SFTF-MW5S were 9,994 and 11,190 square feet per day.

DETERMINATION OF AQUIFER PROPERTIES BASED ON ANALYSIS OF SPECIFIC CAPACITY TESTS

WELL NUMBER PEN-SFTF-MW5I (NASP-FF-MW-5I)

Bradbury and Rothschild

SPECIFIC CAPACITY (GPM/FT) = 2.97619

TRANSMISSIVITY: (FT*FT/SEC) = 4.512603E-02
(FT*FT/DAY) = 3898.889
(GAL/DAY/FT) = 29165.64

USING A STORAGE COEFFICIENT = .2
NUMBER OF ITERATIONS = 3

HYDRAULIC CONDUCTIVITY: (FT/SEC) = 9.025206E-04
(FT/DAY) = 77.97778
(GAL/DAY/FT*FT) = 518.0468

Kasenow and Pare

Q = Pumping rate = gpm = 1.25
r = Radius of the pumping well = ft = 0.08
t = Time duration of pumping test = 45.00 min = 0.03125 days
t(o) = Time of zero drawdown = 0.00045484 min = 0.0000003159 days
Slope = ft = 0.01

T = Transmissivity = 23991.00 gpd/ft
= 3214.79 ft^2/day
= 297.49 m^2/day

Apparent storage coefficient = 0.330000
Aquifer thickness = b = ft = 50.00

Hydraulic conductivity = K = 479.82 gpd/sq Ft
= 64.30 ft/day
= 19.68 m/day

Field drawdown = s = ft = 0.42
Corrected drawdown = s = ft = 0.07
Field specific capacity = Q/s = gpm/ft = 2.98
Corrected specific capacity = Q/s = gpm/ft = 18.17
Apparent limit of cone of depression at steady-rate = r (o) = ft = 26.11

DETERMINATION OF AQUIFER PROPERTIES BASED ON ANALYSIS OF SPECIFIC CAPACITY TESTS

WELL NUMBER PEN-SFTF-MW5S (NASP-FF-MW-5S)

Bradbury and Rothschild

SPECIFIC CAPACITY (GPM/FT) = 11.36357

TRANSMISSIVITY: (FT*FT/SEC) = .1295109
(FT*FT/DAY) = 11189.74
(GAL/DAY/FT) = 83704.83
USING A STORAGE COEFFICIENT = .2
NUMBER OF ITERATIONS = 3

HYDRAULIC CONDUCTIVITY: (FT/SEC) = 2.590217E-03
(FT/DAY) = 223.7948
(GAL/DAY/FT*FT) = 486.785

Kasenow and Pare

Q = Pumping rate = gpm = 1.25
r = Radius of the pumping well = ft = 0.08
t = Time duration of pumping test = 40.00 min = 0.02778 days
t(o) = Time of zero drawdown = 0.00014714 min = 0.0000001022 days
Slope = ft = 0.00

T = Transmissivity = 74164.00 gpd/ft
= 9937.98 ft^2/day
= 919.63 m^2/day

Apparent storage coefficient = 0.330000
Aquifer thickness = b = ft = 50.00
Hydraulic conductivity = K = 1483.28 gpd/sq Ft
= 198.76 ft/day
= 60.82 m/day

Field drawdown = s = ft = 0.11
Corrected drawdown = s = ft = 0.02
Field specific capacity = Q/s = gpm/ft = 11.36
Corrected specific capacity = Q/s = gpm/ft = 51.71
Apparent limit of cone of depression at steady-rate = r (o) = ft = 43.28

3.2.6 Groundwater Velocity

Potential movement of groundwater at the site may be described in terms of transportation by natural flow in the saturated zone while assuming groundwater flow follows Darcy's Law. Darcy's Law may be expressed as:

$$V = \frac{(K \times I)}{n}$$

Where:

V = average seepage velocity
K = hydraulic conductivity
n = effective porosity
I = average hydraulic gradient

Data from soil borings advanced during the DPT investigation indicate that silty fine sand and fine sand are the typical lithologies at the site. Review of standard literature suggests that a representative effective porosity for this lithology is approximately 30% (Heath, 1983).

Using an average hydraulic conductivity of 141.20 feet/day, an average hydraulic gradient of 0.00526 feet/foot, an effective porosity value of 30%, and Darcy's Equation, the estimated groundwater seepage velocity averaged across the site was calculated at 2.48 feet/day.

3.3 POTABLE WATER SUPPLY WELL SURVEY

Three water wells at NAS Pensacola provide an emergency backup potable water supply to the NAS. These wells have typically been used as fire fighting water supply sources. One of the potable water supply wells (designated as well No. 3) has been abandoned. The remaining two potable supply wells located at NAS Pensacola, designated as Wells No. 1 and No. 2, are indicated on Figure 3-4. According to NAS personnel, these wells are not currently used for potable water supplies at NAS Pensacola, but are available as reserve potable water supplies should the need arise. Potable well inventory data are presented in Table 3-2. Both wells at NAS Pensacola are screened in the main producing zone of the sand-and-gravel aquifer at depths ranging from 105 to 160 feet bls. The main source of water for the base is a Navy-owned well field located at the Naval Technical Training Center, Corry Station. The water from this well field is pumped from the sand-and-gravel aquifer.

3.4 SURFACE WATER

There are naturally occurring surface water bodies in the vicinity of the site. Garcon Swamp is located approximately 1000 feet northwest of the site. There are the headlands of an unnamed intermittent stream approximately 250 feet north-northwest of the site that drains northward to Bayou Grande. To the southeast approximately 350 feet is a marsh between the site and Sherman Cove and Big Lagoon at the western side of Pensacola Bay.

3.4.1 Tidal Influence Survey

Data Collection

To aid in determining the effects of tidal fluctuations upon groundwater levels at the site, tidal data, barometric pressure data and groundwater elevation data were collected and evaluated. Tidal data, including the occurrence and magnitude of high and low tides for Pensacola, was downloaded from a National Oceanic and Atmospheric Administration (NOAA) website. Hourly observations of barometric pressure data for NAS Pensacola and Pensacola Regional Airport were downloaded from National Weather Service (NWS) websites. Groundwater elevation data were collected at 15-minute intervals during the test from three shallow monitoring wells at the site. Observations were made in monitoring wells NASP-FF-14S, NASP-FF-11S, and NASP-FF-9S. These wells were selected to evaluate variations in tidal influence across the site due to proximity to the shoreline, with NASP-FF-14S being the closest well and NASP-FF-9S being the most distant well. The groundwater level in each well was measured with a pressure transducer and recorded using an electronic data logger.

Data Evaluation

Data for the test were evaluated for a 35-hour period, beginning at high tide at approximately 2:00 on December 5, 2000 and ending at low tide at 12:00 on December 6, 2000. This interval represents approximately 1-1/2 tidal cycles.

The first high tide of the test interval, which was selected as the beginning point for data evaluation, occurred at 2:00 on December 5, 2000. This high tide also had the greatest magnitude for the test interval, 0.72 feet above Mean Lowest Low Water (MLLW). Low tide occurred approximately 11 hours later at 13:00. The low tide magnitude was 0.26 feet MLLW, a drop of 0.46 feet from the previous high tide. The next high tide occurred approximately nine hours later at 22:00. The magnitude of this high tide was 0.66 feet MLLW, an increase of 0.4 feet from the previous low tide, but 0.06 feet less than the previous high tide. The next low tide occurred approximately 14 hours later at 12:00 on December 6, 2000. The magnitude of this low tide was 0.34 feet MLLW, a decrease of 0.32 feet since the previous high tide, but 0.08 feet higher than the previous low tide. The intervals between high and low tides ranged from nine to 14 hours during the test interval. The largest tidal fluctuation during the test was 0.46 feet and the smallest was 0.32 feet.

Barometric pressure data recorded at NAS Pensacola and Pensacola Regional Airport were evaluated for the test period. In general, the barometric pressures recorded for the two stations

were the same. For intervals with records for both stations that were different, the data from NAS Pensacola was used. When data for an interval was not available from NAS Pensacola, data from the Regional Airport was used. Barometric pressures for the first eight hours of the test evaluation ranged from 30.37 to 30.35 inches of mercury (In. Hg). Data for the next seven hours of the test were not downloaded and are currently not available. During the remaining 20 hours of the test barometric pressures ranged from 30.27 to 30.2 In. Hg, showing an overall decrease of 0.07 In. Hg measured at 20:00 on December 5, 2000 to the end of the test.

Groundwater elevation data was collected from three shallow monitoring wells during the test interval. Pressure transducers were installed in each of the monitoring wells and electronic data loggers were used to collect water level data from the wells at 15-minute intervals. The water level measurements were referenced to the surveyed top-of-casing elevation for each monitoring well to determine the groundwater elevations. Evaluation of the data recorded for NASP-FF-11S indicates that the pressure transducer installed in that well was not functioning correctly and that the groundwater elevations recorded during the test are not correct.

Groundwater elevations in NASP-FF-9S were approximately 1 foot higher than the groundwater elevations in NASP-FF-14S. The groundwater elevations measured in NASP-FF-14S ranged from 19.98 to 19.94 feet above mean sea level (MSL). The groundwater elevations measured in NASP-FF-9S ranged from 20.93 to 20.91 feet MSL. Lower groundwater elevations generally occurred at or before low tides and high groundwater elevations occurred at or after high tides.

Conclusions

Variations in tidal range, barometric pressure and groundwater elevation were evaluated to determine the factors influencing groundwater elevation in the monitoring wells during the test. The maximum tidal range between a high tide and a low tide during the test was 0.46 feet. Barometric pressure remained fairly steady during the first eight hours of the test, varying approximately 0.02 In. Hg. From eight to 14 hours of the test, the barometric pressure dropped approximately 0.10 In. Hg. and during the last 22 hours of the test, barometric pressure had dropped approximately 0.07 In. Hg. Barometric pressure values showed an overall decrease during the course of the test. The groundwater elevation in NASP-FF-14S fluctuated 0.04 feet during the course of the test. This fluctuation is about 10% of the maximum tidal fluctuation that occurred during the test. The groundwater elevation in NASP-FF-9S fluctuated 0.02 feet during the course of the test. This fluctuation is about 5 % of the maximum tidal fluctuation that occurred during the test.

The groundwater elevation changes observed in NASP-FF-14S, which is located closer to the shoreline, were approximately twice as great as the changes observed in NASP-FF-9S, which is located further from the shoreline. Groundwater elevation changes in both wells showed limited correlation with the timing of tidal fluctuations. The magnitude of groundwater elevation changes did not decrease as the magnitude of tidal fluctuations decreased. Changes in barometric pressure seemed to have little or no influence on groundwater elevations during this test.

4.0 SITE ASSESSMENT RESULTS

Soil samples were collected at the Sherman Field former Fuel Farm UST Site 000024 for headspace screening and/or laboratory analysis during the preliminary assessment. The headspace screening results were evaluated following the appropriate 62-770 F.A.C. guidelines. The results of laboratory soil analyses were compared to the soil cleanup target levels (SCTLs) and appropriate 62-777 F.A.C. requirements.

Groundwater samples were collected at UST Site 000024 during the preliminary assessment. The results of groundwater analyses were compared to the groundwater cleanup target levels (GCTLs) and appropriate 62-777 F.A.C. requirements.

Natural attenuation parameters were measured from selected wells during the groundwater-sampling event. The data from wells located inside the source area were compared to data collected from wells located outside of the source area.

4.1 SOIL ASSESSMENT RESULTS

During the preliminary assessment, 26 out of 41 DPT soil borings had a headspace screening response greater than 50 ppm, indicating that excessively contaminated soil as defined by 62-770 F.A.C. was present at the site. The other 15 soil borings had headspace screening responses ranging from 0 to 6 ppm. Following the initial screening process, soil samples were collected from borings with low, medium, and high range responses and submitted to a laboratory for analysis. BTEX, PAH, and TRPH compounds were reported at concentrations exceeding SCTLs in samples ranging from low to high headspace readings. Generally the higher range screening had greater concentrations. Those screened generally below 1,200 ppm had little to no concentrations exceeding SCTLs, except for NASP-FF-SB-12 (6-8' BLS, OVA = 120 ppm) and NASP-FF-SB-13 (14-16' BLS, OVA = 690 ppm), which contained concentrations of benzene of 0.0106 and 0.0018 mg/kg, respectively.

4.1.1 DPT Headspace Screening

Preliminary assessment activities were conducted to determine the extent of the petroleum-impacted soil in the vadose zone. Soils exhibiting a headspace screening response of greater than 50 ppm are considered "excessively contaminated" as defined by Chapter 62-770.200,

F.A.C. for the Kerosene Analytical Group. The extent of excessively contaminated soil was assessed through soil headspace screening performed during the DPT investigation. A summary of soil OVA screening results are presented in Table 4-1. Soil boring locations and soil headspace readings for the 4 to 8 feet bls depth and the sample immediately above the water table are shown on Figures 4-1 and Figure 4-2, respectively. Soil headspace measurements for the 0 to 4 feet depth range are not shown on a figure because elevated readings were not recorded. Additional depth ranges are not shown on individual figures because of the topography of the soil mounds covering the cut and cover tanks, which limits correlation of the sample depth intervals.

4.1.2 Laboratory Soil Sample Analysis

Soil samples (NASPFFSB-11, NASPFFSB-12, NASPFFSB-13, NASPFFSB-14, NASPFFSB-15, NASPFFSB-16, NASPFFSB-17, NASPFFSB-18, NASPFFSB-19, NASPFFSB-27, and NASPFFSB-28) were collected from inside and outside of the source area for laboratory analysis to correlate with the headspace screening results (Figure 4-1 and Figure 4-2). Laboratory analytical reports can be found in Appendix B and Table 4-2 and 4-3 contain a summary of the soil analytical results.

Benzene was reported in the soil samples NASPFFSB-12 (6-8 feet BLS and 20-24 feet BLS) at concentrations of 0.0106 mg/kg and 0.0115 mg/kg, respectively, which is above the leachability for groundwater SCTL of 0.007 mg/kg (Table 4-2). Benzene was reported above the SCTL in the soil sample NASPFFSB-16 (22-26 feet BLS) at an estimated concentration of 0.113 mg/kg. Benzene was reported below the SCTL in the soil sample NASPFFSB-13 (14-16 feet BLS) at an estimated concentration of 0.0018 mg/kg.

Ethylbenzene was reported in the soil sample NASPFFSB-11 (4-8 feet BLS) at a concentration of 5.05 mg/kg, which is above the leachability for groundwater SCTL of 0.6 mg/kg (Table 4-2). Ethylbenzene was reported above the SCTL in the soil samples NASPFFSB-16 (22-26 feet BLS) and NASPFFSB-28 (7-11 feet BLS) at concentrations of 6.7 mg/kg and 3.41 mg/kg, respectively. Ethylbenzene was reported below the SCTL in the soil samples NASPFFSB-12 (6-8 feet BLS and 20-24 feet BLS) and NASPFFSB-13 (14-16 feet BLS) at concentrations of 0.0087 mg/kg, 0.0146 mg/kg, and 0.0177 mg/kg, respectively.

Total xylene was reported in the soil sample NASPFFSB-11 (4-8 feet BLS) at a concentration of 12.3 mg/kg, which is above the leachability for groundwater SCTL of 0.2 mg/kg (Table 4-2). Total xylene was reported above the SCTL in the soil samples NASPFFSB-16 (22-26 feet BLS) and

NASPFFSB-28 (7-11 feet BLS) at concentrations of 13.3 mg/kg and 30.5 mg/kg, respectively. Total xylene was reported below the SCTL in the soil samples NASPFFSB-12 (20-24 feet BLS) and NASPFFSB-13 (14-16 feet BLS) at estimated concentrations of 0.0119 mg/kg, and 0.0144 mg/kg, respectively.

1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were reported in the soil sample NASPFFSB-11 (4-8 feet BLS) at a concentrations of 8.65 mg/kg, 9.28 mg/kg, and 2.85 mg/kg, respectively, which are above the respective leachability for groundwater SCTLs of 2.2 mg/kg, 6.1 mg/kg, and 1.7 mg/kg (Table 4-2). 1-methylnaphthalene was reported above the SCTL in the soil samples NASPFFSB-16 (22-26 feet BLS) and NASPFFSB-28 (7-11 feet BLS) at concentrations of 2.32 mg/kg and 3.27 mg/kg, respectively.

Total recoverable petroleum hydrocarbons (TRPH) was reported in the soil sample NASPFFSB-11 (4-8 feet BLS) at a concentration of 2530 mg/kg, which is above the leachability for groundwater SCTL of 340 mg/kg (Table 4-2). TRPH was reported above the SCTL in the soil samples NASPFFSB-16 (22-26 feet BLS) and NASPFFSB-28 (7-11 feet BLS) at concentrations of 810 mg/kg and 2130 mg/kg, respectively.

4.1.3 Estimated Mass of Contaminants in Soil

Net soil vapor readings in excess of 50 ppm were used to define "excessively contaminated soil" in accordance with Rule 62-770.200(2), FAC. For the site area, the area of impacted soil was calculated by assuming a representative geometric shape (an ellipse), then calculating the area based on the equation:

$$\textbf{Area} = \pi(\textbf{rA})(\textbf{rB})$$

where:

r = the radius of the axis
A = the long axis of the ellipse
B = the short axis of the ellipse

The volume of the soil was calculated using the equation:

$$\textbf{Volume} = (\textbf{Area})(\textbf{Depth})$$

where:

Area = calculated area in square feet
Depth = average vertical extent of contaminated soil in feet

The mass of contaminants in vadose zone soil was calculated using the following equation:

$$\textbf{Mass} = \textbf{Volume ft}^3 \times \frac{1\ \text{yd}^3}{27\ \text{ft}^3} \times \frac{1.4\ \text{tons}}{1\ \text{yd}^3} \times 1016\frac{\text{kg}}{\text{ton}} \times \frac{\text{mg}}{\text{kg}}\text{TRPH} \times \left(1.0 \times 10^{-6}\right)\frac{\text{kg}}{\text{mg}} \times 2.204623\frac{\text{lb}}{\text{kg}}$$

where:

TRPH = arithmetic mean of Total Recoverable Petroleum Hydrocarbon concentrations.

The estimated mass of contaminants was calculated for two elliptical areas from 4 feet bls to the water table (Figure 4-1) and a larger area immediately above the water table (Figure 4-2). The estimated mass of contaminants for the three combined areas was calculated at 89,980 lbs.

Soil volume and contaminant mass calculations for each site are provided in Appendix I. The estimated mass does not include contamination dissolved in soil pore water.

4.2 GROUNDWATER ASSESSMENT RESULTS

During the site assessment, twenty-six groundwater samples were collected from monitoring wells installed within and surrounding the source area and were submitted to a laboratory for analysis. The petroleum constituents benzene, ethylbenzene, xylene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and TRPH were reported at concentrations exceeding GCTLs in these samples.

4.2.1 Monitoring Well Sampling

Groundwater samples were collected from twenty-three shallow monitoring wells, two intermediate monitoring wells, and one deep monitoring well installed at the site (Figure 2-2). Twenty-six groundwater samples were collected and analyzed for VOCs, PAHs, EDB, TRPH, and lead at an offsite laboratory (Table 4-4). The laboratory analytical reports can be found in Appendix B. Benzene, ethylbenzene, and total xylene were reported at concentrations exceeding GCTLs in groundwater samples collected from the monitoring wells. The PAH compounds 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were reported at concentrations exceeding GCTLs in groundwater samples collected from the monitoring wells. TRPH was reported at concentrations exceeding GCTLs in groundwater samples collected from the monitoring wells.

Benzene detections exceeding the GCTL of 1 μg/l were reported from eight of the groundwater samples submitted to the laboratory at concentrations ranging from 39 to 590 μg/l (Figure 4-2, Table 4-4). The GCTLs for ethylbenzene and total xylene, 30 and 20 μg/l, respectively were exceeded in eight monitoring wells (Figures 4-3 and 4-4).

1-methylnaphthalene, 2-methylnaphthalene, and naphthalene detections were reported at concentrations exceeding the GCTLs of 20 μg/l from eight of the groundwater samples submitted to the laboratory at concentrations ranging from 21 to 200 μg/l (Table 4-3). Except for monitoring well NASPFF-MW-5S, exceedances for these compounds also occurred in the samples from wells with reported BTEX exceedances. Exceedances of the TRPH GCTL of 5,000 μg/l, also occurred in samples from wells where exceedances of BTEX were reported. The TRPH exceedances ranged from 5,600 to 28,000 μg/l.

There was one exceedance of the methylene chloride GCTL of 5 μg/l in NASPFF-MW-16S at an estimated concentration of 13 μg/l. There was one exceedance of the chloroform GCTL of 5.7 μg/l in NASPFF-MW-14S at a concentration of 6.6 μg/l. There were five detections for lead, none of which exceeded the GCTL of 15 μg/l. MTBE was detected in deep monitoring well NASP-FF-MW-13D at an estimated concentration of 5.1 μg/l, which is below the GCTL of 50 μg/l. There were no detections of 1, 2 dibromoethane (EDB).

4.3 NATURAL ATTENUATION SAMPLING

Measurements of natural attenuation parameters were made during the site assessment and are included in Table 4-3. Dissolved oxygen (DO) was measured in the field using a Horiba® Model U-10 during purging and sampling and in selected wells using HACH® titration kits. Ferrous iron was also measured in selected wells using HACH® titration kits. Nitrates, nitrites, and sulfates were analyzed at the laboratory for the selected wells. Results of the natural attenuation parameters were evaluated by comparing results from wells in source area (NASPFF-MW-3S, NASPFF-MW-2S, NASPFF-MW-1S, NASPFF-MW-12S, NASPFF-MW-16S) with the results from wells (NASPFF-MW-4S, NASPFF-MW-9S, NASPFF-MW-11S, NASPFF-MW-14S, and NASPFF-MW-21S) which are located outside of the source area. The natural attenuation parameter data are shown in Figure 4-5.

Relative decreases were noted in the DO, nitrate, and sulfate concentrations in the samples collected from inside the source area. DO ranged from <200 to 710 mg/l inside the source area and 2,600 to 7,000 mg/l outside the source area. Nitrate ranged from below detection limits (BDL) to 90 mg/l inside the source area versus 220 to 1,880 mg/l outside the source area. Sulfate ranged from BDL to 6,000 mg/l inside the source area versus 5,000 to 11,000 mg/l outside the source area.

Relative increases were noted in the methane concentrations in the samples collected from inside the source area. Methane ranged from BDL to 210 mg/l outside the source area versus 2,100 to 6,300 mg/l inside the source area.

Relative increases were noted in the ferrous iron concentrations in the samples collected from inside the source area. Ferrous iron ranged from <200 to 2,800 mg/l outside the source area versus 600 to 6,200 mg/l inside the source area.

Nitrite concentrations ranged from BDL to 80 mg/l and were similar in each of the wells sampled.

5.0 DISCUSSION

The significant findings from each phase of site assessment activities are discussed below.

5.1 SOURCE OF HYDROCARBONS

An equipment malfunction in 1983 resulted in the release of approximately 48,000 gallons of JP-4 Jet Fuel. Initial recovery of approximately 600-700 gallons of free product from open trenches was discontinued by direction of the Fire Marshall. A product recovery system installed in a location to the northwest upgradient side of the site proved unsuccessful, and its operation was discontinued.

5.2 SITE CONDITIONS

The site is underlain by silty sand and sandy units of the shallow surficial "sand-and-gravel" aquifer to a depth of approximately 500 feet where the top of the Pensacola Clay has been mapped (Marsh, 1966). Lithologies suggesting the presence of semi-confining layers were observed at the site in the form of approximately 1-foot thick layers of peat approximately 38 feet BLS and again at approximately 65 feet BLS. Depth to water in the surficial aquifer ranged from approximately 11.5 feet to 26 feet BLS during July 2000 and approximately 7.5 feet to 28 feet BLS during November 2000. Relative groundwater elevations were calculated from the static water levels and TOC elevation survey data. This data was used to calculate the groundwater flow direction and water table gradient at the time of the November 2000 gauging event. The groundwater flow at the site is radial around the tank mound but is predominately to the south-southeast. The average groundwater gradient determined for the site was calculated to be approximately 0.00526 feet/foot. The groundwater elevation in the intermediate well, NASPFF-MW-5I was approximately 0.5 feet lower than the groundwater elevation in the adjacent shallow well, NASPFF-MW-5S indicating a potential downward flow. There was essentially no difference in the elevations form the shallow and intermediate wells at the NASPFF-MW-14S and MW-14I locations. The groundwater elevation in deep well NASPFF-MW-13D was approximately 4.4 feet lower in elevation than nearby shallow well NASPFF-MW-3S, indicating a potential for upward flow. The peat layers observed at the site may act as a semi-confining unit. Hydraulic conductivity values for the site were determined from specific capacity tests and averaged 211.3 feet per day. The groundwater seepage velocity was calculated from gradient and hydraulic conductivity values and is estimated at 2.48 ft/day. No active potable water supply wells were

identified within a 0.50-mile radius of the site. A marsh approximately 350 feet southeast from the site is the nearest downgradient surface water body.

5.3 SOIL ASSESSMENT

During the site assessment investigation, soil borings were advanced to a depth of approximately 12 to 28 feet below land surface (BLS) at 41 locations. The results of the assessment indicated that petroleum constituents were present in site soil from the tank location area at concentrations exceeding the requirements specified in 62-770 F.A.C. and 62-777 F.A.C. Based on the headspace screening results, surface soils at the site are unaffected. "Excessively contaminated soils" were present in the 4 to 8 feet bls range in the area surrounding Tank 1884 and east of tank 1887 (Figure 4-1). "Excessively contaminated soil" in the vadose zone was present in the area around the tank mound and extending to the southeast and southwest (Figure 4-2). Analytical results from the laboratory indicated that benzene, ethylbenzene, total xylene, 1,2-methylnaphthalene, naphthalene, and TRPH concentrations in six soil samples from the tank mound area exceeded the SCTLs.

5.4 GROUNDWATER ASSESSMENT

A single area of free product accumulation exists beneath the tank mound area and extending to the northwest and southeast (Figure 3-2). The southeastern extension of free product appears to continue to the south-southeast away from the tank mound toward the new asphalt road.

Based on the results of the groundwater assessment, concentrations of dissolved petroleum constituents appear to be moving slowly to the south-southeast at the site since the release in 1983. Locations with exceedances of the GCTLs detected during the groundwater assessment included most of the tank mound and associated flanks on the eastern and western sides. Analytical results from the laboratory indicated that benzene, ethylbenzene, total xylene, 1,2-methylnaphthalene, naphthalene, and TRPH concentrations in eight samples from the tank mound area exceeded the GCTLs. No GCTL exceedances were detected in the groundwater sample from the vertical extent well, NASP-FF-MW-13D.

Evaluation of the natural attenuation parameter data indicates that natural attenuation may be occurring in the source area. Concentrations of dissolved oxygen, nitrate and sulfate, which act as substrates for biodegradation were reduced in the source area when compared to the wells outside of the source area. Concentrations of methane and ferrous iron (metabolic products of anaerobic biodegradation) were increased in the source area when compared to the wells outside of the source area. The depletion in substrate concentrations and the increase in metabolic

byproducts suggests that anaerobic biodegradation of petroleum hydrocarbons is occurring in the source area.

6.0 CONCLUSIONS AND RECOMMENDATION

The conclusions based on the data collected during the site assessment performed by TtNUS at the former Sherman Field Fuel Farm, UST Site 000024, are summarized as follows:

- Excessively contaminated soil, exceeding 62-770 F.A.C. and 62-777 F.A.C. SCTLs, has not been removed from the vadose zone at the site but is generally limited to the immediate vicinity of the UST tank mound,

- Free-product accumulations within existing site monitoring wells ranges from a sheen to over 1.5 feet in thickness,

- Concentrations of dissolved petroleum contaminants of concern in site groundwater exceed 62-770 F.A.C. and 62-777 F.A.C. GCTLs,

- Geochemical evidence (natural attenuation parameters) suggests that anaerobic biodegradation of petroleum hydrocarbons may be occurring at the site,

- Downgradient horizontal extent of dissolved contamination is not defined, and

- Exposure pathways to human receptors via surface water or supply wells are not complete.

Based upon the hydrogeological and chemical data presented in this SAR and the requirements of Chapter 62-770 and 62-777, F.A.C., TtNUS recommends, that a Remedial Action Plan (RAP) be completed and active remediation of the free-product and soils be addressed. Following active remediation, natural attenuation of the onsite groundwater may be appropriate.

In addition, TtNUS recommends

- free product removal at the site should be initiated immediately and continued until active recovery system is installed,
- a complete horizontal delineation of the dissolved contaminant plume should be performed in the southeasterly direction, and
- monitoring wells installed prior to this SAR be either abandoned in place or completed with concrete pads and steel manhole vaults for well head protection.

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TABLES

TABLE 2-1

MONITORING WELL CONSTRUCTION DETAILS
UST SITE 000024 ASSESSMENT REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Well No.	Date Installed	Drilling Method	Top of Casing Elevation[1]	A/G Riser Length, If Applicable	Total Well Depth (Feet)	Screened Interval (FBLS)	Well Diameter (Inches)	Lithology of Screened Interval
NASP-FF-MW-1S	9/9/2000	HSA	40.01	NA	24.65	14.5 - 24.5	2	yellowish to white "beach" silty fine-med Sand
NASP-FF-MW-2S	9/9/2000	HSA	43.95	NA	29.45	18.5 - 28.5	2	yellowish to white "beach" silty fine-med Sand
NASP-FF-MW-3S	9/9/2000	HSA	45.65	NA	29.45	19.0 - 29.0	2	yellowish to white "beach" silty fine-med Sand
NASP-FF-MW-4S	9/10/2000	HSA	44.88	NA	29.70	19.0 - 29.0	2	yellowish to white "beach" silty fine-med Sand
NASP-FF-MW-5S	9/8/2000	HSA	31.86	NA	18.60	7.5 - 17.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-6S	9/10/2000	HSA	30.67	NA	18.00	7.5 - 17.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-7S	9/8/2000	HSA	28.83	NA	16.70	6.2 - 16.2	2	white "beach" silty fine-med Sand
NASP-FF-MW-8S	9/9/2000	HSA	31.47	NA	18.27	7.5 - 17.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-9S	9/6/2000	HSA	29.24	NA	16.65	6.0 - 16.0	2	white "beach" silty fine-med Sand
NASP-FF-MW-10R	9/6/2000	HSA	29.85	NA	18.50	8.0 - 18.0	2	white "beach" silty fine-med Sand
NASP-FF-MW-11S	9/6/2000	HSA	27.99	NA	16.50	6.0 - 16.0	2	white "beach" silty fine-med Sand
NASP-FF-MW-12S	9/9/2000	HSA	33.47	NA	19.70	9.2 - 19.2	2	white "beach" silty fine-med Sand
NASP-FF-MW-13S	9/9/2000	HSA	36.24	NA	18.80	8.3 - 18.3	2	white "beach" silty fine-med Sand
NASP-FF-MW-14S	9/8/2000	HSA	31.47	NA	18.25	7.5 - 17.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-15S	9/9/2000	HSA	30.62	NA	18.20	7.5 - 17.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-16S	9/9/2000	HSA	31.62	NA	18.10	7.5 - 17.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-17S	9/9/2000	HSA	34.28	NA	19.40	8.9 - 18.9	2	white "beach" silty fine-med Sand
NASP-FF-MW-18S	9/11/2000	HSA	32.29	NA	19.55	9.0 - 19.0	2	white "beach" silty fine-med Sand
NASP-FF-MW-19S	9/11/2000	HSA	35.87	NA	19.20	9.0 - 19.0	2	white "beach" silty fine-med Sand
NASP-FF-MW-20S	9/11/2000	HSA	36.13	NA	19.40	9.0 - 19.0	2	white "beach" silty fine-med Sand

Well No.	Date Installed	Drilling Method	Top of Casing Elevation(1)	A/G Riser Length, If Applicable	Total Well Depth (Feet)	Screened Interval (FBLS)	Well Diameter (Inches)	Lithology of Screened Interval
NASP-FF-MW-21S	9/9/2000	HSA	28.83	NA	18.15	7.5 - 17.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-22S	9/13/2000	HSA	33.01	NA	20.35	9.85 - 19.85	2	white "beach" silty fine-med Sand
NASP-FF-MW-23S	9/14/2000	HSA	29.59	NA	15.30	4.5 - 14.5	2	white "beach" silty fine-med Sand
NASP-FF-MW-5I	9/11/2000	HSA	31.65	NA	39.30	34.0 - 39.0	2	white "beach" fine-med Sand, dark brown Peat
NASP-FF-MW-14I	9/11/2000	HSA	32.27	NA	40.00	34.0 - 39.0	2	white "beach" fine-med Sand, dark brown Peat
NASP-FF-MW-13D	9/13/2000	MR	45.01	NA	76.83	71.33 - 76.33	2	brown silty Sand, dark gray silty sandy Clay

NOTES:

(1)	Top of casing elevations referenced to Mean Sea Level, North American Vertical Datum of 1988 (NAVD 88)
D	Indicates deep monitoring well
HSA	Hollow Stem Auger
MR	Mud Rotary
A/G	Above Ground
NA	Not Applicable
FBLS	Feet Below Land Surface

TABLE 3-1
GROUNDWATER ELEVATION SUMMARY UST SITE 000024
NAS PENSACOLA PENSACOLA FLORIDA

November 5, 2000

Well ID	TOC Elevation (ft)	Depth of Well (ft)	Screened Interval (ft)	Depth to Water Level (ft)	Depth to Free Product (ft)	Free Product Thickness (ft)	Adj. Water Level Elevation (ft)
NASP-FF-MW-1S	40.01	24.65	14.5 - 24.5	20.45			19.56
NASP-FF-MW-2S	43.95	29.45	18.5 - 28.5	24.10	Sheen		19.85
NASP-FF-MW-3S	45.65	29.45	19.0 - 29.0	24.44	Sheen		21.21
NASP-FF-MW-4S	44.88	29.70	19.0 - 29.0	24.49			20.39
NASP-FF-MW-5S	31.86	18.60	7.5 - 17.5	11.83			20.03
NASP-FF-MW-6S	30.67	18.00	7.5 - 17.5	11.33	11.30	0.03	19.55
NASP-FF-MW-7S	28.83	16.70	6.2 - 16.2	7.95			20.88
NASP-FF-MW-8S	31.47	18.27	7.5 - 17.5	12.36			19.11
NASP-FF-MW-9S	29.24	16.65	6.0 - 16.0	8.66			20.58
NASP-FF-MW-10R	29.85	18.50	8.0 - 18.0	9.30			20.55
NASP-FF-MW-11S	27.99	16.50	6.0 - 16.0	7.51			20.48
NASP-FF-MW-12S	33.47	19.70	9.2 - 19.2	14.45			19.02
NASP-FF-MW-13S	36.24	18.80	8.3 - 18.3	16.92			19.32
NASP-FF-MW-14S	31.47	18.25	7.5 - 17.5	11.83			19.64
NASP-FF-MW-15S	30.62	18.20	7.5 - 17.5	11.2			19.42
NASP-FF-MW-16S	31.62	18.10	7.5 - 17.5	12.64			18.98
NASP-FF-MW-17S	34.28	19.40	8.9 - 18.9	16.12			18.16
NASP-FF-MW-18S	32.29	19.55	9.0 - 19.0	13.59			18.70
NASP-FF-MW-19S	35.87	19.20	9.0 - 19.0	16.85			19.02
NASP-FF-MW-20S	36.13	19.40	9.0 - 19.0	17.16			18.97
NASP-FF-MW-21S	28.83	18.15	7.5 - 17.5	9.25			19.58
NASP-FF-MW-22S	33.01	20.35	9.85 - 19.85	14.47			18.54
NASP-FF-MW-23S	29.59	15.30	4.5 - 14.5	9.54			20.05
NASP-FF-MW-5I	31.65	39.30	34.0 - 39.0	12.14			19.51
NASP-FF-MW-14I	32.27	40.00	34.0 - 39.0	12.65			19.62
NASP-FF-MW-13D	45.01	76.83	71.33 - 76.33	28.21			16.80

NOTES: TOC (Top Of Casing) elevations surveyed 11/7-9/00 using North American Vertical Datum of 1988 (NAVD 88) datum.
Assumes Specfic Gravity of 0.7 for free product.

TABLE 3-1
GROUNDWATER ELEVATION SUMMARY UST SITE 000024
NAS PENSACOLA PENSACOLA FLORIDA

September 6 to September 26, 2000 Data - Prior to Development

Well ID	TOC Elevation (ft)	Depth of Well (ft)	Screened Interval (ft)	Depth to Water Level (ft)	Depth to Free Product (ft)	Free Product Thickness (ft)	Adj. Water Level Elevation (ft)
NASP-FF-MW-1S	40.01	24.65	14.5 - 24.5	20.28*			NA
NASP-FF-MW-2S	43.95	29.45	18.5 - 28.5	24.02	Sheen		19.93
NASP-FF-MW-3S	45.65	29.45	19.0 - 29.0	25.29*	Sheen		NA
NASP-FF-MW-4S	44.88	29.70	19.0 - 29.0	24.14*			NA
NASP-FF-MW-5S	31.86	18.60	7.5 - 17.5	11.53*			NA
NASP-FF-MW-6S	30.67	18.00	7.5 - 17.5	12.61*	Sheen		NA
NASP-FF-MW-7S	28.83	16.70	6.2 - 16.2	9.50*			NA
NASP-FF-MW-8S	31.47	18.27	7.5 - 17.5	13.77*			NA
NASP-FF-MW-9S	29.24	16.65	6.0 - 16.0	10.31*			NA
NASP-FF-MW-10R	29.85	18.50	8.0 - 18.0	11.08*			NA
NASP-FF-MW-11S	27.99	16.50	6.0 - 16.0	8.60*			NA
NASP-FF-MW-12S	33.47	19.70	9.2 - 19.2	13.47			20.00
NASP-FF-MW-13S	36.24	18.80	8.3 - 18.3	17.61*			NA
NASP-FF-MW-14S	31.47	18.25	7.5 - 17.5	13.38*			NA
NASP-FF-MW-15S	30.62	18.20	7.5 - 17.5	12.47*			NA
NASP-FF-MW-16S	31.62	18.10	7.5 - 17.5	13.95*			NA
NASP-FF-MW-17S	34.28	19.40	8.9 - 18.9	16.38*			NA
NASP-FF-MW-18S	32.29	19.55	9.0 - 19.0	16.85			15.44
NASP-FF-MW-19S	35.87	19.20	9.0 - 19.0	16.19			19.68
NASP-FF-MW-20S	36.13	19.40	9.0 - 19.0	12.65			23.48
NASP-FF-MW-21S	28.83	18.15	7.5 - 17.5	10.59*			NA
NASP-FF-MW-22S	33.01	20.35	9.85 - 19.85	13.62*			NA
NASP-FF-MW-23S	29.59	15.30	4.5 - 14.5	8.46			21.13
NASP-FF-MW-5I	31.65	39.30	34.0 - 39.0	11.02			20.63
NASP-FF-MW-14I	32.27	40.00	34.0 - 39.0	11.7			20.57
NASP-FF-MW-13D	45.01	76.83	71.33 - 76.33	18.31			26.70

NOTES: * = Measurment prior to casing cut to final TOC elevation. NA = Data not available

TOC (Top Of Casing) elevations surveyed 11/7-9/00 using North American Vertical Datum of 1988 (NAVD 88) datum.

TABLE 3-1
GROUNDWATER ELEVATION SUMMARY UST SITE 000024
NAS PENSACOLA PENSACOLA FLORIDA

July 19, 2000 Data From Previously Existing Wells

Well ID	TOC** Elevation (ft)	Depth of Well (ft)	Screened Interval (ft)	Depth to Water Level (ft)	Depth to Free Product (ft)	Free Product Thickness (ft)	Adj. Water Level Elevation (ft)
MW-25	31.21	NA	NA	26.96	26.20	0.76	4.78
OW-5	31.28	NA	NA	11.95			19.33
MW-30	33.88	NA	NA	16.31	15.15	1.16	18.38
MW-31	32.69	NA	NA	15.35			17.34
MW-13	47.30	Missing	NA	Missing			NA
MW-27	45.97	Missing	NA	Missing			NA
MW-16	37.43	NA	NA	20.56	18.92	1.64	18.02
MW-18	43.77	NA	NA	25.83	25.29	0.54	18.32
MW-11	31.10	NA	NA	12.62			18.48
MW-19	35.38	NA	NA	17.24			18.14
OW-4	30.05	10.40	NA	Dry			NA
MW-9	30.03	NA	NA	11.47			18.56
MW-24	30.75	NA	NA	12.1			18.65
MW-7	33.99	NA	NA	17.09	15.58	1.51	17.96
Unk Well/Adj-SB-39	NA	NA	NA	15.47	14.05	1.42	NA
MW-1	33.58	NA	NA	Missing			NA
MW-20	36.38	NA	NA	Missing			NA
MW-22	32.70	NA	NA	Missing			NA
MW-12	32.37	NA	NA	14.86	13.65	1.21	18.36
MW-4	31.21	NA	NA	13.87	12.48	1.39	18.31

NOTES: TOC** (Top Of Casing) elevations as previously reported. These have not been adjusted to the newly installed wells.
NA = Not available.

TABLE 3-2
POTABLE WELL INVENTORY DATA
SHERMAN FIELD FORMER FUEL FARM UST 000024 SITE ASSESSMENT REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

WELL ID/LOCAL NAME	LOCATION	TOTAL DEPTH (ft) bls	SCREENED INTERVAL (ft) bls	DIAMETER CASING/SCREEN (inches)
302116087170201/No. 1	Sec. 1, T3S, R30W Duncan and Taylor Roads	174	105-160	24/12
302124087163601/No. 2	Sec. 1, T3S, R30W Murray and Farrar Roads	178	110-160	24/12

NOTE: bls = below land surface

TABLE 4-1

SOIL OVA SCREENING RESULTS FROM DPT INVESTIGATION
UST SITE - UST000024
NAS PENSACOLA, PENSACOLA FLORIDA

SAMPLE				OVA SCREENING RESULTS			
LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (ft)	SAMPLE INTERVAL (fbls)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	COMMENTS
SB-1	7/19/2000		4-8	0	0	0	All soil borings hand-augered the first four
	7/19/2000	11	8-12	0	0	0	feet for potential utilities.
SB-2	7/19/2000		4-8	0	0	0	
	7/19/2000		9-11	3000	0	3000	
	7/19/2000	12	11-13	5000	0	5000	
SB-3	7/19/2000		0-4	0	0	0	
	7/19/2000		4-8	0	0	0	
	7/19/2000		8-12	8	0	8	
	7/19/2000	13	12-14	>5000	0	>5000	
	7/19/2000		14-16	3500	0	3500	
SB-4	7/19/2000		0-4	0	0	0	
	7/19/2000		4-8	0	0	0	
	7/19/2000	11.5	8-12	25	0	25	
	7/19/2000		12-16	25	0	25	
SB-5	7/19/2000		0-4	0	0	0	
	7/19/2000		6-10	0	0	0	
	7/19/2000	12	10-14	0	0	0	
SB-6	7/20/2000		0-4	0	0	0	
	7/20/2000		6-10	0	0	0	
	7/20/2000	12	10-14	0	0	0	
SB-7	7/20/2000		0-4	0	0	0	
	7/20/2000		6-10	0	0	0	
	7/20/2000	12	10-14	0	0	0	
SB-8	7/20/2000		0-4	0	0	0	
	7/20/2000		6-10	0	0	0	
	7/20/2000	12	10-14	0	0	0	
SB-9	7/20/2000		0-4	0	0	0	
	7/20/2000		4-8	0	0	0	
	7/20/2000		8-12	0	0	0	
	7/20/2000		12-16	0	0	0	
	7/20/2000		16-20	0	0	0	
	7/20/2000		20-24	0	0	0	
	7/20/2000	26	24-28	0	0	0	
SB-10	7/20/2000		0-4	0	0	0	
	7/20/2000		4-8	0	0	0	
	7/20/2000		8-12	0	0	0	
	7/20/2000		12-16	35	0	35	
	7/20/2000		16-20	350	0	350	
	7/20/2000		20-24	>5000	0	>5000	
	7/20/2000	26	24-27	>5000	0	>5000	

TABLE 4-1

SOIL OVA SCREENING RESULTS FROM DPT INVESTIGATION
UST SITE - UST000024
NAS PENSACOLA, PENSACOLA FLORIDA

SAMPLE				OVA SCREENING RESULTS			
LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (ft)	SAMPLE INTERVAL (fbls)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	COMMENTS
SB-11	7/21/2000		0-4	0	0	0	
	7/21/2000		4-8	>5000	250	>5000	Analytical Sample
	7/21/2000		8-12	4800	4800	0	Sewerage odor
	7/21/2000		12-16	4500	4400	100	
	7/21/2000		18-22	>5000	220	>5000	Refusal-Offset
	7/21/2000	25	22-26	>5000	0.1	>5000	
SB-12	7/21/2000		0-4	0	0	0	
	7/21/2000		4-8	240	120	120	Analytical Sample
	7/21/2000		8-12	30	0	30	
	7/21/2000		12-16	120	0	120	
	7/21/2000		16-20	600	15	585	
	7/21/2000		20-24	>5000	50	>5000	Analytical Sample
	7/21/2000	26.5	24-28	>5000	80	>5000	
SB-13	7/22/2000		0-4	0	0	0	
	7/22/2000		4-8	0	0	0	
	7/22/2000		8-12	0	0	0	
	7/22/2000		12-16	1100	600	500	Analytical Sample
	7/22/2000		14-18	900	210	690	Difficult Penetration
	7/22/2000		17-21	240	120	120	
	7/22/2000		21-24	>5000	5	>5000	
	7/22/2000	26.5	24-27.5	>5000	50	>5000	
SB-14	7/22/2000		0-4	0	0	0	
	7/22/2000		4-8	0	0	0	
	7/22/2000		8-12	0	0	0	
	7/22/2000		12-16	0	0	0	
	7/22/2000		16-20	0	15	0	
	7/22/2000		20-24	2	0	2	
	7/22/2000	27	24-28	35	0	35	Analytical Sample + TOC
SB-15	7/22/2000		0-4	0	0	0	
	7/22/2000		5-9	0	0	0	
	7/22/2000	11.5	9-13	0	0	0	Analytical Sample + TOC
SB-16	7/23/2000		0-4	0	0	0	
	7/23/2000		4-8	0	0	0	
	7/23/2000		8-12	0	0	0	
	7/23/2000		12-16	50	10	40	
	7/23/2000		16-20	>5000	0	>5000	
	7/23/2000		20-24	>5000	0	>5000	Analytical Sample 22-26
	7/23/2000	26	24-28	>5000	0	>5000	

TABLE 4-1

SOIL OVA SCREENING RESULTS FROM DPT INVESTIGATION
UST SITE - UST000024
NAS PENSACOLA, PENSACOLA FLORIDA

SAMPLE				OVA SCREENING RESULTS			
LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (ft)	SAMPLE INTERVAL (fbls)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	COMMENTS
SB-17	7/23/2000		0-4	0	0	0	
	7/23/2000		4-8	0	0	0	
	7/23/2000		8-12	1000	130	870	Analytical Sample 10-12
	7/23/2000		12-16	1000	125	875	
	7/23/2000		16-20	>5000	28	>5000	
	7/23/2000		20-24	>5000	40	>5000	
	7/23/2000	26	24-27	>5000	40	>5000	
SB-18	7/23/2000		0-4	0	0	0	
	7/23/2000		4-8	0	0	0	
	7/23/2000		8-12	0	0	0	
	7/23/2000		12-16	8	8	0	
	7/23/2000		16-20	13	0	13	
	7/23/2000		20-24	12	2	10	
	7/23/2000	26	24-28	1200	7	1193	Analytical Sample 24-27
SB-19	7/24/2000		0-4	0	0	0	
	7/24/2000		4-8	0	0	0	
	7/24/2000		8-12	0	0	0	
	7/24/2000		12-16	0	0	0	
	7/24/2000		16-20	0	0	0	
	7/24/2000		20-24	36	0	36	Analytical Sample
	7/24/2000	26	24-28	15	5	10	
SB-20	7/24/2000		0-4	0	0	0	
	7/24/2000		4-8	0	0	0	
	7/24/2000		8-12	0	0	0	
	7/24/2000	15.5	12-16	3500	0	3500	
SB-21	7/24/2000		0-4	0	0	0	
	7/24/2000		4-8	0	0	0	
	7/24/2000		8-12	0	0	0	
	7/24/2000	15.5	12-16	0	0	0	
SB-22	7/24/2000		0-4	0	0	0	
	7/24/2000		4-8	0	0	0	
	7/24/2000		8-12	0	0	0	
	7/24/2000	15	12-16	0	0	0	
SB-23	7/24/2000		0-4	0	0	0	
	7/24/2000		4-8	0	0	0	
	7/24/2000		8-12	0	0	0	
	7/24/2000	15	12-16	0	0	0	
SB-24	7/24/2000		0-4	0	0	0	
	7/24/2000		4-8	0	0	0	
	7/24/2000	11.5	8-12	>5000	0	>5000	
	7/24/2000		12-16	>5000	0	>5000	

TABLE 4-1

SOIL OVA SCREENING RESULTS FROM DPT INVESTIGATION
UST SITE - UST000024
NAS PENSACOLA, PENSACOLA FLORIDA

SAMPLE				OVA SCREENING RESULTS			
LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (ft)	SAMPLE INTERVAL (fbls)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	COMMENTS
SB-25	7/24/2000		0-4	0	0	0	
	7/24/2000		4-8	20	0	20	
	7/24/2000		8-12	0	0	0	
	7/24/2000	15	12-16	>5000	0	>5000	
SB-26	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	0	0	0	
	7/25/2000	11.5	8-12	100	0	100	
SB-27	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	310	0	310	Analytical Sample
	7/25/2000	11.5	8-12	>5000	10	>5000	
SB-28	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	1300	0	1300	Analytical Sample 7-11
	7/25/2000	11.0	8-12	>5000	5	>5000	
SB-29	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	0	0	0	
	7/25/2000	11.5	8-12	12	6	6	
SB-30	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	0	0	0	
	7/25/2000	11.0	8-12	>5000	0	>5000	
SB-31	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	0	0	0	
	7/25/2000	12	8-12	4200	0	4200	
SB-32	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	0	0	0	
	7/25/2000	12	8-12	3000	0	3000	
SB-33	7/25/2000		0-4	0	0	0	
	7/25/2000		4-8	0	0	0	
	7/25/2000	11.5	8-12	0	0	0	
SB-34	7/26/2000		0-4	0	0	0	
	7/26/2000		4-8	0	0	0	
	7/26/2000	10.5	8-12	0	0	0	
SB-35	7/26/2000		0-4	0	0	0	
	7/26/2000		4-8	0	0	0	
	7/26/2000		8-12	0	0	0	
	7/26/2000		12-16	0	0	0	
	7/26/2000	19	16-20	12	0	12	
SB-36	7/26/2000		0-4	0	0	0	
	7/26/2000		4-8	0	0	0	
	7/26/2000		8-12	0	0	0	
	7/26/2000	13	12-13	0	0	0	

TABLE 4-1

SOIL OVA SCREENING RESULTS FROM DPT INVESTIGATION
UST SITE - UST000024
NAS PENSACOLA, PENSACOLA FLORIDA

SAMPLE				OVA SCREENING RESULTS			
LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (ft)	SAMPLE INTERVAL (fbls)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	COMMENTS
SB-37	7/26/2000		0-4	0	0	0	
	7/26/2000		4-8	170	10	160	
	7/26/2000		8-12	215	135	80	NE=Groundwater not encountered.
	7/26/2000		12-16	1800	310	1490	Difficulty retreiving sampler
	7/26/2000	NE	16-20	1350	365	985	Terminated above water table
SB-38	7/26/2000		7-8	13	0	13	Hand Auger inside fence.
	7/26/2000	10.5	9-10	4100	0	4100	
SB-39	7/26/2000		0-4	0	0	0	
	7/26/2000		7-8	100	0	100	Hand Auger inside fence.
	7/26/2000		9-10	2000	0	2000	
	7/26/2000	11.5	11-12	>5000	0	>5000	
SB-40	7/26/2000		0-4	0	0	0	
	7/26/2000		7-8	1400	0	1400	Hand Auger inside fence.
	7/26/2000	11.5	10.5-11.5	>5000	0	>5000	
SB-41	7/26/2000		0-4	0	0	0	Hand Auger inside fence.
	7/26/2000		7-8	180	0	180	
	7/26/2000		9-10	4400	0	4400	
	7/26/2000	10.5	10.5-11.5	4400	0	4400	

Notes: fbls = feet below land surface
ppm = parts per million
NS = not sampled
Shade = headspace sample collected at water table.

Table 4-2
ANALYTICAL RESULTS FOR SUBSURFACE SOIL SAMPLES - UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA
PAGE 1 OF 3

Sample No.		NASPFFSB-11	NASPFFSB-12	NASPFFSB-12	NASPFFSB-13	NASPFFSB-14
Sample Location		Soil boring 11	Soil boring 12	Soil boring 12	Soil boring 13	Soil boring 14
Collect Date		8/3/2000	8/2/2000	8/2/2000	8/3/2000	8/3/2000
Sample Depth (bls)		4-8'	6-8'	20-24'	14-16'	24-27'
	DE1[1]/DE2[2]/LE[3] (mg/kg)					
Volatile[4] (mg/kg)						
Benzene	1.1/1.6/0.007	--	**0.0106**	**0.0115**	**0.0018**[J]	--
Ethylbenzene	1100/8400/0.6	**5.05**	0.0087	0.0146	0.0177	--
Total Xylenes	5900/40000/0.2	**12.3**	--	0.0119[J]	0.0144[J]	--
Polycyclic Aromatic Hydrocarbons[5] (mg/kg)						
1-Methylnaphthalene	68/470/2.2	**8.65**	--	--	--	--
2-Methylnaphthalene	80/560/6.1	**9.28**	--	--	--	--
Naphthalene	40/270/1.7	**2.85**	--	--	--	--
Total Petroleum Hydrocarbons[6] (mg/kg)	340/2500/340	**2,530**	9.79	10.4	14.7	--

[1] DE1= Direct Exposure limit for residential area from Chapter 62-777, F.A.C.
[2] DE2= Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.
[3] LE= Leachability for groundwater limit from Chapter 62-777, F.A.C.
[4] SW-846 8260B, [5] SW-846 8310, [6] FL-PRO
[J] Indicates the presence of a chemical at an estimated concentration.
Bold indicates an exceedance of regulatory limits.

Table 4-2
ANALYTICAL RESULTS FOR SUBSURFACE SOIL SAMPLES - UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.		NASPFFDUP-1	NASPFFSB-15	NASPFFSB-16	NASPFFSB-17	NASPFFSB-18
Sample Location		Soil boring 14 duplicate	Soil boring 15	Soil boring 16	Soil boring 17	Soil boring 18
Collect Date		8/3/2000	8/3/2000	8/3/2000	8/2/2000	8/2/2000
Sample Depth (bls)			8-12'	22-26'	10-12'	24-27'
	DE1[1]/DE2[2]/LE[3] (mg/kg)					
Volatile[4] (mg/kg)						
Benzene	1.1/1.6/0.007	--	--	**0.113[J]**	--	--
Ethylbenzene	1100/8400/0.6	--	--	**6.7**	--	--
Total Xylenes	5900/40000/0.2	--	--	**13.3**	--	--
Polycyclic Aromatic Hydrocarbons[5] (mg/kg)						
1-Methylnaphthalene	68/470/2.2	--	--	**2.32**	--	--
2-Methylnaphthalene	80/560/6.1	--	--	**2.7**	--	--
Naphthalene	40/270/1.7	--	--	0.566	--	--
Total Petroleum Hydrocarbons[6] (mg/kg)	340/2500/340	--	--	**810**	--	--

[1] DE1= Direct Exposure limit for residential area from Chapter 62-777, F.A.C.
[2] DE2= Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.
[3] LE= Leachability for groundwater limit from Chapter 62-777, F.A.C.
[4] SW-846 8260B, [5] SW-846 8310, [6] FL-PRO
[J] Indicates the presence of a chemical at an estimated concentration.
Bold indicates an exceedance of regulatory limits.

Table 4-2
ANALYTICAL RESULTS FOR SUBSURFACE SOIL SAMPLES - UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.		NASPFFSB-19	NASPFFSB-27	NASPFFSB-28
Sample Location		Soil boring 19	Soil boring 27	Soil boring 28
Collect Date		8/2/2000	8/2/2000	8/2/2000
Sample Depth (bls)		20-24'	6-8'	7-11'
	DE1[1]/DE2[2]/LE[3] (mg/kg)			
Volatile[4] (mg/kg)				
Benzene	1.1/1.6/0.007	--	--	--
Ethylbenzene	1100/8400/0.6	--	--	**3.41**
Total Xylenes	5900/40000/0.2	--	--	**30.5**
Polycyclic Aromatic Hydrocarbons[5] (mg/kg)				
1-Methylnaphthalene	68/470/2.2	--	--	**3.27**
2-Methylnaphthalene	80/560/6.1	--	--	4.05
Naphthalene	40/270/1.7	--	--	1.38
Total Petroleum Hydrocarbons[6] (mg/kg)	340/2500/340	9.97	--	**2,130**

[1] DE1= Direct Exposure limit for residential area from Chapter 62-777, F.A.C.
[2] DE2= Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.
[3] LE= Leachability for groundwater limit from Chapter 62-777, F.A.C.
[4] SW-846 8260B, [5] SW-846 8310, [6] FL-PRO
[J] Indicates the presence of a chemical at an estimated concentration.
Bold indicates an exceedance of regulatory limits.

Table 4-3
ANALYTICAL RESULTS FOR INORGANIC ANALYTES IN SUBSURFACE SOIL SAMPLES - UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.	NASPFFSB-12	NASPFFSB-14	NASPFFSB-15	NASPFFSB-16
Sample Location	Soil boring 12	Soil boring 14	Soil boring 15	Soil boring 16
Collect Date	8/2/2000	8/3/2000	8/3/2000	8/3/2000
Sample Depth (bls)	20-24'	24-27'	8-12'	22-26'
DE1[1]/DE2[2]/LE[3] (mg/kg)				
Metals[4] (mg/kg)				
Barium	5.7	NA	NA	--
Chromium	4.3	NA	NA	--
Lead	1.1	NA	NA	--
Mercury	0.05	NA	NA	0.01
Selenium	0.29	NA	NA	--
Silver	0.15	NA	NA	--
Miscellaneous (mg/kg)				
Total Organic Carbon	NA	--	--	NA
Total Organic Halides	NA	--	--	NA

[1] DE1= Direct Exposure limit for residential area from Chapter 62-777, F.A.C.
[2] DE2= Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.
[3] LE= Leachability for groundwater limit from Chapter 62-777, F.A.C.

[J] Indicates the presence of a chemical at an estimated concentration.

TABLE 4-4
SUMMARY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.		NASPFF MW-1S	NASPFF MW-2S	NASPFF MW-3S	NASPFF MW-4S	NASPFF MW-5I
Sample Location		MW-1	MW-2	MW-3	MW-4	MW-5
Collect Date		11/7/2000	11/7/2000	11/9/2000	11/9/2000	11/7/2000
	Groundwater Clean-up Criteria [1] (ug/L)					
Volatile [2] (ug/L)						
1,1-Dichloroethane	70	--	--	--	--	--
1,2-Dichloroethane	3	17[J]	--	--	--	--
1,2-Dichloropropane	5	--	3.6[J]	--	--	--
Benzene	1	**530**	**55**	**280**	--	--
Chloroform	5.7	--	--	--	0.63[J]	--
Chloromethane	2.7	--	--	--	--	--
Ethylbenzene	30	**1,300**	**1,100**	**1,700**	1.2	--
Methyl tert-Butyl Ether	50	--	--	--	--	--
Methylene Chloride	5	--	--	--	--	--
Toluene	40	--	10	16[J]	--	--
Xylenes, total	20	**430**	**3,100**	**4,100**	0.88[J]	--
Polycyclic Aromatic Hydrocarbons [3] (ug/L)						
1-Methylnaphthalene	20	**54**	**50**	**64**	--	--
2-Methylnaphthalene	20	**68**	**63**	**79**	--	--
Acenaphthene	20	0.8[J]	2.2	0.59[J]	--	--
Anthracene	2,100	--	--	--	--	--
Benzo(g,h,i)perylene	210	--	--	--	--	--
Dibenzo(a,h)anthracene	0.2	--	--	--	--	--
Fluoranthene	280	--	--	--	--	--
Fluorene	280	1.1	2	1.4	--	--
Indeno(1,2,3-c,d)pyrene	0.2	--	--	--	--	--
Naphthalene	20	**130**	**110**	**200**	--	--
Phenanthrene	210	0.78[J]	2	--	--	--
Pyrene	210	--	--	--	--	--
Total Petroleum Hydrocarbons [4] (ug/L)	5,000	**5,600[J]**	**7,900[J]**	**28,000**	--	--
Dissolved Gases [5] (ug/L)						
Methane	NA	6,300	2,500	2,100	210	NA
Oxygen*	NA	290	710	<200	2,600	270
Metals [6] (ug/L)						
Lead	15	--	--	--	--	--
Ferrous Iron*	NA	6,100	5,600	6200	800	NA
Inorganic Parameters [7] (ug/L)						
Nitrate	10,000	90	10	--	860	NA
Nitrite	1,000	--	--	80	20	NA
Sulfate	250,000	--	1,000	--	5,000	NA

[1] Groundwater Clean-up Criteria as provided in Chapter 62-777,F.A.C.
[2] SW-846 8021B and EPA 504.1, [3] SW-846 8310, [4] FDEP FL-PRO, [5] RSK-175M, [6] SW-846 6010B, [7] EPA 300/376.1
[J] indicates the presence of a chemical at an estimated concentration.

* = Field Measurement -- = not detected NA = not applicable
Bold indicates an exceedance of limits.

TABLE 4-4
SUMMARY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.		NASPFF MW-5S	NASPFF MW-7S	NASPFF MW-8S	NASPFF MW-9S	NASPFF MW-10R
Sample Location		MW-5	MW-7	MW-8	MW-9	MW-10
Collect Date		11/6/2000	11/6/2000	11/6/2000	11/15/2000	11/6/2000
	Groundwater Clean-up Criteria [1] (ug/L)					
Volatile [2] (ug/L)						
1,1-Dichloroethane	70	--	--	--	--	--
1,2-Dichloroethane	3	--	--	--	--	--
1,2-Dichloropropane	5	--	--	--	--	--
Benzene	1	--	--	**39**	--	--
Chloroform	5.7	2.9	1.8	--	0.81[J]	0.65[J]
Chloromethane	2.7	--	--	--	0.56[J]	--
Ethylbenzene	30	--	--	**100**	--	--
Methyl tert-Butyl Ether	50	--	--	--	--	--
Methylene Chloride	5	--	--	--	0.58[J]	--
Toluene	40	--	--	--	--	--
Xylenes, total	20	0.78[J]	--	**520**	--	--
Polycyclic Aromatic Hydrocarbons [3] (ug/L)						
1-Methylnaphthalene	20	**30[J]**	--	16	--	--
2-Methylnaphthalene	20	**48[J]**	--	**21**	--	--
Acenaphthene	20	--	--	--	--	--
Anthracene	2,100	--	--	--	--	--
Benzo(g,h,i)perylene	210	--	--	--	--	--
Dibenzo(a,h)anthracene	0.2	--	--	--	--	--
Fluoranthene	280	--	--	--	--	--
luorene	280	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.2	--	--	--	--	--
Naphthalene	20	**110[J]**	--	**30**	--	--
Phenanthrene	210	--	--	--	--	--
Pyrene	210	--	--	--	--	--
Total Petroleum Hydrocarbons [4] (ug/L)	5,000	--	--	4,600	--	--
Dissolved Gases [5] (ug/L)						
Methane	NA	NA	NA	NA	--	NA
Oxygen*	NA	3,800	2,450	300	3,700	3,220
Metals [6] (ug/L)						
Lead	15	--	--	--	--	7.2[J]
Ferrous Iron*	NA	NA	NA	NA	<200	NA
Inorganic Parameters [7] (ug/L)						
Nitrate	10,000	NA	NA	NA	330	NA
Nitrite	1,000	NA	NA	NA	--	NA
Sulfate	250,000	NA	NA	NA	7,000	NA

[1] Groundwater Clean-up Criteria as provided in Chapter 62-777,F.A.C.
[2] SW-846 8021B and EPA 504.1, [3] SW-846 8310, [4] FDEP FL-PRO, [5] RSK-175M, [6] SW-846 6010B, [7] EPA 300/376.1
[J] indicates the presence of a chemical at an estimated concentration.

* = Field Measurement -- = not detected NA = not applicable
Bold indicates an exceedance of limits.

TABLE 4-4
SUMMARY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.		NASPFF MW-11S	NASPFF MW-12S	NASPFFDUP-3	NASPFF MW-13D	NASPFF MW-13S
Sample Location		MW-11	MW-12	Duplicate of MW-12	MW-13	MW-13
Collect Date		11/15/2000	11/16/2000	11/16/2000	11/9/2000	11/7/2000
	Groundwater Clean-up Criteria [1] (ug/L)					
Volatile [2] (ug/L)						
1,1-Dichloroethane	70	--		--	2	--
1,2-Dichloroethane	3	--		--	--	--
1,2-Dichloropropane	5	--		--	--	--
Benzene	1	--	**590**	**560**	0.89[J]	--
Chloroform	5.7	--		--	--	2.2
Chloromethane	2.7	--		--	--	--
Ethylbenzene	30	--	**550**	**550**	--	--
Methyl tert-Butyl Ether	50	--		--	5.1[J]	--
Methylene Chloride	5	0.81[J]		--	--	--
Toluene	40	--	11	11	--	--
Xylenes, total	20	--	**320**	**320**	--	--
Polycyclic Aromatic Hydrocarbons [3] (ug/L)						
1-Methylnaphthalene	20	--	**52**	**53**	--	--
2-Methylnaphthalene	20	--	**65**	**67**	--	--
Acenaphthene	20	--	1.4	1.2	--	--
Anthracene	2,100	--	0.64[J]	0.59[J]		
Benzo(g,h,i)perylene	210	--	--	--	--	--
Dibenzo(a,h)anthracene	0.2	--	--	--	--	--
Fluoranthene	280	--	1.7	1.7		
Fluorene	280	--	1.5	1.3	--	--
Indeno(1,2,3-c,d)pyrene	0.2	--	--	--	--	--
Naphthalene	20	--	**130**	**130**	--	--
Phenanthrene	210	--	2.6	2.5	--	--
Pyrene	210	--	0.97[J]	0.94[J]	--	--
Total Petroleum Hydrocarbons [4] (ug/L)	5,000	--	4,000	3,800	--	--
Dissolved Gases [5] (ug/L)						
Methane	NA	41	4,400	4,800	NA	NA
Oxygen*	NA	3,200	<200	NA	1,030	1,180
Metals [6] (ug/L)						
Lead	15	--	--	--	--	--
Ferrous Iron*	NA	2,800	6,200	NA	NA	NA
Inorganic Parameters [7] (ug/L)						
Nitrate	10,000	220	450	430	NA	NA
Nitrite	1,000	--	20[J]	10[J]	NA	NA
Sulfate	250,000	8,000	6,000	6,000	NA	NA

[1] Groundwater Clean-up Criteria as provided in Chapter 62-777,F.A.C.
[2] SW-846 8021B and EPA 504.1, [3] SW-846 8310, [4] FDEP FL-PRO, [5] RSK-175M, [6] SW-846 6010B, [7] EPA 300/376.1
[J] indicates the presence of a chemical at an estimated concentration.

* = Field Measurement -- = not detected NA = not applicable
Bold indicates an exceedance of limits.

TABLE 4-4
SUMMARY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.		NASPFF MW-14I	NASPFF MW-14S	NASPFF MW-15S	NASPFF DUP-2	NASPFF MW-16S
Sample Location		MW-14	MW-14	MW-15	Duplicate of MW-15	MW-16
Collect Date		11/16/2000	11/16/2000	11/7/2000	11/7/2000	11/8/2000
	Groundwater Clean-up Criteria [1] (ug/L)					
Volatile [2] (ug/L)						
1,1-Dichloroethane	70	--	--	--	--	--
1,2-Dichloroethane	3	--	--	--	--	--
1,2-Dichloropropane	5	--	--	--	--	--
Benzene	1	--	--	--	--	**32**
Chloroform	5.7	0.78[J]	**6.6**	--	--	--
Chloromethane	2.7	--	--	--	--	--
Ethylbenzene	30	--	--	--	--	**330**
Methyl tert-Butyl Ether	50	--	--	--	--	--
Methylene Chloride	5	--	--	--	--	**13[J]**
Toluene	40	--	--	--	--	17
Xylenes, total	20	--	--	--	--	**2,300**
Polycyclic Aromatic Hydrocarbons [3] (ug/L)						
1-Methylnaphthalene	20	--	--	--	--	**29**
2-Methylnaphthalene	20	--	--	--	--	**37**
Acenaphthene	20	--	--	--	--	0.44[J]
Anthracene	2,100	--	--	--	--	--
Benzo(g,h,i)perylene	210	--	--	--	--	0.44[J]
Dibenzo(a,h)anthracene	0.2	--	--	--	--	**0.27[J]**
Fluoranthene	280	--	--	--	--	--
Fluorene	280	--	--	--	--	0.42[J]
Indeno(1,2,3-c,d)pyrene	0.2	--	--	--	--	**0.28[J]**
Naphthalene	20	--	--	--	--	**75**
Phenanthrene	210	--	--	--	--	--
Pyrene	210	--	--	--	--	--
Total Petroleum Hydrocarbons [4] (ug/L)	5,000	--	--	--	--	**9,600**
Dissolved Gases [5] (ug/L)						
Methane	NA	NA	--	NA	NA	2,900
Oxygen*	NA	1,640	7,000	3,130	NA	<200
Metals [6] (ug/L)						
Lead	15	--	--	--	--	11
Ferrous Iron*	NA	NA	<200	NA	NA	600
Inorganic Parameters [7] (ug/L)						
Nitrate	10,000	NA	380	NA	NA	40
Nitrite	1,000	NA	--	NA	NA	--
Sulfate	250,000	NA	9,000	NA	NA	4,000

[1] Groundwater Clean-up Criteria as provided in Chapter 62-777,F.A.C.
[2] SW-846 8021B and EPA 504.1, [3] SW-846 8310, [4] FDEP FL-PRO, [5] RSK-175M, [6] SW-846 6010B, [7] EPA 300/376.1
[J] indicates the presence of a chemical at an estimated concentration.

* = Field Measurement -- = not detected NA = not applicable
Bold indicates an exceedance of limits.

TABLE 4-4
SUMMARY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

Sample No.		NASPFF MW-17S	NASPFF MW-18S	NASPFF MW-19S	NASPFF MW-20S	NASPFF MW-21S
Sample Location		MW-17	MW-18	MW-19	MW-20	MW-21
Collect Date		11/6/2000	11/5/2000	11/5/2000	11/5/2000	11/15/2000
	Groundwater Clean-up Criteria [1] (ug/L)					
Volatile [2] (ug/L)						
1,1-Dichloroethane	70	--	--	--	--	--
1,2-Dichloroethane	3	--	--	--	--	--
1,2-Dichloropropane	5	--	--	--	--	--
Benzene	1	--	--	--	--	--
Chloroform	5.7	2.4	--	0.93[J]	--	--
Chloromethane	2.7	--	--	--	--	--
Ethylbenzene	30	--	3.1	--	--	--
Methyl tert-Butyl Ether	50	--	--	--	--	--
Methylene Chloride	5	--	--	--	--	0.68[J]
Toluene	40	--	0.54[J]	--	1.6	--
Xylenes, total	20	1.7[J]	7.7	--	--	--
Polycyclic Aromatic Hydrocarbons [3] (ug/L)						
1-Methylnaphthalene	20	--	4.5	--	--	--
2-Methylnaphthalene	20	--	3.3	--	--	--
Acenaphthene	20	--	--	--	--	--
Anthracene	2,100	--	--	--	--	--
Benzo(g,h,i)perylene	210	--	--	--	--	--
Dibenzo(a,h)anthracene	0.2	--	--	--	--	--
Fluoranthene	280	--	--	--	--	--
Fluorene	280	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.2	--	--	--	--	--
Naphthalene	20	--	5.7	--	--	--
Phenanthrene	210	--	--	--	--	--
Pyrene	210	--	--	--	--	--
Total Petroleum Hydrocarbons [4] (ug/L)	5,000	--	--	--	--	--
Dissolved Gases [5] (ug/L)						
Methane	NA	NA	NA	NA	NA	--
Oxygen*	NA	2,760	4,840	5,440	4,370	4,400
Metals [6] (ug/L)						
Lead	15	4.7[J]	--	--	--	--
Ferrous Iron*	NA	NA	NA	NA	NA	<200
Inorganic Parameters [7] (ug/L)						
Nitrate	10,000	NA	NA	NA	NA	1,880
Nitrite	1,000	NA	NA	NA	NA	--
Sulfate	250,000	NA	NA	NA	NA	11,000

[1] Groundwater Clean-up Criteria as provided in Chapter 62-777,F.A.C.
[2] SW-846 8021B and EPA 504.1, [3] SW-846 8310, [4] FDEP FL-PRO, [5] RSK-175M, [6] SW-846 6010B, [7] EPA 300/376.1
[J] indicates the presence of a chemical at an estimated concentration.

* = Field Measurement -- = not detected NA = not applicable
Bold indicates an exceedance of limits.

TABLE 4-4
SUMMARY ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES UST SITE 000024
NAS PENSACOLA, PENSACOLA FLORIDA

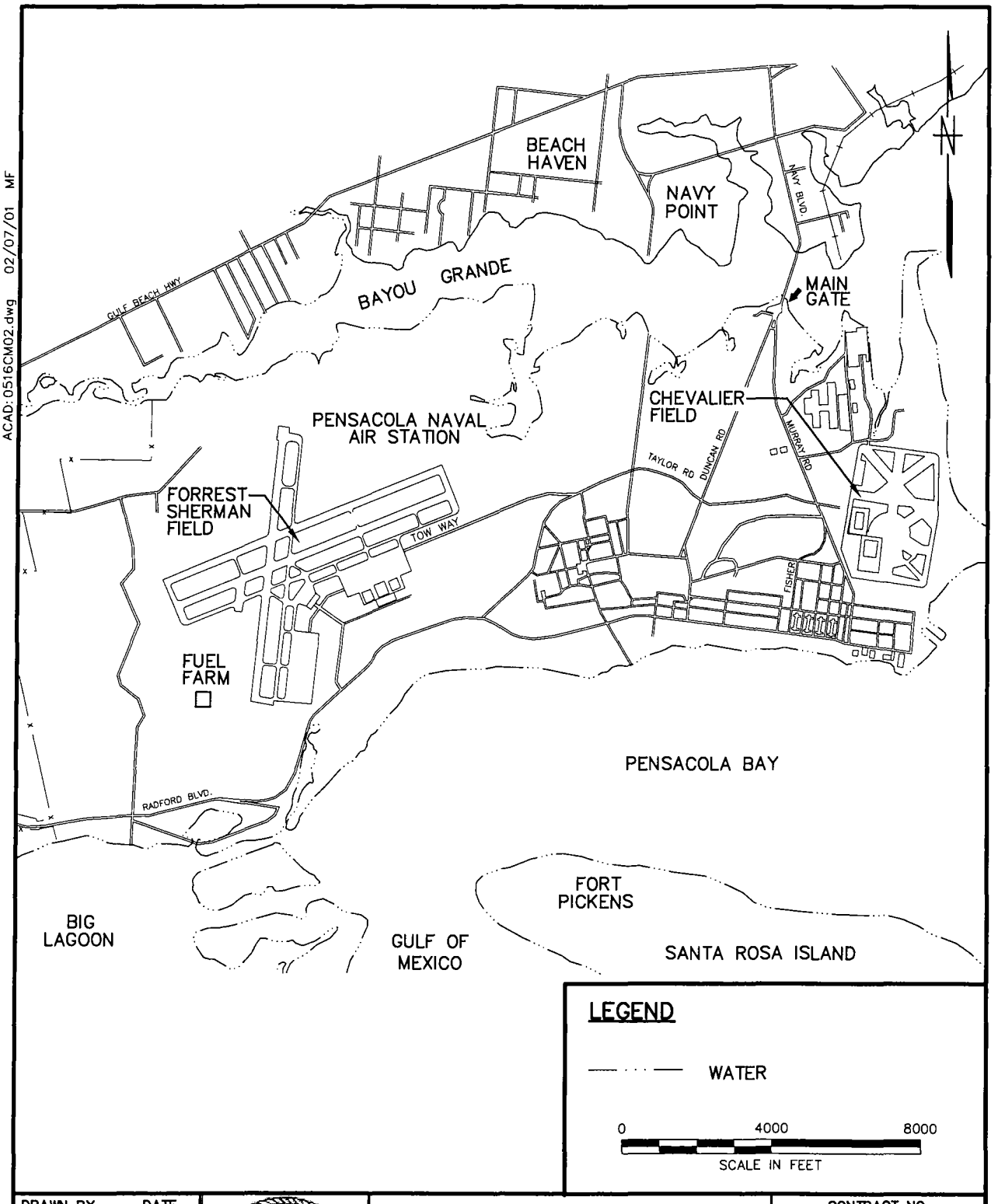
Sample No.		NASPFF MW-22S	NASPFF MW DUP-1	NASPFF MW-23S	NASPFF EQB-1	NASPFF EQB-2
Sample Location		MW-22	Duplicate of MW-22	MW-23		
Collect Date		11/6/2000	11/6/2000	11/6/2000	11/7/2000	
	Groundwater Clean-up Criteria [1] (ug/L)					
Volatile [2] (ug/L)						
1,1-Dichloroethane	70	--	--	--	--	--
1,2-Dichloroethane	3	**3.8**	--	--	--	--
1,2-Dichloropropane	5	--	--	--	--	--
Benzene	1	**110**	**120**	--	--	--
Chloroform	5.7	--	--	0.74[J]	--	--
Chloromethane	2.7	0.65[J]	0.64[J]	--	--	--
Ethylbenzene	30	**420**	**450**	--	--	--
Methyl tert-Butyl Ether	50	--	--	--	--	--
Methylene Chloride	5	--	--	--	--	--
Toluene	40	2.8	2.8	--	--	--
Xylenes, total	20	**2,900**	**3,100**	--	--	--
Polycyclic Aromatic Hydrocarbons [3] (ug/L)						
1-Methylnaphthalene	20	--	**37**	--	--	--
2-Methylnaphthalene	20	--	**45**	--	--	--
Acenaphthene	20	--	--	--	--	--
Anthracene	2,100	--	--	--	--	--
Benzo(g,h,i)perylene	210	--	--	--	--	--
Dibenzo(a,h)anthracene	0.2	--	--	--	--	--
Fluoranthene	280	--	--	--	--	--
luorene	280	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.2	--	--	--	--	--
Naphthalene	20	--	**120**	--	--	--
Phenanthrene	210	--	--	--	--	--
Pyrene	210	--	--	--	--	--
Total Petroleum Hydrocarbons [4] (ug/L)	5,000	**23,000**	**22,000**	--	--	--
Dissolved Gases [5] (ug/L)						
Methane	NA	NA	NA	NA	NA	NA
Oxygen*	NA	300	NA	5,670	NA	NA
Metals [6] (ug/L)						
Lead	15	6.7[J]	6.4[J]	--	--	--
Ferrous Iron*	NA	NA	NA	NA	NA	NA
Inorganic Parameters [7] (ug/L)						
Nitrate	10,000	NA	NA	NA	NA	NA
Nitrite	1,000	NA	NA	NA	NA	NA
Sulfate	250,000	NA	NA	NA	NA	NA

[1] Groundwater Clean-up Criteria as provided in Chapter 62-777,F.A.C.
[2] SW-846 8021B and EPA 504.1, [3] SW-846 8310, [4] FDEP FL-PRO, [5] RSK-175M, [6] SW-846 6010B, [7] EPA 300/376.1
[J] indicates the presence of a chemical at an estimated concentration.

* = Field Measurement -- = not detected NA = not applicable
Bold indicates an exceedance of limits.

FIGURES

ACAD: 0516CM02.dwg 02/07/01 MF



LEGEND

WATER

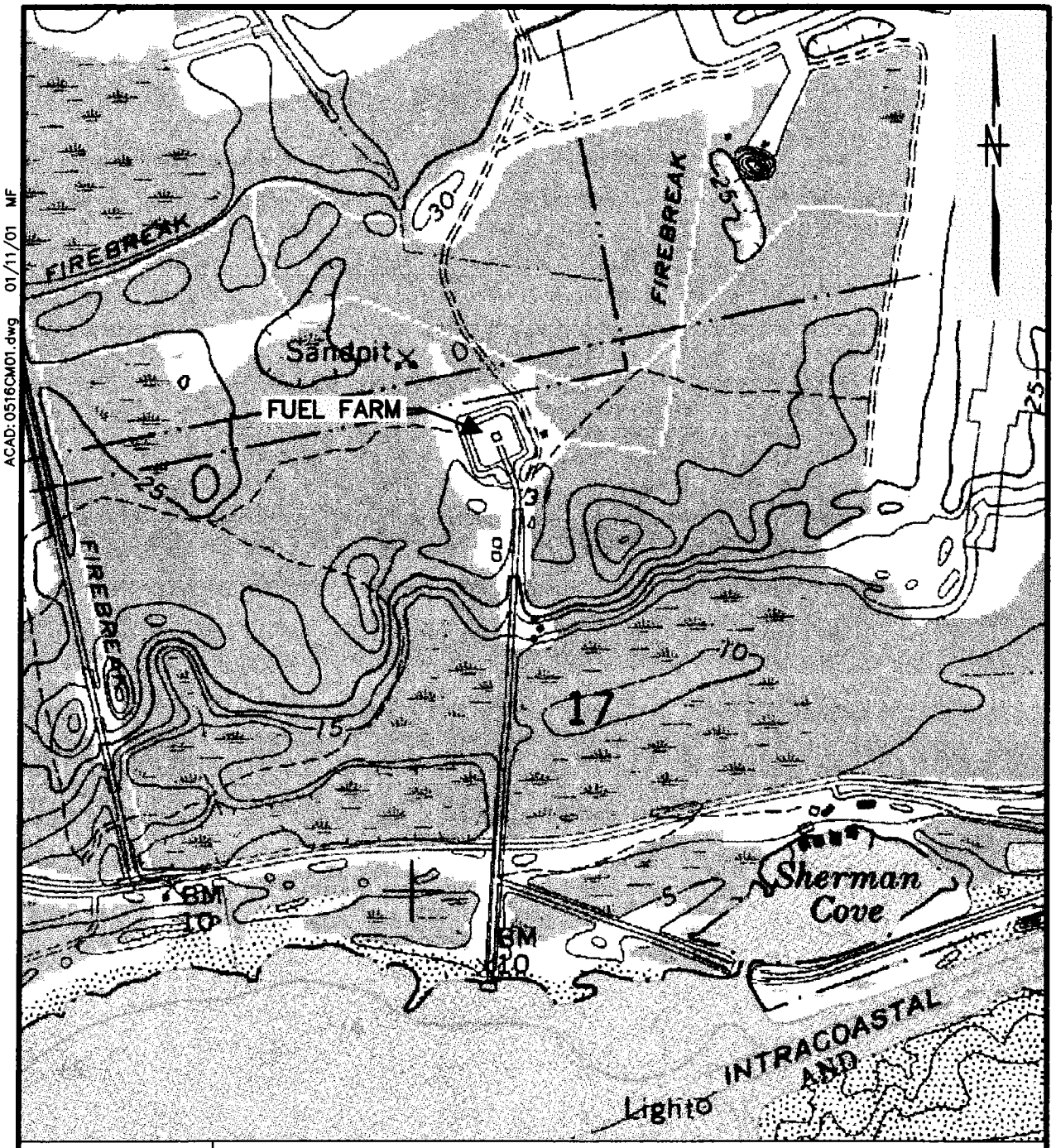
0 4000 8000

SCALE IN FEET

DRAWN BY MF DATE 1/11/01	DEPARTMENT OF THE NAVY SOUTHERN DIV FACILITIES ENGINEERING COMD	REGIONAL MAP SHERMAN FIELD FUEL FARM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO. 0516
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-1 / REV. 0

FORM CADD NO. SDIV_AV.DWG – REV 0 – 1/20/98

ACAD:0516CM01.dwg 01/11/01 MF



QUADRANGLE LOCATION

SOURCE: USGS QUADRANGLE MAP, FORT BARRANCAS, FLA. 1970. PHOTOREVISED 1987. MINOR REVISION 1992.

0 2000 4000
SCALE IN FEET

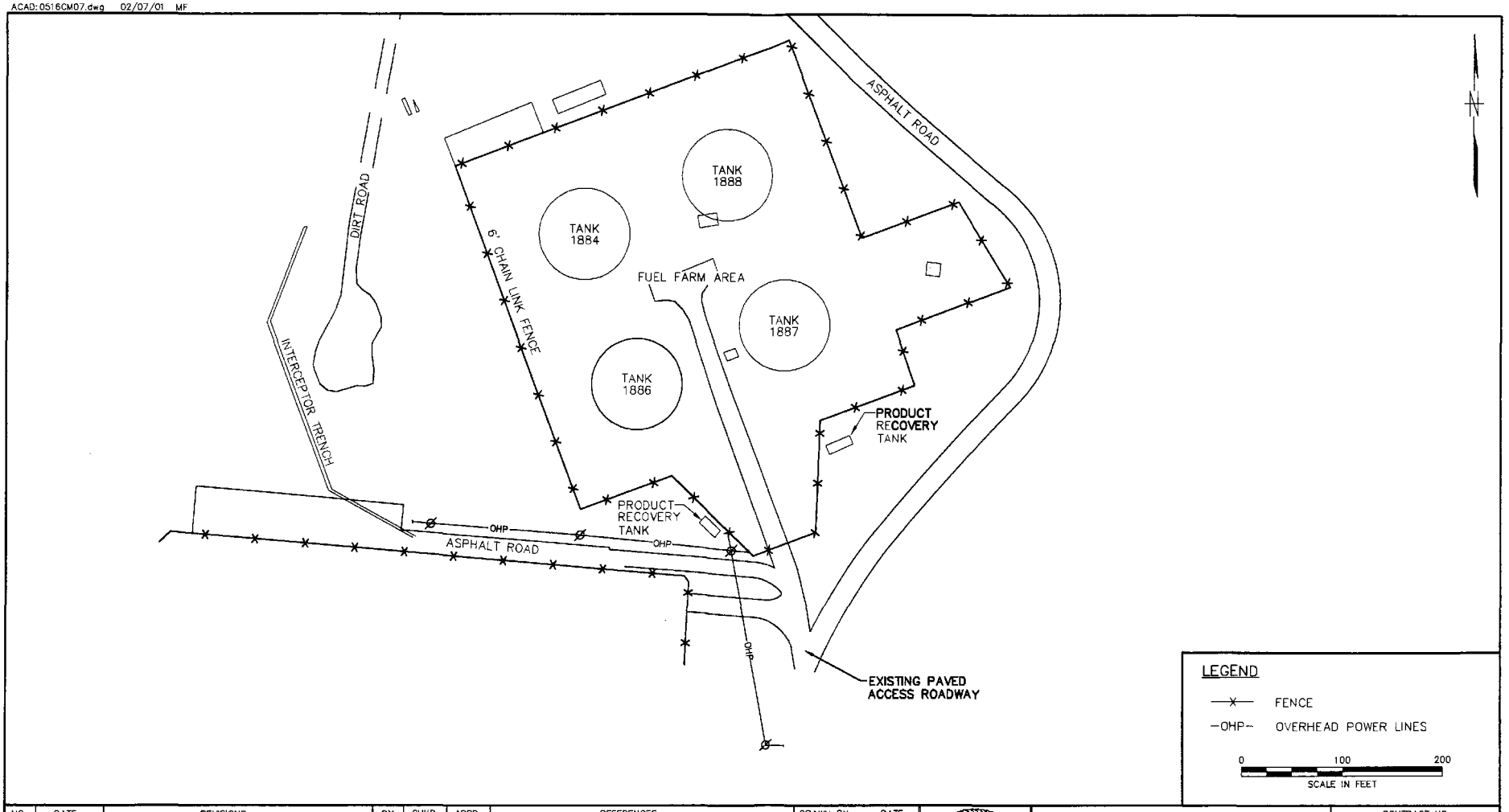
DRAWN BY MF DATE 1/11/91			CONTRACT NO. 0516
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-2 / REV. 0

DEPARTMENT OF THE NAVY ★ SOUTHERN DIV FACILITIES ENGINEERING COMD

TOPOGRAPHICAL MAP
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

FORM CADD NO. SDIV_AV.DWG - REV 0 - 1/20/98

ACAD:0516CM07.dwg 02/07/01 MF



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

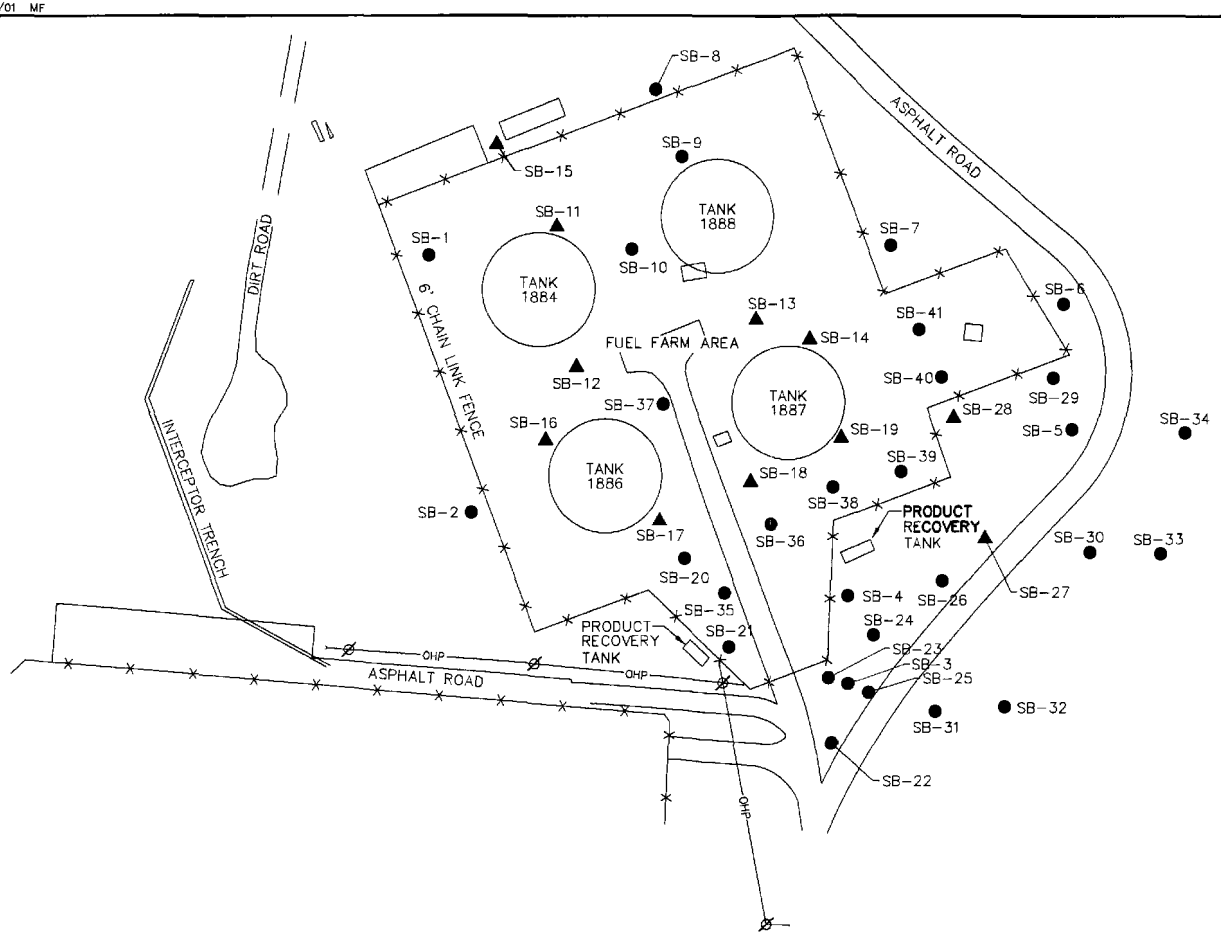
DRAWN BY MF DATE 1/11/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SITE PLAN
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 1-3
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

ACAD: 0516CM05.dwg 02/07/01 MF



LEGEND

● SB-32	SOIL BORING
▲ SB-27	SOIL BORING WITH ANALYTICAL SAMPLE
—×—	FENCE
—OHP—	OVERHEAD POWER LINES

0 100 200
SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

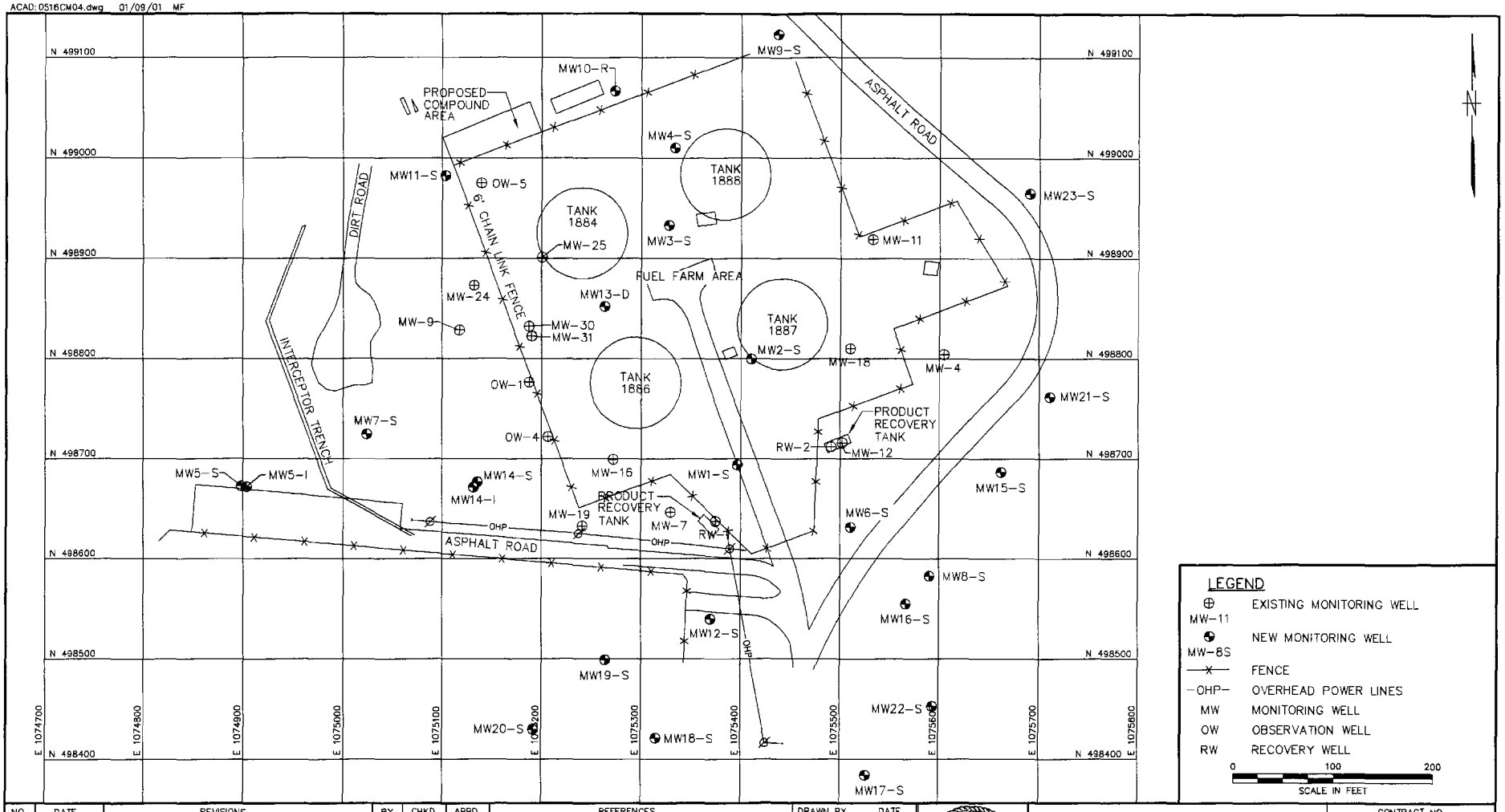
DRAWN BY MF DATE 1/9/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SOIL SAMPLING AND DPT BOREHOLE LOCATIONS
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2-1
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

ACAD: 0516CM04.dwg 01/09/01 MF



LEGEND

⊕ MW-11	EXISTING MONITORING WELL
◕ MW-8S	NEW MONITORING WELL
—×—	FENCE
—OHP—	OVERHEAD POWER LINES
MW	MONITORING WELL
OW	OBSERVATION WELL
RW	RECOVERY WELL

0 100 200
SCALE IN FEET

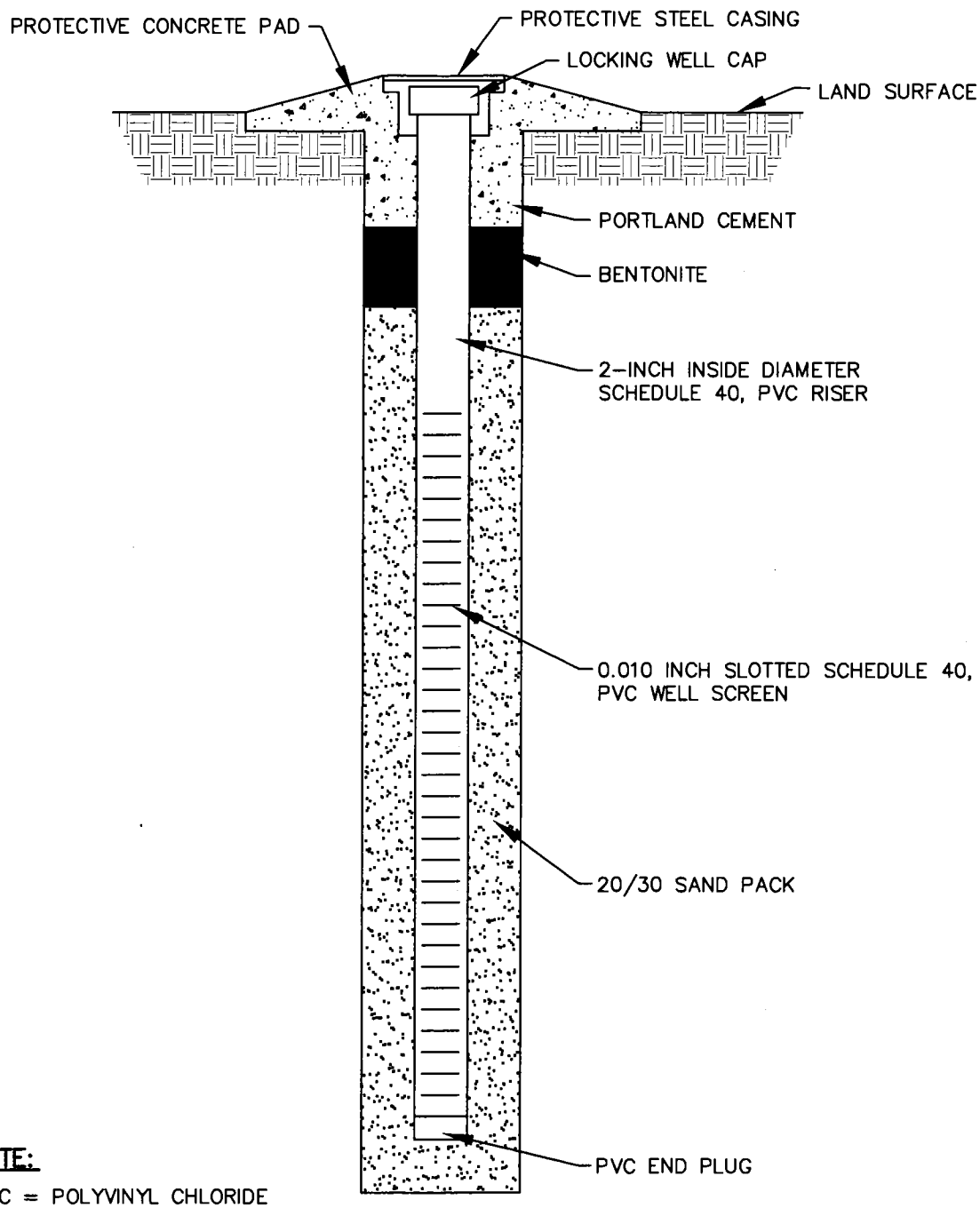
NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY MF DATE 1/9/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

MONITORING WELL LOCATION MAP
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2-2
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98



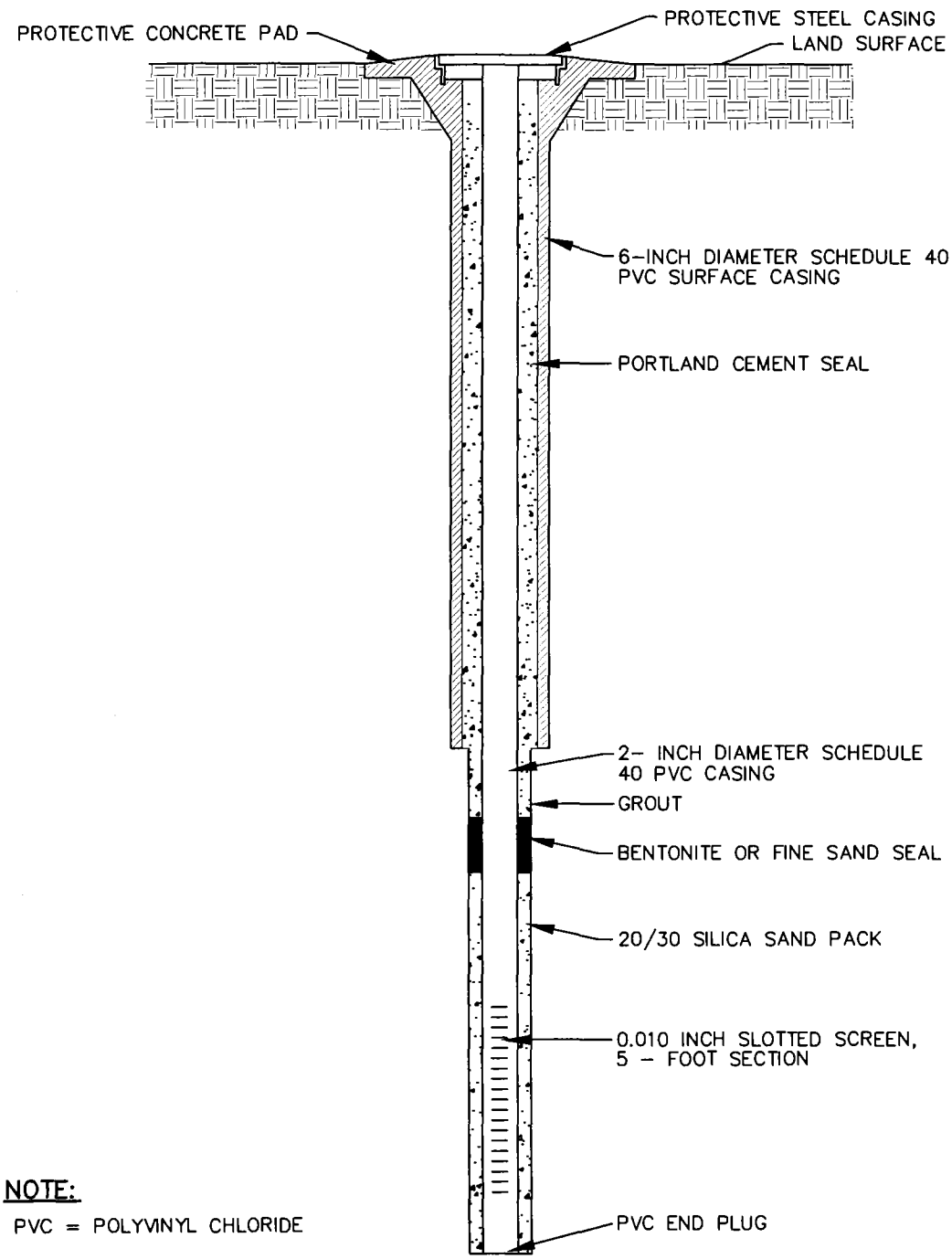
NOTE:

PVC = POLYVINYL CHLORIDE

DRAWN BY MF DATE 1/11/01		TYPICAL SHALLOW AND INTERMEDIATE MONITORING WELL CONSTRUCTION DETAIL SHERMAN FIELD FUEL FARM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO. 0516
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2-3 REV. 0

FORM CADD NO. SDIV_AV.DWG - REV 0 - 1/20/98

ACAD: 0516CD01.dwg 01/16/01 MF



NOTE:

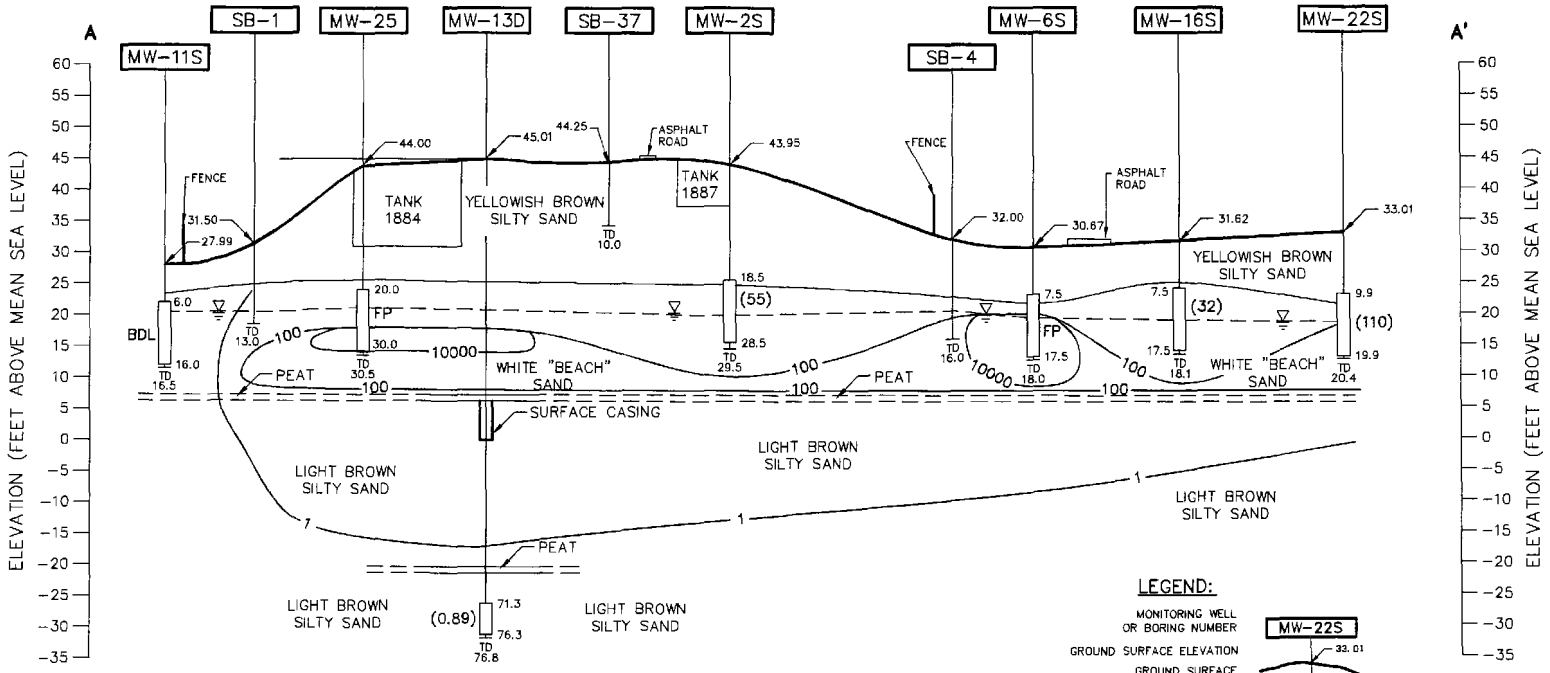
PVC = POLYVINYL CHLORIDE

ACAD: 0516CD02.dwg 01/11/01 MF

DRAWN BY MF DATE 1/11/91		TYPICAL DEEP MONITORING WELL CONSTRUCTION DETAIL SHERMAN FIELD FUEL FARM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO. 0516
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2-4 / REV. 0

FORM CADD NO. SDIV_AV.DWG - REV 0 - 1/20/98

ACAD:0516GX01.dwg 02/08/01 HJP



LEGEND:

MONITORING WELL OR BORING NUMBER — MW-22S

GROUND SURFACE ELEVATION — 33.01

GROUND SURFACE

GROUNDWATER ELEVATION 11/05/00 DATA

TOP OF MONITORED INTERVAL (FT BGS) — 9.9

LITHOLOGIC CONTACT (DASHED WHERE INFERRED)

BOTTOM OF MONITORED INTERVAL (FT BGS) — 19.9

TOTAL DEPTH OF WELL OR BORING (FT BGS) — TD 20.4

FP = FREE PRODUCT

BDL = BELOW DETECTION LIMIT FOR BENZENE

(110) = BENZENE CONCENTRATION IN ppb

ppb = PARTS PER BILLION

—1— BENZENE ISOCONCENTRATION

NOTE:

ISOCONCENTRATION LEVELS EXPRESSED IN PPB

0 80 160 HORIZONTAL SCALE IN FEET

0 20 40 VERTICAL SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY MF DATE 1/26/01

CHECKED BY DATE

COST/SCHED-AREA

SCALE AS NOTED

HYDROGEOLOGIC CROSS SECTION
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516

APPROVED BY DATE

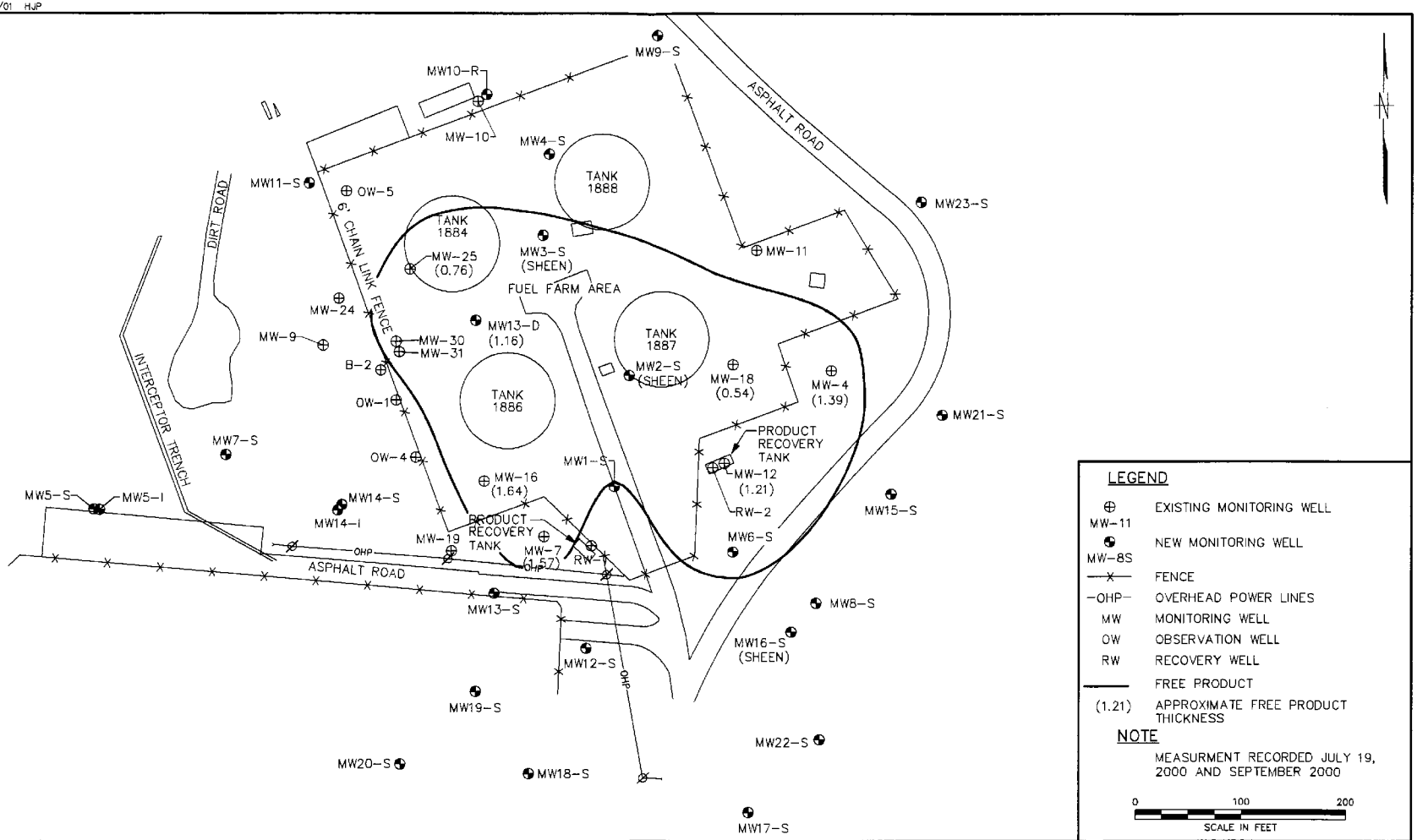
APPROVED BY DATE

DRAWING NO. FIGURE 3-1

REV. 0

FORM CADD NO. SOUTH-BH.DGN - REV 0 - 9/9/98

ACAD: 0516GM08.dwg 02/08/01 HJP



LEGEND

⊕ MW-11	EXISTING MONITORING WELL
MW-8S	NEW MONITORING WELL
—×—	FENCE
—OHP—	OVERHEAD POWER LINES
MW	MONITORING WELL
OW	OBSERVATION WELL
RW	RECOVERY WELL
———	FREE PRODUCT
(1.21)	APPROXIMATE FREE PRODUCT THICKNESS

NOTE

MEASURMENT RECORDED JULY 19, 2000 AND SEPTEMBER 2000

0 100 200
SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

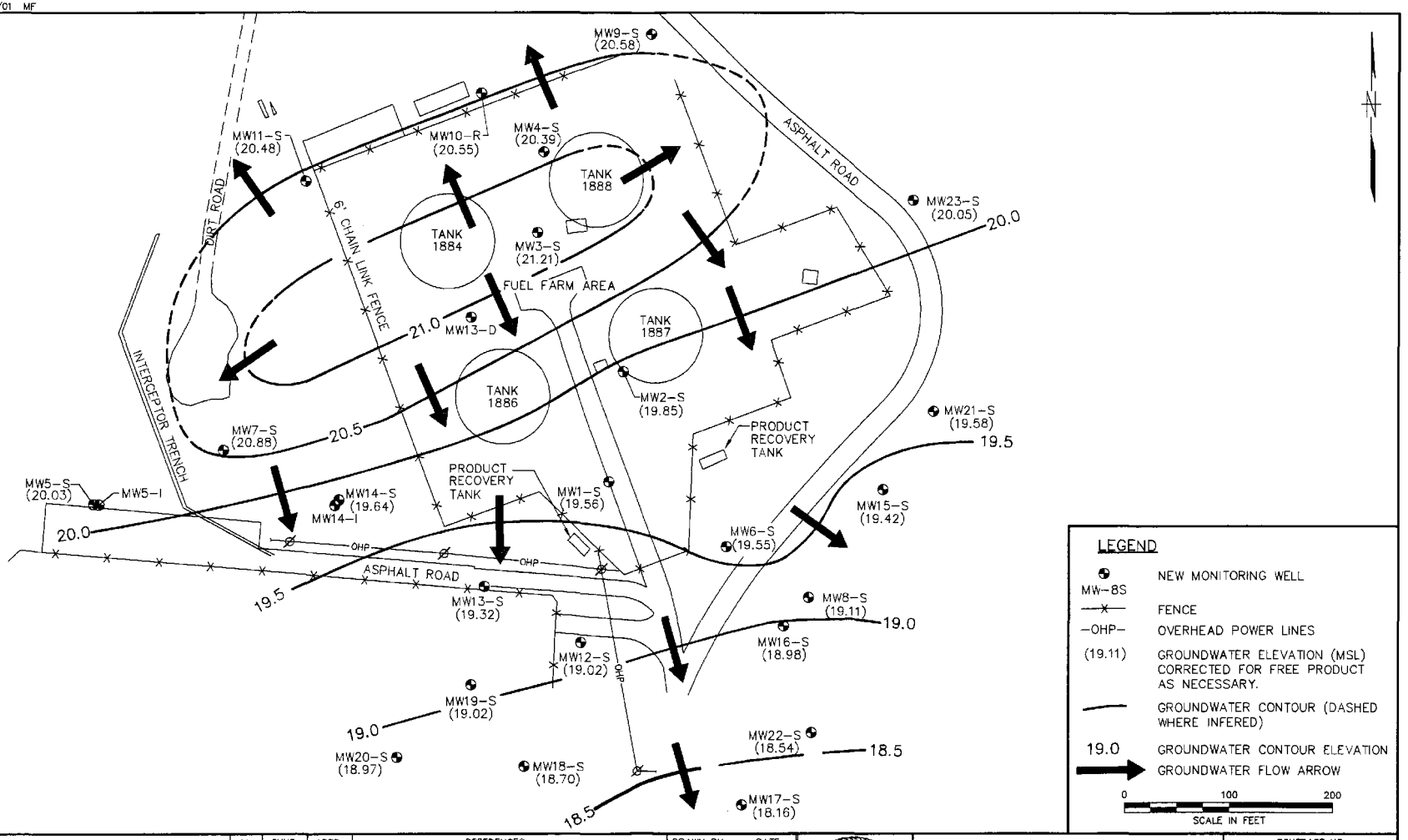
DRAWN BY MF DATE 1/9/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

FREE PRODUCT THICKNESS
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 3-2
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

ACAD:0516CM06.dwg 02/07/01 MF



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

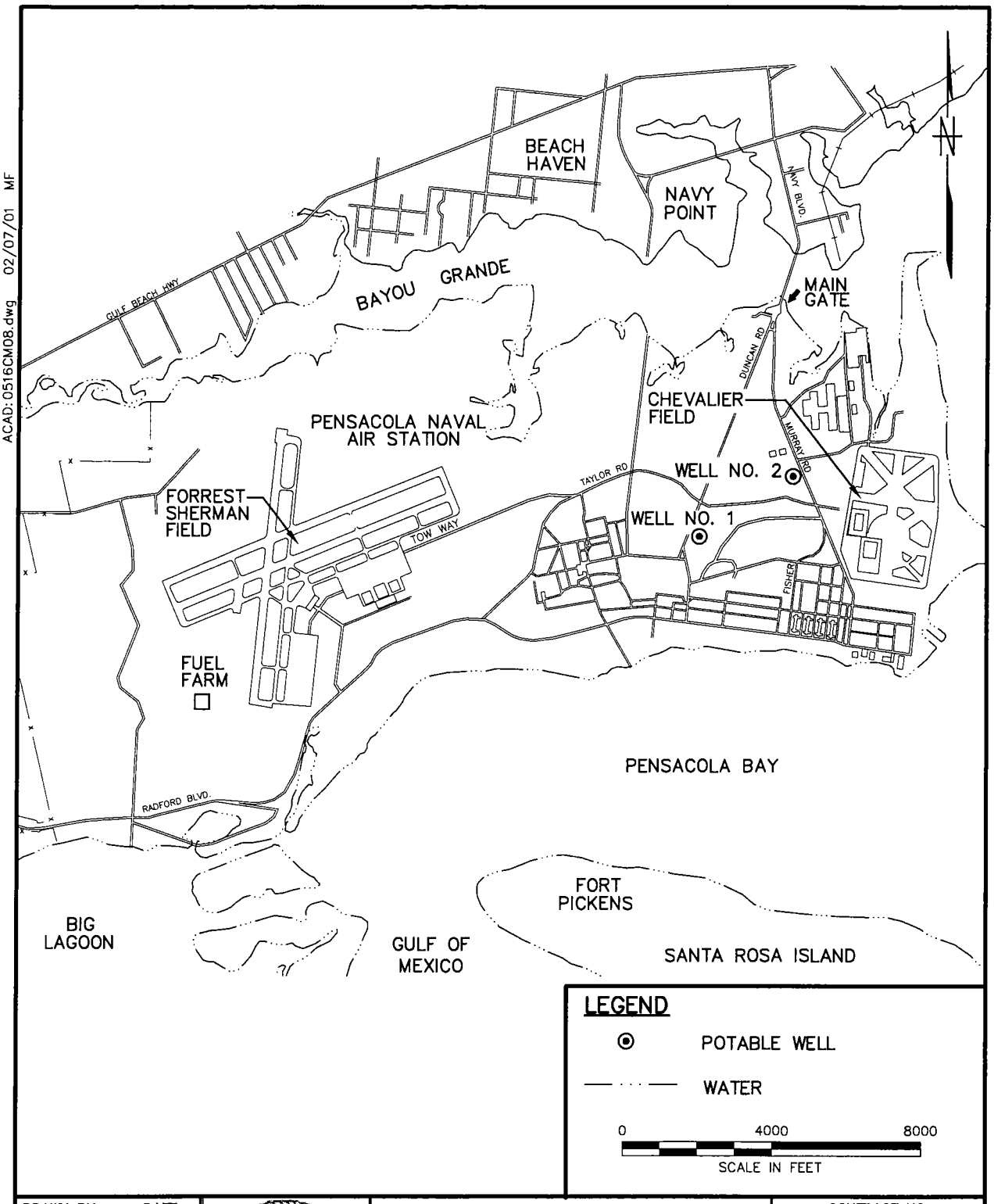
DRAWN BY MF DATE 1/9/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

GROUNDWATER ELEVATION MAP
(NOVEMBER 5, 2000)
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 3-3
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

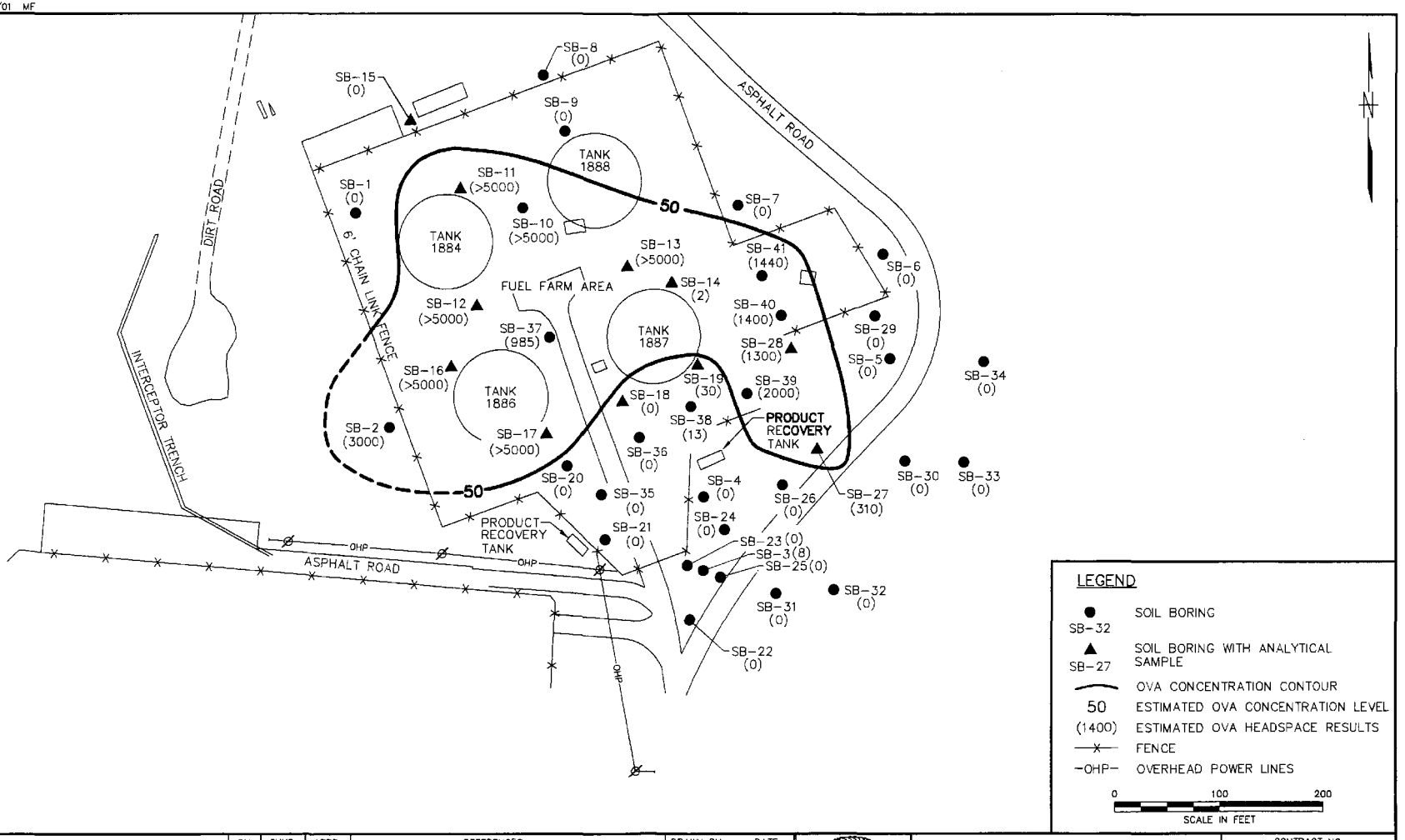
ACAD:0516CM08.dwg 02/07/01 MF



DRAWN BY MF DATE 1/11/01		SUPPLY WELL LOCATIONS SHERMAN FIELD FUEL FARM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO. 0516
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3-4 / REV. 0

FORM CADD NO. SDIV_AV.DWG – REV 0 – 1/20/98

ACAD: 0516GM07.dwg 02/07/01 MF



LEGEND

● SB-32	SOIL BORING
▲ SB-27	SOIL BORING WITH ANALYTICAL SAMPLE
⌒	OVA CONCENTRATION CONTOUR
50	ESTIMATED OVA CONCENTRATION LEVEL
(1400)	ESTIMATED OVA HEADSPACE RESULTS
—x—	FENCE
-OHP-	OVERHEAD POWER LINES

0 100 200
SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

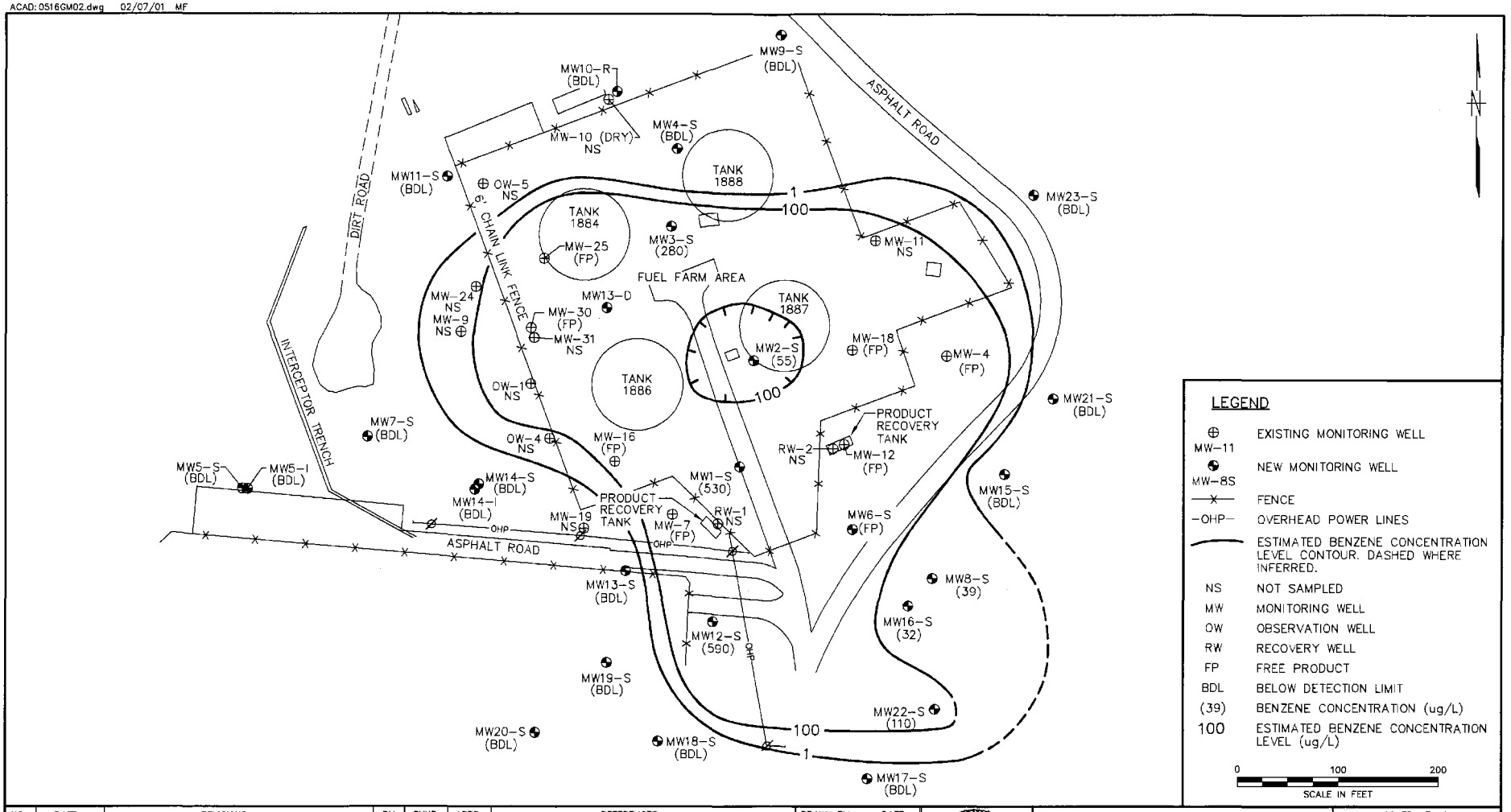
DRAWN BY MF DATE 2/7/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SOIL HEADSPACE SCREENING RESULTS FOR SAMPLE IMMEDIATELY ABOVE WATERTABLE
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4-2
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

ACAD: 0516GM02.dwg 02/07/01 MF



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

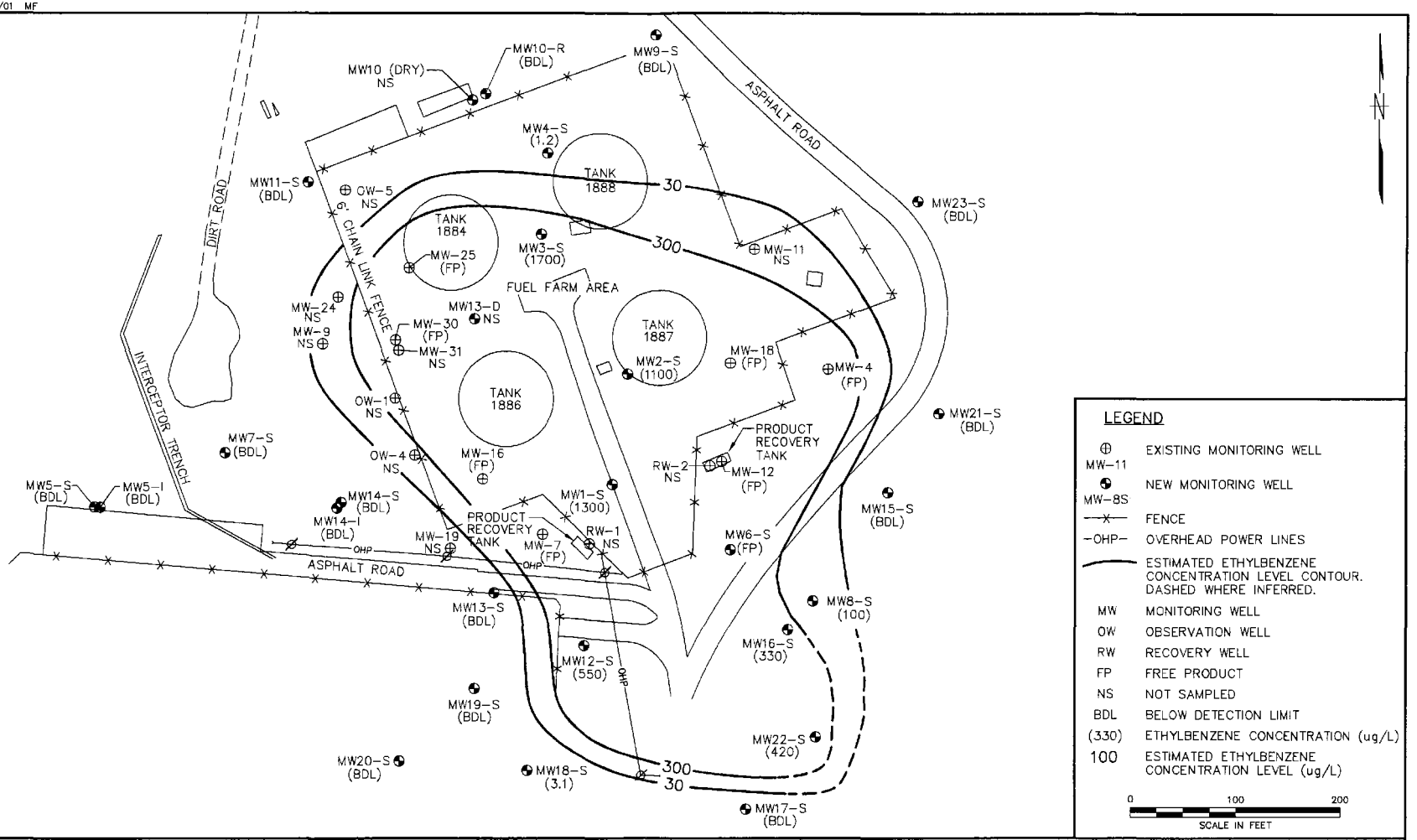
DRAWN BY MF DATE 1/17/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

GROUNDWATER ANALYTICAL RESULTS
BENZENE CONCENTRATIONS
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4-3
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

ACAD:0516GM03.dwg 02/07/01 MF



LEGEND

⊕ MW-11	EXISTING MONITORING WELL
MW-8S	NEW MONITORING WELL
—X—	FENCE
-OHP-	OVERHEAD POWER LINES
⌒	ESTIMATED ETHYLBENZENE CONCENTRATION LEVEL CONTOUR. DASHED WHERE INFERRED.
MW	MONITORING WELL
OW	OBSERVATION WELL
RW	RECOVERY WELL
FP	FREE PRODUCT
NS	NOT SAMPLED
BDL	BELOW DETECTION LIMIT
(330)	ETHYLBENZENE CONCENTRATION (ug/L)
100	ESTIMATED ETHYLBENZENE CONCENTRATION LEVEL (ug/L)

0 100 200
SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

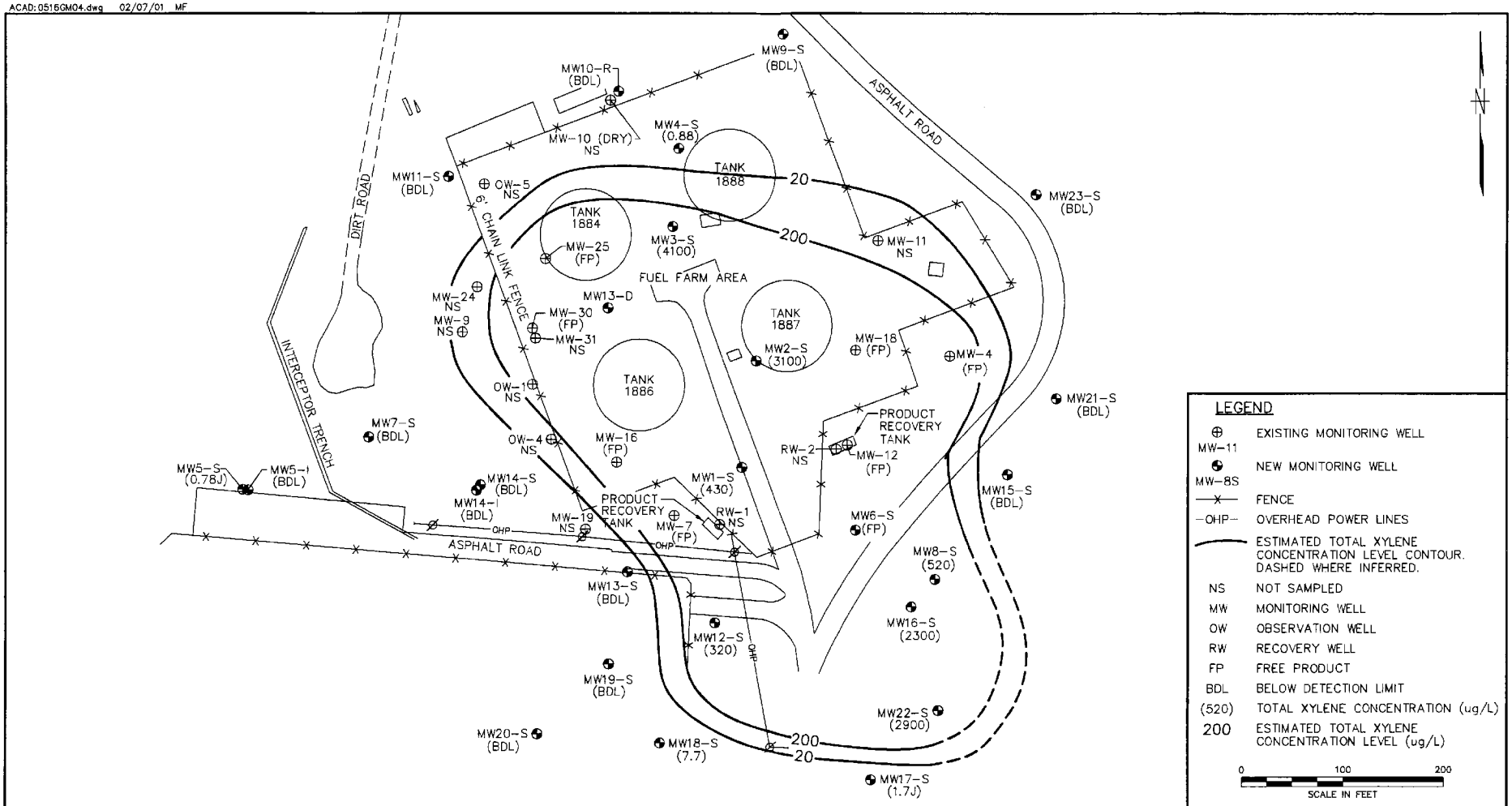
DRAWN BY MF DATE 1/18/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

GROUNDWATER ANALYTICAL RESULTS
ETHYLBENZENE CONCENTRATIONS
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4-4
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

ACAD:0516GM04.dwg 02/07/01 MF



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

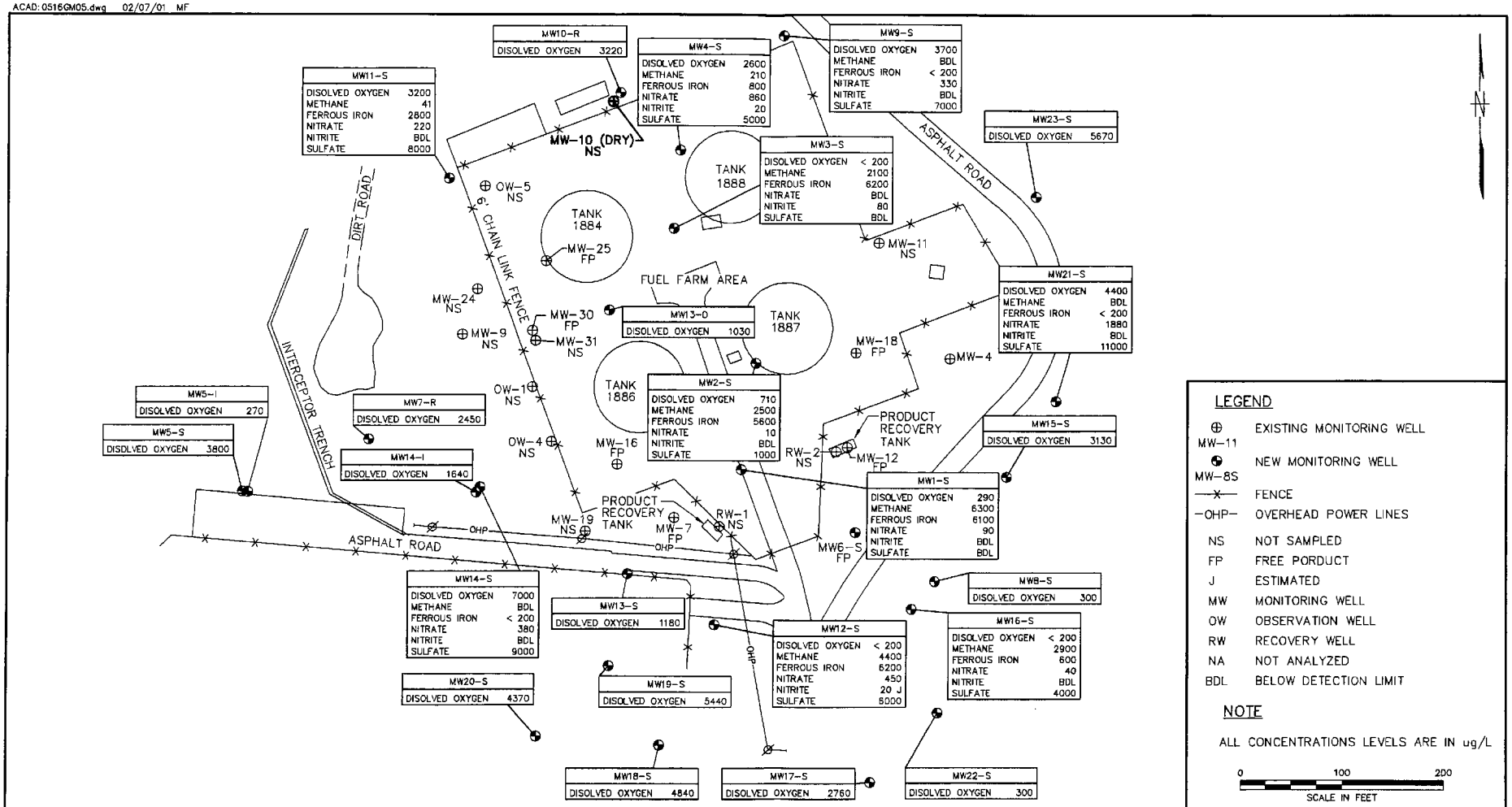
DRAWN BY MF DATE 1/18/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

GROUNDWATER ANALYTICAL RESULTS
TOTAL XYLENE CONCENTRATIONS
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4-5
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

ACAD: 0516GM05.dwg 02/07/01 MF



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY MF DATE 1/18/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

NATURAL ATTENUATION PARAMETERS
SHERMAN FIELD FUEL FARM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0516
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4-6
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

APPENDIX A

FIELD DATA FORMS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola - Former Fuel Farm
BORING No.: SB-1
PROJECT NUMBER:
DATE: 07-19-00
DRILLING COMPANY: ATI - Drilling & Probing
GEOLOGIST: Gary J. Davis
DRILLING RIG: Geoprobe
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
									Grass surface				
		NA	NA				Brown to Light Brown silty sand	SC	fine-med. grained				
					Hand		Auger for utilities						
	5				loose								
			36"/46"		to very loose		Yellowish brown to buff silty sand trace Clay		fine-med grained			O	O
	10		36"/46*			White							
				▼			▼ Water level based on DW-5		Adjacent Saturation			O	O
							Terminated boring @ 12' BGS						
	15								No FID Response				

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm
PROJECT NUMBER:
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-2
DATE: 07-19-00
GEOLOGIST: Gary J. Davis
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA to 4'		loose to very loose	Dark Brown to light brown	silty clayey sand	SC					
	5												
					sharp color change to yellowish Brown		silty ~~clayey~~ sand 2qp w/ trace clay	SC		0.0			
9'	10		24"		white to buff					0.0			
11'	2qp		24"				silty sand		very Petroleum Strong odor			3000 PPM	
		13'								←		5000 PPM	
	15						Terminated Boring @ 13' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Confirms inside Free-Product boundary

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER:
DRILLING COMPANY: ATI Drilling & Probing
DRILLING RIG: Geoprobe

BORING No.: SB-3
DATE: 07-19-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks: Hand Auger to 4' BGS	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Light Brown to orange brown	silty sand with trace clay	SC	Dry fine-med grained.			0	0
	5		36"/48"						damp				
						Buff white to yellowish brown	silty sand	SC		0	0	0	0
	10		30"/48"						"beach" sand				
						White	silty sand	SC	damp to moist	8	0	0	0
									saturated	>25,000			
	15								strong odor				
								SC		3500			
							Terminated boring @ 16' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm Sherman
PROJECT NUMBER:
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-4
DATE: 07-19-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA				yellowish orange to		SC	Hand Auger				
					very	light brown			to 4' BGS				
					loose		silty sand		Dry	0	0	0	0
					to		w/ trace clay						
	5				loose								
			36"/48"						damp				
						Dry white to							
						yellowish brown		SC		0	0	0	0
							silty sand						
	10		30"/48"										
						White "beach" sand			damp to				
						to yellowish brown		SC	wet	25.0			
							silty sand		Strong odor of petroleum				
			36"/48"										
	15								Saturated	25.0			
							Terminated at 16' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #:

Tetra Tech NUS, Inc.
NAS Pensacola

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman
PROJECT NUMBER:
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-5
DATE: 07-19-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose	buff	to light brown	SC	Hand auger	0	0	0	0
					to		silty sand w/		to 5' BGS				
					very		trace clay		Dry				
	5				loose								
	1								fine - med.				
	6								grained				
			36"			white to							
			48"			buff	silty sand		moist to				
	10'						"beach" sand		damp	0	0	0	0
			48"	▼					saturated				
							Same as above						
	14'		48"							0	0	0	0
							Terminated boring						
							at 14' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-6
DATE: 07-20-06
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	buff to yellowish brown	silty sand with trace clay	SC	Hand Auger to 4 feet dry fine grained angular to sub-rounded	0	0	0	0
	5												
			30"/48"			buff to white "beach" sand		SC	fine-med grained moist to damp at bottom of spoon No Odor	0	0	0	0
	10												
							Same as above		Saturated at 12 feet BGS	0	0	0	0
	15						Terminated boring at 14' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Farmer Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-7
DATE: 07-20-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose		buff to yellowish brown silty sand w/ trace clay	SC	Hand Auger to 4' BGS	0	0	0	0
	5												
			36"/48"				buff to white "beach" sand silty sand		fine to med. grained				
	10							SC	damp to moist at bottom No Odor	0	0	0	0
			36"/48"				same as above			0	0	0	0
										0	0	0	0
	15						Terminated boring at 14' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Forma Fuel Farm-Sherman
BORING No.: SB-8
PROJECT NUMBER:
DATE: 07-20-00
DRILLING COMPANY:
GEOLOGIST: Gary J. Davis
DRILLING RIG:
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							buff to		Hand auger				
		NA	NA		loose to		yellowish brown		to 4' BGS				
					very		silty sand w/	SC		0	0	0	0
					loose		trace clay		Dry				
	5												
			36"/48"						No odor				
					@ 8'								
					Sharp color change to white								
	10						silty sand	SC	damp	0	0	0	0
							"beach" sand						
										0	0	0	0
									saturated				
	15				Terminated boring								
							at 14' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-9
DATE: 07-20-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks: Grass & Weeds	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
								SC	Just off back of	0	0	0	0
		NA	NA		loose to very loose		buff to yellowish brown silty sand w/ trace clay		Tank No 1558 Pad				
									dry				
	5												
			36"/48"				yellowish brown silty sand		moist				
								SC		0	0	0	0
	10		36"/48"										
							Same as above except some iron staining to reddish brown	SC	damp	0	0	0	0
			24"/48"										
	15						brown silty sand						
							Same	SC	damp	0	0	0	0
			30"/48"										
	20						Same as above	SC		0	0	0	0
			24"/48"				buff to white silty sand		"beach" sand	0	0	0	0
	25												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB-9
DATE: 07-20-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	25	NR	36"/36"		very loose		White "beach" sand	SC	Noobr	0	0	0	0
					wet		Same as above		Hit something				
							silty sand		hard, about				
									24', but				
	30						Terminated boring		got past it				
							at 27' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

BORING No.: SB-10
DATE: 12-20-78
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	yellowish to light brown	silty sand	SC	Hand Auger to 4' BGS	0	0	0	0
									fine-med grained				
	5		36"/48"				same	SC	moist	0	0	0	0
	10		38"/48"						Has sewerage odor.				
								SC		0	0	0	0
			42"/48"				same		damp				
	15						(except laminated layers of dark gray from sewerage?)	SC		35 ppm			
			42"/48"										
	20						(Same as above)	SC	strong Petroleum odor dark gray layering	350 ppm			
				21' BGS					Wood Fragment 1/2" root or limb piece				
							Sharp color change to white "beach" sand			75,000 ppm			
	25			TD @ 27' BGS			Saturated approx 26' BGS						

1500 Thunderstorm Stopped work

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: @ 18' BGS - Caving borehole? or something creating barrier to point - penetrates when opened?

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page 1 of 1

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB-11
DATE: 07-20-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No and Type or RQD	Depth (Ft.) or Run No	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
Offset 2nd Try		NA											
					Very Very Loose		buff to light brown silty sand w/ trace clay	SC	Hand Auger to 4' BGS				
									Very soft could push auger down				
	5												
30" / 48"					Offset 2nd Try		Strong petroleum odor						
										>5000 / 225-250			With Carbon Filter
				?					Saturated? Can't be groundwater				
36" / 48"	10						Slight Petroleum odor to water			4800/4800			
							Possible runoff from top of tank?		Possibly inside containment area? Sewage Leachate?				Methane from sewage
	15												
							offset not saturated below			4500/4400			
36" / 48"	20		It gray to lt brown mottled				Refusal - Piece of concrete in bottom of						
				to white "Beach" sand			slightly gradational to sharp color change Did not want to penetrate containment area	SC		>5000/220			offset Not Saturated
			36" / 36"				Offsetting out from the pad approximately 5' & trying again						
	25						silty sand	SC	Tried to hand auger	>5000/0			

* When rock coring, enter rock brokenness.
** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Terminated

Remarks: Terminated at 27' BGS same white sand - saturated.

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No ✓ Well I.D # ____

Tetra Tech NUS, Inc

BORING LOG

Page 1 of 1

PROJECT NAME: NAS Pensacola Forrest Field Farm - Sherman
PROJECT NUMBER: CTC 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No: SB-12
DATE: 07-21-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No and Type or RQD	Depth (Ft) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole*	Driller BZ*
NS		NA	NA		loose to very loose	Buff to light Brown	silty sand w/ trace clay	SC	Dry Hand tamp to 4' BGS	0	0	0	0
	5		30"/48"						Moist to damp				
								SC				0	0
							Same as above except less clay						
	10		42"/48"						fine-med. grained.			0	0
								SC					
			42"/48"				Same as above						
	15												
0835 07-22-00			48"/48"				slightly mottled olive gray to yellowish brown.	SC	damp				
	20									600/15			0
			48"/48"		slightly gradational color change over 21-22' to white "beach" sand				Strong hydrocarbon odor				
	25	Drop					silty sand	SC	moist	>5,000/50			0
26'	25												

Unfilt./Clean w/Filt
240/120
30/0
1130 Sample tool broke (mech.)
>5,000
>5,000/80

* When rock coring, enter rock brokenness.
** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Drilling Area Background (ppm): 0

Remarks: Picked up replacement samplers & tools. Thunderstorm moved out this afternoon until tomorrow.

Converted to Well Yes ____ No ✓ Well I D #: ____

Tetra Tech NUS, Inc

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB-13
DATE: 07-22-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole*	Driller BZ**
		NA			Light to dark brown		silty sand		Hand auger 4' BGS				
					loose		w/ trace clay			0	0	0	0
					to very loose								
1st	5		42"/48"				same as above		damp	0	0	0	0
2nd	10		42"/48"				same as above		damp to moist	0	0	0	0
3rd			42"/48"		gradational color change to		yellowish brown		damp				
4th	15		30"/48"						1100/600 ppm				0
									damp 900/210				
5th	20		36"/50"						wet	240/120		0	0
6th			30"/48"				white "lead" sand silty sand		fine med-grained damp to wet	>5,000/5			
Saturated @ 27	25				Sand had greenish tint from Free Product					>5,000/50			

Depth of Screen Filter

Very Strong Hydrocarbon odor

* When rock coring, enter rock hardness.
** Provide minimum reading in 6 foot intervals for borehole. Increase reading frequency if elevated response read.

Terminated at 27.5 BGS

Drilling Area Background (ppm): 0

27.5

Remarks: Hard layer to penetrate similar to SB 10 & SB 11 at approx 16' on Sonda filling in (casing?) Point wont move. Must hit sample will hold open point? Sampler stuck at 24' when pulling out. ~30 min. to pull.

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Hard drilling is probably due to compacted layer at base of tanks.

Tetra Tech NUS, Inc

BORING LOG

Page 1 of 1

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-14
DATE: 07-22-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
								SC	Dry				
		N/A	N/A		loose to very loose	buff to light brown	silty sand w/ trace clay		Hand Augur to 4' BGS	0	0	0	0
	5								fine - med grained				
			42"/48"				light brown to yellowish brown silty sand	SC	moist	0	0	0	0
	10		36"/48"				same except - slight mottling to gray to grayish black	SC	moist to damp	0	0	0	0
	15		42"/48"				Same as above						
			48"/48"					SC	damp	0	0	0	0
	20						Same as above ~~except~~	SC	damp	0	0	0	0
									Hard drilling				
					& slightly gradational color change to white "beach" sand		silty sand	SC	began at 18' pt 20-24' Run damp	2	0	0	0
	25												

* When rock coring, enter rock brokeness.
** Provide monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Terminated boring at 28' BGS

Drilling Area 350 cut 27'

Remarks: @ ~27' BGS saturated

Background (ppm): 0

To 28' BGS

slight odor like xylene

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page 1 of 1

PROJECT NAME: NAS Pensacola Former Fuel Farm Sherman
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB-15
DATE: 07-22-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole*	Driller BZ**
								SC					
		NA				Light brown to			Hand augered	0	0	0	0
							yellowish brown		to 5' BGS				
							silty sand						
	5												
								SC					
							silty sand						
			48"/48"		Gradational	color change to			damp				
							white "beach" sand	SC		0	0	0	0
	10												
										0	0	0	0
									Saturated.				
							Terminated boring						
	15						at 13' BGS						
	20												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read

Drilling Area Background (ppm):

Remarks:

Converted to Well Yes _____ No _____ Well I D #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 JTO 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB-16
DATE: 07-23-00
GEOLOGIST: Gary J. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
								SL					
		NA	NA.		loose to very loose	buff to light brown	silty sand w/ trace clay		Hand Auger 4' fine to med grained.	0	0	0	0
	5								moist				
			42"/48"				same as above	SL		0	0	0	0
	10		42"/48"				same as above		damp				
								SL					
	15		24"/48"				same as above		damp				
								SL		50/10	0	0	0
	20		36"/48"				Same as above except black staining @ 19'		@ 18' BGS very strong hydrocarbon odor	7500		0	0
			42"/48"				White "Beach" Sand stained light greenish tint from product to yellowish green.		damp to wet	7500		0	0
	25						same as above						

unfiltered / Filtered (Charcoal)

* When rock coring, enter rock brokenness @ 26'

** Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

TD 25 BGS

Converted to Well: Yes ____ No ✓ Well I D # ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 Job 0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB-17
DATE: 07-23-00
GEOLOGIST: Gary T. Davis
DRILLER: Joshua Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm) Sample	Sample Bz	Breathing Zone	Drilling Area
								SL	Hand Auger				
		N/A			loose	Buff	to light brown		to 4' BGS	0	0	0	0
					to		silty sand		Dry				
					very								
	5				loose		Mottled light brown						
			42"/48"				to yellowish brown		Moist				
								SL		0	0	0	0
	10		42"/48"		gradational				moist				
					color change to light brown								
					to yellowish brown to gray			SC		1,200	130	0	0
							mottled						
			48"/48"						damp				
	15						Same as above						
								SL		1000/1000	145/125	0	0
			42"/48"						damp				
	20				gradational								
					color change to white "beach"			sand SC		>5,000	28	0	0
							silty sand		fine-med. grained				
			36"/48"										
							Same white						
							silty sand	SL		(>5,000	40)	0	0
	25												

23

~26'

TD 27

* When rock coring, enter rock brokeness.
** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Terminated at 27' BGS

>5,000 Drilling Area

Remarks: Sample Screening (unfiltered) / filtered w/ act. charcoal

Background (ppm): 0

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

up: 1/4

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: RTI
DRILLING RIG: Geoprobe
BORING No.: SB-18
DATE: 07-23-00
GEOLOGIST: Gary J. Davis
DRILLER: Josh Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Drilling BZ**
		NA			loose to very loose	Buff to light brown	silty sand	SC	Dry Hand Augur to 4' bgs fine-med. grained	0	0	0	0
	5		42"/48"				Some slight mottling light gray-yellowish brown-light brown otherwise same as above.	SC	moist ~1½" diam cobble of Fe cemented sandstone	0	0	0	0
	10		46"/48"					SC	damp	0	0	0	0
	15		42"/48"				same as above	SC	8/8		0	0	
			36"/48"				same as above	SC	damp 13/2		0	0	
	20						White "beach" sand silty sand	SC	damp 12/2		0	0	
			36"/48"										
	25												

* When rock coring, enter rock brokenness.
** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Terminated boring @ 26' 1200/7 00

Drilling Area Background (ppm): 0

Remarks: ~26'

TD 28

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola FFF (Former Fuel Farm - Sherman)
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No. SB-19
DATE: 07-24-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	buff to light brown	silty sand w/ trace clay	SC	Dry fine-med grained	0	0	0	0
	5		48"/48"				light brown to light gray to yellowish brown mottled or layered silty sand	SC	moist	0	0	0	0
	10		36"/48"				Same as above	SC	damp	0	0	0	0
	15		36"/48"				Same as above except more yellowish brown	SC	damp	0	0	0	0
			42"/48"										
	20				gradational color change to		white "beach" sand	SC	damp	0	0	0	0
			40"/48"				silty sand		damp to wet				
	25		36"/48"					SC		36	0	0	0
	28												

* When rock coring, enter rock brokeness.
** Provide monitor reading at point intervals in borehole. Increase reading frequency if elevated response read.

Saturated 15/5 0 0

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I D # ____

26

28'

auger/Filt

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
BORING No.: SB-20
PROJECT NUMBER: CTO 112 N0401
DATE: 07-24-00
DRILLING COMPANY: ATI
GEOLOGIST: Gary J. Davis
DRILLING RIG: Geoprobe
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	buff to light brown	silty sand w/ trace clay	SC	Hand Auger to 4' BGS Dry	0	0	0	0
	5		42"/48"			yellowish to light brown		SC	moist fine-med. grained	0	0	0	0
	10		36"/48"		gradational color change to white "beach" sand		silty sand	SC	moist to damp	0	0	0	0
	15		30"/48"					SC	wet	3500/0		0	0
	20						Terminated boring at 16' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB 21
DATE: 07-24-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA			Loose	buff to light brown		SL	Hand Auger 4' BGS	0	0	0	0
					to		silty sand						
					very								
	5				loose								
			42"/48"										
					gradational color change to			SL	damp	0	0	0	0
						white "beach"							
	10		24"/48"										
							Same as above	SL	damp	0	0	0	0
			18"/48"										
	15												
								SL	saturated	0	0	0	0
					Terminated boring at 16' BGS								
	20												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATT
DRILLING RIG: Geoprobe

BORING No.: SB-22
DATE: 07-24-00
GEOLOGIST: Gary D. Davis
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		Loose to very loose	Buff to light brown	silty sand	SC	Dry Hand Auger to 4' BLS	0	0	0	0
	5		42"/48"						fine-med. grained moist				
					gradational		color change to white "beach" sand silty sand	SC		0	0	0	0
	10		36"/48"					SC		0	0	0	0
	15		24"/48"	▼				SC	damp wet saturated	0	0	0	0
	20												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola FFF Former Fuel Farm
PROJECT NUMBER: CTO 112 N0201
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB23
DATE: 07-24-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA			loose to very loose	buff to light brown		SC	Dry Hand Auger to 4' BGS	0	0	0	0
	5		36"/40"										
							Gradational color change to white "beach" sand		Moist	0	0	0	0
	10		30"/40"				silty sand						
								SC	damp	0	0	0	0
							Same as above						
	15		30"/40"										
								SC	wet	0	0	0	0
	20												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
BORING No.: SB 24
PROJECT NUMBER: CTO 112 N0401
DATE: 07-24-00
DRILLING COMPANY: ATI
GEOLOGIST: Gary J. Davis
DRILLING RIG: Geoprobe
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	buff to light brown	silty sand w/ trace clay	SC	Dry	0	0	0	0
	5		36"/48"						moist				
				gradational color change to			White "beach" sand	SC		0	0	0	0
	10		36"/48"						damp	>5,000		0	0
							Same	SC	wet strong petroleum odor saturated				
	15									>5,000		0	0
								SC					
Not used													
				Terminated boring at 16' BLG									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
BORING No.: SB25
PROJECT NUMBER: CTO 112 N0401
DATE: 07-24-00
DRILLING COMPANY: ATI
GEOLOGIST: Gary J. Davis
DRILLING RIG: Geoprobe
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		Loose to very loose	buff to light brown	silty sand w/ trace clay	SC	Hand Auge to 4' BGS	0	0	0	0
	5						yellowish brown silty sand						
			48" / 48"				Gradational color change to white "beach" sand	SC	moist Screen 7-8' Strong petroleum odor Light HPD	20/0		0	0
	10		30" / 48"				silty sand	SC		0	0	0	0
	15		30" / 48"				same	SC	Saturated Strong petroleum odor	>5000		0	0
							Terminated boring at 16' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm (FFF) Sherman
BORING No.: SB-26
PROJECT NUMBER: CTO 112 N0401
DATE: 07-25-00
DRILLING COMPANY: ATF
GEOLOGIST: Gary J. Davis
DRILLING RIG: Geoprobe
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	buff to light brown	silty sand w/ trace clay	SL	Dry	0	0	0	0
	5		11 / 42" / 48"										
				Gradational color change to			"white" beach sand	SL	change slight odor petroleum	0	0	0	0
	10		42" / 48"				silty sand						
								SL	wet strong odor saturated	0	0	0	0
							Terminated boring at 12' BGS						
	15												
	20												
	25												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page 1 of 1

PROJECT NAME: NAS Pensacola Former Fuel Farm (FFF) Site
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATE
DRILLING RIG: Geoprobe
BORING No.: SB-27
DATE: 07-25-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Drillers BZ**
									Open Gravel Surface				
		NA	NA		0031 to 1009	Buff	to light brown silty sand w/ trace clay	SC	Dry Hand Auger to 4' BGS	0	0	0	0
	5												
					1009		gradational color change to white beach sand silty sand	SC	damp	3	0	0	0
	10								wet				
								SC	saturated	500	1	10	
							Terminated @ 12' BGS		strong odor petroleum				
	15												

* When rock coring, enter rock brokenness.
** Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated response read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fire Farm (FFF) Site
BORING No.: SB-28
PROJECT NUMBER: CTO 112 ND401
DATE: 07-25-00
DRILLING COMPANY: ATI
GEOLOGIST: Gary J. Davis
DRILLING RIG: Geoprobe
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Bore Hole*	Driller BZ*
		NA	NA		loose to very loose		Buff to light brown silty sand	SC	Dry Hand Auger to 4' BGS	0	0	0	0
	5		11" / 40"				gradational color change to white "beach" sand silty sand	SC	Mainly	1300		0	0
	10		38" / 48"					SC	Saturated	7500		0	0
	15						Terminated at 12' BGS						

* When rock coring, enter rock brokenness.

* Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated response read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
BORING No.: SB 29
PROJECT NUMBER: CTO 112 N0401
DATE: 07-25-00
DRILLING COMPANY: ATI
GEOLOGIST: Gary S. Davis
DRILLING RIG: Geoprobe
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff to light brown	silty sand	SP	Dry Hand auger to 4' BGS	0	0	0	0
	5		12"/48"						damp				
					gradational color change to		White "beach" sand	SP		0	0	0	0
	10												
								SP	saturated	1/6	0	0	
							Terminated at 12' BGS						
	15												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm-Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB-30
DATE: 09-25-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff to light brown	silty sand w/ trace clay	SL	Dry	0	0	0	0
	5		48"/48"						hoist				
						Gradational color change		SL		0	0	0	0
	10		36"/48"										
									wet >5000/600 strong petrol odor				
	15							SL					

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB 31
DATE: 07-25-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff to light brown	silty sand w/ trace clay	SC	Hand Auger to 4' BGS	0	0	0	0
	5												
							gradational color change to white "beach" sand silty sand	SC	moist	0	0	0	0
	10												
							strong petroleum odor	SC	wet	4200		0	0
	15												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe
BORING No.: SB 32
DATE: 07-25-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Brnf to light brown		SL	dry Hand augs to 1'	0	0	0	0
	5		42"/48"						moist				
					gradational color change to		White "beach" sand silty sand		moist to damp	0	0	0	0
	10		24"/48"					SL	wet	300/0		0	0
	15						Terminated boring at 12' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATE
DRILLING RIG: Geoprobe
BORING No.: SB 33
DATE: 07-25-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff to light brown	silty sand w/ trace clay	SC	Dry	0	0	0	2
	5		42"/48"										
							gradational color change to white "beach" sand	SC	moist	0	0	0	0
	10		36"/48"						damp				
								SC	wet to saturated	0	0	0	0
	15												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
PROJECT NUMBER: CTO 112 - N0401
DRILLING COMPANY: TT
DRILLING RIG: Geoprobe
BORING No.: SB 34
DATE: 07-26-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA			loose to very loose	Buff to light brown to light yellow brown	silty sand	SC	Hand Auger 4'-BGS Dry	0	0	0	0
	5		11 AB/AB			Gradational color change to White "Beach" Sand							
							silty sand	SC	moist to damp	0	0	0	0
			11 AB/AB						No odor				
							Same as above	SC	Saturated	0	0	0	0
							Terminated boring at 12ft BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Geoprobe

BORING No.: SB 35
DATE: 07-26-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff	to light brown silty sand w trace clay	SC	Dry Hand Auger to 4' BGS	0	0	0	0
	5						slight mottling of light gray	SC	moist	0	0	0	0
	10						Sand	SC		0	0	0	0
	15				gradational w/a change to white "beach" sand		silty sand	SC	damp	0	0	0	0
	20							SC	wet	0	0	0	0
	25												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm - Sherman
BORING No.: SB 36
PROJECT NUMBER: CTO 112 N0401
DATE: 07-26-00
DRILLING COMPANY: ATI
GEOLOGIST: Gary F. Davis
DRILLING RIG: Hand Auger
DRILLER: Dan Hartnett

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA			loose to very loose	Buff	to light brown silty sand	SC	Dry	0	0	0	0
	5								moist				
								SC		0	0	0	0
	10							SC	damp	0	0	0	0
					gradational color change to								
							white "beach" sand	SC	wet	0	0	0	0
	15						Terminated boring at 13' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hand auger to avoid taking track down embankment inside fence.

Converted to Well: Yes ____ No Y Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATF
DRILLING RIG: Geoprobe
BORING No.: SB 37
DATE: 07-26-00
GEOLOGIST: Gary J. Davis
DRILLER: Josh Darling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff to light brown	silty sand w/ trace clay reddish brown to light gray mottled	SC	Hand Auger to 4' BGS Dry	0	0	0	0
	5		12"/24"						moist				
							Same	SC		170/10		0	0
	10		18"/48"						damp				
							Smell like starter wood → Wood Fragments 12-13'	SC		215/135		0	0
	15		36"/48"				dark gray to black layering		damp				
								SC	Hand Drilling	1800/310		0	0
			18"/48"										
	20									1350/365		0	0
							Terminated at 20' BGS after 4 tries to get sample						
	25												

unfil/filtered

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hard drilling at 15' BGS & difficulty pulling tool.

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Farmer Fuel Farm-Sherman
BORING No.: SB 38
PROJECT NUMBER: CTO 112 N0401
DATE: 07-26-00
DRILLING COMPANY: ATI
GEOLOGIST: Gary J. Davis
DRILLING RIG: Hand Auger.
DRILLER: Josh D.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA			loose to very loose		Buff to light brown silty sand	SL	Dry	0	0	0	0
			NA										
	5												
							color change to white "beach" sand		moist				
							silty sand	SL	damp	13/0		0	0
	10								wet	4100/0		0	0
							Terminated boring @ 10' BGS						
	15												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hand Auger to avoid taking Rig down steep embankment inside fence.

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm-Sherman
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: HAND AUGER

BORING No.: SB 39
DATE: 07-26-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff to light brown		SC					
	5												
								SL					
					Gradational color change to White "beach" sand					100/	0	0	0
	10								wet	2000/		0	0
								SL	saturated	>5000/		0	
	15												

Dun filtered/Filtered

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Hand Auger

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NAS Pensacola Former Fuel Farm
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Hand Auger

BORING No.: SB 40
DATE: 07-26-00
GEOLOGIST: Gary T. Davis
DRILLER: Josh Parling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose to very loose	Buff to light brown	Silty sand	SC	Shell & clay & sand sulfur	0	0	0	0
	5								damp				
					gradational color change to white "beach" sand		silty sand	SC	moist	1,400		0	0
	10									>5,000		0	0
							Terminated boring at 11' bgs	SC					
	15												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Hand auger inside fenced Area

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

NAS Pensacola **BORING LOG**

PROJECT NAME: Former Fuel Farm
PROJECT NUMBER: CTO 112 N0401
DRILLING COMPANY: ATI
DRILLING RIG: Hand Auger

BORING No.: SB 41
DATE: 07-26-00
GEOLOGIST: Gary J. Davis
DRILLER: Nick B.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		Loose to very loose	Buff to light brown	silty sand	SC	Shell clay & sand Surface Dry	0	0	0	0
	5						Gradational color change to white "beach" sand						
							Sand	SC	Moist	180		20	
	10							SC	Wet ~~Damp~~ Saturated	1,400 1,400		60	
							Terminated boring at 11' BLS						
	15												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

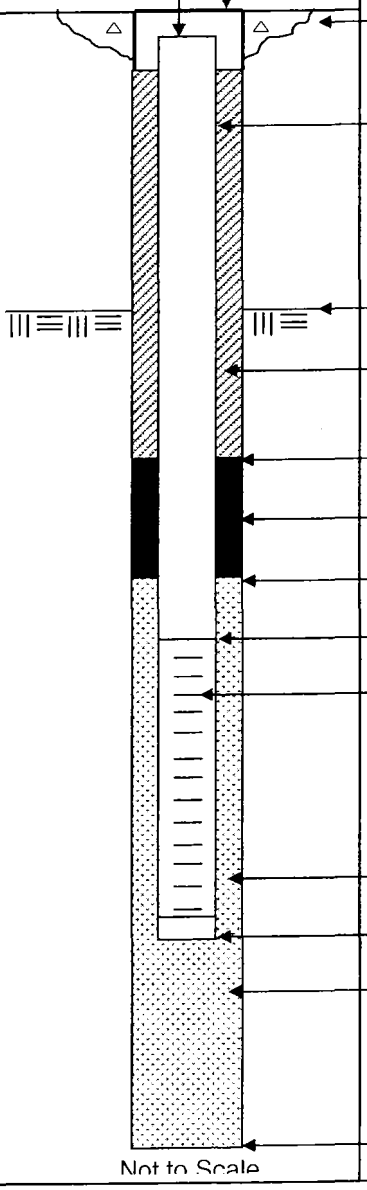
WELL No.: MW-15

Sherman Field - **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-15
PROJECT No.:	N0516 G0132	DRILLER:	Johnny Body	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola ~~Universal Eng. Svcs~~	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	CME-75	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete Pad 2'X2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~ 8 1/4"
Elevation / Depth Top of Rock:	N/A
Type of Backfill:	grout
Elevation / Depth of Seal:	19.5
Type of Seal:	Baroid Hole Plug 3/8 inch ~~pellets~~ chips
Elevation / Depth of Top of Filter Pack:	11.5
Elevation / Depth of Top of Screen:	14.5'
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unamin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	24.5'
Elevation / Depth of Bottom of Filter Pack:	25' BGS
Type of Backfill Below Well:	Unamin Filter Sil
Elevation / Total Depth of Borehole:	25' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-1S
PROJECT NUMBER: N0516 CTO 132
DATE: 09-09-00
DRILLING COMPANY: Universal Eng. Svcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME-75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					loose	Yellowish brown			see Adj. DPT				
		NA	NA		to		Silty sand	SC	SB-35 for				
					very				detailed log				
					loose								
	5												
	10												
									moist				
	15												
							gradational color change						
							to white beach sand	SC					
	20								wet to				
									saturated				
	25						Terminated Boring at 25' BGS to set well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Adjacent to SB-35 Soil Boring (DPT)

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-1S

Tetra Tech NUS, Inc.

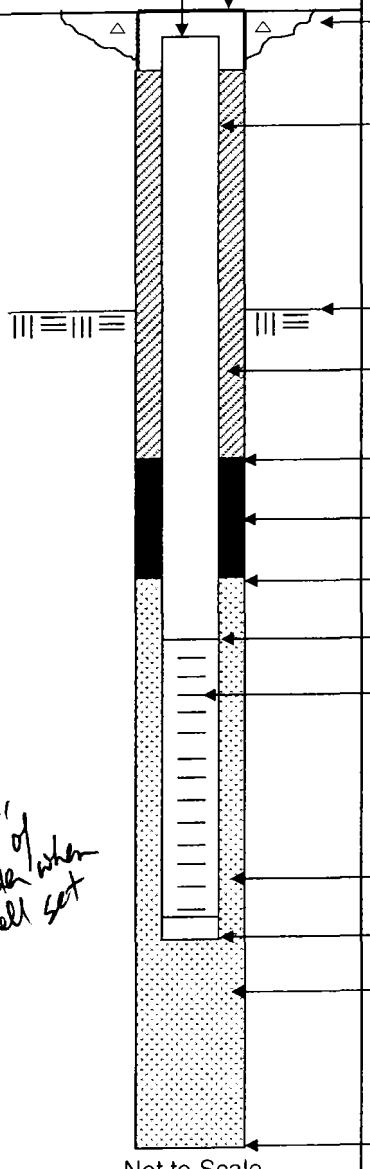
WELL No.: MW-25

Sherman Field – **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-25
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Boyd	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	steel Manhole
Type of Surface Seal:	concrete pad. 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~ 8¼-inch
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 12.5
Type of Seal:	Baroid Hole Plug
Elevation / Depth of Top of Filter Pack:	/ 15.5
Elevation / Depth of Top of Screen:	/ 18.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 ft.
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	28.5
Elevation / Depth of Bottom of Filter Pack:	/ 30
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ 30

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
PROJECT NUMBER: N0516 CTO 132
DRILLING COMPANY: Universal Eng. Svcs.
DRILLING RIG: CME-75
BORING No.: MW-2S
DATE: 09-09-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						yellowish brown			See Adj. DPT				
					loose to very loose		silty sand	SC	SB-18 for detailed log.				
		NA	NA										
	5												
									Moist.				
	10												
	15												
									damp				
	20												
					gradational color change to "white beach sand"			SC					
	25												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Adjacent to DPT soil Boring SB-18

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-2S

30

Terminated boring at 30' BGS to set well.

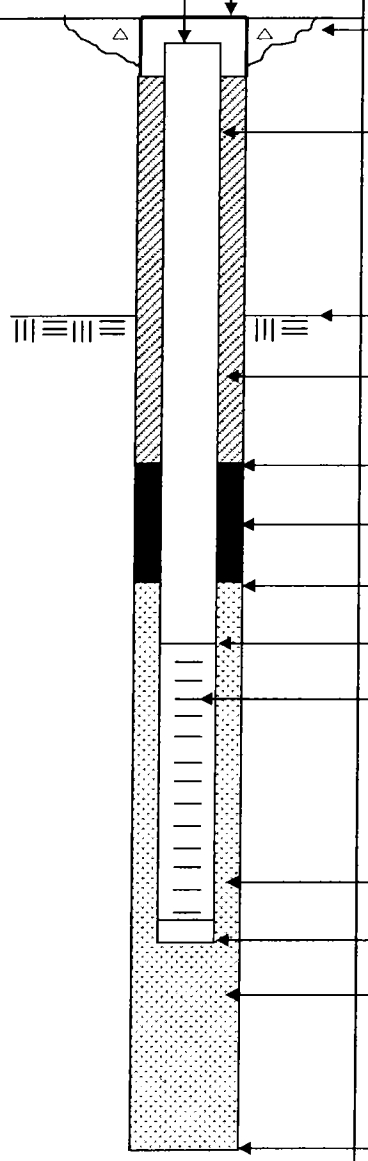
Tetra Tech NUS, Inc.

WELL No.: MW-35

Sherman Field – **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-35
PROJECT No.:	N0516 CTO132	DRILLER:	Johnny Body	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =
Datum:



Not to Scale

Elevation / Depth of Top of Riser: /

Elevation / Height of Top of Surface Casing: /

I.D. of Surface Casing: 8-inch

Type of Surface Casing: Steel Manhole

Type of Surface Seal: Concrete Pad 2'x2'

I.D. of Riser: 2-inch

Type of Riser: Sch 40 PVC

Borehole Diameter: ~ 8 1/4 inch

Elevation / Depth Top of Rock: NA / /

Type of Backfill: grout

Elevation / Depth of Seal: / 12.0

Type of Seal: Bentonite Hole Plug 3/8 inch chips

Elevation / Depth of Top of Filter Pack: / 15.0

Elevation / Depth of Top of Screen: / 19.0

Type of Screen: Sch 40 PVC

Slot Size x Length: 0.01 x 10 feet

I.D. of Screen: 2-inch

Type of Filter Pack: Unimin Filter Sil 20/40

Elevation / Depth of Bottom of Screen: / 29.0

Elevation / Depth of Bottom of Filter Pack: / 30.0

Type of Backfill Below Well: Unimin Filter Sil

Elevation / Total Depth of Borehole: / 30.0 BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-35
PROJECT NUMBER: N0516 CT0132
DATE: 09-09-00
DRILLING COMPANY: Universal Eng. Svcs
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME-75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown			See adj. DPT				
		NA	NA		loose		silty sand	SC	# SB-10 for				
					to				detailed log.				
					very								
	5				loose								
									moist				
	10												
	15												
	20												
						gradational color change		SC	damp				
						to "white beach sand"							
	25												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Adj. to DPT boring SB-10

wet to saturated

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-35

30 — Terminate boring at 30' BGS to set well

Tetra Tech NUS, Inc.

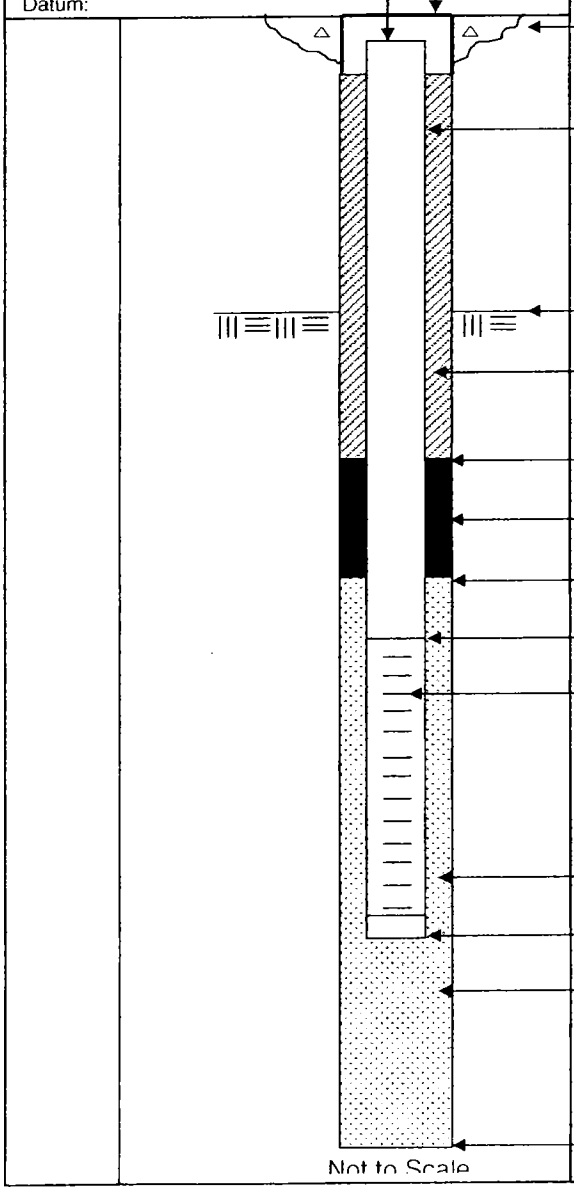
WELL No.: MW-4S

Sherman Field - **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-4S
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Bady	DATE COMPLETED:	09-10-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	sch 40 PVC
Borehole Diameter:	~8 1/4 inch
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 13.5
Type of Seal:	Baroid Hole Plug 3/8 inch chips
Elevation / Depth of Top of Filter Pack:	/ 16.0
Elevation / Depth of Top of Screen:	/ 19.0
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10'
I.D. of Screen:	2-inch
Type of Filter Pack:	Unamin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 29.0
Elevation / Depth of Bottom of Filter Pack:	/ 30.0
Type of Backfill Below Well:	Unamin Filter Sil
Elevation / Total Depth of Borehole:	/ 30.0' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Forma Fuel Farm - Sherman Field
BORING No.: MW-4S
PROJECT NUMBER: N0516 CTO 132
DATE: 09-10-00
DRILLING COMPANY: Universal Eng. Srvcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME 75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown			located between				
					loose		silty sand	SC	DPT locations				
		NA	NA		to				SB9 + SB10				
					very								
	5				loose								
									moist				
	10												
	15												
									damp				
	20												
					gradational color change								
					to "white beach sand."			SC					
	25												

25-26' based on DPT borings

* When rock coring, enter rock brokeness.
** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Between former DPT locations SB9 + SB-10.

Wet to saturated

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-4S

30

Terminated boring at 30' BGS to set well.

Tetra Tech NUS, Inc.

WELL No.: MW-5S

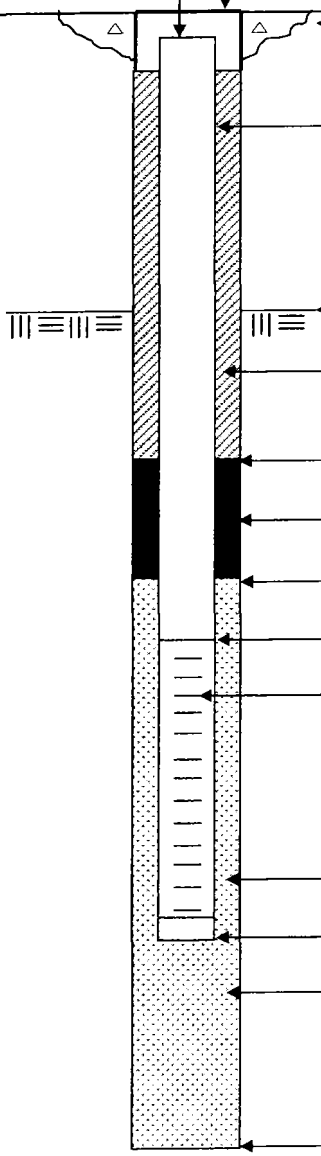
Sherman

MONITORING WELL SHEET

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW 5S
PROJECT No.:	N0516 CT0132	DRILLER:	Johnny Body	DATE COMPLETED:	09-08-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8'
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~ 8 1/4"-inch
Elevation / Depth Top of Rock:	N/A
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 2.5' BGS
Type of Seal:	Baroid Hole Plug 3/8" chips
Elevation / Depth of Top of Filter Pack:	/ 4.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filtersil 20/40
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18' BGS
Type of Backfill Below Well:	Unimin Filtersil 20
Elevation / Total Depth of Borehole:	/ ~~18~~ 20' BGS

gjd

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm Sherman
PROJECT NUMBER: N0516 CT0132
DRILLING COMPANY: Mineral Eng. Svcs
DRILLING RIG: CME-75

BORING No.: MW-5S
DATE: 09-08-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
		NA	NA		loose		silty sand	SC					
					to				moist				
					very								
	5				loose								
	10					gradational color change							
						to "white beach" sand		SC					
	15												
									wet				
									to saturated				
							Terminated boring						
	20						at ~~18~~ feet BGS						
							to set well						
							20'						
							BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-5S

Tetra Tech NUS, Inc.

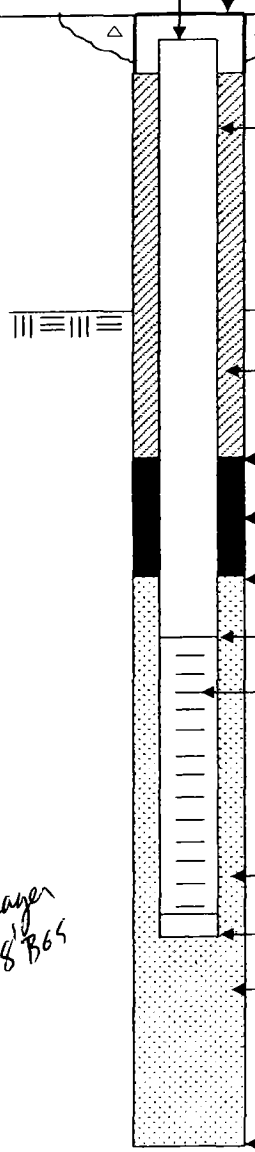
WELL No.: MW-5I

Sperman Field - **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Srvs.	BORING No.:	MW-5I
PROJECT No.:	N0516 CT0132	DRILLER:	Johnny Body	DATE COMPLETED:	09-11-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Part layer ~38' BGS

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	~~8 inch~~ 4'D steel manhole
Type of Surface Seal:	Concrete pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	8 1/4"
Elevation / Depth Top of Rock:	N/A /
Type of Backfill:	Grout
Elevation / Depth of Seal:	/ 30'
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 31.0
Elevation / Depth of Top of Screen:	/ ~~19.0~~ 34.0 BGS
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 5 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 39.0
Elevation / Depth of Bottom of Filter Pack:	/ 40.0
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ 41.0

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-5I
PROJECT NUMBER: N0516 CT0132
DATE: 09-11-00
DRILLING COMPANY: Universal Eng. Svcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME-75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
					loose	Yellowish brown		SL					
		NA	NA		to		silty sand						
					very								
					loose								
	10					gradational color change		SL					
						to "white beach sand"							
									wet to				
									saturated				
	20												
									Surge affect?				
	30								Tried split spoon				
									@ 31' Sand flowed in				
									when knocked out				
									plug at 5'				
					Color change to				Lost circulation				
	40				Dark brown silty sand. Water				when attempted				
					is dark brown - coloring sand				to wash sand out				
		Pushed	No Recovery		41'BGS	Terminated boring			of augers.				
						at 41' BGS			Possible Peat				
						to set well			layer?				

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Problem at TD - attempted split spoon - No Recovery even with catcher. Surge affect pulled sand into augers. Redrilled.

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-5I

Tetra Tech NUS, Inc.

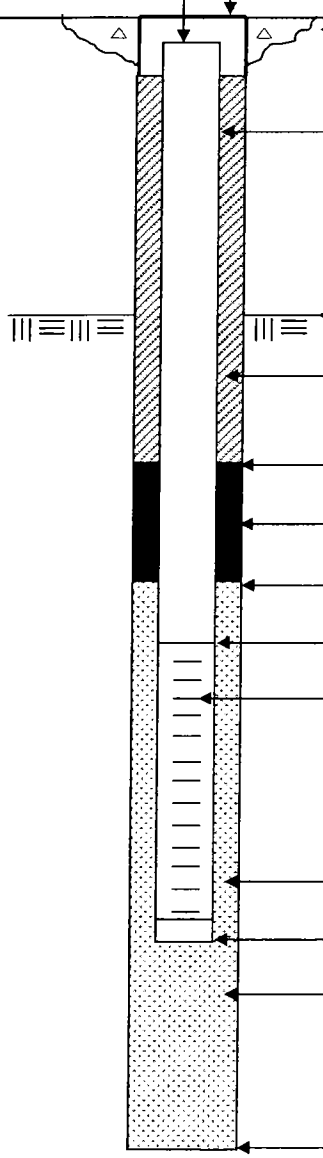
WELL No.: MW-6S

Sherman Field – **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-6S
PROJECT No.:	N0516CT0132	DRILLER:	Johnny Body	DATE COMPLETED:	09-10-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	steel manhole
Type of Surface Seal:	concrete pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	sch 40 PVC
Borehole Diameter:	~8 1/4-inch
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 2.0
Type of Seal:	Baroid Hole Plug 3/8-inch chips.
Elevation / Depth of Top of Filter Pack:	/ 4.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18.0'
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ 18' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-6S
PROJECT NUMBER: N0516 CTO 132
DATE: 09-10-00
DRILLING COMPANY: Universal Eng. Svcs
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME-75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**	
						Yellowish brown			See adj. DPT					
		NA	NA		loose		silty sand	SC	Boring log for					
					to				SB-3 for					
					very				details.					
	5				loose									
									Moist					
	10													
						gradational color change		SC		8				from SB-3
						to "white beach sand"								
	15								Wet					
									to					
									saturated					
										> 5,000				from SB-3
							Terminated boring			to 2,500				
	20						at 29' BGS							
							to set well.							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: Adjacent to DPT location SB-3. Drummed cuttings below 12' BGS.

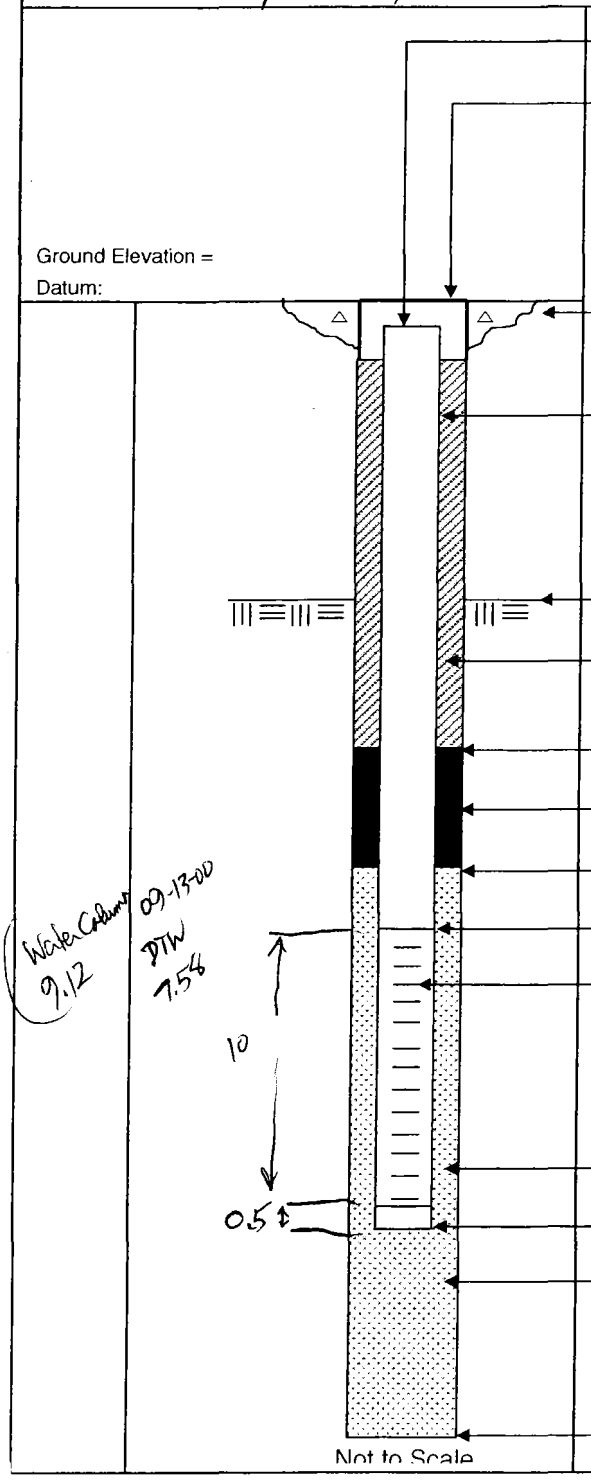
Converted to Well: Yes ✓ No _____ Well I.D. #: MW-6S

Tetra Tech NUS, Inc.

WELL No.: MW 7S

Sherman – **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW7S
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-06-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	



Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Manhole
Type of Surface Seal:	Concrete Pad
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	8 1/4 inch
Elevation / Depth Top of Rock:	NA
Type of Backfill:	Grout
Elevation / Depth of Seal:	12.5' BGS
Type of Seal:	Baroid Hole Plug 3/8" chips
Elevation / Depth of Top of Filter Pack:	14.5
Elevation / Depth of Top of Screen:	~~17.5~~ 6.2 AGD
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40 - 50 lb Bags (8)
Elevation / Depth of Bottom of Screen:	16.7 ~~17.5~~ AGD
Elevation / Depth of Bottom of Filter Pack:	18' BGS
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	20' ~~18'~~ BGS

AGD

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman
PROJECT NUMBER: N0576 - CTO 132
DRILLING COMPANY: Universal Eng. Svcs
DRILLING RIG: CME-75

BORING No.: MW-7S
DATE: 09-08-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
		NA	NA		loose		silty sand	SL					
					to								
					very								
	5				loose								
									moist				
				▼		Gradational color							
						change to							
	10					"white beach" sand			wet				
								SL					
	15												
									Wet to				
									saturated				
							Terminated boring at						
	20						18' BGS to set well						
							20' TD						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-7S

Tetra Tech NUS, Inc.

WELL No.: MW 8S

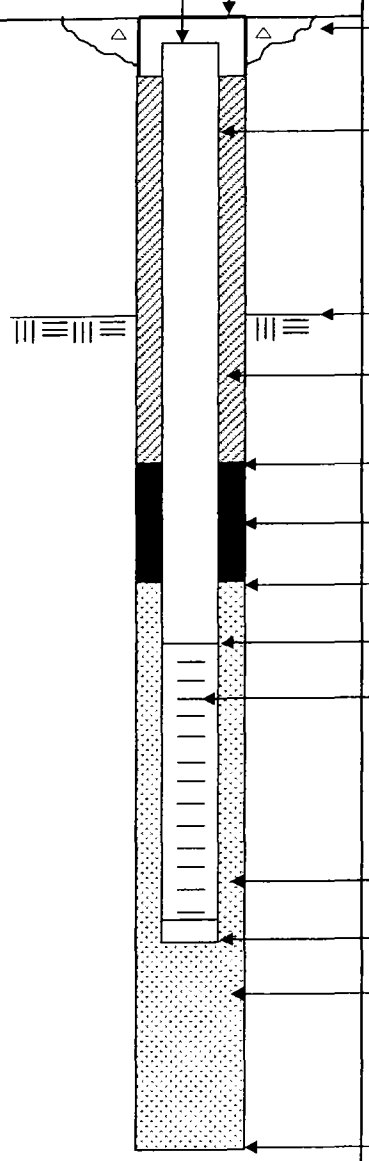
Sherman Field-

MONITORING WELL SHEET

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW 8S
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Baty	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pumped Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	steel manhole
Type of Surface Seal:	concrete pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	sch 40 PVC
Borehole Diameter:	~8 1/4"
Elevation / Depth Top of Rock:	NA
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 2.5
Type of Seal:	Baroid Hole Plug 3/8"-chips
Elevation / Depth of Top of Filter Pack:	/ 4.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ ~~18~~ 20'

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm ~ Sherman Field
PROJECT NUMBER: N0516 CTO 132
DRILLING COMPANY: Universal Eng. Svcs.
DRILLING RIG: CME-75

BORING No.: MW-8S
DATE: 09-09-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown to			See adj.				
		NA	NA		loose		light brown		SB32				
					to								
					very								
	5				loose				Moist				
							Gradational color change						
							to "white beach sand"						
	10												
	15								wet to saturated.				
							Terminated boring						
	20						at ~~18~~ BGS						
							20' to set well						
							Agd						

* When rock coring, enter rock brokeness

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW 8S

Tetra Tech NUS, Inc.

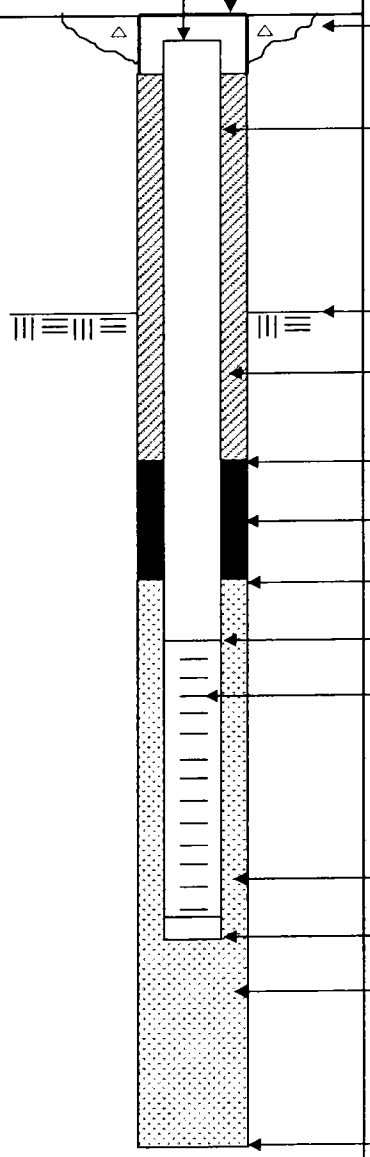
WELL No.: MW-9S

Sherman Field- **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-9S
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-06-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	steel manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~8 1/4"
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 2.5
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 4.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 X 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40 8-50 lb bags
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18.0
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ ~~18~~ 20 BGS ~~48~~

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman
PROJECT NUMBER: N0516 CT0132
DRILLING COMPANY: Universal Eng. Services
DRILLING RIG: CME 75

BORING No.: MW ~~10~~ 9 S
DATE: 09-06-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose			SC	logged				
					to				from				
					very				cuttings				
	5				loose	gradational color change							
						to "white beach" sand							
	10												
								SC					
	15								Wet.				
						Terminated at ~~16~~ 20' BGS to							
	20					get well							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW 10 S

Tetra Tech NUS, Inc.

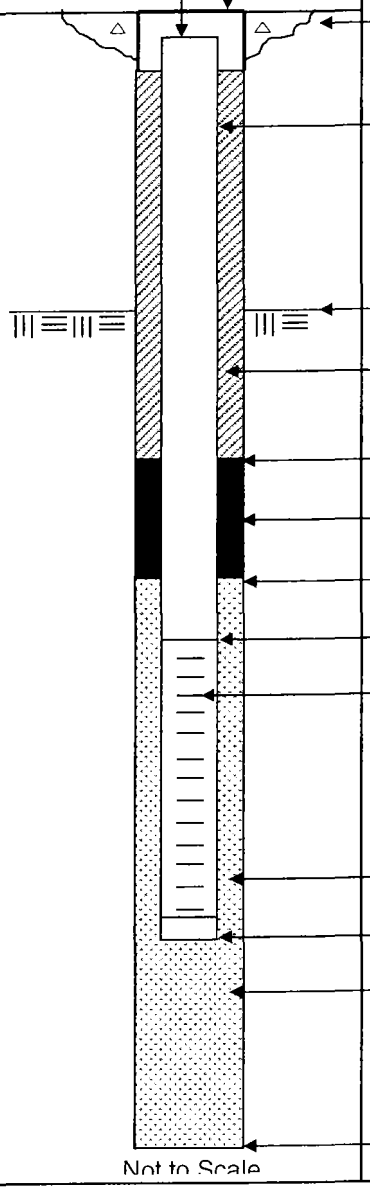
WELL No.: MW-10R

MONITORING WELL SHEET

PROJECT:	Sherman Field Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-10R
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-06-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~8¼-inch
Elevation / Depth Top of Rock:	/ NA
Type of Backfill:	Grout
Elevation / Depth of Seal:	/ 2.5
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 4.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40 ~8-50 lb bags.
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ ~~18'~~ 20 BGS

GJD

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman
BORING No.: MW 10 R
PROJECT NUMBER: N0516 CTO 132
DATE: 09-06-00
DRILLING COMPANY: Universal Engineering Sciences
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME 75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA				Yellowish brown	SC					
					loose		silty sand		fine-grained				
					to								
					very				logged from				
	5				loose		Gradational change		cuttings.				
							to 'white beach sand'						
								SC					
	10												
	15												
									wet				
							Terminated boring						
	20						at ~~18'~~ BGS to set well						
							20' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: 2 1' of water on Rods when removed. Replacement for MW-10 which was dry at ~~12' BGS~~ ~ 1½' stickup - 2' stickup (30 ~ 10' BGS)

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-10R

Tetra Tech NUS, Inc.

WELL No.: MW-115

Sherman Field

MONITORING WELL SHEET

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs.	BORING No.:	MW-115
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Baty	DATE COMPLETED:	09-06-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:

Not to Scale

09-13-00 after cut off

Measurements

Water Column 10.48

DTW = 6.43

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete Pad 2x2
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~8 1/4"
Elevation / Depth Top of Rock:	NA
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 2.5
Type of Seal:	Baroid Hole Plug 3/8 inch chips
Elevation / Depth of Top of Filter Pack:	/ 4.5
Elevation / Depth of Top of Screen:	~~/ 7.5~~ 6.41 AJD
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2 inch
Type of Filter Pack:	Unimin Filter Sil 20/40 ~(8) 50 lb bags.
Elevation / Depth of Bottom of Screen:	16.91 AJD ~~/ 17.5~~
Elevation / Depth of Bottom of Filter Pack:	/ 18.0
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	20 ~~/ 18.0~~ BGS AJD

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm-Sherman
PROJECT NUMBER: N0516 CT0132
DRILLING COMPANY: Universal Eng. Servs.
DRILLING RIG: CME-75

BORING No.: MW 11S
DATE: 09-06-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA		loose	Yellowish brown		SC	Logged from				
					to		silty sand		Cuttings.				
					very								
					loose								
	5					gradational color change							
						to "white beach" sand							
									Wet				
	10												
								SC					
	15								Wet				
									to				
									Saturated				
							Terminated boring						
	20						at 18' BGS						
							to set well						
							20' BGS						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-11S

Tetra Tech NUS, Inc.

WELL No.: MW-12S

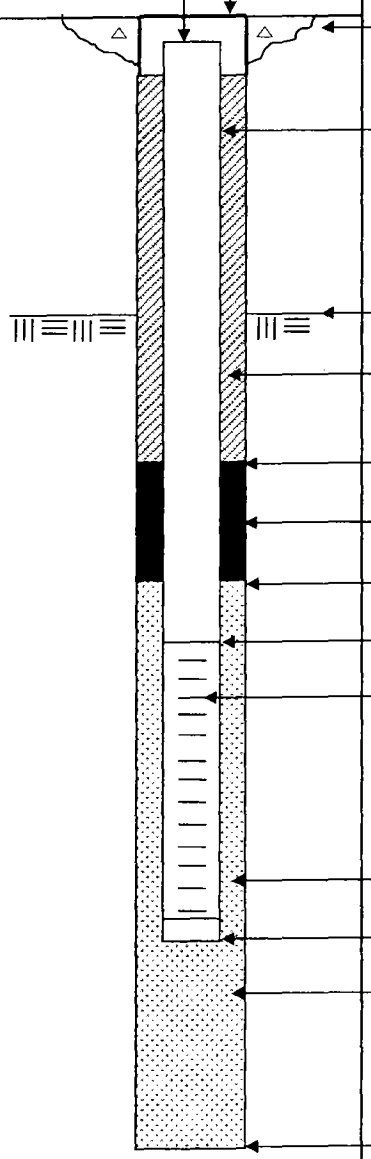
Sherman Field -

MONITORING WELL SHEET

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW12S
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~8¼"
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 2.5
Type of Seal:	Baroid Hole Plug
Elevation / Depth of Top of Filter Pack:	3/8" chips / 4.5
Elevation / Depth of Top of Screen:	/ 7.5'
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 17.5'
Elevation / Depth of Bottom of Filter Pack:	/ 18.0'
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ ~~18.0~~ 20 BGS

AJB

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-12S
PROJECT NUMBER: N0516 CTO132
DATE: 09-09-00
DRILLING COMPANY: Universal Eng. Svcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME 75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
					loose		silty sand	SC					
		NA	NA		to								
					very								
					loose								
	5												
	10												
	15												
							Terminated boring						
	20						at ~~18'~~ BGS to						
							20' set well						
							Bgd						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-12S

Tetra Tech NUS, Inc.

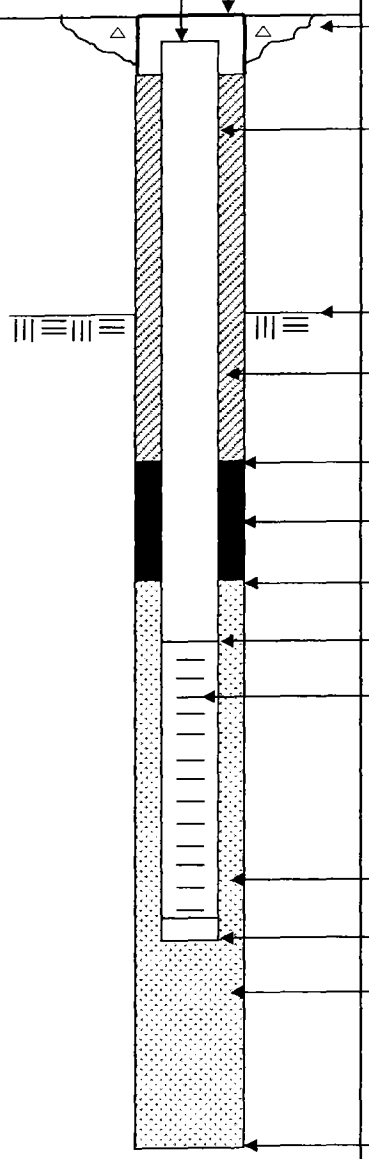
WELL No.: MW-13S

Sherman Field- **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-13S
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	6-inch
Type of Surface Casing:	Steel manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	sch 40 PVC
Borehole Diameter:	28 1/4 inch
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 2.5
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 4.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unamin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18.0
Type of Backfill Below Well:	Unamin Filter Sil
Elevation / Total Depth of Borehole:	/ 18.0' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-13S
PROJECT NUMBER: N0516 CTO 132
DATE: 09-09-00
DRILLING COMPANY: Universal Eng. Svcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME 75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
					loose		silty sand	SL					
		NA	NA		to								
					very								
					loose								
	5												
	10				gradational color change			SL					
						to	"White beach sand"						
									Wet to				
	15												
									saturated				
							Terminated boring						
	20						at 18' BGS						
						20' to set well							
						up							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-13S

Tetra Tech NUS, Inc.

WELL No.: MW-13D

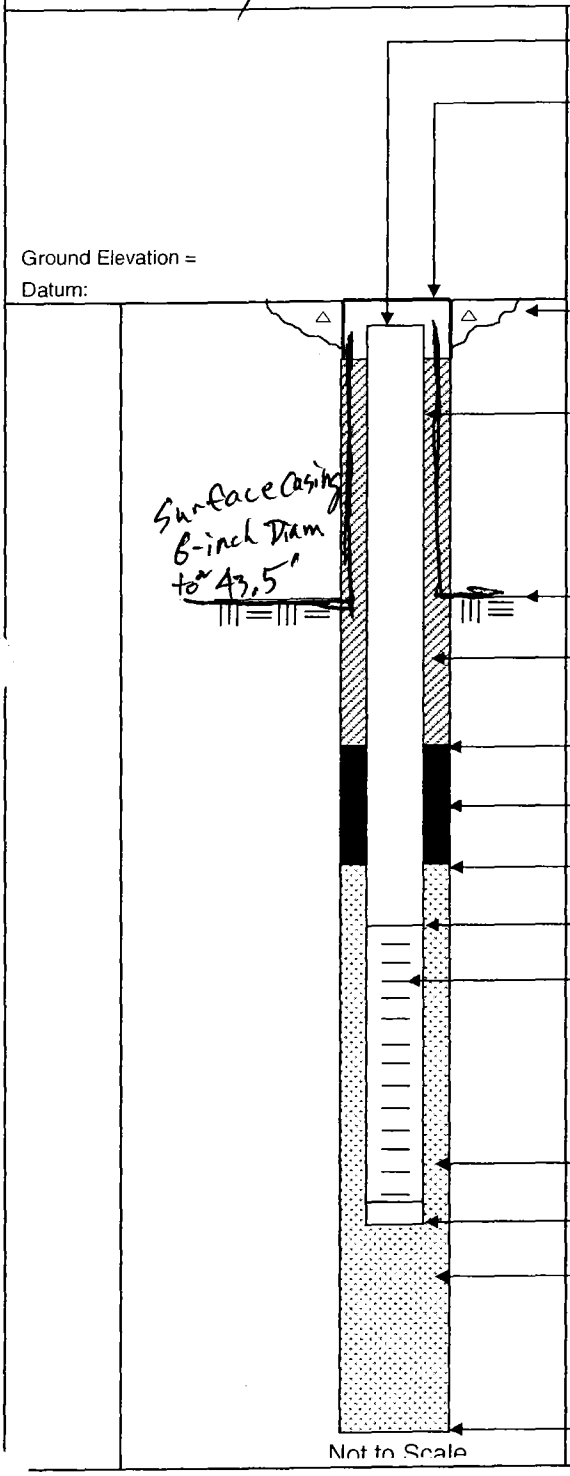
Sherman Field - **MONITORING WELL SHEET**

PROJECT: Former Fuel Farm
PROJECT No.: N0516 CTO 132
SITE: NAS Pensacola
GEOLOGIST: Gary J. Davis

DRILLING Co.: Universal Eng. Svcs
DRILLER: Johnny Body
DRILLING METHOD: Mud-Rotary
DEV. METHOD: Pump & Surge

BORING No.: MW-13D
DATE COMPLETED: 09-13-00
NORTHING:
EASTING:

Ground Elevation =
Datum:



Elevation / Depth of Top of Riser: /

Elevation / Height of Top of Surface Casing: /

I.D. of Surface Casing: 8-inch

Type of Surface Casing: Steel Manhole

Type of Surface Seal: Concrete Pad

I.D. of Riser: 2-inch

Type of Riser: Sch 40 PVC

Borehole Diameter:

Elevation / ~~Depth Top of Rock~~: Bottom of Surface Casing 6-inch ~~N/A~~ / 43.5

Type of Backfill: Grout above bentonite within

Elevation / Depth of Seal: 16.0

Type of Seal: Pure Gold Bentonite Medium chips

Elevation / Depth of Top of Filter Pack: 165

Elevation / Depth of Top of Screen: 169.5'

Type of Screen: Sch 40 PVC

Slot Size x Length: 0.01 x 5 feet

I.D. of Screen: 2-inch

Type of Filter Pack: Unimin Filter Sil 20/40

Elevation / Depth of Bottom of Screen: 174.5

Elevation / Depth of Bottom of Filter Pack: 175'

Type of Backfill Below Well: Unimin Filter Sil

Elevation / Total Depth of Borehole: 175' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
PROJECT NUMBER: N0516 CTO132
DRILLING COMPANY: Universal
DRILLING RIG: CME 75

BORING No.: MW-13D
DATE: 09-10-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		NA	NA	Approx 10" Diam Borehole	loose to very loose	Yellowish brown	Silty sand	SC	Mud-Rotary to set surface casing	NA			
	10								See Adjacent DPT location SB12 for detailed boring log to 28' BGS				
	20												
					gradational color change to "white beach sand"			SC	Sheen of Free Product returning with fluids.				
	30												
	40			Surface Casing Grich			Peat layer at 38' BGS	OL	Water returns from dark brown with tannic acid				
				43.5'			pieces of wood & plant material some charcoal pieces (Could not tell how thick from cutting returns)						
	50			5 7/8" bit			Silty sand below	SC					

Surface Casing grouted 1800 hrs. 09-10-00

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: 6" Surface casing set to 43.5' BGS.

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-13I

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-13D
PROJECT NUMBER: N0516 CN0132
DATE: ~~08~~ 09-13-00
DRILLING COMPANY: Universal Eng. Svcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME 75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	50												
					loose	light brown	silty sand fine-med grained	SC	Logged from cuttings.	NA			
		NA	NA										
	60												
					@65'		peat layer coarse fragments of wood, plant material, clay, silt & sand	OL	at ~65' Returns turned brown with tannic acid				
	70			4 foot of silt	@ 70'		silty sandy clay dark gray with organics	OH	fine to med. sand.				
	80						Terminated boring at 75' BGS to set well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No ____ Well I.D. #: MW-13D

Tetra Tech NUS, Inc.

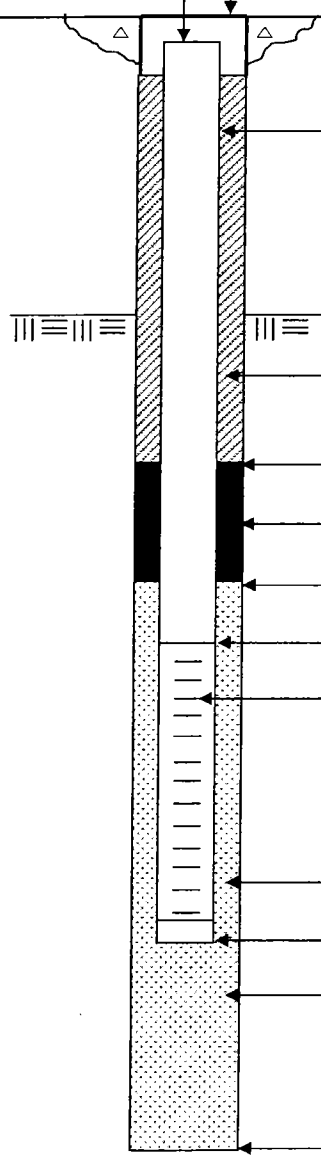
WELL No.: MW-145

Sherman Field **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-145
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-08-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8"
Type of Surface Casing:	steel Manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~8 1/4"
Elevation / Depth Top of Rock:	N/A /
Type of Backfill:	grout
Elevation / Depth of Seal:	12.5' BGS
Type of Seal:	Baroid Hole Plug 3/8" chips
Elevation / Depth of Top of Filter Pack:	14.5
Elevation / Depth of Top of Screen:	17.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	17.5
Elevation / Depth of Bottom of Filter Pack:	18' BGS
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	20 / ~~18'~~ BGS

GJD

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm-Sherman
PROJECT NUMBER: N0516 CTO 132
DRILLING COMPANY: Universal Eng. Svcs
DRILLING RIG: CME 75
BORING No.: MW-14 S
DATE: 09-06-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
					loose		silty sand	SC					
		NA	NA		to				Moist				
					very								
	5				loose								
	10												
	15												
							Terminated at 20'		NP				
	20						boring at ~~15~~ BGS						
							to set well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-14 S

Tetra Tech NUS, Inc.

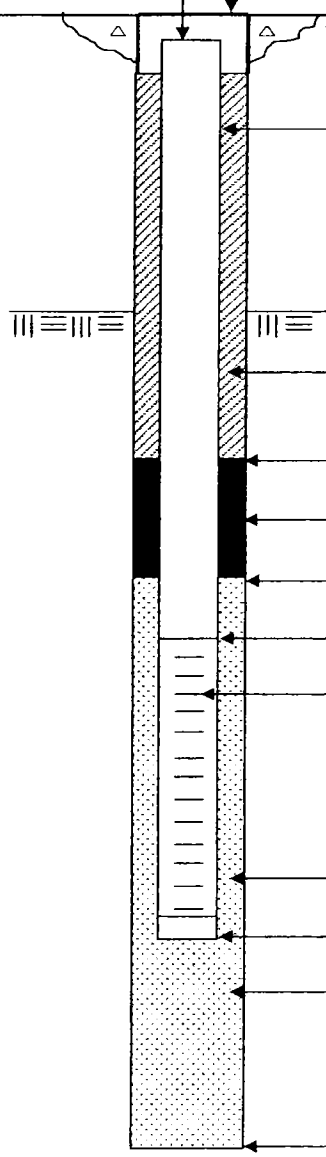
WELL No.: MW-14I

Former Fuel Farm **MONITORING WELL SHEET**

PROJECT:	Sherman Field	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW14I
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-11-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser: /

Elevation / Height of Top of Surface Casing: /

I.D. of Surface Casing: 8-inch

Type of Surface Casing: steel manhole

Type of Surface Seal: concrete pad 2'x2'

I.D. of Riser: 2-inch

Type of Riser: Sch 40 PVC

Borehole Diameter: 8 1/4"

Elevation / Depth Top of Rock: NA

Type of Backfill: grout

Elevation / Depth of Seal: 12.0

Type of Seal: Bentonite Hole Plug 3/8-inch chips

Elevation / Depth of Top of Filter Pack: 31.0

Elevation / Depth of Top of Screen: 34.0

Type of Screen: Sch 40 PVC

Slot Size x Length: 0.01 x 5 feet

I.D. of Screen: 2-inch

Type of Filter Pack: Unimin Filter Sil 20/40

Elevation / Depth of Bottom of Screen: 39.0

Elevation / Depth of Bottom of Filter Pack: 40.0

Type of Backfill Below Well: Unimin Filter Sil

Elevation / Total Depth of Borehole: 40' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm-Sherman Field
BORING No.: MW-14I
PROJECT NUMBER: N0516 CTO132
DATE: 09-11-00
DRILLING COMPANY: Universal Eng. Svcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME-75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
					loose		silty sand	SC					
		NA	NA		to								
					very	gradational color change							
	10				loose		to "white beach sand"						
								SC					
									Wet to				
									saturated				
	20												
	30												
						← Dark Brown	Water coloring						
	40						Sand Brown		(Possible Peat layer)				
							Terminated boring						
							at 40' BGS						
							to set well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-14I

Tetra Tech NUS, Inc.

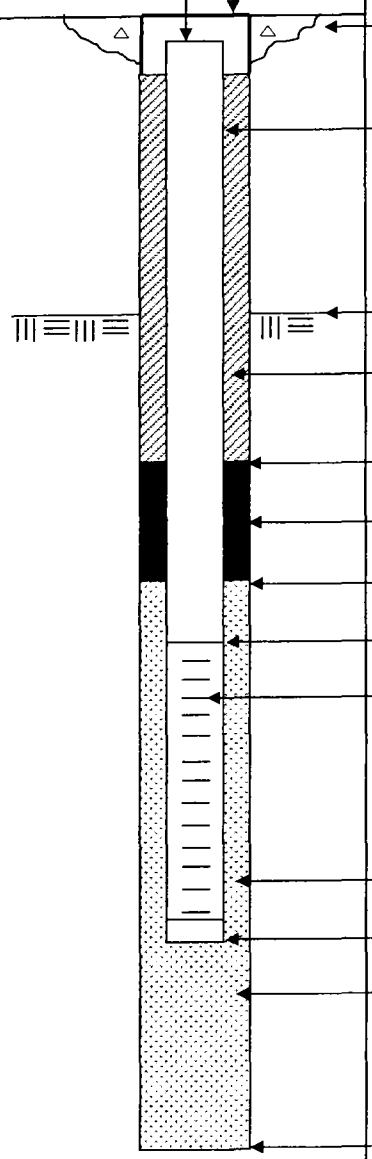
WELL No.: MW-15S

MONITORING WELL SHEET

PROJECT:	Sherman Field - Former Fuel Farm	DRILLING Co.:	Universal Eng Svcs	BORING No.:	MW-15S
PROJECT No.:	N0516CT0132	DRILLER:	Johnny Boyd	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~ 8 1/4"
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	Grout
Elevation / Depth of Seal:	/ 1.5
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 3.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unamin Filter Sil 20/40 sand
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18.0
Type of Backfill Below Well:	Unamin Filter Sil
Elevation / Total Depth of Borehole:	/ ~~18~~ 20' BGS

NA

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
PROJECT NUMBER: N0516 CT0132
DRILLING COMPANY: Universal Eng. Svcs
DRILLING RIG: CME 75

BORING No.: MW-15S
DATE: 09-09-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown		SC					
		NA	NA		loose to very loose		silty sand						
	5								moist				
						Gradational color change to "white" beach sand							
	10							SC					
									wet to saturated				
	15												
	20						Terminated boring at 15' BGS to set well.						
					20'								

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: ~~CME~~ MW-15S

Tetra Tech NUS, Inc.

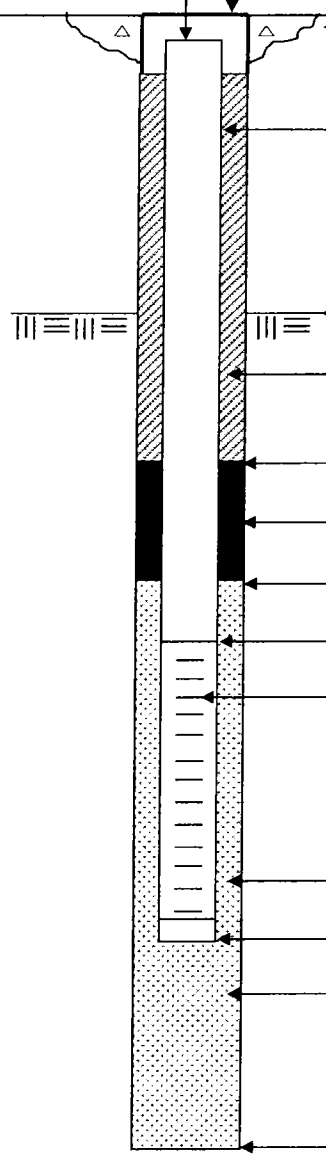
WELL No.: MW-16S

Sherman Field - **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-16S
PROJECT No.:	N0516CT0132	DRILLER:	Johnny Body	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	~~8-inch~~ 2pp steel manhole
Type of Surface Seal:	Concrete pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	18 3/4"
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 1.5
Type of Seal:	Baroid Hole Plug 3/8 inch chips
Elevation / Depth of Top of Filter Pack:	/ 3.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ ~~18~~ 20

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-16S
PROJECT NUMBER: N0516 (TO 132
DATE: 09-09-00
DRILLING COMPANY: Universal Eng. Svcs
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME 75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
		NA	NA		loose		silty sand						
					to			SC					
					very								
	5				loose								
									moist				
							Gradational color change						
							to "white-beach sand"						
	10												
								SC					
	15												
									wet				
									to				
									saturated				
							Terminated boring at						
	20						~~18'~~ 36S to set well						
							20' AJO						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-16S

Tetra Tech NUS, Inc.

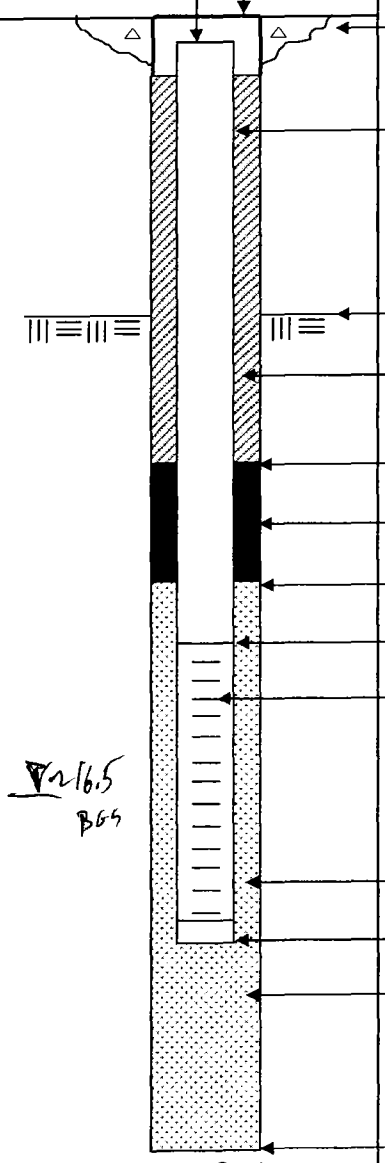
WELL No.: MW-17S

Sherman Field **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW17S
PROJECT No.:	N0516 CTO 132	DRILLER:	Johnny Body	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	ASA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~8 1/4"
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 4.5
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 6.5
Elevation / Depth of Top of Screen:	/ 9.5
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 19.5
Elevation / Depth of Bottom of Filter Pack:	/ 20' BGS
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ 20' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
PROJECT NUMBER: N0516 CT0132
DRILLING COMPANY: Universal Engr. Svcs
DRILLING RIG: CME-75

BORING No.: MW-17S
DATE: 09-09-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						yellowish brown							
					loose		silty sand	SC					
		NA	NA		to				Moist				
					very								
	5				loose								
	10						Gradational color change to white beach sand						
	15												
									wet to saturated				
	20												
							Terminated boring at 20' BGS to set well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Remarks: Elevated ~ 3-4' above road on hill.

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-17S

Tetra Tech NUS, Inc.

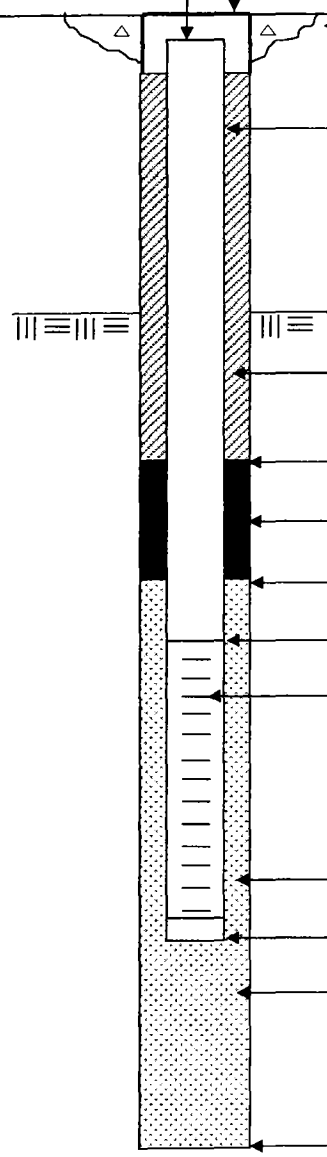
WELL No.: MW-18S

Sherman Field – **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-18S
PROJECT No.:	N0516 GT0132	DRILLER:	Johnny Body	DATE COMPLETED:	09-11-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel manhole
Type of Surface Seal:	Concrete pad 2'X2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~ 8 1/4"
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 1.0
Type of Seal:	Benoid Hole Plug 3/8 inch chips
Elevation / Depth of Top of Filter Pack:	/ 6.0
Elevation / Depth of Top of Screen:	/ 9.0
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 X 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 19.0
Elevation / Depth of Bottom of Filter Pack:	/ 20.0
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ 20' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Fld. BORING No.: MW 18 S
PROJECT NUMBER: N0516 CTO 132 DATE: 09-11-00
DRILLING COMPANY: Universal Eng. Svcs GEOLOGIST: Gary J. Davis
DRILLING RIG: CME-75 DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
					loose		silty sand	SC					
		NA	NA		to								
					very								
	5				loose								
	10												
						gradational color change							
							to "white beach sand"	SP					
								SC	wet to				
	15								saturated				
	20												
							Terminated boring						
							at 20' BGS						
							to set well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW 18 S

Tetra Tech NUS, Inc.

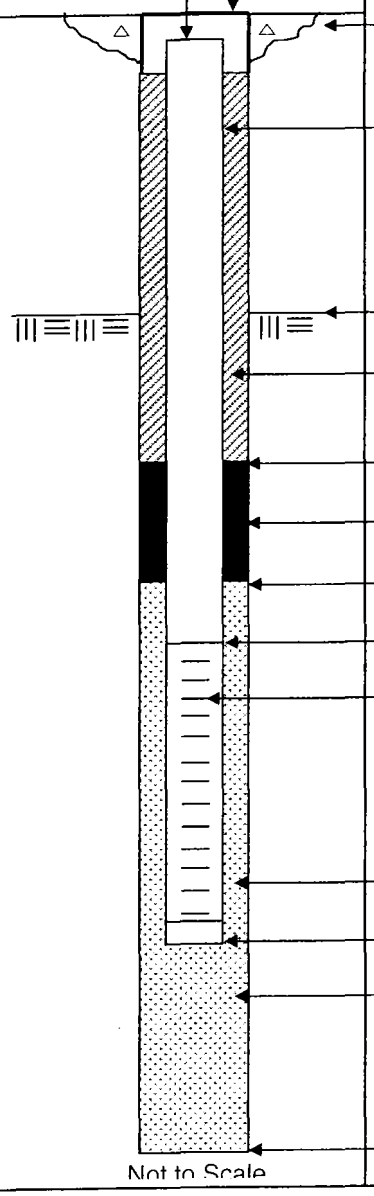
WELL No.: MW-19S

Sherman Field - **MONITORING WELL SHEET**

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng Svcs	BORING No.:	MW-19S
PROJECT No.:	N0516CTO132	DRILLER:	Johnny Body	DATE COMPLETED:	09-11-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel Manhole
Type of Surface Seal:	Concrete Pad 2'x 2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	8 1/4"
Elevation / Depth Top of Rock:	NA
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 1.0
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 6.0
Elevation / Depth of Top of Screen:	/ 9.0
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unamin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 19.0
Elevation / Depth of Bottom of Filter Pack:	/ 20.0' BGS
Type of Backfill Below Well:	Unamin Filter Sil
Elevation / Total Depth of Borehole:	/ 20.0' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Fld.
PROJECT NUMBER: N0516 CT0132
DRILLING COMPANY: Universal Eng. Svcs.
DRILLING RIG: CME-75

BORING No.: MW-19S
DATE: 09-11-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown							
					loose		silty sand	SL					
		NA	NA		to								
					very								
	5				loose								
						Gradational color change							
						to "white beach sand"		SL					
	10												
									wet to				
									saturated				
	15												
							Terminated boring						
	20						at 20' BGS						
						gp	to set Well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-19S

Tetra Tech NUS, Inc.

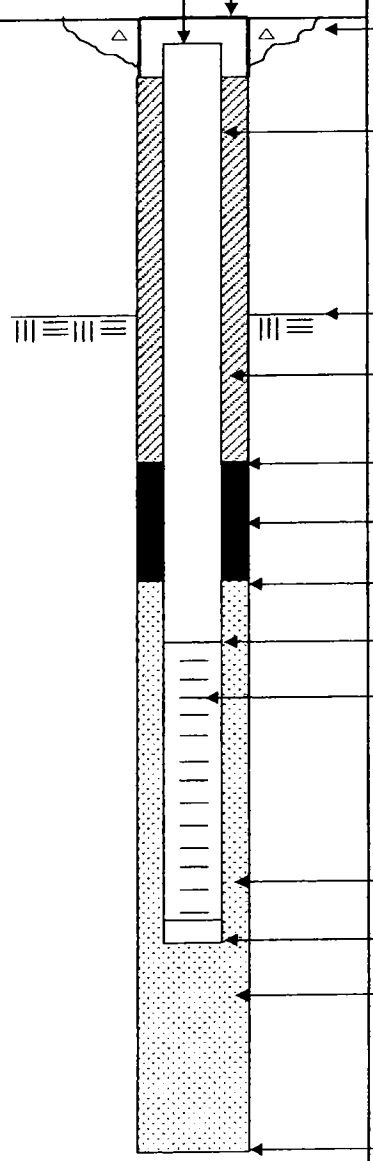
WELL No.: MW-20S

Sherman Field - **MONITORING WELL SHEET**

PROJECT: Former Fuel Farm	DRILLING Co.: Universal Eng. Svcs	BORING No.: MW-20S	
PROJECT No.: N0516 CTO 132	DRILLER: Johnny Body	DATE COMPLETED: 09-11-00	
SITE: NAS Pensacola	DRILLING METHOD: HSA	NORTHING:	
GEOLOGIST: Gary J. Davis	DEV. METHOD: Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel manhole
Type of Surface Seal:	concrete pad 2' x 2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	8 1/4 inch
Elevation / Depth Top of Rock:	N/A /
Type of Backfill:	grout
Elevation / Depth of Seal:	/ 1.0
Type of Seal:	Baroid Hole Plug 3/8-inch chips
Elevation / Depth of Top of Filter Pack:	/ 6.0
Elevation / Depth of Top of Screen:	/ 9.0'
Type of Screen:	Sch 40 PVC
Slot Size x Length:	0.01 x 10 feet
I.D. of Screen:	~~0.01~~ 2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	/ 19.0'
Elevation / Depth of Bottom of Filter Pack:	/ 20.0'
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	/ 20.0' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Fld
PROJECT NUMBER: N0516 CTO 132
DRILLING COMPANY: Universal Eng. Srvcs
DRILLING RIG: CME 75
BORING No.: MW-20S
DATE: 09-11-00
GEOLOGIST: Gary J. Davis
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						yellowish Brown			Hand Augered				
		NA	NA		loose		silty sand	SC	to 10 BGS				
					to								
					very				Dry				
	5				loose								
									Moist				
						gradational color							
						change to "white beach							
	10					sand"							
								SC					
									Wet				
	15								to				
									saturated				
							Terminated boring						
	20						at 20 ft BGS						
						Ready to set well							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No ____ Well I.D. #: MW-20S

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm - Sherman Field
BORING No.: MW-21S
PROJECT NUMBER: N0516 CT0132
DATE: 09-09-00
DRILLING COMPANY: Universal Eng. Svcs.
GEOLOGIST: Gary J. Davis
DRILLING RIG: CME 75
DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						Yellowish brown		SC					
		NA	NA		loose		silty sand						
					to								
					very								
	5				loose		Gradational color change						
							to "white beach" sand		moist				
								SC					
	10												
									wet to saturated				
	15												
							Terminated boring at						
	20						~~18'~~ 36' to set well						
							20'						
							GP						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-21S

Tetra Tech NUS, Inc.

WELL No.: MW21S

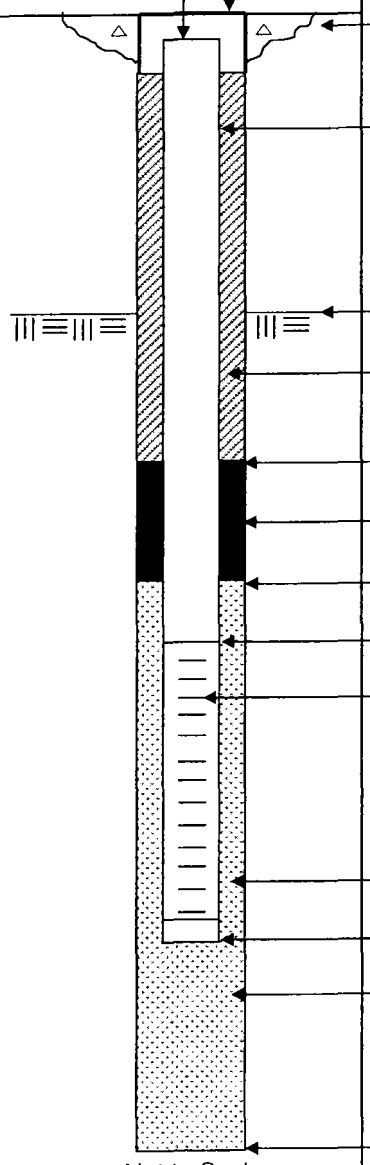
Sherman Field

MONITORING WELL SHEET

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs.	BORING No.:	MW-21S
PROJECT No.:	N0516 CT0132	DRILLER:	Johnny Boyd	DATE COMPLETED:	09-09-00
SITE:	NAS Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8-inch
Type of Surface Casing:	Steel manhole
Type of Surface Seal:	Concrete Pad 2'x2'
I.D. of Riser:	2-inch
Type of Riser:	Sch 40 PVC
Borehole Diameter:	~ 8 1/4 inch
Elevation / Depth Top of Rock:	NA /
Type of Backfill:	Grout
Elevation / Depth of Seal:	/ 1.5
Type of Seal:	Baroid Hole Plug 3/8 inch chips
Elevation / Depth of Top of Filter Pack:	/ 3.5
Elevation / Depth of Top of Screen:	/ 7.5
Type of Screen:	0.01 x 10 feet
Slot Size x Length:	Sch 40 PVC
I.D. of Screen:	2-inch
Type of Filter Pack:	Unamin Filter Sil 20/40 ~8 bags.
Elevation / Depth of Bottom of Screen:	/ 17.5
Elevation / Depth of Bottom of Filter Pack:	/ 18'
Type of Backfill Below Well:	Unamin Filter Sil
Elevation / Total Depth of Borehole:	~~18~~ 20' BGS

Tetra Tech NUS, Inc.

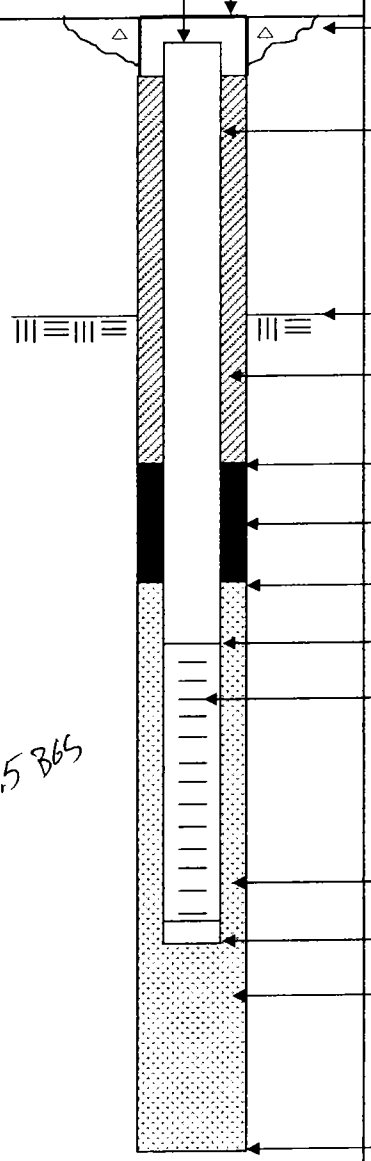
WELL No.: MW-21S

Sherman Field _MONITORING WELL SHEET

PROJECT:	Former Fuel Farm	DRILLING Co.:	Universal Eng. Svcs	BORING No.:	MW-21S
PROJECT No.:	N0516 CT0132	DRILLER:	Johnny Body	DATE COMPLETED:	09-13-00
SITE:	NAS. Pensacola	DRILLING METHOD:	HSA	NORTHING:	
GEOLOGIST:	Gary J. Davis	DEV. METHOD:	Pump & Surge	EASTING:	

Ground Elevation =

Datum:



DTW ~13.5 BGS

Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8 inch
Type of Surface Casing:	Steel manhole
Type of Surface Seal:	concrete pad 2'X2'
I.D. of Riser:	2 inch
Type of Riser:	sch 40 PVC
Borehole Diameter:	~8 1/4"
Elevation / Depth Top of Rock:	N/A /
Type of Backfill:	grout
Elevation / Depth of Seal:	14.0
Type of Seal:	Baroid Hole Plug 3/8 inch chips
Elevation / Depth of Top of Filter Pack:	17.0
Elevation / Depth of Top of Screen:	110.5
Type of Screen:	Sch. 40 PVC
Slot Size x Length:	.001 x 10 feet
I.D. of Screen:	2-inch
Type of Filter Pack:	Unimin Filter Sil 20/40
Elevation / Depth of Bottom of Screen:	120.5
Elevation / Depth of Bottom of Filter Pack:	121.0
Type of Backfill Below Well:	Unimin Filter Sil
Elevation / Total Depth of Borehole:	122.0' BGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Former Fuel Farm-Sherman Fld. BORING No.: MW-22S
PROJECT NUMBER: N0516CT0132 DATE: 09-13-00
DRILLING COMPANY: Universal Eng. Svcs. GEOLOGIST: Gary J. Davis
DRILLING RIG: CME-75 DRILLER: Johnny Body

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						yellowish brown							
		NA	NA		loose		silty sand	SL					
					to								
					very								
	5				loose					0			
	10									0			
							additional color change to "white beach sand"			0			
	15												
	20												
							Terminated boring at 22' BGS to set well						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No _____ Well I.D. #: MW-21S

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-~~Bldg. 1932~~ Former Fuel Farm - Sherman Field
Project No.: CTO ~~140/0547~~ 132 N0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFF-MW35
Sample Location: MW 35
Sampled By: Gary J. Davis
C.O.C. No.:
Type of Sample:
[] Low Concentration
[X] High Concentration

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	SH ~~IBD~~	Time ~~IBD~~ DTW
Date: 11-09-00								
Time: 1345								
Method: Peristaltic	Clear to yellow	5.93	0.234	24.8	2	0.89	0.00	25.57

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	SH ~~IBD~~	Time ~~IBD~~
Date: 11-09-00								
Method: Peristaltic	~1L	5.91	0.254	25.1	5	1.05	0.00	1150
Monitor Reading (ppm): NA		See Low Flow Purge Data Sheet						
Well Casing Diameter & Material	~1.5gal	5.76	0.232	24.5	4	0.85	0.00	1220
Type: 2-inch Sch 40 PVC	~2gal	5.92	0.234	24.9	3	0.81	0.00	1245
Total Well Depth (TD): 29.45	~2.5gal	5.97	0.231	24.8	2	1.80	0.00	1310
Static Water Level (WL): 25.56	~3.5gal	5.93	0.234	24.6	2	0.89	0.00	1340
One Casing Volume (gal/L): 0.7								
Start Purge (hrs): 1145								
End Purge (hrs): 1345								
Total Purge Time (min): 120								
Total Vol. Purged (gal/L): ~3.5gal								

Show odor

FP 25.555

DTW 25.57

25.57 [illegible] pump

25.57

25.57

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40ml VOA	GJD
EDB	$Na_2S_2O_3$	3 - " "	GJD
PAH	Ice	2 - 1L Amber	GJD
TRPH - FL PRO	HCL	2 - " "	GJD
Pb	HNO_3	1 - 500ml Poly	GJD
Sulfide	NaOH	1 - " "	GJD
Anions	Ice	1 - " "	GJD
Methane	HCL	3 - 40ml VOA	GJD

OBSERVATIONS / NOTES:

29.45 - 25.56 = 3.89 ft H_2O x .167 = 0.65 gal = 1 vol.

~~6mg/L~~ 6.2 mg/L Fe^{2+} - with Hach kit

Less than 0.2 mg/L Dissolved Oxygen

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Gary J. Davis

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-Former Fuel Farm-Sherman Field
Project No.: CTO 132 / 0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-4S
Sample Location: Sherman Field
Sampled By: D Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/9/00	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD % Salinity	TBD Time	DTW Feet
Time: 1310								1202	
Method: peristaltic/straw									

PURGE DATA

Date: 11/9/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: peristaltic	initial	5.37	0.090	25.4	8	2.63	0.00	1202	
Monitor Reading (ppm):		See Low Flow Purge Data Sheet							
Well Casing Diameter & Material	1	5.14	0.066	25.3	6	2.31	0.00	1217	24.63
Type: 2" PVC	2	5.15	0.067	25.2	4	2.66	0.00	1233	24.63
Total Well Depth (TD): 29.70	3.5	5.16	0.068	25.4	3	2.55	0.00	1300	24.63
Static Water Level (WL): 24.61	1308	End purge							
One Casing Volume(gal/L): .85									
Start Purge (hrs): 12:00									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL		
EDB	HCL $NA_2S_2O_3$	40ml x 3	
PAH's	Ice	1 liter x 1	
TRPH	HCL	1 liter x 1	
Pb	HNO_3	500ml x 1	
Sulfide	NaOH	500 ml x 1	
Anions	Ice	500 ml x 1	
Methane	HCL	40ml x 3	

OBSERVATIONS / NOTES:

Calibrate Horiba Model U-10, Pine Environmental ID. 951
Cal-solution Lot # 2270

HACH Fe^{2+} = 0.8 mg/l D.O. = 2.6 mg/l

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): D Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: ~~NASP-Bldg. 1932~~ Former Sherman Fuel Farm
Project No.: ~~CTO 149 / 0547~~ N0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-5S
Sample Location: Sherman Field FF
Sampled By: D. Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/6/00	Color	pH	S.C.	Temp.	Turbidity	DO	TBD	TBD	
Time: 0940	Visual	Standard	mS/cm	°C	NTU	mg/l	Salinity	Time	DTW
Method: peristaltic/straw	Very clear	5.49	0.123	24.	-6	~~4.73~~ 3.88	% 0	~~0957~~	

PURGE DATA

Date: 11/6/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: peristaltic	initial	5.31	0.135	24.5	-10	4.73	0.00	0957	11.85
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	1	5.55	0.127	24.2	-10	4.12	0.00	0908	
Type: PVC, 2"	2	5.48	0.124	24.1	-2	4.08	0.00	09:22	11.85
Total Well Depth (TD): 18.60	3	5.49	0.123	24.0	-6	3.80	0.00	0937	11.85
Static Water Level (WL): 11.81	End Development								
One Casing Volume (gal/L): 1.1									
Start Purge (hrs): 0955									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC, 8021B	HCL	40 ml x3	✓
EDB, 504.1		40 ml x3	✓
PAHs, 8310	Ice	1 liter x2	✓
TRPH, FL. PRO	H_2SO_4	1 liter x2	✓
Pb, 7421	HNO_3	1-500ml x1	✓

OBSERVATIONS / NOTES:

08:50 calibrate Horiba Model U-10. Pine Env. # 951
Cal. Solution Lot # 2270 Exp. Dat 6-16-2002.
pH = 4.0 cond = 4.5 Turb = 0

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Daniel Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Former Fuel Farm - Sherman Pkt
Project No.: NASP-~~Bldg. 1932~~ / CTO ~~140/0547~~ 132N0516

Sample ID No.: NASP FFF-MW7S
Sample Location: MW7S
Sampled By: Gary J. Davis
C.O.C. No.:
Type of Sample:
- [x] Low Concentration
- [ ] High Concentration

- [ ] Domestic Well Data
- [x] Monitoring Well Data
- [ ] Other Well Type:
- [ ] QA Sample Type:

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	~~SAL TBD~~	~~DTW TBD~~
Date: 11-06-00								
Time: 1000								
Method: Peristaltic	Clear	5.24	0.099	23.8	7	2.45	0.00	8.99

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	~~SAL TBD~~	~~TIME TBD~~	DTW
Date: 11-06-00									
Method: Peristaltic	2L	4.89	0.153	23.4	56	3.05	0.00	0905	8.98
Monitor Reading (ppm): 0		~~See Low Flow Purge Data Sheet~~							slowed to 100ml/min
Well Casing Diameter & Material	~4gal	5.24	0.096	23.4	6	2.70	0.00	0915	8.98
Type: 2-inch sch 40 PVC	~1.5gal	5.22	0.097	23.8	9	2.45	0.00	0930	8.98
Total Well Depth (TD): 16.70	~3gal	5.24	0.099	23.8	7	2.45	0.00	1000	8.99
Static Water Level (WL): 8.98									
One Casing Volume(gal/L): ~1.3									
Start Purge (hrs): 0900									
End Purge (hrs): 1000									
Total Purge Time (min): 60 min									
Total Vol. Purged (gal/L): ~3gal									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40ml glass vial	GJD
EDB	$Na_2S_2O_3$	3 - " "	GJD
PAH	Ice	2 - 1L Amber glass	GJD
TRPH - FL PRO	H_2SO_4	2 1L " "	GJD
Pb	HNO_3	1 500ml poly	GJD

OBSERVATIONS / NOTES:

16.70 - 8.98 = 7.72 ft H_2O x .167 = 1.29 gal

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Gary J. Davis

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP ~~Bldg. 1932~~ Former Fuel Farm, Sherman Fld
Project No.: CTO ~~1407/0347~~ 132 N0516

Sample ID No.: NASPFFF-MW8S
Sample Location: MW-8S
Sampled By: Mary J. Davis
C.O.C. No.:
Type of Sample:
[x] Low Concentration
[ ] High Concentration

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	~~SAL~~ TBD	~~DTW~~ TBD
Date: 11-05-00								
Time: 1500								
Method: Peristaltic	Clear	5.82	0.178	25.2	2	0.30	0.00	12.37

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	~~SAL~~ TBD	~~TIME~~ TBD	
Date: 11-05-00									DTW
Method: Peristaltic	~2L	5.83	0.182	25.6	2	0.48	0.00	1410	12.37
Monitor Reading (ppm): 0	See Low Flow Purge Data Sheet								
Well Casing Diameter & Material	~1.5gal	5.83	0.178	25.5	2	0.30	0.00	1430	12.37
Type: 2inch sch 40 PVC	~2gal	5.82	0.178	25.2	2	0.30	0.00	1445	12.37
Total Well Depth (TD): 18.27									
Static Water Level (WL): 12.36									
One Casing Volume(gal/L): ~1gal									
Start Purge (hrs): 1400									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40ml VOA	MJD
EDB 504.1	Na2S2O3	3 - 40ml VOA	MJD
PAH	Ice	2 1L Amber	MJD
TRPH - FL PRO	H2SO4	2 1L Amber	MJD
Pb	HNO3	1 500ml Poly	MJD

OBSERVATIONS / NOTES:

18.27 - 12.36 = 5.91 ~~ft~~ ft H2O x .167 = .99

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Mary J. Davis

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-Former Fuel Farm-Sherman Field
Project No.: CTO 132 / 0516

[] Domestic Well Data
[] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-9S
Sample Location: Sherman Field
Sampled By: D. Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD % Salinity	TBD Time	DTW
Date: 11/15/00									
Time: 1630									
Method: peristaltic/straw									

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Date: 11/15/00									9.88
Method: peristaltic	initial	6.12	0.103	24.8	18	3.70	0.00	1538	
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	1/2	5.97	0.100	25.0	11	3.50	0.00	1545	
Type: 2 = PVC	1	5.97	0.099	25.0	5	3.50	0.00		
Total Well Depth (TD): 16.65	2	5.89	0.095	25.1	0	3.27	0.00		9.88
Static Water Level (WL): 8.78	3	5.77	0.097	25.1	1	3.49	0.00		
One Casing Volume (gal/L): 1.25		End purge							
Start Purge (hrs): ~~1535~~ 1535									
End Purge (hrs): 1627									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	40ml x 3	✓
EDB	$Na_2S_2O_3$	40ml x 3	✓
Methane	HCL	40ml x 3	✓
PAH's	Ice	1 liter x 2	✓
TRPH	HCL	1 liter x 2	✓
Pb	HNO_3	500ml x 1	✓
Sulfide	NaOH ZnAc	500ml x 1	✓
Anions	Ice	500ml x 1	✓
HACH Results	Fe^{2+} = <0.2	D.O. = 3.7 mg/l	

OBSERVATIONS / NOTES:

Use Horiba Model U-10 From Pine Environmental #00954
Cal-Solution Lot # 2200 From Pine Env

Circle if Applicable:

MS/MSD N/A

Duplicate ID No.: N/A

Signature(s): Dan Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP ~~Bldg. 1932~~ Former Fuel Farm Sherman FH
Project No.: CTO ~~140/0547~~ 132 N0516

[] Domestic Well Data
[✓] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASP FFF-MW 10R
Sample Location: MW 10 R
Sampled By: Gary J Davis
C.O.C. No.:
Type of Sample:
[✓] Low Concentration
[] High Concentration

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD	TBD
Date: 11-06-00								
Time: 1215								
Method: Peristaltic	Clear							

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	~~TBD~~	~~TBD~~	DTW
Date: 11-06-00									
Method: Peristaltic	~1L	5.69	0.233	24.7	337	1.45	0.00	1110	9.32
Monitor Reading (ppm): 0		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	~1 gal	5.60	0.188	23.9	4	3.07	0.00	1130	9.32
Type: 2-inch Sch 40 PVC	~2 gal	5.63	0.178	23.8	1	3.18	0.00	1155	9.32
Total Well Depth (TD): 18.50	~2.5 gal	5.74	0.179	23.6	0	3.22	0.00	1215	
Static Water Level (WL): 9.31									
One Casing Volume(gal/L): ~1.5 gal									
Start Purge (hrs): 1110									
End Purge (hrs): 1215									
Total Purge Time (min): 65									
Total Vol. Purged (gal/L): ~25-30 gal									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40ml glass vials	
EDB	$Na_2S_2O_3$	3 - " " "	
PAH	Ice	2 - 1L Amber Glass	
TRPH-FL PRO	H_2SO_4	2 - " " "	
Pb	HNO_3	1 - 500ml poly	

OBSERVATIONS / NOTES:

14.50 - 9.31 = 9.19 ft H_2O x .167 = 1.53

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Gary J. Davis

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-Former Fuel Farm-Sherman Field
Project No.: CTO 132 / 0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-11S
Sample Location: Sherman Field
Sampled By: D. Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD % Salinity	TBD Time	DTW
Date: 11/15/00									
Time: 1459									
Method: peristaltic/straw									

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Date: 11/15/00									
Method: peristaltic	initial	5.39	0.104	22.4	120	3.48	0.00	1203	7.70
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~						~~1245~~	
Well Casing Diameter & Material	1	5.33	0.080	22.5	3	3.73	0.00	1245	7.69
Type: 2" PVC	2	5.35	0.081	22.5	3	3.59	0.00	1510	7.69
Total Well Depth (TD): 16.50	3	5.37	.082	22.4	3	3.75	0.00	1447	7.69
Static Water Level (WL): 7.69	End purge								
One Casing Volume (gal/L): ~~16.50~~ 1.5									
Start Purge (hrs): 1300									
End Purge (hrs): 1445									
Total Purge Time (min): 105									
Total Vol. Purged (Gal/L): 4.5									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	40 ml x 3	✓
EDB	$Na_2S_2O_3$	40 ml x 3	✓
methane	HCL	40 ml x 3	✓
PAH'S	Ice	1 liter x 2	✓
TRPH	HCL	1 liter x 2	✓
Pb	HNO_3	500 ml x 1	✓
Sulfide	ZnAC NaOH	" "	✓
Anions	Ice	" "	✓
HACH results	Fe^{2+} = 28 mg/l	D.O. = ~~6.4~~ 3.2 mg/l	

OBSERVATIONS / NOTES:

- Flow Rate ≤ 100 ml/min due to High Turbidity.
- Use Horiba Model U-10 from Pine Environmental # 00951
- Cal-Solution Lot # 2270, calibrate @ 1255

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s): Dan Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-Former Fuel Farm-Sherman Field
Project No.: CTO 132 / 0516

[] Domestic Well Data
[✓] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-12S
Sample Location: Sherman Field
Sampled By: D. Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLE INDICATOR

Date: 11/16/00	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD % Salinity	TBD Time	DTW
Time: 1000									
Method: peristaltic/straw	V. Clear	5.97	0.305	25.4	0	1.26	0.01		

PURGE DATA

Date: 11/16/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: peristaltic	Initial	5.86	0.316	23.7	15	0.91	0.01		
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	1	5.96	0.313	25.2	1	0.65	0.01	900	14.61
Type: 2" PVC	2	5.95	0.307	25.5	0	0.92	0.01	930	14.61
Total Well Depth (TD): 19.70	3	5.97	0.305	25.4	0	1.26	0.01	957	14.61
Static Water Level (WL): 14.60	End purge								
One Casing Volume(gal/L): .85									
Start Purge (hrs): 0830									
End Purge (hrs): 0957									
Total Purge Time (min): 117									
Total Vol. Purged (gal/L): 3									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	40ml x 3	✓
EDB	$Na_2S_2O_3$	40ml x 3	✓
Pb	HNO_3	500ml x1	✓
PAH's	Ice	1 liter x2	✓
TRPH	HCL	1 liter x2	✓
Sulfide	ZnAC NaOH	500ml x1	✓
Anions	Ice	500ml x1	✓
Methane	HCL	40ml x 3	✓
HACH Results	Fe^{2+} = 6.2 mg/l	D.O. = <0.2	

OBSERVATIONS / NOTES:

Calibrate Horiba Model U-10 @ 0830 from ~~Fine Environ.~~
I.D.# 00954, Cal-Solution Lot # 2200
collect Equip. Blk. (NASPFFEQB-2) @ 0800

☆ Sheen

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
N/A	NASPFF~~#~~DUP-3	D. Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: ~~NASP Bldg. 1932~~ Sherman Fuel Farm
Project No.: CTO 140 / 0547 NO516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-13S
Sample Location: Sherman Fuel Farm
Sampled By: Dr Hartnett
C.O.C. No.: 27734
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/7/00	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD % Salinity	TBD Time	DTW
Time: 1035									
Method: peristaltic/straw	V. Clear			26.					

PURGE DATA

Date: 11/7/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: peristaltic	Initial	5.10	0.179	26.2	0	1.26	0.00	—	
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	1	5.15	0.174	26.2	0	1.24	0.00	1012	16.99
Type: 2" PVC	2	5.23	0.170	26.3	0	1.58	0.00	1023	16.99
Total Well Depth (TD): 18.80	3	5.22	0.168	26.4	0	1.18	0.00	1034	16.99
Static Water Level (WL): 16.97	End	~~Develop~~		purge					
One Casing Volume (gal/L): 0.3									
Start Purge (hrs): 10:10									
End Purge (hrs): 10:34									
Total Purge Time (min): 24									
Total Vol. Purged (gal/L): ~1.0									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	40ml X 3	✓
EDB	$Na_2S_2O_3$	" "	✓
PAHS	Ice	1 liter x 2	✓
TRPH	H_2SO_4	" "	✓
Pb	HNO_3	500ml X 1	✓

OBSERVATIONS / NOTES:

Collect Equipment Blank prior to this well.
1010 calibrate Horiba Model U-10 from Pine Environmental.
Cal solution Lot # 2270 Exp. 6/16/2002

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Dan Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-Former Fuel Farm-Sherman Field
Project No.: CTO 132 / 0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASP FF MW-14S
Sample Location: Sherman Field
Sampled By: Dan Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/16/00	Color	pH	S.C.	Temp.	Turbidity	DO	TBD	TBD	
Time: 1300	Visual	Standard	mS/cm	°C	NTU	mg/l	% Salinity	Time	DTW
Method: peristaltic/straw	V. Clear	6.21	0.127	23.4	0	6.03	0.00		

PURGE DATA

Date: 11/16/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: peristaltic	initial	6.27	0.132	22.5	0	6.47	0.00	1157	11.97
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~					0.00	~~#~~ 1220	
Well Casing Diameter & Material	1	6.24	0.127	23.4	0	6.63	0.00	~~1230~~	11.97
Type: 2" PVC	2	6.20	0.127	23.4	1	5.98	0.00	~~1257~~	
Total Well Depth (TD): 18.25	3	6.21	0.127	23.4	0	6.03	0.00	1:57	11.97
Static Water Level (WL): 11.96	End purge								
One Casing Volume (gal/L): 1.0									
Start Purge (hrs): 1155									
End Purge (hrs): 1157									
Total Purge Time (min): 62									
Total Vol. Purged (gal/L): 3									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 x 40ml	✓
EDB		3 x 40ml	✓
Methane	HCL	3 x 40ml	✓
PAH's	Ice	2 x 1 liter	✓
TRPH	HCL	2 x 1 liter	✓
Pb	HNO3	1 x 500ml x 1	✓
Sulfide		1 x 500ml x 1	✓
Anions	Ice	1 x 500ml x 1	✓
HACH results	Fe^{2+} = 0mg/l	D.O. = 7.0mg/l	

OBSERVATIONS / NOTES:

- Use Horiba, Model U-10, calibrated this morning @ 08:30
- Pine Environmental I.D. # 00954
- Cal solution Lot # 2200

Circle if Applicable:

MS/MSD ✓ Duplicate ID No.: N/A

Signature(s): Dan Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Former Fuel Farm Sherman FB
Project No.: NASP-~~Bldg. 1032~~ / CTO ~~148/0547~~ 132 N0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFF-MW15S
Sample Location: MW-15S
Sampled By: Gary J. Davis
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	~~SAL~~ TBD	~~TBD~~ DTW
Date: 11-07-00								
Time: 1100								
Method: Peristaltic	clear	6.65	0.224	26.0	0	3.13	0.00	11.27

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	~~SAL~~ TBD	~~Time~~ TBD	DTW
Date: 11-07-00									
Method: Peristaltic	~1L	6.28	0.248	25.8	0	3.83	0.00	0920	11.27
Monitor Reading (ppm): 0		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	~1.5gal	6.65	0.224	25.8	0	3.50	0.00	0950	11.27
Type: 2 inch Sch 40 PVC	~2.5gal	6.64	0.225	25.8	0	3.15	0.00	1025	11.27
Total Well Depth (TD): 18.20	~3gal	6.65	0.224	26.0	0	3.13	0.00	1055	11.27
Static Water Level (WL): 11.27									
One Casing Volume(gal/L): ~1.2gal									
Start Purge (hrs): 0915									
End Purge (hrs): 1055									
Total Purge Time (min): 100min									
Total Vol. Purged (gal/L): ~3gal									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40ml VOA	
EDB	$Na_2S_2O_3$	3 - " "	
PAH	Ice	2 - 1L Amber	
TRPH-FL Pro	H_2SO_4	2 - "	
Pb	HNO_3	1 - ~~1-50~~ 500ml Poly	

OBSERVATIONS / NOTES:

18.20 - 11.27 = 6.93 ft H2O x .167 = 1.16 gal

Circle if Applicable:

MS/MSD | Duplicate ID No.: NASPFFF-DUPE2

Signature(s): Gary J. Davis

TETRA TECH NUS, INC. **LOW FLOW PURGE DATA SHEET**

PROJECT SITE NAME: NAS PENSACOLA
PROJECT NUMBER: N0516
Begin 0745

DTW = 12.69
TD = 18.10
1 Volumn = .90

WELL ID.: NASPFFMW-16S
DATE: 11/8/00

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Sal. (%)	Comments
0748	12 ~~13~~.71	300/min	5.60	0.180	8	0.78	25.2	0.00	Very Clear
0808	0~~1~~3 12.70	"	5.62	0.173	7	0.34	25.3	0.00	Very Clear
0827	12.70	300/min	5.65	0.173	11	0.28	25.3	0.00	Drop FlRate to 100/min
0842	12.70	100/min	5.61	0.179	8	0.39	25.5	0.00	Very Clear
0904	12.70	" "	5.61	0.176	6	0.26	25.6	0.00	" "
	End purge								

HACH

Fe^{2+} = 0.6 mg/l

D.O. = <0.20 mg/l

SIGNATURE(S) [signature]

PAGE___OF___

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Former Fuel Farm
NASP-~~Bldg. 1932~~ Sherman Fld.
Project No.: CTO ~~140/0547~~ 132 N0516

[] Domestic Well Data
[✓] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASP FFF-MW175
Sample Location: MW-175
Sampled By: Gary J. Davis
C.O.C. No.:
Type of Sample:
[✓] Low Concentration
[] High Concentration

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	~~Gal TBD~~	~~Time TBD~~ DTW
Date: 11-06-00								
Time: 1700								
Method: Peristaltic	Cloudy	6.49	0.167	24.2	25	2.76	0.00	16.17

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	~~Gal TBD~~	~~Time TBD~~	DTW
Date: 11-06-00									
Method: Peristaltic	~1L	6.33	0.190	24.9	9	5.06	0.00	~~1755~~	16.17
Monitor Reading (ppm): 0	~~See Low Flow Purge Data Sheet~~							1455	
Well Casing Diameter & Material	~1gal	6.49	0.172	24.7	18	3.67	0.00	1515 ~~1815~~	16.17
Type: 2 inch Sch 40 PVC	~1.5gal	6.53	0.169	24.6	22	2.92	0.00	1530	
Total Well Depth (TD): 19.40	~2gal	6.56	0.173	24.3	21	3.00	0.00	1600	16.16
Static Water Level (WL): 16.15	~2.5	6.49	0.167	24.2	25	3.12	0.00	1630	16.17 pump stop
One Casing Volume(gal/L): ~.5gal	~3gal	6.49	0.167	24.2	25	2.76	~~0.00~~	1700	16.17
Start Purge (hrs): 1445									
End Purge (hrs): 1700									
Total Purge Time (min): 135									
Total Vol. Purged (gal/L): ~3.5gal.									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40ml glass vials	✓
EDB	$Na_2S_2O_3$	3 - " " "	✓
PAH	Ice	2 - 1L Amber glass	✓
TRPH-FL PRO	H_2SO_4	2 " " "	✓
Pb	HNO_3	1 500ml poly	✓

OBSERVATIONS / NOTES:

19.40 - 16.15 = 3.25 ft H_2O x .167 = .54 gal

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Gary J. Davis

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: ~~NASP Bldg. 1932~~ Sherman Field
Project No.: ~~CTO 140 / 0547~~ No 516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFF MW-18 5
Sample Location: Sherman Fuel Farm
Sampled By: D Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/5/00	Color	pH	S.C.	Temp.	Turbidity	DO	TBD	TBD	
Time: 10:30	Visual	Standard	mS/cm	°C	NTU	mg/l	Salinity	Time	DTW
Method: peristaltic/straw	Very Clear	5.42	0.098	25.7	-4	4.84	%	10:30	

PURGE DATA

Date: 11/5/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: Peristaltic	Initial	5.13	0.098	25.1	2	4.87	0.00	0932	
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	1	5.42	0.093	25.7	-4	5.12	0.00	0950	13.60
Type: 2" PVC	2	5.42	0.093	25.8	-4	4.76	0.00	1010	13.60
Total Well Depth (TD): 19.55	3	5.42	0.092	25.7	-4	4.84	0.00	1028	13.60
Static Water Level (WL): 13.59	End	purge							
One Casing Volume (gal/L): 1.0									
Start Purge (hrs): 09:30									
End Purge (hrs): 10:28									
Total Purge Time (min): 55									
Total Vol. Purged (gal/L): 3.0									

SAMPLE COLLECTION INFORMATION

Analysis		Preservative	Container Requirements	Collected
VOC	8021B	HCL	40ml x3	✓
EDB	504.1	$Na_2S_2O_3$	" "	✓
PAH'S	8310	Ice	1 liter x2	✓
TRPH	FL, PRO	H_2SO_4	" "	✓
Pb	7421	HNO_3	1500ml pl. x1	✓

OBSERVATIONS / NOTES:

Calibrate Horiba from Pine Env. # 951 09:20
cal sol. Lot # 2270

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Daniel Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP ~~Bldg. 1932~~ Former Fuel Farm Sherman Fld.
Project No.: ~~CTO 140/0547~~ CTO 132 N0516

Sample ID No.: NASPFFF-MW-19S
Sample Location: MW-19S
Sampled By: Harry J. Davis
C.O.C. No.:
Type of Sample:
- [x] Low Concentration
- [ ] High Concentration

- [ ] Domestic Well Data
- [x] Monitoring Well Data
- [ ] Other Well Type:
- [ ] QA Sample Type:

SAMPLING DATA

Date: 11-05-00	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	~~SALIBD~~	~~TBD~~ DTW
Time: 1100								
Method: Peristaltic	Clear	5.28	0.109	25.3	0	5.44	0.00	16.87

PURGE DATA

Date: 11-05-00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	~~SALIBD~~	~~Time IBD~~	DTW
Method: Peristaltic	~1L	5.25	0.144	24.5	10	4.65	0.00	1000	16.86
Monitor Reading (ppm): 0	~~See Low Flow Purge Data Sheet~~						~~0.00~~		
Well Casing Diameter & Material	~1.5gal	5.32	0.111	25.0	0	5.44	0.00	1025	16.87
Type: 2 inch Sch 40 PVC	~2gal	5.32	0.109	25.4	1	5.43	0.00	1045	~~1075~~ ~~0.00~~ 16.87
Total Well Depth (TD): 19.20	~3gal	5.28	0.109	25.3	0	5.44	0.00	1100	
Static Water Level (WL): 16.85									
One Casing Volume(gal/L): ~.4									
Start Purge (hrs): 0955	0955								
End Purge (hrs): 1100									
Total Purge Time (min): 65									
Total Vol. Purged (gal/L): ~3.5gal									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC 8021B	HCL	3 - 40ml VOAs	
EDB 504.1	~~Ice~~ $Na_2S_2O_3$	3 - 40ml VOAs	
PAH	Ice	2 - 1L Amber	
TRPH - FL PRO	H_2SO_4	2 - 1L Amber	
Pb	HNO_3	1 - 500ml poly	

OBSERVATIONS / NOTES:

19.20 - 16.85 = 2.35 ft H_2O × .167 = .39

Pumping @ 100ml/min

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Harry J. Davis

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: ~~NASP-Bldg. 1932~~ Sherman Field
Project No.: ~~CTO 140 / 0547~~

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-20S
Sample Location: Sherman F.F.
Sampled By:
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/5/00	Color	pH	S.C.	Temp.	Turbidity	DO	TBD	TBD	
Time: 1140	Visual	Standard	mS/cm	°C	NTU	mg/l	Salinity	Time	DTW
Method: peristaltic/Strau	Very Clear	5.90	0.157	26.2	-4	4.37	%	1140	-

PURGE DATA

Date: 11/5/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: peristaltic	initial	5.84	0.166	26.0	1	4.70	0.00	11:03	17.17
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	1	5.90	0.158	26.3	-4	4.67	0.00	1110	17.17
Type: 2= PVC	2	5.90	0.158	26.3	-4	4.44	0.00	1120	
Total Well Depth (TD): 19.40	3	5.90	0.157	26.2	-4	4.37	0.00	1130	17.17
Static Water Level (WL): 17.16									
One Casing Volume(gal/L): .4									
Start Purge (hrs): 11:00									
End Purge (hrs): 11:30									
Total Purge Time (min): 30									
Total Vol. Purged (gal/L): 1.5									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC, 8021B	HCL	40ml x 3	✓
EDB, 504.1	~~Ice~~ $Na_2S_2O_3$	" "	✓
PAH's, 8310	Ice	1 liter x 2	✓
TRPH, FL.PRO	H_2SO_4	" "	✓
Pb, 7421	HNO_3	500ml x 1	✓

OBSERVATIONS / NOTES:

Use Horiba Model U-10 Pine I.D. # 951
Cal Solution Lot # 2270 calibrated today @ 0920

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Daniel Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-Former Fuel Farm-Sherman Field
Project No.: CTO 132 / 0516

[] Domestic Well Data
[x] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-21S
Sample Location: Sherman Field
Sampled By: D. Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/15/00	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD % Salinity	TBD Time
Time: 1205								
Method: peristaltic/straw								

PURGE DATA

Date: 11/15/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD
Method: peristaltic	initial	5.30	0.147	23.6	19	2.36	0.00	1100
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~						1120
Well Casing Diameter & Material	1	5.99	0.152	24.5	1	2.93	0.00	1120
Type: 2" PVC	2	6.15	0.160	24.9	2	3.18	0.00	1140
Total Well Depth (TD): 18.15	3	6.19	0.160	25.0	0	3.12	0.00	1200
Static Water Level (WL): 9.46		Endpurge						1204
One Casing Volume(gal/L): 1.5								
Start Purge (hrs): 1055								
End Purge (hrs): 1204								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	40ml x 3	✓
EDB	~~None~~	40ml x 3	✓
Methane	HCL	40ml x 3	✓
PAH'S	Ice	1 liter x 2	✓
TRPH	~~H2SO4~~ HCL	1 liter x 2	✓
Pb	HNO3	500ml x 1	✓
Sulfide ZnAc	NaOH	500ml x 1	✓
Anions	Ice	500ml x 1	✓
HACH Results	Fe^{2+} = 0mg/l	D.O. = 4.4mg/l	

OBSERVATIONS / NOTES:

- Calibrate Horiba Model U-10 from Pine Environ. ID#951
- Cal. Solution Lot # 2270 from Pine Environmental
- calibrate @ 1050

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s): Dan Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: ~~NASP Bldg. 1932~~ Sherman Field Fuel Farm
Project No.: ~~CTO 140 / 0547~~ N0516

[] Domestic Well Data
[x] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-22S
Sample Location: Sherman Fuel F
Sampled By: D. Hartnett
C.O.C. No.: 2273+2
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/6/00	Color	pH	S.C.	Temp.	Turbidity	DO	TBD	TBD
Time: 15:30	Visual	Standard	mS/cm	°C	NTU	mg/l	% Salinity	Time
Method: peristaltic/Straw	V. Clear	5.72	0.184	24.5	2	0.30	0.00	DTW

PURGE DATA

Date: 11/6/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD
Method: peristaltic	initial	5.74	0.198	24.6	3	0.68	0.00	1442
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~						
Well Casing Diameter & Material	1	5.72	0.192	24.5	2	0.34	0.00	1452
Type: 2 = PVC	2	5.72	0.186	24.5	2	0.30	0.00	1504
Total Well Depth (TD): 20.35	~~3~~ 4	5.72	0.184	24.5	2	0.30	0.00	1528
Static Water Level (WL): 14.47	End development							
One Casing Volume (gal/L): 1.0								
Start Purge (hrs): 14:40								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC, 8021B	HCL	40ml x 3	✓
EDB, 501.4	$Na_2S_2O_3$	40ml x 3	✓
PAH'S, 8310	Ice	1 liter x 2	✓
TRPH FL. PRO	H_2SO_4	1 liter x 2	✓
Pb, 7421	HNO_3	500ml x 1	✓

OBSERVATIONS / NOTES:

Use Horiba model U-10; Pine Environmental I.D. # 00951
Cal. Solution Lot # 2270 - calibrated Today.

Circle if Applicable:

MS/MSD

Duplicate ID No.: NASPFF DUP-1

Signature(s): D. Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: ~~NASP Bldg. 1992~~ Sherman Field Fuel Farm
Project No.: ~~CTO 140 / 0547~~ N0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFF-MW-23S
Sample Location: Sherman Fuel Farm
Sampled By: D. Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/6/00	Color	pH	S.C.	Temp.	Turbidity	DO	TBD	TBD	
Time: 1145	Visual	Standard	mS/cm	°C	NTU	mg/l	Salinity	Time	DTW
Method: peristaltic/straw	Very Clear	5.77	0.093	24.7	1	5.67	%	1145	

PURGE DATA

Date: 11/6/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD	
Method: peristaltic	11:07	5.56	0.098	24.9	6	4.25	0.00	11:07	9.57
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~							
Well Casing Diameter & Material	1	5.79	0.094	24.7	1	5.70	0.00	11:20	9.56
Type: 2" PVC	2	5.78	0.093	24.7	1	5.69	0.00	11:30	9.56
Total Well Depth (TD): 15.30	3	5.79	0.093	24.7	1	5.67	0.00	11:40	9.56
Static Water Level (WL): 9.55	End Development								
One Casing Volume(gal/L): 1.0									
Start Purge (hrs): 11:05									
End Purge (hrs): 11:45									
Total Purge Time (min): 45									
Total Vol. Purged (gal/L): 3									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	40ml x3	✓
EDB		40ml x3	✓
PAH's	Ice	1 liter x2	✓
TRPH	H_2SO_4	1 liter x2	✓
Pb	HNO_3	500ml x1	✓

OBSERVATIONS / NOTES:

Using Horiba Model U-10 calibrated Today at 09:50
Pine Env. I.D. # 00951, Cal. Solution Lot # 2270
Exp. 6-16-2002

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Daniel Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-~~Bldg. 1932~~ Former Fuel Farm - Sherman Field
Project No.: CTO ~~140/0547~~ 132 N0516

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFF-MW5I
Sample Location: MW-5I
Sampled By: Gary J. Davis
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	SL ~~TBD~~	DTW ~~TBD~~
Date: 11-07-00								
Time: 1615								
Method: Peristaltic	Clear Yellow	4.88	0.082	22.3	1	0.27	0.00	12.24

PURGE DATA

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	SL ~~TBD~~	Time ~~TBD~~	DTW
Date: 11-07-00									
Method: Peristaltic	~1L	5.01	0.086	24.6	4	1.09	0.00	1405	12.21
Monitor Reading (ppm): 0		~~See Low Flow Purge Data Sheet~~					200 ml/min	increased pump rate	
Well Casing Diameter & Material	~1.5gal	4.85	0.083	23.1	1	0.69	0.00	1435	12.21
Type: 2-inch Sch 40 PVC	~2.5gal	4.91	0.083	23.2	1	0.31	0.00	1500	12.21
Total Well Depth (TD): 39.30	~5.5gal	4.90	0.083	22.2	2	0.22	0.00 increase rate	1530	12.24
Static Water Level (WL): 12.19	~10gal	4.88	0.082	22.3	1	0.27	0.00	1615	12.24
One Casing Volume(gal/L): 4.53									
Start Purge (hrs): 1400									
End Purge (hrs): 1615									
Total Purge Time (min): 135									
Total Vol. Purged (gal/L): ~10gal									

12.14

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40ml VOA	GJD
EDB	$Na_2S_2O_3$	3 - " "	GJD
PAH	Ice	2 - 1L Amber	GJD
TRPH-FL PRO	H_2SO_4	2 - " "	GJD
Pb	HNO_3	1 - 500ml Poly	GJD

OBSERVATIONS / NOTES:

39.30 - 12.19 = 27.11 ft H_2O x .167 = 4.53 gal ≈ 1 vol.
set tubing approx 3ft off bottom (5' screen)

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Gary J. Davis

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-Former Fuel Farm-Sherman Field
Project No.: CTO 132 / 0516

[] Domestic Well Data
[x] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: NASPFFMW-14I
Sample Location: Sherman Field
Sampled By: D. Hartnett
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 11/16/00 Time: 1555	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	TBD	TBD Time
Method: peristaltic/straw	V. Clear	5.09	0.148	21.0	0	1.64	% Salinity	

PURGE DATA

Date: 11/16/00	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	TBD	TBD
Method: peristaltic/straw	initial	5.63	0.146	21.5	16	2.70	0.00	
Monitor Reading (ppm):		~~See Low Flow Purge Data Sheet~~						
Well Casing Diameter & Material	1/2	5.22	0.149	21.4	2	1.67	0.00	
Type: 2" PVC	1	5.11	0.148	21.6	0	2.40	0.00	
Total Well Depth (TD): 40.0	1 1/2	5.10	0.149	21.1	1	1.80	0.00	
Static Water Level (WL): 12.77	2	5.09	0.148	21.0	0	1.64	0.00	
One Casing Volume (gal/L): 4.5	End	purge						
Start Purge (hrs): 1405								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	40 ml x 3	✓
EDB	$Na_2S_2O_3$	40 ml x 3	✓
Pb	HNO_3	500 ml x 1	✓
PAH'S	Ice	1 liter x 2	✓
TRPH	HCL	1 liter x 2	✓

OBSERVATIONS / NOTES:

- Use Horiba Model U-10 calibrated this Moring @ 08:30
- Cal-Solution Lot # 2200 Both from Pine Environmental

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s): Dan Hartnett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NASP-~~Bldg. 1932~~ Former Fuel Farm Sherman Field
Project No.: CTO ~~T407/0547~~ 132 N0516

Sample ID No.: NASPFFF-MW13D
Sample Location: MW-13D
Sampled By: Gary J. Davis
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	~~SAL~~ TBD	~~TEMP~~ TBD DTW
Date: 11-09-00								
Time: 1515								
Method: Peristaltic	Clear H. brown	4.90	0.059	24.1	15	1.03	900	28.39

PURGE DATA

Date:	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	~~SAL~~ TBD	~~TEMP~~ TBD	DTW
Method: Whale & Peristaltic	~1.5 gal	4.83	0.060	24.9	5	0.47	0.00	1210	
Monitor Reading (ppm): N/A		~~See Low Flow Purge Data Sheet~~					~~400~~		
Well Casing Diameter & Material	~6 gal	5.36	0.061	25.5	17	1.02	0.00	1250	28.61
Type: 2 inch Sch 40 PVC	~13 gal	5.32	0.062	26.1	82	0.43	0.00	1305	28.48
Total Well Depth (TD): 76.83	~19 gal	4.95	0.064	26.3	46	0.47	0.00	~~1448~~	28.39
Static Water Level (WL): ~~28.21~~ 28.13		Change to Peristaltic						1400	
One Casing Volume (gal/L): 8.12	~20 gal	4.93	0.063	24.1	17	1.36	0.00	~~1445~~	≈ 9
Start Purge (hrs): 1200	~20.5 gal	4.94	0.061	24.3	18	1.31	0.00	1500	28.39
End Purge (hrs): 1515	~21 gal	4.90	0.059	24.1	15	1.03	0.00	1515	28.39
Total Purge Time (min): 195									
Total Vol. Purged (gal/L): ~21 gal									

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 - 40 ml VOA	
EDB	$Na_2S_2O_3$	3 - " "	
PAH	Ice	2 - 1L Amber	
~~PP~~ A - FL. PRO	HCL	2 - " "	
Pb	HNO_3	1 - 500 ml Poly	

OBSERVATIONS / NOTES:

76.83 - ~~28.21~~ 28.13 = ~~48.62~~ 48.70 Ft H_2O x .167 = ~~8.12~~ 8.13 gallons Req. Min. Vol ~~16.24~~ 16.26 gallons

Pump Rate w/ whale ≈ 1 gal/6 min. ≈ 10 gal/hr

Note: There is a density difference in the clear water up above and the peat water deep.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Gary J. Davis

APPENDIX B

LABORATORY ANALYTICAL REPORTS

Tetra Tech NUS, Inc. **Internal Correspondence**

TO: **Mr. Gerald Walker** **DATE: January 8, 2001**

FROM: **Suzanne I. Smith** **CC: File**

SUBJECT: **Organic Data Validation – VOC, EDB, Methane, PAH, and TRPH**
CTO132 – NAS Pensacola
SDG 26150

SAMPLES: **1/Aqueous**

NASPFF MW 16S

OVERVIEW

The sample set for CTO132, SDG 26150; Naval Air Station Pensacola, Pensacola, Florida consists of one (1) aqueous environmental sample. The environmental sample was analyzed for Volatile Organic Carbons (VOCs), Ethylene Dibromide (EDB), Methane, Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs).

The sample was collected by Tetra Tech NUS on November 8, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), EPA Method 504.1 (EDB), RSK-175 (Methane), SW-846 Method 8270C (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
- Laboratory method/field quality control blank results
- Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Volatile Fraction

All quality control criteria were met for this fraction.

EDB Fraction

All quality control criteria were met for this fraction.

Polycyclic Aromatic Hydrocarbon Fraction

All quality control criteria were met for this fraction.

Methane Fraction

All quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

Laboratory Blank Analysis

Affected samples: none

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
TRPH	0.35	1.75

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination.

All other quality control criteria were met for this fraction.

Executive Summary

Laboratory performance: All quality control criteria were met

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne L Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-I ` PENSACOLA
WATER DA`A
AAL
SDG: 26150

SAMPLE NUMBER:	NASPFF MW-16S											
SAMPLE DATE:	11/08/00			/ /			/ /			/ /		
LABORATORY ID:	AC02994											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	10	U										
1,1,2,2-TETRACHLOROETHANE	10	U										
1,1,2-TRICHLOROETHANE	10	U										
1,1-DICHLOROETHANE	10	U										
1,1-DICHLOROETHENE	10	U										
1,2-DIBROMOETHANE	0.05	U										
1,2-DICHLOROETHANE	10	U										
1,2-DICHLOROPROPANE	10	U										
1,3-DICHLOROPROPENE	10	U										
2-CHLOROETHYL VINYL ETHER	100	U										
ACROLEIN	100	U										
ACRYLONITRILE	100	U										
BENZENE	32											
BROMODICHLOROMETHANE	10	U										
BROMOFORM	50	U										
BROMOMETHANE	10	U										
CARBON TETRACHLORIDE	10	U										
CHLOROBENZENE	10	U										
CHLOROETHANE	10	U										
CHLOROFORM	10	U										
CHLOROMETHANE	10	U										
ETHYLBENZENE	330											
METHYL TERT-BUTYL ETHER	100	U										
METHYLENE CHLORIDE	13	J	P									
TETRACHLOROETHENE	10	U										
TOLUENE	17											
TRANS-1,2-DICHLOROETHENE	10	U										
TRICHLOROETHENE	10	U										
VINYL CHLORIDE	10	U										
XYLENES, TOTAL	2300											

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26150

SAMPLE NUMBER:	NASPFF MW-16S											
SAMPLE DATE:	11/08/00			/ /			/ /			/ /		
LABORATORY ID:	AC02994											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	29											
2-METHYLNAPHTHALENE	37											
ACENAPHTHENE	0.44	J	P									
ACENAPHTHYLENE	1.0	U										
ANTHRACENE	1.0	U										
BENZO(A)ANTHRACENE	1.0	U										
BENZO(A)PYRENE	1.0	U										
BENZO(B)FLUORANTHENE	1.0	U										
BENZO(G,H,I)PERYLENE	0.44	J	P									
BENZO(K)FLUORANTHENE	1.0	U										
CHRYSENE	1.0	U										
DIBENZO(A,H)ANTHRACENE	0.27	J	P									
FLUORANTHENE	1.0	U										
FLUORENE	0.42	J	P									
INDENO(1,2,3-CD)PYRENE	0.28	J	P									
NAPHTHALENE	75											
PHENANTHRENE	1.0	U										
PYRENE	1.0	U										

CTO132-M PENSACOLA
WATER DA...
AAL
SDG: 26150

SAMPLE NUMBER:	NASPFF MW-16S			
SAMPLE DATE:	11/08/00	/ /	/ /	/ /
LABORATORY ID:	AC02994			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/ML			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
DISSOLVED GASES												
METHANE	2.9											

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26150

SAMPLE NUMBER:	NASPFF MW-16S			
SAMPLE DATE:	11/08/00	/ /	/ /	/ /
LABORATORY ID:	AC02994			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	MG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	9.6											

26150

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	M	11/08/00	11/13/00	11/23/00	5	10	15
UG/ML	NASPFF MW-16S	AC02994	NORMAL	26150	METH	11/08/00	11/21/00	11/21/00	13	0	13
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	NTA	11/08/00	11/09/00	11/10/00	1	1	2
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	NTI	11/08/00	11/09/00	11/10/00	1	1	2
UG/L	NASPFF MW-16S	AC02994	NORMAL	26150	OV	11/08/00	11/10/00	11/16/00	2	6	8
UG/L	NASPFF MW-16S	AC02994	NORMAL	26150	PAH	11/08/00	11/15/00	11/19/00	7	4	11
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	SO4	11/08/00	11/09/00	11/10/00	1	1	2
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	SUL	11/08/00	11/10/00	11/10/00	2	0	2
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	TPH	11/08/00	11/13/00	11/16/00	5	3	8

Tetra Tech NUS, Inc. **Internal Correspondence**

TO: **Mr. Gerald Walker** **DATE: January 8, 2001**

FROM: **Suzanne I. Smith** **CC: File**

SUBJECT: **Inorganic Data Validation – Lead and Anions**
CTO132 – NAS Pensacola
SDG 26150

SAMPLES: **1/Aqueous**

NASPFF MW 16S

OVERVIEW

The sample set for CTO132, SDG 26150; Naval Air Station Pensacola, Pensacola, Florida consists of one (1) aqueous environmental sample. The environmental sample was analyzed for Lead and Anions.

The sample was collected by Tetra Tech NUS on November 8, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010B (VOCs), and EPA Methods 300 and 376.1 (Anions) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Lead Fraction

All quality control criteria were met for this fraction.

Anion Fraction

All quality control criteria were met for this fraction.

Executive Summary

Laboratory performance: All quality control criteria were met

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne I. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26150

SAMPLE NUMBER:	NASPFF MW-16S			
SAMPLE DATE:	11/08/00	/ /	/ /	/ /
LABORATORY ID:	AC02994			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	MG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	0.01											

CTO132-N PENSACOLA
WATER DATA
AAL
SDG: 26150

SAMPLE NUMBER:	NASPFF MW-16S			
SAMPLE DATE:	11/08/00	/ /	/ /	/ /
LABORATORY ID:	AC02994			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANIC PARAMETERS												
NITRATE(MG/L)	0.04											
NITRITE(MG/L)	0.01	U										
SULFATE(MG/L)	4											
SULFIDE(MG/L)	1.0	U										

26150

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	M	11/08/00	11/13/00	11/23/00	5	10	15
UG/ML	NASPFF MW-16S	AC02994	NORMAL	26150	METH	11/08/00	11/21/00	11/21/00	13	0	13
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	NTA	11/08/00	11/09/00	11/10/00	1	1	2
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	NTI	11/08/00	11/09/00	11/10/00	1	1	2
UG/L	NASPFF MW-16S	AC02994	NORMAL	26150	OV	11/08/00	11/10/00	11/16/00	2	6	8
UG/L	NASPFF MW-16S	AC02994	NORMAL	26150	PAH	11/08/00	11/15/00	11/19/00	7	4	11
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	SO4	11/08/00	11/09/00	11/10/00	1	1	2
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	SUL	11/08/00	11/10/00	11/10/00	2	0	2
MG/L	NASPFF MW-16S	AC02994	NORMAL	26150	TPH	11/08/00	11/13/00	11/16/00	5	3	8

27744

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: Tetra Tech NUS
Address: 1401 Oven park Dr.
Report Sent to: (Client Contact): Gerry Walker
Contact Phone # 850/3859899 Fax # 850/3859860
Project Name: Former Fuel Farm
Project Number: N0516

Billing address:
Client P.O. #

For Laboratory Use Only
Custody Seal: Yes N
Page 1 of 1
QC Level: N 1 2 3 4
Init. Temp: 2.0/2.3
Sample Conditions:
AAL Lab Project: 28150

Samplers: (signature): Dan Hartnett
Samplers: (printed): Dan Hartnett

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	VOC	EDB	PAH's	TRPH	Pb	Anions	Sulfide	Methane	Remarks	Accura Sample ID No. ~~AB~~ AC
NASPFF MW-165	11/8/00 0905		✓	A	✓	Sherman Field Fuel Farm	16	3	3	2	2	1	1	1	3		02994

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
Daniel Hartnett	11/7/00 1800	FEDEX		
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
FEDEX	11-9-00 / 0945	[illegible]	11-9-00 / 0945	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02994 **Accura Project #: 26150**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/8/00

Client Contact: GERRY WALKER Date Received: 11/9/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-16S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.04	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	4	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.011	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	2.9	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	29	1.0

2-Methylnaphthalene	37	1.0
Acenaphthene	0.44J	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	0.44J	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	0.27J	1.0
Fluoranthene	<RDL	1.0
Fluorene	0.42J	1.0
Indeno(1,2,3-cd)pyrene	0.28J	1.0
Naphthalene	75	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	9.6	5.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	10
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	10
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	10
1,2-Dichloroethane	<RDL	10
1,2-Dichloropropane	<RDL	10
1,3-Dichloropropene	<RDL	10
2-Chloroethylvinyl ether	<RDL	100
Acrolein	<RDL	100
Acrylonitrile	<RDL	100
Benzene	32	10
Bromodichloromethane	<RDL	10
Bromoform	<RDL	50
Bromomethane	<RDL	10

Carbon tetrachloride	<RDL	10
Chlorobenzene	<RDL	10
Chloroethane	<RDL	10
Chloroform	<RDL	10
Chloromethane	<RDL	10
Ethylbenzene	330	10
Methyl-tert-butyl ether (MTBE)	<RDL	100
Methylene chloride	13 J	50
Tetrachloroethene	<RDL	10
Toluene	17	10
trans-1,2-Dichloroethene	<RDL	10
Trichloroethene	<RDL	10
Vinyl chloride	<RDL	10
Xylenes (Total)	2300	50

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	71	
Nitrobenzene-d5 (Range 37-104)	85	
p-Terphenyl-d14 (Range 15-132)	33	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	9.5	
o-Terphenyl (Range 82-142)	48	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	79	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	100	

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02995 **Accura Project #: 26150**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00

Client Contact: GERRY WALKER Date Received: 11/9/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.35J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	78	
Nitrobenzene-d5	(Range 50-103)	84	
p-Terphenyl-d14	(Range 64-113)	92	

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	18	
o-Terphenyl (Range 82-142)	89	

ANALYSIS: X VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	86	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	99	

Accura Analytical Laboratory, Inc.

Tetra Tech NUS, Inc. **Internal Correspondence**

TO: **Mr. Gerald Walker** **DATE: January 4, 2001**

FROM: **Suzanne I. Smith** **CC: File**

SUBJECT: **Organic Data Validation – VOC, EDB, Methane, PAH, and TRPH**
CTO132 – NAS Pensacola
SDG 26137

SAMPLES: **8/Aqueous**

NASPFF DUP-2	**NASPFF EQB-1**	**NASPFF MW-13S**
NASPFF MW-15S	**NASPFF MW-1S**	**NASPFF MW-2S**
NASPFF MW-5I	**TRIP BLANK**	

OVERVIEW

The sample set for CTO132, SDG 26137; Naval Air Station Pensacola, Pensacola, Florida consists of six (6) aqueous environmental samples, one (1) equipment blank, and one (1) trip blank. The environmental samples and equipment blank were analyzed for Volatile Organic Carbons (VOCs), Ethylene Dibromide (EDB), Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs). Only MW-1S and MW-2S were also analyzed for Methane. The trip blank was only analyzed for VOCs. The sample set included one set of duplicate samples: NASPFF MW-15S/NASPFF DUP-2.

The samples were collected by Tetra Tech NUS on November 7, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), EPA Method 504.1 (EDB), RSK-175M (Methane), SW-846 method 8270C (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
  • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Volatile Fraction

The MS/MSD %R for Acrolein and 2-Chloroethylvinyl ether were outside acceptable accuracy control limits due to matrix interference. The LCS %R was acceptable. No action was taken since neither compound was detected in the associated samples.

All other quality control criteria were met for this fraction.

EDB Fraction

All quality control criteria were met for this fraction.

Methane

All quality control criteria were met for this fraction.

Polycylcic Aromatic Hydrocarbon Fraction

The MS/MSD %R for the following compounds was outside acceptable accuracy control limits due to matrix interference: Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-c,d)pyrene. The LCS %Rs were acceptable. No action was taken since no PAHs were detected in the associated samples.

All other quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

Laboratory Blank Analysis

Affected samples: all

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
TRPH	0.35	1.75

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination. Results less than the action level and reporting limit (RL) were reported as a nondetect at the RL value.

The MS/MSD %R was outside acceptable accuracy control limits due to matrix interference. The LCS %R was also outside of acceptable limits. Therefore, all detects are flagged estimated "J" due to spike noncompliance.

All other quality control criteria were met for this fraction.

Field Duplicate Summary

No analytes were detected in the sample duplicate pair.

Executive Summary

Laboratory performance: Detects for TRPH less than the action level and less than the RL were reported as nondetects. All TRPH detects are flagged estimated "J" due to spike noncompliance.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne J. Smith

Suzanne J. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132- ''\S PENSACOLA
WATER D,
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF DUP-2	NASPFF EQB-1	NASPFF MW-13S	NASPFF MW-15S
SAMPLE DATE:	11/07/00	11/07/00	11/07/00	11/07/00
LABORATORY ID:	AC02916	AC02910	AC02911	AC02912
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:	MW-15S			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,1,2,2-TETRACHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1,2-TRICHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,2-DIBROMOETHANE	~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U	
1,2-DICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,2-DICHLOROPROPANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,3-DICHLOROPROPENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
2-CHLOROETHYL VINYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U	
ACROLEIN	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACRYLONITRILE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
BROMODICHLOROMETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BROMOFORM	~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
BROMOMETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
CARBON TETRACHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROBENZENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROFORM	~~0~~	U		~~0~~	U		2.2			~~0~~	U	
CHLOROMETHANE	~~0~~	U		~~0~~	U		~~0~~ 1.0	U		~~0~~	U	
ETHYLBENZENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
METHYL TERT-BUTYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U	
METHYLENE CHLORIDE	~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
TETRACHLOROETHENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
TOLUENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
TRANS-1,2-DICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
TRICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
VINYL CHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
XYLENES, TOTAL	~~0~~ 2.0	U		~~0~~ 2.0	U		~~0~~ 2.0	U		~~0~~ 2.0	U	

CTO132- NAS PENSACOLA
WATER DATA
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF MW-1S	NASPFF MW-2S	NASPFF MW-5I	TRIP BLANK
SAMPLE DATE:	11/07/00	11/07/00	11/07/00	11/07/00
LABORATORY ID:	AC02913	AC02915	AC02914	AC02922
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	~~0~~ 25	U		~~0~~ 5.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,1,2,2-TETRACHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1,2-TRICHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,2-DIBROMOETHANE	~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U				
1,2-DICHLOROETHANE	17	J	P	~~0~~ 5.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,2-DICHLOROPROPANE	~~0~~ 25	U		~~1~~ 3.6	J	P	~~0~~	U		~~0~~	U	
1,3-DICHLOROPROPENE	~~0~~	U		~~0~~ 5.0	U		~~0~~	U		~~0~~	U	
2-CHLOROETHYL VINYL ETHER	~~0~~ 250	U		~~0~~ 50	U		~~0~~ 10	U		~~0~~ 10	U	
ACROLEIN	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACRYLONITRILE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZENE	530			55			~~0~~ 1.0	U		~~0~~ 1.0	U	
BROMODICHLOROMETHANE	~~0~~ 25	U		~~0~~ 5.0	U		~~0~~	U		~~0~~	U	
BROMOFORM	~~0~~ 130	U		~~0~~ 25	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
BROMOMETHANE	~~0~~ 25	U		~~0~~ 5.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
CARBON TETRACHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROBENZENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROFORM	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROMETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ETHYLBENZENE	1300			1100			~~0~~	U		~~0~~	U	
METHYL TERT-BUTYL ETHER	~~0~~ 250	U		~~0~~ 50	U		~~0~~ 10	U		~~0~~ 10	U	
METHYLENE CHLORIDE	~~0~~ 130	U		~~0~~ 25	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
TETRACHLOROETHENE	~~0~~ 25	U		~~0~~ 5.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
TOLUENE	~~0~~	U		10			~~0~~	U		~~0~~	U	
TRANS-1,2-DICHLOROETHENE	~~0~~	U		~~0~~ 5.0	U		~~0~~	U		~~0~~	U	
TRICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
VINYL CHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
XYLENES, TOTAL	430			3100			~~0~~ 2.0	U		~~0~~ 2.0	U	

CTO132-' S PENSACOLA
WATER D/ .
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF DUP-2	NASPFF EQB-1	NASPFF MW-13S	NASPFF MW-15S
SAMPLE DATE:	11/07/00	11/07/00	11/07/00	11/07/00
LABORATORY ID:	AC02916	AC02910	AC02911	AC02912
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
2-METHYLNAPHTHALENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACENAPHTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACENAPHTHYLENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(A)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(A)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(B)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(G,H,I)PERYLENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(K)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHRYSENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
DIBENZO(A,H)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
FLUORENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
INDENO(1,2,3-CD)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
NAPHTHALENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
PHENANTHRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF MW-1S	NASPFF MW-2S	NASPFF MW-5I	
SAMPLE DATE:	11/07/00	11/07/00	11/07/00	/ /
LABORATORY ID:	AC02913	AC02915	AC02914	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	UG/L	UG/L	UG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	54			50			~~0~~ 1.0	U				
2-METHYLNAPHTHALENE	68			63			~~0~~	U				
ACENAPHTHENE	0.8	J	P	2.2			~~0~~	U				
ACENAPHTHYLENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~	U				
ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(B)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(G,H,I)PERYLENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(K)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
CHRYSENE	~~0~~	U		~~0~~	U		~~0~~	U				
DIBENZO(A,H)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORENE	1.1			2.0			~~0~~	U				
INDENO(1,2,3-CD)PYRENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~	U				
NAPHTHALENE	130			110			~~0~~	U				
PHENANTHRENE	~~1~~ 0.78	J	P	2.0			~~0~~	U				
PYRENE	0 1.0	U		~~0~~ 1.0	U		~~0~~	U				

CTO132 "AS PENSACOLA
WATER L A
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF DUP-2			NASPFF EQB-1			NASPFF MW-13S			NASPFF MW-15S		
SAMPLE DATE:	11/07/00			11/07/00			11/07/00			11/07/00		
LABORATORY ID:	AC02916			AC02910			AC02911			AC02912		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			MG/L			MG/L			MG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	~~0.37~~ 1.0	~~JB~~ U		~~0.98~~	~~JB~~ 1.0U		~~0.4~~ 1.0	~~JB~~ U		~~0.37~~ 1.0	~~JB~~ U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF MW-1S			NASPFF MW-2S			NASPFF MW-5I					
SAMPLE DATE:	11/07/00			11/07/00			11/07/00			/ /		
LABORATORY ID:	AC02913			AC02915			AC02914					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	MG/L			MG/L			MG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	5.6	J	D,E	~~8~~ 7.9	J	D,E	~~0.4~~ 1.0	~~J~~ U				

CTO132· ··AS PENSACOLA
WATER D.
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF MW-1S			NASPFF MW-2S								
SAMPLE DATE:	11/07/00			11/07/00			/ /			/ /		
LABORATORY ID:	AC02913			AC02915								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	0.0 %			0.0 %			100.0 %			100.0 %		
UNITS:	UG/ML			UG/ML								
FIELD DUPLICATE OF:												
	RESULT	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
DISSOLVED GASES												
METHANE	6.3			2.5								

26137

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF DUP-2	AC02916	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF EQB-1	AC02910	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-13S	AC02911	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-15S	AC02912	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-5I	AC02914	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
UG/ML	NASPFF MW-1S	AC02913	NORMAL	26137	METH	11/07/00	11/20/00	11/20/00	13	0	13
UG/ML	NASPFF MW-2S	AC02915	NORMAL	26137	METH	11/07/00	11/20/00	11/20/00	13	0	13
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	NTA	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	NTA	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	NTI	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	NTI	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF DUP-2	AC02916	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF EQB-1	AC02910	NORMAL	26137	OV	11/07/00	11/10/00	11/10/00	3	0	3
UG/L	NASPFF MW-13S	AC02911	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-15S	AC02912	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-1S	AC02913	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-2S	AC02915	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-5I	AC02914	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	TRIP BLANK	AC02922	NORMAL	26137	OV	11/07/00	11/13/00	11/13/00	6	0	6
UG/L	NASPFF DUP-2	AC02916	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF EQB-1	AC02910	NORMAL	26137	PAH	11/07/00	11/08/00	11/10/00	1	2	3
UG/L	NASPFF MW-13S	AC02911	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	PFF MW-15S	AC02912	NORMAL	26137		11/07/00	11/08/00	11/09/00	1	1	2

Units	mple	Lab Id	Qc Type	Sdg		Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	MP_DATE TO ANAL_DATE
UG/L	NASPFF MW-1S	AC02913	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF MW-2S	AC02915	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF MW-5I	AC02914	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	SO4	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	SO4	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	SUL	11/07/00	11/09/00	11/09/00	2	0	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	SUL	11/07/00	11/09/00	11/09/00	2	0	2
MG/L	NASPFF DUP-2	AC02916	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF EQB-1	AC02910	NORMAL	26137	TPH	11/07/00	11/13/00	11/15/00	6	2	8
MG/L	NASPFF MW-13S	AC02911	NORMAL	26137	TPH	11/07/00	11/13/00	11/15/00	6	2	8
MG/L	NASPFF MW-15S	AC02912	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF MW-5I	AC02914	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Gerald Walker**	**DATE:**	**January 5, 2001**
FROM:	**Suzanne I. Smith**	**CC:**	**File**
SUBJECT:	**Inorganic Data Validation – Lead and Anions** **CTO132 – NAS Pensacola** **SDG 26137**		
SAMPLES:	**7/Aqueous**		

NASPFF DUP-2	**NASPFF EQB-1**	**NASPFF MW-13S**
NASPFF MW-15S	**NASPFF MW-1S**	**NASPFF MW-2S**
NASPFF MW-5I		

OVERVIEW

The sample set for CTO132, SDG 26137; Naval Air Station Pensacola, Pensacola, Florida consists of six (6) aqueous environmental samples and one (1) equipment blank. The environmental samples and equipment blank were analyzed for Lead. Only MW-1S and MW-2S were also analyzed for Anions. The sample set included one set of duplicate samples: NASPFF MW-15S/NASPFF DUP-2.

The samples were collected by Tetra Tech NUS on November 7, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010B (VOCs), and EPA Methods 300 and 376.1 (Anions) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Lead Fraction

All quality control criteria were met for this fraction.

Anion Fraction

All quality control criteria were met for this fraction.

Field Duplicate Summary

No analytes were detected in the sample duplicate pair.

Executive Summary

Laboratory performance: All quality control criteria were met.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne I. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-' S PENSACOLA
WATER D
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF DUP-2			NASPFF EQB-1			NASPFF MW-13S			NASPFF MW-15S		
SAMPLE DATE:	11/07/00			11/07/00			11/07/00			11/07/00		
LABORATORY ID:	AC02916			AC02910			AC02911			AC02912		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			MG/L			MG/L			MG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	0.010	U		0.010	U		0.010	U		0.010	U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF MW-1S	NASPFF MW-2S	NASPFF MW-5I	
SAMPLE DATE:	11/07/00	11/07/00	11/07/00	/ /
LABORATORY ID:	AC02913	AC02915	AC02914	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	MG/L	MG/L	MG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	0.010	U		0.010	U		0.010	U				

CTO132- N S PENSACOLA
WATER DA
AAL
SDG: 26137

SAMPLE NUMBER:	NASPFF MW-1S	NASPFF MW-2S		
SAMPLE DATE:	11/07/00	11/07/00	/ /	/ /
LABORATORY ID:	AC02913	AC02915		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMETERS												
NITRATE(MG/L)	0.09			0.01								
NITRITE(MG/L)	0.01	U		0.01	U							
SULFATE(MG/L)	1.0	U		1								
SULFIDE(MG/L)	1.0	U		~~0~~ 1.0	U							

26137

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF DUP-2	AC02916	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF EQB-1	AC02910	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-13S	AC02911	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-15S	AC02912	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
MG/L	NASPFF MW-5I	AC02914	NORMAL	26137	M	11/07/00	11/13/00	11/23/00	6	10	16
UG/ML	NASPFF MW-1S	AC02913	NORMAL	26137	METH	11/07/00	11/20/00	11/20/00	13	0	13
UG/ML	NASPFF MW-2S	AC02915	NORMAL	26137	METH	11/07/00	11/20/00	11/20/00	13	0	13
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	NTA	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	NTA	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	NTI	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	NTI	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF DUP-2	AC02916	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF EQB-1	AC02910	NORMAL	26137	OV	11/07/00	11/10/00	11/10/00	3	0	3
UG/L	NASPFF MW-13S	AC02911	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-15S	AC02912	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-1S	AC02913	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-2S	AC02915	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	NASPFF MW-5I	AC02914	NORMAL	26137	OV	11/07/00	11/10/00	11/16/00	3	6	9
UG/L	TRIP BLANK	AC02922	NORMAL	26137	OV	11/07/00	11/13/00	11/13/00	6	0	6
UG/L	NASPFF DUP-2	AC02916	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF EQB-1	AC02910	NORMAL	26137	PAH	11/07/00	11/08/00	11/10/00	1	2	3
UG/L	NASPFF MW-13S	AC02911	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	N F MW-15S	AC02912	NORMAL	26137		11/07/00	11/08/00	11/09/00	1	1	2

Units	ıple	Lab Id	Qc Type	Sdg		Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	IP_DATE TO ANAL_DATE
UG/L	NASPFF MW-1S	AC02913	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF MW-2S	AC02915	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
UG/L	NASPFF MW-5I	AC02914	NORMAL	26137	PAH	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	SO4	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	SO4	11/07/00	11/08/00	11/09/00	1	1	2
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	SUL	11/07/00	11/09/00	11/09/00	2	0	2
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	SUL	11/07/00	11/09/00	11/09/00	2	0	2
MG/L	NASPFF DUP-2	AC02916	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF EQB-1	AC02910	NORMAL	26137	TPH	11/07/00	11/13/00	11/15/00	6	2	8
MG/L	NASPFF MW-13S	AC02911	NORMAL	26137	TPH	11/07/00	11/13/00	11/15/00	6	2	8
MG/L	NASPFF MW-15S	AC02912	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF MW-1S	AC02913	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF MW-2S	AC02915	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9
MG/L	NASPFF MW-5I	AC02914	NORMAL	26137	TPH	11/07/00	11/13/00	11/16/00	6	3	9

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02910 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF EQB-1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.88JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	86	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	106	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	14	
o-Terphenyl (Range 82-142)	98	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	85	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	92	

Accura Analytical Laboratory, Inc.

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02911 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-13S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.40JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	2.2	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	86	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	87	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	18	
o-Terphenyl (Range 82-142)	99	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	92	
4-Bromofluorobenzene (86-112)	100	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02912 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-15S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	84	
p-Terphenyl-d14	(Range 15-132)	105	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	22	
o-Terphenyl (Range 82-142)	95	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	82	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	97	

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LABORATORY REPORT

Accura Sample ID #: AC02913 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-1S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.09	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	6.3	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	54	1.0

2-Methylnaphthalene	68	1.0
Acenaphthene	0.80J	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	1.1	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	130	1.0
Phenanthrene	0.78J	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	5.6	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	25
1,1,2,2-Tetrachloroethane	<RDL	25
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	25
1,1-Dichloroethene	<RDL	25
1,2-Dichloroethane	17 J	25
1,2-Dichloropropane	<RDL	25
1,3-Dichloropropene	<RDL	25
2-Chloroethylvinyl ether	<RDL	250
Acrolein	<RDL	250
Acrylonitrile	<RDL	250
Benzene	530	25
Bromodichloromethane	<RDL	25
Bromoform	<RDL	130
Bromomethane	<RDL	25

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LABORATORY REPORT

Accura Sample ID #: AC02914 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-5I

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.40JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	84	
Nitrobenzene-d5	(Range 37-104)	82	
p-Terphenyl-d14	(Range 15-132)	100	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	16	
o-Terphenyl (Range 82-142)	112	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	87	
4-Bromofluorobenzene (86-112)	94	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02915 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-2S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.01	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	1	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	2.5	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	50	1.0

2-Methylnaphthalene	63	1.0
Acenaphthene	2.2	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	2.0	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	110	1.0
Phenanthrene	2.0	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	7.9	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	5.0
1,1,2,2-Tetrachloroethane	<RDL	5.0
1,1,2-Trichloroethane	<RDL	5.0
1,1-Dichloroethane	<RDL	5.0
1,1-Dichloroethene	<RDL	5.0
1,2-Dichloroethane	<RDL	5.0
1,2-Dichloropropane	3.6 J	5.0
1,3-Dichloropropene	<RDL	5.0
2-Chloroethylvinyl ether	<RDL	50
Acrolein	<RDL	50
Acrylonitrile	<RDL	50
Benzene	55	5.0
Bromodichloromethane	<RDL	5.0
Bromoform	<RDL	25
Bromomethane	<RDL	5.0

Carbon tetrachloride	<RDL	5.0
Chlorobenzene	<RDL	5.0
Chloroethane	<RDL	5.0
Chloroform	<RDL	5.0
Chloromethane	<RDL	5.0
Ethylbenzene	1100	50
Methyl-tert-butyl ether (MTBE)	<RDL	50
Methylene chloride	<RDL	25
Tetrachloroethene	<RDL	5.0
Toluene	10	5.0
trans-1,2-Dichloroethene	<RDL	5.0
Trichloroethene	<RDL	5.0
Vinyl chloride	<RDL	5.0
Xylenes (Total)	3100	100

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	78	
Nitrobenzene-d5 (Range 37-104)	76	
p-Terphenyl-d14 (Range 15-132)	46	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	24	
o-Terphenyl (Range 82-142)	95	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	93	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	98	

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LABORATORY REPORT

Accura Sample ID #: AC02916 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF DUP-2

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	82	
Nitrobenzene-d5	(Range 37-104)	78	
p-Terphenyl-d14	(Range 15-132)	105	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	14	
o-Terphenyl (Range 82-142)	96	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	87	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	94	

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02917 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/8/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.35J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	82	
Nitrobenzene-d5	(Range 50-103)	82	
p-Terphenyl-d14	(Range 64-113)	102	

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	18	
o-Terphenyl (Range 82-142)	89	

ANALYSIS: X VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	82	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	96	

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02922 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/8/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: TRIP BLANK

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X VOC Sample Surrogates-Waters | Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 | Date Analyzed: 11/13/00 | Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	94	
4-Bromofluorobenzene (86-112)	99	
Toluene-d8 (84-108)	91	

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: Tetra Tech NUS
Billing address:
Address: 1401 Oven Park Dr., Tallahassee, FL 32312
Client P.O. #
Report Sent to: (Client Contact): Gerry Walker
Contact Phone # 850/385-9899 Fax # 850/385-9860
Project Name: Former Sherman Field Fuel Farm
Project Number: N0516-GR00~~5~~460210

For Laboratory Use Only
Custody Seal: Y N Page 1 OF 1
QC Level: N 1 2 3 4 Init Temp: RBS 2°C
Sample Condition: AAL Lab Project # 26187

Samplers: (signature) Dan Hartnett
Samplers: (printed) Gary Davis / Dan Hartnett

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	VOC	EDB	PAH's	TRPH	Pb	Sulfide	Anions	Methane	Remarks	Accura Sample ID No. ~~AB~~ AC
NASP FF EQB-1	11/7/00 09:45		✓	A	✓	Sherman Field Fuel Farm	11	3	3	2	2	1					02910
NASPFF MW-13s	11/7/00 10:35		✓	A	✓	↓	11	3	3	2	2	1					02911
NASPFF MW-15s	11/7/00 11:00		✓	A	✓	↓	11	3	3	2	2	1					02912
NASP FF MW-1s	11/7/00 13:50		✓	A	✓	↓	16	3	3	2	2	1	1	1	3		02913
NASPFF MW-5I	11/7/00 16:15		✓	A	✓	↓	11	3	3	2	2	1					02914
NASPFF MW-2s	11/7/00 16:25		✓	A	✓	↓	18	3	3	3	3	1	1	1	3	(spike)	02915
NASPFF DUP-2	11/7/00		✓	A	✓	↓	11	3	3	2	2	1					02916
Trip Blank				W			2										02922

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
D Hartnett	11/7/00 1900			
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
Fedex	11/08/00 9:15	R.P. Sumathi 12/7/00	11/08/00 9:15	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = ~~Air Sample~~) (F = Foods) (M = Miscellaneous)

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Gerald Walker**	**DATE:**	**January 5, 2001**
FROM:	**Suzanne I. Smith**	**CC:**	**File**
SUBJECT:	**Organic Data Validation – VOC, EDB, Methane, PAH, and TRPH** **CTO132 – NAS Pensacola** **SDG 26163**		
SAMPLES:	**4/Aqueous**		
	NASPFF MW-13D **NASPFF MW-3S** **NASPFF MW-4S** **TRIP BLANK**		

OVERVIEW

The sample set for CTO132, SDG 26137; Naval Air Station Pensacola, Pensacola, Florida consists of three (3) aqueous environmental samples and one (1) trip blank. The environmental samples and equipment blank were analyzed for Volatile Organic Carbons (VOCs), Ethylene Dibromide (EDB), Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs). Only MW-3S and MW-4S were also analyzed for Methane. The trip blank was only analyzed for VOCs.

The samples were collected by Tetra Tech NUS on November 9, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), EPA Method 504.1 (EDB), RSK-175M (Methane), SW-846 method 8270C (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
  • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Volatile Fraction

Trip Blank Analysis

Affected samples: all

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
Methylene Chloride	2.1	10.5

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination. Results less than the action level and reporting limit (RL) were reported as a nondetect at the RL value.

All other quality control criteria were met for this fraction.

EDB Fraction

All quality control criteria were met for this fraction.

Methane

All quality control criteria were met for this fraction.

Polycylcic Aromatic Hydrocarbon Fraction

All quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

Laboratory Blank Analysis

Affected samples: all

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
TRPH	0.45	2.25

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination. Results less than the action level and reporting limit (RL) were reported as a nondetect at the RL value.

All other quality control criteria were met for this fraction.

Executive Summary

Laboratory performance: Results less than the action level and reporting limit (RL) for Methylene Chloride were reported as nondetects. Detects for TRPH less than the action level and less than the RL were reported as nondetects.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne I. Smith

Suzanne I. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-N[illegible]S PENSACOLA
WATER DA[illegible]
AAL
SDG: 26163

SAMPLE NUMBER:	NASPFF MW-13D	NASPFF MW-3S	NASPFF MW-4S	TRIP BLANK
SAMPLE DATE:	11/09/00	11/09/00	11/09/00	11/09/00
LABORATORY ID:	AC03085	AC03084	AC03083	AC03086
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 25	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,1,2,2-TETRACHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1,2-TRICHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHANE	2			~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHENE	~~0~~ 1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,2-DIBROMOETHANE	~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U				
1,2-DICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 25	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,2-DICHLOROPROPANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,3-DICHLOROPROPENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
2-CHLOROETHYL VINYL ETHER	~~0~~ 10	U		~~0~~ 250	U		~~0~~ 10	U		~~0~~ 10	U	
ACROLEIN	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACRYLONITRILE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZENE	0.89	J	P	280			~~0~~ 1.0	U		~~0~~ 1.0	U	
BROMODICHLOROMETHANE	~~0~~ 1.0	U		~~0~~ 25	U		~~0~~	U		~~0~~	U	
BROMOFORM	~~0~~ 5.0	U		~~0~~ 130	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
BROMOMETHANE	~~0~~ 1.0	U		~~0~~ 25	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
CARBON TETRACHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROBENZENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROFORM	~~0~~	U		~~0~~	U		0.63	J	P	~~0~~	U	
CHLOROMETHANE	~~0~~	U		~~0~~	U		~~0~~ 1.0	U		~~0~~	U	
ETHYLBENZENE	~~0~~	U		1700			1.2			~~0~~	U	
METHYL TERT-BUTYL ETHER	5.1	J	P	~~0~~ 250	U		~~0~~ 10	U		~~0~~ 10	U	
METHYLENE CHLORIDE	~~0~~ 5.0	U		~~0~~ 130	U		~~10~~ 5.0	~~J~~U	~~P~~	2.1	J	P
TETRACHLOROETHENE	~~0~~ 1.0	U		~~0~~ 25	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
TOLUENE	~~0~~	U		16	J	P	~~0~~	U		~~0~~	U	
TRANS-1,2-DICHLOROETHENE	~~0~~	U		~~0~~ 25	U		~~0~~	U		~~0~~	U	
TRICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
VINYL CHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
XYLENES, TOTAL	~~0~~ 2.0	U		4100			0.88	J	P	~~0~~ 2.0	U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26163

SAMPLE NUMBER:	NASPFF MW-13D	NASPFF MW-3S	NASPFF MW-4S	
SAMPLE DATE:	11/09/00	11/09/00	11/09/00	/ /
LABORATORY ID:	AC03085	AC03084	AC03083	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	UG/L	UG/L	UG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	~~0~~ 1.0	U		64			~~0~~ 1.0	U				
2-METHYLNAPHTHALENE	~~0~~	U		79			~~0~~	U				
ACENAPHTHENE	~~0~~	U		0.59	J	P	~~0~~	U				
ACENAPHTHYLENE	~~0~~	U		~~0~~ 1.0	U		~~0~~	U				
ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(B)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(G,H,I)PERYLENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(K)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
CHRYSENE	~~0~~	U		~~0~~	U		~~0~~	U				
DIBENZO(A,H)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORENE	~~0~~	U		1.4			~~0~~	U				
INDENO(1,2,3-CD)PYRENE	~~0~~	U		~~0~~ 1.0	U		~~0~~	U				
NAPHTHALENE	~~0~~	U		200			~~0~~	U				
PHENANTHRENE	~~0~~	U		~~0~~ 1.0	U		~~0~~	U				
PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				

CTO132-I PENSACOLA

WATER DATA
AAL
SDG: 26163

SAMPLE NUMBER:	NASPFF MW-13D	NASPFF MW-3S	NASPFF MW-4S	
SAMPLE DATE:	11/09/00	11/09/00	11/09/00	/ /
LABORATORY ID:	AC03085	AC03084	AC03083	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	MG/L	MG/L	MG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	~~0.46~~ 1.0	~~JB~~ U		28			~~0.1~~ 1.0	~~JB~~ U				

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26163

SAMPLE NUMBER:	NASPFF MW-3S			NASPFF MW-4S								
SAMPLE DATE:	11/09/00			11/09/00			/ /			/ /		
LABORATORY ID:	AC03084			AC03083								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	0.0 %			0.0 %			100.0 %			100.0 %		
UNITS:	UG/ML			UG/ML								
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
DISSOLVED GASES												
METHANE	2.1			0.21								

26163

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW-13D	AC03085	NORMAL	26163	M	11/09/00	11/13/00	11/23/00	4	10	14
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	M	11/09/00	11/13/00	11/23/00	4	10	14
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	M	11/09/00	11/13/00	11/23/00	4	10	14
UG/ML	NASPFF MW-3S	AC03084	NORMAL	26163	METH	11/09/00	11/21/00	11/21/00	12	0	12
UG/ML	NASPFF MW-4S	AC03083	NORMAL	26163	METH	11/09/00	11/21/00	11/21/00	12	0	12
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	NTA	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	NTA	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	NTI	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	NTI	11/09/00	11/10/00	11/11/00	1	1	2
UG/L	NASPFF MW-13D	AC03085	NORMAL	26163	OV	11/09/00	11/16/00	11/16/00	7	0	7
UG/L	NASPFF MW-3S	AC03084	NORMAL	26163	OV	11/09/00	11/16/00	11/16/00	7	0	7
UG/L	NASPFF MW-4S	AC03083	NORMAL	26163	OV	11/09/00	11/16/00	11/16/00	7	0	7
UG/L	TRIP BLANK	AC03086	NORMAL	26163	OV	11/09/00	11/15/00	11/15/00	6	0	6
UG/L	NASPFF MW-13D	AC03085	NORMAL	26163	PAH	11/09/00	11/15/00	11/19/00	6	4	10
UG/L	NASPFF MW-3S	AC03084	NORMAL	26163	PAH	11/09/00	11/15/00	11/19/00	6	4	10
UG/L	NASPFF MW-4S	AC03083	NORMAL	26163	PAH	11/09/00	11/15/00	11/19/00	6	4	10
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	SO4	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	SO4	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	SUL	11/09/00	11/15/00	11/15/00	6	0	6
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	SUL	11/09/00	11/15/00	11/15/00	6	0	6
MG/L	NASPFF MW-13D	AC03085	NORMAL	26163	TPH	11/09/00	11/16/00	11/17/00	7	1	8
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	TPH	11/09/00	11/16/00	11/21/00	7	5	12
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	TPH	11/09/00	11/16/00	11/17/00	7	1	8

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Gerald Walker**		**DATE: January 5, 2001**
FROM:	**Suzanne I. Smith**		**CC: File**
SUBJECT:	**Inorganic Data Validation – Lead and Anions** **CTO132 – NAS Pensacola** **SDG 26163**		
SAMPLES:	**3/Aqueous**		
	NASPFF MW-13D	**NASPFF MW-3S**	**NASPFF MW-4S**

OVERVIEW

The sample set for CTO132, SDG 26163; Naval Air Station Pensacola, Pensacola, Florida consists of three (3) aqueous environmental samples. The environmental samples and equipment blank were analyzed for Lead. Only MW-3S and MW-4S were also analyzed for Anions.

The samples were collected by Tetra Tech NUS on November 9, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 60100B (Lead) and EPA Methods 300 and 376.1 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Lead Fraction

All quality control criteria were met for this fraction.

Anion Fraction

All quality control criteria were met for this fraction.

Executive Summary

Laboratory performance: All quality control criteria were met.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne I. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-' ; PENSACOLA
WATER DA...
AAL
SDG: 26163

SAMPLE NUMBER:	NASPFF MW-13D			NASPFF MW-3S			NASPFF MW-4S					
SAMPLE DATE:	11/09/00			11/09/00			11/09/00			/ /		
LABORATORY ID:	AC03085			AC03084			AC03083					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	MG/L			MG/L			MG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	~~0.00~~ 0.010	U		~~0.00~~ 0.010	U		~~0.00~~ 0.010	U				

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26163

SAMPLE NUMBER:	NASPFF MW-3S	NASPFF MW-4S		
SAMPLE DATE:	11/09/00	11/09/00	/ /	/ /
LABORATORY ID:	AC03084	AC03083		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANIC PARAMETERS												
NITRATE(MG/L)	~~0~~ 0.01	U		0.86								
NITRITE(MG/L)	0.08			0.02								
SULFATE(MG/L)	1.0	U		5								
SULFIDE(MG/L)	1.0	U		~~0~~ 1.0	U							

26163

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW-13D	AC03085	NORMAL	26163	M	11/09/00	11/13/00	11/23/00	4	10	14
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	M	11/09/00	11/13/00	11/23/00	4	10	14
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	M	11/09/00	11/13/00	11/23/00	4	10	14
UG/ML	NASPFF MW-3S	AC03084	NORMAL	26163	METH	11/09/00	11/21/00	11/21/00	12	0	12
UG/ML	NASPFF MW-4S	AC03083	NORMAL	26163	METH	11/09/00	11/21/00	11/21/00	12	0	12
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	NTA	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	NTA	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	NTI	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	NTI	11/09/00	11/10/00	11/11/00	1	1	2
UG/L	NASPFF MW-13D	AC03085	NORMAL	26163	OV	11/09/00	11/16/00	11/16/00	7	0	7
UG/L	NASPFF MW-3S	AC03084	NORMAL	26163	OV	11/09/00	11/16/00	11/16/00	7	0	7
UG/L	NASPFF MW-4S	AC03083	NORMAL	26163	OV	11/09/00	11/16/00	11/16/00	7	0	7
UG/L	TRIP BLANK	AC03086	NORMAL	26163	OV	11/09/00	11/15/00	11/15/00	6	0	6
UG/L	NASPFF MW-13D	AC03085	NORMAL	26163	PAH	11/09/00	11/15/00	11/19/00	6	4	10
UG/L	NASPFF MW-3S	AC03084	NORMAL	26163	PAH	11/09/00	11/15/00	11/19/00	6	4	10
UG/L	NASPFF MW-4S	AC03083	NORMAL	26163	PAH	11/09/00	11/15/00	11/19/00	6	4	10
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	SO4	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	SO4	11/09/00	11/10/00	11/11/00	1	1	2
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	SUL	11/09/00	11/15/00	11/15/00	6	0	6
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	SUL	11/09/00	11/15/00	11/15/00	6	0	6
MG/L	NASPFF MW-13D	AC03085	NORMAL	26163	TPH	11/09/00	11/16/00	11/17/00	7	1	8
MG/L	NASPFF MW-3S	AC03084	NORMAL	26163	TPH	11/09/00	11/16/00	11/21/00	7	5	12
MG/L	NASPFF MW-4S	AC03083	NORMAL	26163	TPH	11/09/00	11/16/00	11/17/00	7	1	8

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC03083 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00

Client Contact: GERRY WALKER Date Received: 11/10/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-4S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/11/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.86	0.01
Nitrite by IC	0.02	0.01
Sulfate by IC	5	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	0.21	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.41JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.63 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	1.2	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	1.9 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	0.88 J	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	75	
Nitrobenzene-d5	(Range 37-104)	82	
p-Terphenyl-d14	(Range 15-132)	64	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	6.1	
o-Terphenyl (Range 82-142)	106	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	91	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	98	

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LABORATORY REPORT

Accura Sample ID #: AC03084 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00

Client Contact: GERRY WALKER Date Received: 11/10/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-3S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/11/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	0.08	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	2.1	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	64	1.0

2-Methylnaphthalene	79	1.0
Acenaphthene	0.59J	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	1.4	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	200	10
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/21/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	28	5.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	25
1,1,2,2-Tetrachloroethane	<RDL	25
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	25
1,1-Dichloroethene	<RDL	25
1,2-Dichloroethane	<RDL	25
1,2-Dichloropropane	<RDL	25
1,3-Dichloropropene	<RDL	25
2-Chloroethylvinyl ether	<RDL	250
Acrolein	<RDL	250
Acrylonitrile	<RDL	250
Benzene	280	25
Bromodichloromethane	<RDL	25
Bromoform	<RDL	130
Bromomethane	<RDL	25

Carbon tetrachloride	<RDL	25
Chlorobenzene	<RDL	25
Chloroethane	<RDL	25
Chloroform	<RDL	25
Chloromethane	<RDL	25
Ethylbenzene	1700	100
Methyl-tert-butyl ether (MTBE)	<RDL	250
Methylene chloride	<RDL	130
Tetrachloroethene	<RDL	25
Toluene	16 J	25
trans-1,2-Dichloroethene	<RDL	25
Trichloroethene	<RDL	25
Vinyl chloride	<RDL	25
Xylenes (Total)	4100	200

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	78	
Nitrobenzene-d5 (Range 37-104)	75	
p-Terphenyl-d14 (Range 15-132)	21	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.6	
o-Terphenyl (Range 82-142)	103	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	83	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	97	

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ACCURA ANALYTICAL LABORATORY, INC.

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC03085 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00

Client Contact: GERRY WALKER Date Received: 11/10/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-13D

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.46JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	2.0	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	0.89 J	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	5.1 J	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	82	
Nitrobenzene-d5	(Range 37-104)	90	
p-Terphenyl-d14	(Range 15-132)	67	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.7	
o-Terphenyl (Range 82-142)	104	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	84	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC03086 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00

Client Contact: GERRY WALKER Date Received: 11/10/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: TRIP BLANK

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	2.1 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X VOC Sample Surrogates-Waters

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	81	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	93	

Accura Analytical Laboratory, Inc.

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC03087 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/10/00

Client Contact: GERRY WALKER Date Received: 11/10/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.45J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	78	
Nitrobenzene-d5	(Range 50-103)	84	
p-Terphenyl-d14	(Range 64-113)	92	

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	9.4	
o-Terphenyl (Range 82-142)	101	

ANALYSIS: X VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	80	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	97	

Accura Analytical Laboratory, Inc.

277-9

ACCURA ANALYTICAL BORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: Tetra Tech NUS
Address: 1401 Oven Park Dr. Talla. FL
Report Sent to: (Client Contact): Gerry Walker
Contact Phone # 8503859899 Fax # 8501385 9860
Project Name: Former Sherman Fuel Farm
Project Number: N0516

Billing address:
Client P.O. #

For Laboratory Use Only
Custody Seal: Y N Page 1 OF 1
QC Level: N 1 2 3 4 Init/Temp: JOC/BRB
Sample Condition: AAL Lab Project # 26163

Samplers: (signature): Don Hartatt
Samplers: (printed): Dr. Hartatt/G. Davis

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	VOC	EDB	PAH's	TRPH	Arsenic	Pb	Sulfide	Methane	Remarks	Accura Sample ID No. AB ~~AC~~
NASPFF MW-4S	11/9/00 1310		✓	A		Sherman Fuel Farm	16	3	3	2	2	1	1	1	3		03083
NASPFF MW-3S	11/9/00 1345		✓	A		↓	16	3	3	2	2	1	1	1	3		03084
NASPFF MW-13D	11/9/00 1515		✓	A		↓	11	3	3	2	2		1				03085
Trip Blank	—						~~3~~ 2	~~3~~ 2									03086
							DJ 11/10/00	DJ 11/10/00									

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
Don Hartatt	11/9/00 1730	FEDEX	11-10-00 0920	
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
FEDEX	11-10-00 0920	[signature]	11-10-00 0920	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = ~~Air Sample~~ Air) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Gerald Walker**	**DATE:**	**January 5, 2001**
FROM:	**Suzanne I. Smith**	**CC:**	**File**
SUBJECT:	**Organic Data Validation – VOC, EDB, PAH, and TRPH** **CTO132 – NAS Pensacola** **SDG 26126**		
SAMPLES:	**12/Aqueous**		

NASPFF MW DUP-1	**NASPFF MW-10R**	**NASPFF MW-17S**
NASPFF MW-18S	**NASPFF MW-19S**	**NASPFF MW-20S**
NASPFF MW-22S	**NASPFF MW-23S**	**NASPFF MW-5S**
NASPFF MW-7S	**NASPFF MW-8S**	**TRIP BLANK**

OVERVIEW

The sample set for CTO132, SDG 26126; Naval Air Station Pensacola, Pensacola, Florida consists of eleven (11) aqueous environmental samples and one (1) trip blank. The environmental samples were analyzed for Volatile Organic Carbons (VOCs), Ethylene Dibromide (EDB), Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs). The trip blank was only analyzed for VOCs. One pair of duplicate samples was analyzed with this sample set: NASPFF MW-22S/NASPFF MW DUP-1.

The samples were collected by Tetra Tech NUS on November 5 and 6, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), EPA Method 504.1 (EDB), SW-846 Method 8270C (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
- Laboratory method/field quality control blank results
- Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Volatile Fraction

Trip Blank Analysis

Affected samples: all

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
Methylene Chloride	2.1	10.5

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination. Results less than the action level were reported as nondetects.

All other quality control criteria were met for this fraction.

EDB Fraction

All quality control criteria were met for this fraction.

Polycyclic Aromatic Hydrocarbon Fraction

All surrogates for NASPFF MW-5S had low recoveries therefore all detects will be estimated "J" due to surrogate recovery noncompliance.

All other quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

Laboratory Blank Analysis

Affected samples: all

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
TRPH	0.41	2.05

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination. Results less than the action level and reporting limit (RL) were reported as a nondetect at the RL value.

All other quality control criteria were met for this fraction.

Field Duplicate Summary

Analyte	NASPFF MW-22S(ug/L)	NASPFF MW DUP-1(ug/L)	%RPD
1,2-Dichloroethane	3.8	ND	NA
Benzene	110	120	8.7
Chloromethane	0.65	0.64	1.6
Ethylbenzene	420	450	6.9
Toluene	2.8	2.8	0
Xylenes, total	2900	3100	6.7
TRPH	23	22	4.4

For PAH analysis, it is apparent that NASPFF MW DUP-1 is not a duplicate of NASPFF MW-22S, but rather of NASPFF MW-5S. It is unknown whether this is due to a mislabeling in the field or in the lab, but it does not compromise the data so no action has been taken.

Executive Summary

Laboratory performance: Results less than the action level for Methylene Chloride were reported as nondetects. Detects for TRPH less than the action level and less than the RL were reported as nondetects. All detects for PAHs in NASPFF MW-5S will be estimated "J" due to surrogate recovery noncompliance.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne L. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-N' PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW DUP-1	NASPFF MW-10R	NASPFF MW-17S	NASPFF MW-18S
SAMPLE DATE:	11/06/00	11/06/00	11/06/00	11/05/00
LABORATORY ID:	AC02878	AC02875	AC02877	AC02868
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:	MW-22S			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,1,2,2-TETRACHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1,2-TRICHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,2-DIBROMOETHANE	~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U	
1,2-DICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,2-DICHLOROPROPANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
1,3-DICHLOROPROPENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
2-CHLOROETHYL VINYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U	
ACROLEIN	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACRYLONITRILE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZENE	120			~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
BROMODICHLOROMETHANE	~~0~~ 1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
BROMOFORM	~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
BROMOMETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
CARBON TETRACHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROBENZENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROETHANE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHLOROFORM	~~0~~	U		0.65	J	P	2.4			~~0~~	U	
CHLOROMETHANE	0.64	J	P	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~	U	
ETHYLBENZENE	450			~~0~~	U		~~0~~	U		3.1		
METHYL TERT-BUTYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U	
METHYLENE CHLORIDE	~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
TETRACHLOROETHENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
TOLUENE	2.8			~~0~~	U		~~0~~	U		0.54	J	P
TRANS-1,2-DICHLOROETHENE	~~0~~ 1.0	U		~~0~~	U		~~0~~	U		~~0~~ 1.0	U	
TRICHLOROETHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
VINYL CHLORIDE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
XYLENES, TOTAL	3100			~~0~~ 2.0	U		1.7	J	P	7.7		

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW-19S	NASPFF MW-20S	NASPFF MW-22S	NASPFF MW-23S
SAMPLE DATE:	11/05/00	11/05/00	11/06/00	11/06/00
LABORATORY ID:	AC02869	AC02870	AC02876	AC02874
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
1,1,2,2-TETRACHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
1,1,2-TRICHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
1,1-DICHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
1,1-DICHLOROETHENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
1,2-DIBROMOETHANE	~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U	
1,2-DICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		3.8			~~0~~ 1.0	U	
1,2-DICHLOROPROPANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ 1.0	U		~~0~~ ↓	U	
1,3-DICHLOROPROPENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
2-CHLOROETHYL VINYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U	
ACROLEIN	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
ACRYLONITRILE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
BENZENE	~~0~~ 1.0	U		~~0~~ 1.0	U		110			~~0~~ 1.0	U	
BROMODICHLOROMETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ 1.0	U		~~0~~ ↓	U	
BROMOFORM	~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
BROMOMETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
CARBON TETRACHLORIDE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
CHLOROBENZENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
CHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
CHLOROFORM	0.93	J	P	~~0~~ ↓	U		~~0~~ ↓	U		0.74	J	P
CHLOROMETHANE	~~0~~ 1.0	U		~~0~~ ↓	U		0.65	J	P	~~0~~ 1.0	U	
ETHYLBENZENE	~~0~~ ↓	U		~~0~~ ↓	U		420			~~0~~ ↓	U	
METHYL TERT-BUTYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U		~~0~~ 10	U	
METHYLENE CHLORIDE	~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 5.0	U	
TETRACHLOROETHENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
TOLUENE	~~0~~ ↓	U		1.6			2.8			~~0~~ ↓	U	
TRANS-1,2-DICHLOROETHENE	~~0~~ ↓	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ ↓	U	
TRICHLOROETHENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
VINYL CHLORIDE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U	
XYLENES, TOTAL	~~0~~ 2.0	U		~~0~~ 2.0	U		2900			~~0~~ 2.0	U	

SAMPLE NUMBER:	NASPFF MW-5S			NASPFF MW-7S			NASPFF MW-8S			TRIP BLANK		
SAMPLE DATE:	11/06/00			11/06/00			11/05/00			11/05/00		
LABORATORY ID:	AC02872			AC02873			AC02871			AC02879		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 10	U		0	U	
1,1,2,2-TETRACHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,1,2-TRICHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,1-DICHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,1-DICHLOROETHENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,2-DIBROMOETHANE	~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U				
1,2-DICHLOROETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 10	U		0	U	
1,2-DICHLOROPROPANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,3-DICHLOROPROPENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
2-CHLOROETHYL VINYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 100	U		0	U	
ACROLEIN	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
ACRYLONITRILE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
BENZENE	~~0~~ 1.0	U		~~0~~ 1.0	U		39			0	U	
BROMODICHLOROMETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ 10	U		0	U	
BROMOFORM	~~0~~ 5.0	U		~~0~~ 5.0	U		~~0~~ 50	U		0	U	
BROMOMETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 10	U		0	U	
CARBON TETRACHLORIDE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
CHLOROBENZENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
CHLOROETHANE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
CHLOROFORM	2.9			1.8			~~0~~ ↓	U		0	U	
CHLOROMETHANE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ ↓	U		0	U	
ETHYLBENZENE	~~0~~ ↓	U		~~0~~ ↓	U		100			0	U	
METHYL TERT-BUTYL ETHER	~~0~~ 10	U		~~0~~ 10	U		~~0~~ 100	U		0	U	
METHYLENE CHLORIDE	~~0~~ 5.0	U		~~0~~ 5.0	U		7.1	U ✓	✗	2.1	J	
TETRACHLOROETHENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 10	U		0	U	
TOLUENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
TRANS-1,2-DICHLOROETHENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
TRICHLOROETHENE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
VINYL CHLORIDE	~~0~~ ↓	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
XYLENES, TOTAL	0.78	J	P	~~0~~ 2.0	U		520			0	U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW DUP-1	NASPFF MW-10R	NASPFF MW-17S	NASPFF MW-18S
SAMPLE DATE:	11/06/00	11/06/00	11/06/00	11/05/00
LABORATORY ID:	AC02878	AC02875	AC02877	AC02868
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	37			~~0~~ 1.0	U		~~0~~ 1.0	U		4.5		
2-METHYLNAPHTHALENE	45			~~0~~	U		~~0~~	U		3.3		
ACENAPHTHENE	~~0~~ 1.0	U		~~0~~	U		~~0~~	U		~~0~~ 1.0	U	
ACENAPHTHYLENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(A)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(A)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(B)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(G,H,I)PERYLENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(K)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHRYSENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
DIBENZO(A,H)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
FLUORENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
INDENO(1,2,3-CD)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
NAPHTHALENE	120			~~0~~	U		~~0~~	U		5.7		
PHENANTHRENE	~~0~~ 1.0	U		~~0~~	U		~~0~~	U		~~0~~ 1.0	U	
PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	

CTO132-N' PENSACOLA
WATER DAT.
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW-19S	NASPFF MW-20S	NASPFF MW-22S	NASPFF MW-23S
SAMPLE DATE:	11/05/00	11/05/00	11/06/00	11/06/00
LABORATORY ID:	AC02869	AC02870	AC02876	AC02874
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U	
2-METHYLNAPHTHALENE	~~0~~ 1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACENAPHTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ACENAPHTHYLENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(A)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(A)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(B)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(G,H,I)PERYLENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(K)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHRYSENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
DIBENZO(A,H)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
FLUORENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
INDENO(1,2,3-CD)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
NAPHTHALENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
PHENANTHRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	
PYRENE	~~0~~	U		~~0~~	U		~~0~~	U		~~0~~	U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW-5S			NASPFF MW-7S			NASPFF MW-8S					
SAMPLE DATE:	11/06/00			11/06/00			11/05/00			/ /		
LABORATORY ID:	AC02872			AC02873			AC02871					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	UG/L			UG/L			UG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	30	J	R	~~0~~ 1.0	U		16					
2-METHYLNAPHTHALENE	48	J	R	~~0~~	U		21					
ACENAPHTHENE	~~0~~ 1.0	U		~~0~~	U		~~0~~ 1.0	U				
ACENAPHTHYLENE	~~0~~	U		~~0~~	U		~~0~~	U				
ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(B)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(G,H,I)PERYLENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(K)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
CHRYSENE	~~0~~	U		~~0~~	U		~~0~~	U				
DIBENZO(A,H)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORENE	~~0~~	U		~~0~~	U		~~0~~	U				
INDENO(1,2,3-CD)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				
NAPHTHALENE	110	J	R	~~0~~	U		30					
PHENANTHRENE	~~0~~ 1.0	U		~~0~~	U		~~0~~ 1.0	U				
PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				

CTO132-N PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW DUP-1			NASPFF MW-10R			NASPFF MW-17S			NASPFF MW-18S		
SAMPLE DATE:	11/06/00			11/06/00			11/06/00			11/05/00		
LABORATORY ID:	AC02878			AC02875			AC02877			AC02868		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			MG/L			MG/L			MG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	22			~~0.39~~ 1.0	~~JB~~ U		~~0.42~~ 1.0	~~JB~~ U		~~0.48~~ 1.0	~~JB~~ U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW-19S			NASPFF MW-20S			NASPFF MW-22S			NASPFF MW-23S		
SAMPLE DATE:	11/05/00			11/05/00			11/06/00			11/06/00		
LABORATORY ID:	AC02869			AC02870			AC02876			AC02874		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			MG/L			MG/L			MG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	~~0.88~~ 1.0	~~JB~~ U		~~0.49~~ 1.0	~~JB~~ U		23			~~0.39~~ 1.0	~~JB~~ U	

CTO132-N' ^ PENSACOLA
WATER DA'
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW-5S			NASPFF MW-7S			NASPFF MW-8S					
SAMPLE DATE:	11/06/00			11/06/00			11/05/00			/ /		
LABORATORY ID:	AC02872			AC02873			AC02871					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	MG/L			MG/L			MG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	~~0.37~~ 1.0	~~JB~~ U		~~0.37~~ 1.0	~~JB~~ U		4.6					

26126

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-10R	AC02875	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-17S	AC02877	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-18S	AC02868	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
MG/L	NASPFF MW-19S	AC02869	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
MG/L	NASPFF MW-20S	AC02870	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
MG/L	NASPFF MW-22S	AC02876	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-23S	AC02874	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-5S	AC02872	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-7S	AC02873	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-8S	AC02871	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
UG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-10R	AC02875	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-17S	AC02877	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-18S	AC02868	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	NASPFF MW-19S	AC02869	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	NASPFF MW-20S	AC02870	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	NASPFF MW-22S	AC02876	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-23S	AC02874	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-5S	AC02872	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-7S	AC02873	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-8S	AC02871	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	TRIP BLANK	AC02879	NORMAL	26126	OV	11/05/00	11/13/00	11/13/00	8	0	8
UG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	PAH	11/06/00	11/10/00	11/13/00	4	3	7

Units	Ns e	Lab Id	Qc Type	Sdg	Sc	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	S DATE ANAL_DATE
UG/L	NASPFF MW-10R	AC02875	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-17S	AC02877	NORMAL	26126	PAH	11/06/00	11/10/00	11/13/00	4	3	7
UG/L	NASPFF MW-18S	AC02868	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
UG/L	NASPFF MW-19S	AC02869	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
UG/L	NASPFF MW-20S	AC02870	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
UG/L	NASPFF MW-22S	AC02876	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-23S	AC02874	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-5S	AC02872	NORMAL	26126	PAH	11/06/00	11/08/00	11/10/00	2	2	4
UG/L	NASPFF MW-7S	AC02873	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-8S	AC02871	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
MG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	TPH	11/06/00	11/10/00	11/15/00	4	5	9
MG/L	NASPFF MW-10R	AC02875	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-17S	AC02877	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-18S	AC02868	NORMAL	26126	TPH	11/05/00	11/10/00	11/14/00	5	4	9
MG/L	NASPFF MW-19S	AC02869	NORMAL	26126	TPH	11/05/00	11/10/00	11/14/00	5	4	9
MG/L	NASPFF MW-20S	AC02870	NORMAL	26126	TPH	11/05/00	11/13/00	11/16/00	8	3	11
MG/L	NASPFF MW-22S	AC02876	NORMAL	26126	TPH	11/06/00	11/10/00	11/15/00	4	5	9
MG/L	NASPFF MW-23S	AC02874	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-5S	AC02872	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-7S	AC02873	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-8S	AC02871	NORMAL	26126	TPH	11/05/00	11/10/00	11/14/00	5	4	9

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Gerald Walker**	**DATE: January 8, 2001**
FROM:	**Suzanne I. Smith**	**CC: File**
SUBJECT:	**Inorganic Data Validation – Lead** **CTO132 – NAS Pensacola** **SDG 26126**	
SAMPLES:	**11/Aqueous**	

NASPFF MW DUP-1	**NASPFF MW-10R**	**NASPFF MW-17S**
NASPFF MW-18S	**NASPFF MW-19S**	**NASPFF MW-20S**
NASPFF MW-22S	**NASPFF MW-23S**	**NASPFF MW-5S**
NASPFF MW-7S	**NASPFF MW-8S**	

OVERVIEW

The sample set for CTO132, SDG 26126; Naval Air Station Pensacola, Pensacola, Florida consists of eleven (11) aqueous environmental samples. The environmental samples were analyzed for Lead. One pair of duplicate samples was analyzed with this sample set: NASPFF MW-22S/NASPFF MW DUP-1.

The samples were collected by Tetra Tech NUS on November 5 and 6, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010B (Lead) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Lead Fraction

All quality control criteria were met for this fraction.

Field Duplicate Summary

Analyte	NASPFF MW-22S(mg/L)	NASPFF MW DUP-1(mg/L)	%RPD
Lead	0.0067	0.0064	4.6

Executive Summary

Laboratory performance: All quality control criteria were met.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne I. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW DUP-1			NASPFF MW-10R			NASPFF MW-17S			NASPFF MW-18S		
SAMPLE DATE:	11/06/00			11/06/00			11/06/00			11/05/00		
LABORATORY ID:	AC02878			AC02875			AC02877			AC02868		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			MG/L			MG/L			MG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	~~0.01~~ 0.0064	J	P	~~0.01~~ 0.0072	J	P	0.0047	J	P	~~0.00~~ 0.010	U	

CTO132-N PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW-19S	NASPFF MW-20S	NASPFF MW-22S	NASPFF MW-23S
SAMPLE DATE:	11/05/00	11/05/00	11/06/00	11/06/00
LABORATORY ID:	AC02869	AC02870	AC02876	AC02874
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	MG/L	MG/L	MG/L	MG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	~~0.00~~ 0.010	U		~~0.00~~ 0.010	U		~~0.01~~ 0.0067	J	P	~~0.00~~ 0.010	U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26126

SAMPLE NUMBER:	NASPFF MW-5S			NASPFF MW-7S			NASPFF MW-8S					
SAMPLE DATE:	11/06/00			11/06/00			11/05/00			/ /		
LABORATORY ID:	AC02872			AC02873			AC02871					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	MG/L			MG/L			MG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	~~0.00~~ 0.010	U		~~0.00~~ 0.010	U		~~0.00~~ 0.010	U				

26126

HOLDING TIME

01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-10R	AC02875	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-17S	AC02877	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-18S	AC02868	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
MG/L	NASPFF MW-19S	AC02869	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
MG/L	NASPFF MW-20S	AC02870	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
MG/L	NASPFF MW-22S	AC02876	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-23S	AC02874	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-5S	AC02872	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-7S	AC02873	NORMAL	26126	M	11/06/00	11/10/00	11/23/00	4	13	17
MG/L	NASPFF MW-8S	AC02871	NORMAL	26126	M	11/05/00	11/10/00	11/23/00	5	13	18
UG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-10R	AC02875	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-17S	AC02877	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-18S	AC02868	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	NASPFF MW-19S	AC02869	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	NASPFF MW-20S	AC02870	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	NASPFF MW-22S	AC02876	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-23S	AC02874	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-5S	AC02872	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-7S	AC02873	NORMAL	26126	OV	11/06/00	11/10/00	11/10/00	4	0	4
UG/L	NASPFF MW-8S	AC02871	NORMAL	26126	OV	11/05/00	11/10/00	11/10/00	5	0	5
UG/L	TRIP BLANK	AC02879	NORMAL	26126	OV	11/05/00	11/13/00	11/13/00	8	0	8
UG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	PAH	11/06/00	11/10/00	11/13/00	4	3	7

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/L	NASPFF MW-10R	AC02875	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-17S	AC02877	NORMAL	26126	PAH	11/06/00	11/10/00	11/13/00	4	3	7
UG/L	NASPFF MW-18S	AC02868	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
UG/L	NASPFF MW-19S	AC02869	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
UG/L	NASPFF MW-20S	AC02870	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
UG/L	NASPFF MW-22S	AC02876	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-23S	AC02874	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-5S	AC02872	NORMAL	26126	PAH	11/06/00	11/08/00	11/10/00	2	2	4
UG/L	NASPFF MW-7S	AC02873	NORMAL	26126	PAH	11/06/00	11/08/00	11/09/00	2	1	3
UG/L	NASPFF MW-8S	AC02871	NORMAL	26126	PAH	11/05/00	11/08/00	11/09/00	3	1	4
MG/L	NASPFF MW DUP-1	AC02878	NORMAL	26126	TPH	11/06/00	11/10/00	11/15/00	4	5	9
MG/L	NASPFF MW-10R	AC02875	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-17S	AC02877	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-18S	AC02868	NORMAL	26126	TPH	11/05/00	11/10/00	11/14/00	5	4	9
MG/L	NASPFF MW-19S	AC02869	NORMAL	26126	TPH	11/05/00	11/10/00	11/14/00	5	4	9
MG/L	NASPFF MW-20S	AC02870	NORMAL	26126	TPH	11/05/00	11/13/00	11/16/00	8	3	11
MG/L	NASPFF MW-22S	AC02876	NORMAL	26126	TPH	11/06/00	11/10/00	11/15/00	4	5	9
MG/L	NASPFF MW-23S	AC02874	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-5S	AC02872	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-7S	AC02873	NORMAL	26126	TPH	11/06/00	11/10/00	11/14/00	4	4	8
MG/L	NASPFF MW-8S	AC02871	NORMAL	26126	TPH	11/05/00	11/10/00	11/14/00	5	4	9

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02868 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/5/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-18S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	4.5	1.0
2-Methylnaphthalene	3.3	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	5.7	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.48JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	3.1	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	0.54 J	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	7.7	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	78	
Nitrobenzene-d5	(Range 37-104)	77	
p-Terphenyl-d14	(Range 15-132)	101	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	13	
o-Terphenyl (Range 82-142)	71	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	84	
4-Bromofluorobenzene (86-112)	100	
Toluene-d8 (84-108)	99	

Accura Analytical Laboratory, Inc.

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LABORATORY REPORT

Accura Sample ID #: AC02869 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/5/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-19S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.38JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.93 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	86	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	96	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	12	
o-Terphenyl (Range 82-142)	70	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	89	
4-Bromofluorobenzene (86-112)	101	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC02870 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/5/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-20S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.49JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	1.6	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	90	
p-Terphenyl-d14	(Range 15-132)	97	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	16	
o-Terphenyl (Range 82-142)	90	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	91	
4-Bromofluorobenzene (86-112)	99	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC02871 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/5/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-8S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	16	1.0
2-Methylnaphthalene	21	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	30	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	4.6	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	10
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	10
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	10
1,2-Dichloroethane	<RDL	10
1,2-Dichloropropane	<RDL	10
1,3-Dichloropropene	<RDL	10
2-Chloroethylvinyl ether	<RDL	100
Acrolein	<RDL	100
Acrylonitrile	<RDL	100
Benzene	39	10
Bromodichloromethane	<RDL	10
Bromoform	<RDL	50
Bromomethane	<RDL	10
Carbon tetrachloride	<RDL	10
Chlorobenzene	<RDL	10
Chloroethane	<RDL	10
Chloroform	<RDL	10
Chloromethane	<RDL	10
Ethylbenzene	100	10
Methyl-tert-butyl ether (MTBE)	<RDL	100
Methylene chloride	7.1 J	50
Tetrachloroethene	<RDL	10
Toluene	<RDL	10
trans-1,2-Dichloroethene	<RDL	10
Trichloroethene	<RDL	10
Vinyl chloride	<RDL	10
Xylenes (Total)	520	20

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	85	
Nitrobenzene-d5	(Range 37-104)	88	
p-Terphenyl-d14	(Range 15-132)	53	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	15	
o-Terphenyl (Range 82-142)	80	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	86	
4-Bromofluorobenzene (86-112)	100	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC02872 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/6/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-5S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	30	1.0
2-Methylnaphthalene	48	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	110	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	2.9	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	0.78 J	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	28	
Nitrobenzene-d5	(Range 37-104)	26	
p-Terphenyl-d14	(Range 15-132)	15	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	5.9	
o-Terphenyl (Range 82-142)	76	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	86	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC02873 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/6/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-7S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	1.8	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	80	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	84	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	25	
o-Terphenyl (Range 82-142)	88	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	83	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC02874 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/6/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-23S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.39JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.74 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	84	
p-Terphenyl-d14	(Range 15-132)	90	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	16	
o-Terphenyl (Range 82-142)	63	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	78	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC02875 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/6/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-10R

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0072J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.39JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.65 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	84	
Nitrobenzene-d5	(Range 37-104)	83	
p-Terphenyl-d14	(Range 15-132)	80	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	20	
o-Terphenyl (Range 82-142)	76	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	91	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02876 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/6/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-22S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0067J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	23	5.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	3.8	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	110	25
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	0.65 J	1.0
Ethylbenzene	420	25
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	2.8	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	2900	50

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	85	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	81	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	15	
o-Terphenyl (Range 82-142)	86	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	107	
Toluene-d8 (84-108)	101	

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LABORATORY REPORT

Accura Sample ID #: AC02877 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/6/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-17S

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0047J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.42JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	2.4	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	1.7 J	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	82	
Nitrobenzene-d5	(Range 37-104)	73	
p-Terphenyl-d14	(Range 15-132)	69	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/14/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	21	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	87	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02878 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/6/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPEF MW DUP-1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0064J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	37	1.0
2-Methylnaphthalene	45	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	120	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/15/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	22	5.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	120	25
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	0.64 J	1.0
Ethylbenzene	450	25
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	2.8	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	3100	100

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/13/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	77	
Nitrobenzene-d5	(Range 37-104)	84	
p-Terphenyl-d14	(Range 15-132)	57	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	13	
o-Terphenyl (Range 82-142)	86	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	100	
4-Bromofluorobenzene (86-112)	111	
Toluene-d8 (84-108)	100	

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LABORATORY REPORT

Accura Sample ID #: AC02879 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/5/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: TRIP BLANK

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	2.1 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	99	
Toluene-d8 (84-108)	93	

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC02880 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00

Client Contact: GERRY WALKER Date Received: 11/7/00

Client Project Number: CTO 132 / N0516 Date Reported: 11/28/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/13/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.41J	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	82	
Nitrobenzene-d5	(Range 50-103)	82	
p-Terphenyl-d14	(Range 64-113)	102	

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	17	
o-Terphenyl (Range 82-142)	72	

ANALYSIS: X VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	86	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	99	

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: Tetra Tech NUS
Address: 1401 Oven Park Dr.
Report Sent to: (Client Contact): Gerry Walker
Contact Phone # 850/385/9899 Fax # 850/385-9860
Project Name: Former Sherman Field Fuel Farm
Project Number: N0516 GR0060210

Billing address:
Client P.O. #

For Laboratory Use Only
Custody Seal: Y N
Page 1 OF 2
QC Level: N 1 2 3 4
Init/Temp: RPS/2°C
Sample Condition:
AAL Lab Project # 2626

Samplers: (signature) Dan Hartnett / Gary J Davis
Samplers: (printed) Dan Hartnett + Gary Davis

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	VOC	EDB	PAH's	TRPH	Pb					Remarks	Accura Sample ID No. ~~AB~~ AC
NASPFF MW-18s	11/5/00 10:30		✓	W	✓	Former Fuel Farm Sherman Field	11	3	3	2	2	1						02868
NASPFF MW-19s	11/5/00 11:00		✓	W	✓		11	3	3	2	2	1					1 EDB VIAL BROKEN ON REC'PT & 1 Amber	02869
NASPFF MW-20s	11/5/00 1140		✓	W	✓		11	3	3	2	2	1						02870
NASPFF MW-8s	11/5/00 1500		✓	W	✓		11	3	3	2	2	1						02871
NASPFF MW-5s	11/6/00 0940		✓	W	✓		11	3	3	2	2	1					2 EDB VIALS BROKEN ON REC'PT & 1 Amber	02872
NASPFF MW-7s	11/6/00 10:00		✓	W	✓		11	3	3	2	2	1						02873
NASPFF MW-23s	11/6/00 1145		✓	W	✓		11	3	3	2	2	1						02874
NASPFF MW-10R	11/6/00		✓	W	✓		11	3	3	2	2	1					1 VOC's VIAL BROKEN ON REC'PT	02875
NASPFF MW-22S	11/6/00 1530		✓	W	✓		11	3	3	2	2	1						02876
NASPFF MW-17S	11/6/00 1700		✓	W	✓	✓	11											02877

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
Gary J Davis	11/06/00 1900	→		
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
Fedex	11/07/00 9:10	R. P. Sumathi	11/07/00 9:10	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

27733

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: TetraTech NVS
Address: 1401 Oven Park Dr. Tallahassee, FL
Report Sent to: (Client Contact): Gerry Walker
Contact Phone # 850/385-9899 Fax # 850/385-9860
Project Name: Sherman Field Fuel Farm NASP
Project Number: N0516 GR0060210

Billing address:
Client P.O. #

For Laboratory Use Only
Custody Seal: Y N Page 2 OF 2
QC Level: N 1 2 3 4 Init/Temp: RB/2°C
Sample Condition: AAL Lab Project # 26126

Samplers: (signature) Dan Hartnett / Gary J. Davis
Samplers: (printed)

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	VOC	EDB	PAH's	TRPH	Pb					Remarks	Accura Sample ID No. ~~AB~~ AC
NASPFF DUP-1	11/6/00		✓	W	✓	Sherman Field Fuel Farm	11	3	3	2	2	1						~~02878~~
Trip Blank				W	✓		3	3										02879

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
Gary J. Davis	11-06-00 / 1900	→	→	
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
Fed	11/07/00 9:10	R. P. Suma	11/07/00 9:10	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

Tetra Tech NUS, Inc. **Internal Correspondence**

TO: **Mr. Gerald Walker** **DATE: January 4, 2001**

FROM: **Suzanne I. Smith** **CC: File**

SUBJECT: **Organic Data Validation – VOC, EDB, Methane, PAH, and TRPH**
CTO132 – NAS Pensacola
SDG 26211

SAMPLES: **3/Aqueous**

NASPFFMW-11S **NASPFFMW-21S**
NASPFFMW-9S

OVERVIEW

The sample set for CTO132, SDG 26211; Naval Air Station Pensacola, Pensacola, Florida consists of three (3) aqueous environmental samples. The environmental samples were analyzed for Volatile Organic Carbons (VOCs), Ethylene Dibromide (EDB), Methane, Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs).

The samples were collected by Tetra Tech NUS on November 15, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), EPA Method 504.1 (EDB), RSK-175M (Methane), SW-846 method 8270C (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
  • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Volatile Fraction

The MS/MSD %R for 2-Chloroethylvinyl ether was below the lower accuracy control limits. The LCS %R was acceptable. No action was taken since 2-Chloroethylvinyl ether was not detected in the associated samples.

All other quality control criteria were met for this fraction.

EDB Fraction

All quality control criteria were met for this fraction.

Methane

All quality control criteria were met for this fraction.

Polycylcic Aromatic Hydrocarbon Fraction

All quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

Laboratory Blank Analysis

Affected samples: all

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
TRPH	0.43	2.15

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors, and sample aliquots were taken into account when evaluating for blank contamination. Results less than the action level and reporting limit (RL) were reported as a nondetect at the RL value.

All other quality control criteria were met for this fraction.

Executive Summary

Laboratory performance:	MS/MSD %Rs for 2-Chloroethylvinyl ether were below the lower control limits. No action was taken. Detects for TRPH less than the action level and less than the RL were reported as nondetects.
Other factors affecting data quality:	None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne J. Smith

Suzanne J. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26211

SAMPLE NUMBER:	NASPFF MW-11S			NASPFF MW-21S			NASPFF MW-9S					
SAMPLE DATE:	11/15/00			11/15/00			11/15/00			/ /		
LABORATORY ID:	AC03322			AC03323			AC03321					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	UG/L			UG/L			UG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	~~0~~ 1.0	U		0 1.0	U		~~0~~ 1.0	U				
1,1,2,2-TETRACHLOROETHANE	~~0~~	U		0	U		~~0~~	U				
1,1,2-TRICHLOROETHANE	~~0~~	U		0	U		~~0~~	U				
1,1-DICHLOROETHANE	~~0~~	U		0	U		~~0~~	U				
1,1-DICHLOROETHENE	~~0~~	U		0	U		~~0~~	U				
1,2-DIBROMOETHANE	~~0~~ 0.05	U		~~0~~ 0.05	U		~~0~~ 0.05	U				
1,2-DICHLOROETHANE	~~0~~ 1.0	U		0 1.0	U		~~0~~ 1.0	U				
1,2-DICHLOROPROPANE	~~0~~	U		0	U		~~0~~ 1.0	U				
1,3-DICHLOROPROPENE	~~0~~	U		0	U		~~0~~ 1.0	U				
2-CHLOROETHYL VINYL ETHER	~~0~~ 10	U		0 10	U		~~0~~ 10	U				
ACROLEIN	~~0~~	U		0	U		~~0~~	U				
ACRYLONITRILE	~~0~~	U		0	U		~~0~~	U				
BENZENE	~~0~~ 1.0	U		0 1.0	U		~~0~~ 1.0	U				
BROMODICHLOROMETHANE	~~0~~	U		0	U		~~0~~	U				
BROMOFORM	~~0~~ 5.0	U		0 5.0	U		~~0~~ 5.0	U				
BROMOMETHANE	~~0~~ 1.0	U		0 1.0	U		~~0~~ 1.0	U				
CARBON TETRACHLORIDE	~~0~~ 1.0	U		0	U		~~0~~	U				
CHLOROBENZENE	~~0~~	U		0	U		~~0~~	U				
CHLOROETHANE	~~0~~	U		0	U		~~0~~	U				
CHLOROFORM	~~0~~	U		0	U		0.81	J	P			
CHLOROMETHANE	~~0~~	U		0	U		0.56	J	P			
ETHYLBENZENE	~~0~~	U		0	U		~~0~~ 1.0	U				
METHYL TERT-BUTYL ETHER	~~0~~ 10	U		0 10	U		~~0~~ 10	U				
METHYLENE CHLORIDE	0.81	J	P	0.68	J	P	0.58	J	P			
TETRACHLOROETHENE	~~0~~ 1.0	U		0 1.0	U		~~0~~ 1.0	U				
TOLUENE	~~0~~	U		0	U		~~0~~	U				
TRANS-1,2-DICHLOROETHENE	~~0~~	U		0	U		~~0~~	U				
TRICHLOROETHENE	~~0~~	U		0	U		~~0~~	U				
VINYL CHLORIDE	~~0~~	U		0	U		~~0~~	U				
XYLENES, TOTAL	~~0~~ 2.0	U		0 2.0	U		~~0~~ 2.0	U				

CTO132-N PENSACOLA
WATER DA1..
AAL
SDG: 26211

SAMPLE NUMBER:	NASPFF MW-11S	NASPFF MW-21S	NASPFF MW-9S	
SAMPLE DATE:	11/15/00	11/15/00	11/15/00	/ /
LABORATORY ID:	AC03322	AC03323	AC03321	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	UG/L	UG/L	UG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U				
2-METHYLNAPHTHALENE	~~0~~	U		~~0~~	U		~~0~~	U				
ACENAPHTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
ACENAPHTHYLENE	~~0~~	U		~~0~~	U		~~0~~	U				
ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(A)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(B)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(G,H,I)PERYLENE	~~0~~	U		~~0~~	U		~~0~~	U				
BENZO(K)FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
CHRYSENE	~~0~~	U		~~0~~	U		~~0~~	U				
DIBENZO(A,H)ANTHRACENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORANTHENE	~~0~~	U		~~0~~	U		~~0~~	U				
FLUORENE	~~0~~	U		~~0~~	U		~~0~~	U				
INDENO(1,2,3-CD)PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				
NAPHTHALENE	~~0~~	U		~~0~~	U		~~0~~	U				
PHENANTHRENE	~~0~~	U		~~0~~	U		~~0~~	U				
PYRENE	~~0~~	U		~~0~~	U		~~0~~	U				

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26211

SAMPLE NUMBER:	NASPFF MW-11S			NASPFF MW-21S			NASPFF MW-9S					
SAMPLE DATE:	11/15/00			11/15/00			11/15/00			/ /		
LABORATORY ID:	AC03322			AC03323			AC03321					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	MG/L			MG/L			MG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	~~0.31~~	1.0 ~~JB~~	U	~~0.31~~	1.0 ~~JB~~	U	~~0.85~~	1.0 ~~JB~~	U			

CTO132-N PENSACOLA
WATER DATA
AAL
SDG: 26211

SAMPLE NUMBER:	NASPFF MW-11S			NASPFF MW-21S			NASPFF MW-9S					
SAMPLE DATE:	11/15/00			11/15/00			11/15/00			/ /		
LABORATORY ID:	AC03322			AC03323			AC03321					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	UG/ML			UG/ML			UG/ML					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
DISSOLVED GASES												
METHANE	0.041			~~0~~ 0.010	U		~~0~~ 0.010	U				

26211

HOLDING TIME

01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	M	11/15/00	11/27/00	11/28/00	12	1	13
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	M	11/15/00	11/27/00	11/29/00	12	2	14
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	M	11/15/00	11/27/00	11/28/00	12	1	13
UG/ML	NASPFF MW-11S	AC03322	NORMAL	26211	METH	11/15/00	11/21/00	11/21/00	6	0	6
UG/ML	NASPFF MW-21S	AC03323	NORMAL	26211	METH	11/15/00	11/21/00	11/21/00	6	0	6
UG/ML	NASPFF MW-9S	AC03321	NORMAL	26211	METH	11/15/00	11/21/00	11/21/00	6	0	6
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	NTA	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	NTA	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	NTA	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	NTI	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	NTI	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	NTI	11/15/00	11/16/00	11/17/00	1	1	2
UG/L	NASPFF MW-11S	AC03322	NORMAL	26211	OV	11/15/00	11/16/00	11/16/00	1	0	1
UG/L	NASPFF MW-21S	AC03323	NORMAL	26211	OV	11/15/00	11/16/00	11/16/00	1	0	1
UG/L	NASPFF MW-9S	AC03321	NORMAL	26211	OV	11/15/00	11/16/00	11/16/00	1	0	1
UG/L	NASPFF MW-11S	AC03322	NORMAL	26211	PAH	11/15/00	11/17/00	11/20/00	2	3	5
UG/L	NASPFF MW-21S	AC03323	NORMAL	26211	PAH	11/15/00	11/17/00	11/20/00	2	3	5
UG/L	NASPFF MW-9S	AC03321	NORMAL	26211	PAH	11/15/00	11/20/00	11/21/00	5	1	6
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	SO4	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	SO4	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	SO4	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	SUL	11/15/00	11/20/00	11/20/00	5	0	5
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	SUL	11/15/00	11/20/00	11/20/00	5	0	5
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	SUL	11/15/00	11/20/00	11/20/00	5	0	5

Units	N le	Lab Id	Qc Type	Sdg	S	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	S _DATE O ANAL_DATE
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	TPH	11/15/00	11/16/00	11/27/00	1	11	12
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	TPH	11/15/00	11/16/00	11/27/00	1	11	12
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	TPH	11/15/00	11/16/00	11/27/00	1	11	12

Tetra Tech NUS, Inc. **Internal Correspondence**

TO: **Mr. Gerald Walker** **DATE: January 4, 2001**

FROM: **Suzanne I. Smith** **CC: File**

SUBJECT: **Inorganic Data Validation – Lead and Anions**
CTO132 – NAS Pensacola
SDG 26211

SAMPLES: **3/Aqueous**

NASPFFMW-11S **NASPFFMW-21S**
NASPFFMW-9S

OVERVIEW

The sample set for CTO132, SDG 26211; Naval Air Station Pensacola, Pensacola, Florida consists of three (3) aqueous environmental samples. The environmental samples were analyzed for Lead and select Anions.

The samples were collected by Tetra Tech NUS on November 15, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010B (Lead), and EPA Methods 300/376.1 (Anions) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Lead Fraction

All quality control criteria were met for this fraction.

Anions Fraction

All quality control criteria were met for this fraction.

Executive Summary

Laboratory performance: All quality control criteria were met.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne L. Smith

Suzanne L. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26211

SAMPLE NUMBER:		NASPFF MW-11S			NASPFF MW-21S			NASPFF MW-9S				
SAMPLE DATE:		11/15/00			11/15/00			11/15/00			/ /	
LABORATORY ID:		AC03322			AC03323			AC03321				
QC_TYPE:		NORMAL			NORMAL			NORMAL				
% SOLIDS:		0.0 %			0.0 %			0.0 %			100.0 %	
UNITS:		MG/L			MG/L			MG/L				
FIELD DUPLICATE OF:												
		RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS													
LEAD	0.010	~~0~~	U		~~0~~ 0.010	U		~~0~~ 0.010	U				

CTO132-! ; PENSACOLA
WATER DA
AAL
SDG: 26211

SAMPLE NUMBER:	NASPFF MW-11S			NASPFF MW-21S			NASPFF MW-9S					
SAMPLE DATE:	11/15/00			11/15/00			11/15/00			/ /		
LABORATORY ID:	AC03322			AC03323			AC03321					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
FIELD DUPLICATE OF:												
	RESULT	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
INORGANIC PARAMETERS												
NITRATE(MG/L)	0.22			1.88			0.33					
NITRITE(MG/L)	~~0~~ 0.01	U		~~0~~ 0.01	U		~~0~~ 0.01	U				
SULFATE(MG/L)	8			11			7					
SULFIDE(MG/L)	~~0~~ 1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U				

26211

HOLDING TIME

01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	M	11/15/00	11/27/00	11/28/00	12	1	13
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	M	11/15/00	11/27/00	11/29/00	12	2	14
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	M	11/15/00	11/27/00	11/28/00	12	1	13
UG/ML	NASPFF MW-11S	AC03322	NORMAL	26211	METH	11/15/00	11/21/00	11/21/00	6	0	6
UG/ML	NASPFF MW-21S	AC03323	NORMAL	26211	METH	11/15/00	11/21/00	11/21/00	6	0	6
UG/ML	NASPFF MW-9S	AC03321	NORMAL	26211	METH	11/15/00	11/21/00	11/21/00	6	0	6
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	NTA	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	NTA	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	NTA	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	NTI	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	NTI	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	NTI	11/15/00	11/16/00	11/17/00	1	1	2
UG/L	NASPFF MW-11S	AC03322	NORMAL	26211	OV	11/15/00	11/16/00	11/16/00	1	0	1
UG/L	NASPFF MW-21S	AC03323	NORMAL	26211	OV	11/15/00	11/16/00	11/16/00	1	0	1
UG/L	NASPFF MW-9S	AC03321	NORMAL	26211	OV	11/15/00	11/16/00	11/16/00	1	0	1
UG/L	NASPFF MW-11S	AC03322	NORMAL	26211	PAH	11/15/00	11/17/00	11/20/00	2	3	5
UG/L	NASPFF MW-21S	AC03323	NORMAL	26211	PAH	11/15/00	11/17/00	11/20/00	2	3	5
UG/L	NASPFF MW-9S	AC03321	NORMAL	26211	PAH	11/15/00	11/20/00	11/21/00	5	1	6
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	SO4	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	SO4	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	SO4	11/15/00	11/16/00	11/17/00	1	1	2
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	SUL	11/15/00	11/20/00	11/20/00	5	0	5
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	SUL	11/15/00	11/20/00	11/20/00	5	0	5
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	SUL	11/15/00	11/20/00	11/20/00	5	0	5

Units	ıple	Lab Id	Qc Type	Sdg		Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	ıP_DATE TO ANAL_DATE
MG/L	NASPFF MW-11S	AC03322	NORMAL	26211	TPH	11/15/00	11/16/00	11/27/00	1	11	12
MG/L	NASPFF MW-21S	AC03323	NORMAL	26211	TPH	11/15/00	11/16/00	11/27/00	1	11	12
MG/L	NASPFF MW-9S	AC03321	NORMAL	26211	TPH	11/15/00	11/16/00	11/27/00	1	11	12

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC03321 **Accura Project #: 26211**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/15/00

Client Contact: GERRY WALKER Date Received: 11/16/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-9S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.33	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	7	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.35JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.81 J	1.0
Chloromethane	0.56 J	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	0.58 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	87	
p-Terphenyl-d14	(Range 15-132)	87	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.3	
o-Terphenyl (Range 82-142)	101	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	81	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC03322 **Accura Project #: 26211**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/15/00

Client Contact: GERRY WALKER Date Received: 11/16/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-11S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.22	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	8	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	0.041	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.31JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	0.81J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	89	
Nitrobenzene-d5	(Range 37-104)	97	
p-Terphenyl-d14	(Range 15-132)	64	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	6.4	
o-Terphenyl (Range 82-142)	83	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	83	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	90	

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LABORATORY REPORT

Accura Sample ID #: AC03323 **Accura Project #: 26211**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/15/00

Client Contact: GERRY WALKER Date Received: 11/16/00

Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFF MW-21S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	1.88	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	11	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/29/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.31JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	0.68 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	80	
Nitrobenzene-d5	(Range 37-104)	89	
p-Terphenyl-d14	(Range 15-132)	68	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	4.7	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	81	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	94	

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Environmental Analytical Services

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CHAIN OF CUSTODY

Company Name: Tetra Tech NUS
Address: 1401 Oven Park Dr. Tallahassee, FL
Report Sent to: (Client Contact): Gerry Walker
Contact Phone # 8503859899 Fax # 8503859860
Project Name: Former Sherman Field Fuel Farm
Project Number: N0516 CTO 132

Billing address:
Client P.O. #

For Laboratory Use Only
Custody Seal: Y N Page 1 OF 1
QC Level: N 1 2 3 4 Init/Temp. ABL/2°C
Sample Condition: AAL Lab Project # 26211

Samplers: (signature): Dan Hartnett
Samplers: (printed): Dan Hartnett

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	VOC 8021B	EDB 504.1	Methane	PAH's 8310	TRPH FL PRO	Pb	Sulfide	Anions		Remarks	Accura Sample ID No. ~~AB~~ AC
NASPFFMW-9S	11/15/00 1630		✓	A	✓	Former Sherman Field Fuel Farm		3	3	3	2	2	1	1	1			03321
NASPFFMW-11S	11/15/00 1450		✓	A	✓	↓		3	3	3	2	2	1	1	1			03322
NASPFFMW-21S	11/15/00 1205		✓	A	✓	↓		3	3	3	2	2	1	1	1			03323
Trip Blank				A	✓	Accura		3									NOT REC'D DIT 11/16/00	03324

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
Dan Hartnett	11/15/00-1900	FED EX		
Relinquished By:	**Date / Time**	**Received By:**	**Date / Time**	**Turnaround Time Requested:**
FED EX	11-16-00/0915	Arnold B Griffin	11-16-00/0915	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

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LABORATORY REPORT

Accura Sample ID #: AC02868 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/05/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-18S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	4.5	1.0
2-Methylnaphthalene	3.3	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	5.7	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.48JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	3.1	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	0.54 J	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	7.7	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	78	
Nitrobenzene-d5	(Range 37-104)	77	
p-Terphenyl-d14	(Range 15-132)	101	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	13	
o-Terphenyl (Range 82-142)	71	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	84	
4-Bromofluorobenzene (86-112)	100	
Toluene-d8 (84-108)	99	

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LABORATORY REPORT

Accura Sample ID #: AC02869 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/05/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-19S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.38JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.93 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	86	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	96	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	12	
o-Terphenyl (Range 82-142)	70	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	89	
4-Bromofluorobenzene (86-112)	101	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC02870 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/05/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-20S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/2000 Date Analyzed: 11/16/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.49JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	1.6	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	90	
p-Terphenyl-d14	(Range 15-132)	97	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/2000 Date Analyzed: 11/16/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	16	
o-Terphenyl (Range 82-142)	90	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	91	
4-Bromofluorobenzene (86-112)	99	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC02871 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/05/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-8S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	16	1.0
2-Methylnaphthalene	21	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	30	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	4.6	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/2000 Date Analyzed: 11/13/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	10
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	10
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	10
1,2-Dichloroethane	<RDL	10
1,2-Dichloropropane	<RDL	10
1,3-Dichloropropene	<RDL	10
2-Chloroethylvinyl ether	<RDL	100
Acrolein	<RDL	100
Acrylonitrile	<RDL	100
Benzene	39	10
Bromodichloromethane	<RDL	10
Bromoform	<RDL	50
Bromomethane	<RDL	10
Carbon tetrachloride	<RDL	10
Chlorobenzene	<RDL	10
Chloroethane	<RDL	10
Chloroform	<RDL	10
Chloromethane	<RDL	10
Ethylbenzene	100	10
Methyl-tert-butyl ether (MTBE)	<RDL	100
Methylene chloride	7.1 J	50
Tetrachloroethene	<RDL	10
Toluene	<RDL	10
trans-1,2-Dichloroethene	<RDL	10
Trichloroethene	<RDL	10
Vinyl chloride	<RDL	10
Xylenes (Total)	520	20

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	85	
Nitrobenzene-d5	(Range 37-104)	88	
p-Terphenyl-d14	(Range 15-132)	53	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	15	
o-Terphenyl (Range 82-142)	80	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/2000 Date Analyzed: 11/13/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	86	
4-Bromofluorobenzene (86-112)	100	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC02872 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/06/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-5S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	30	1.0
2-Methylnaphthalene	48	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	110	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	2.9	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	0.78 J	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	28	
Nitrobenzene-d5	(Range 37-104)	26	
p-Terphenyl-d14	(Range 15-132)	15	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	5.9	
o-Terphenyl (Range 82-142)	76	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	86	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC02873 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/06/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-7S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	1.8	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	80	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	84	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	25	
o-Terphenyl (Range 82-142)	88	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	83	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC02874 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/06/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-23S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.39JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.74 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	84	
p-Terphenyl-d14	(Range 15-132)	90	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	16	
o-Terphenyl (Range 82-142)	63	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	78	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC02875 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee
Client Contact: GERRY WALKER
Client Project Number: CTO 132 / N0516
Client Project Name: FORMER SHERMAN FIELD FUEL FARM
Client Sample ID: NASPFF MW-10R

Date Sampled: 11/06/2000
Date Received: 11/07/2000
Date Reported: 12/01/2000
Sample Matrix: WATER

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0072J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.39JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.65 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	84	
Nitrobenzene-d5	(Range 37-104)	83	
p-Terphenyl-d14	(Range 15-132)	80	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	20	
o-Terphenyl (Range 82-142)	76	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	91	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02876 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/06/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-22S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0067J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/15/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	23	5.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	3.8	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	110	25
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	0.65 J	1.0
Ethylbenzene	420	25
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	2.8	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	2900	50

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	85	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	81	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/15/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	15	
o-Terphenyl (Range 82-142)	86	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	107	
Toluene-d8 (84-108)	101	

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LABORATORY REPORT

Accura Sample ID #: AC02877 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/06/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-17S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0047J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/13/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.42JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	2.4	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	1.7 J	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/13/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	82	
Nitrobenzene-d5	(Range 37-104)	73	
p-Terphenyl-d14	(Range 15-132)	69	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/14/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	21	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	87	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02878 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/06/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPEF MW DUP-1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0064J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/13/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	37	1.0
2-Methylnaphthalene	45	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	120	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/15/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	22	5.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	120	25
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	0.64 J	1.0
Ethylbenzene	450	25
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	2.8	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	3100	100

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/13/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	77	
Nitrobenzene-d5	(Range 37-104)	84	
p-Terphenyl-d14	(Range 15-132)	57	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/15/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	13	
o-Terphenyl (Range 82-142)	86	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	100	
4-Bromofluorobenzene (86-112)	111	
Toluene-d8 (84-108)	100	

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LABORATORY REPORT

Accura Sample ID #: AC02879 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee
Client Contact: GERRY WALKER
Client Project Number: CTO 132 / N0516
Client Project Name: FORMER SHERMAN FIELD FUEL FARM
Client Sample ID: TRIP BLANK

Date Sampled: 11/05/2000
Date Received: 11/07/2000
Date Reported: 12/01/2000
Sample Matrix: WATER

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/2000 Date Analyzed: 11/13/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	2.1 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/2000 Date Analyzed: 11/13/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	99	
Toluene-d8 (84-108)	93	

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LABORATORY REPORT

Accura Sample ID #: AC02880 **Accura Project #: 26126**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/07/2000
Client Contact: GERRY WALKER Date Received: 11/07/2000
Client Project Number: CTO 132 / N0516 Date Reported: 12/01/2000
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: METHOD BLANK

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/23/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/13/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.41J	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/08/2000 Date Analyzed: 11/09/2000 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	82	
Nitrobenzene-d5	(Range 50-103)	82	
p-Terphenyl-d14	(Range 64-113)	102	

ANALYSIS: X_PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/13/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	17	
o-Terphenyl (Range 82-142)	72	

ANALYSIS: X_VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/2000 Date Analyzed: 11/10/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	86	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	99	

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CASE NARRATIVE for Project Number: 26126
Client Project: Former Sherman Field Fuel Farm / CTO 132 / N0516
Task Order Manager: Gerry Walker
Samplers: Dan Hartnett / Gary Davis

The following items were noted concerning this project:

1. The following samples were received by Accura Analytical Laboratory on 11/07/00 at 0910:

Client I.D.	Laboratory I.D.
NASPFF MW-18S	AC02868
NASPFF MW-19S	AC02869
NASPFF MW-20S	AC02870
NASPFF MW-8S	AC02871
NASPFF MW-5S	AC02872
NASPFF MW-7S	AC02873
NASPFF MW-23S	AC02874
NASPFF MW-10R	AC02875
NASPFF MW-22S	AC02876
NASPFF MW-17S	AC02877
NASPFF DUP-1	AC02878
Trip Blank	AC02879

2. The sample cooler temperature was noted to be 2^0C upon receipt.

3. Sample NASPFF MW-18S, submitted for metals analysis was preserved upon receipt in the laboratory with 3mL of HNO_3.

4. The pH for all samples submitted for VOC analyses was noted to be < 2 prior to analysis.

5. The J values noted for the Metals, VOC, and FL-PRO analyses indicate estimated values where the compounds are present at concentrations that are less than the quantitation limits, but above the method detection limits.

6. The "B" values noted for the FL-PRO analyses indicate that the analyte was detected in the Method Blank and the concentration in the sample was less than ten times the concentration in the Method Blank. The results for this analyte should be considered estimated due to Method Blank contamination.

7. The Trip Blank associated with the samples submitted for VOC analyses had a concentration of Methylene Chloride that was above the reporting limit.

8. The recovery of Nonatriacontane (C39), was outside the method specified limits for all samples and associated QC for the FL-PRO analyses. However, the recoveries were within historical in-house limits; therefore the data was accepted.

9. The recovery of ortho-Terphenyl was outside the method specified limits for the following samples:

   Petroleum Range Organics FL-PRO
   NASPFF MW-18S
   NASPFF MW-19S
   NASPFF MW-8S
   NASPFF MW-5S
   NASPFF MW-23S
   NASPFF MW-10R
   Method Blank

10. The following surrogates were outside the method specified limits for sample NASPFF MW-5S:

    PAH SW-846-8270C
    Nitrobenzene-d5
    2-Fluorobiphenyl
    Terphenyl-d14

    The extraction procedure consumed all available sample for the analysis; therefore no re-extraction was performed. All PAH results for this sample should be considered estimated.

11. The following samples required dilution due to high analyte concentration and/or the nature of the matrix, resulting in elevated detection limits:

    Pertoleul Range Organics FL-PRO
    NASPFF MW-22S
    NASPFF DUP-1

    VOC SW-846-8260B
    NASPFF MW-8S
    NASPFF MW-22S
    NASPFF DUP-1

12. The Q.C. reported for the FL-PRO and PAH analyses represents batch Q.C. and consists of Laboratory Control Sample and Laboratory Control Sample Duplicate analyses.

_____

Laboratory Manager

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LABORATORY REPORT

Accura Sample ID #: AC02910 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF EQB-1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.88JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	86	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	106	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	14	
o-Terphenyl (Range 82-142)	98	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	85	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02911 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-13S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.40JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	2.2	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	86	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	87	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	18	
o-Terphenyl (Range 82-142)	99	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	92	
4-Bromofluorobenzene (86-112)	100	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02912 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-15S

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	84	
p-Terphenyl-d14	(Range 15-132)	105	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	22	
o-Terphenyl (Range 82-142)	95	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	82	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	97	

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LABORATORY REPORT

Accura Sample ID #: AC02913 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-1S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.09	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	6.3	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	54	1.0

2-Methylnaphthalene	68	1.0
Acenaphthene	0.80J	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	1.1	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	130	1.0
Phenanthrene	0.78J	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	5.6	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	25
1,1,2,2-Tetrachloroethane	<RDL	25
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	25
1,1-Dichloroethene	<RDL	25
1,2-Dichloroethane	17 J	25
1,2-Dichloropropane	<RDL	25
1,3-Dichloropropene	<RDL	25
2-Chloroethylvinyl ether	<RDL	250
Acrolein	<RDL	250
Acrylonitrile	<RDL	250
Benzene	530	25
Bromodichloromethane	<RDL	25
Bromoform	<RDL	130
Bromomethane	<RDL	25

Carbon tetrachloride	<RDL	25
Chlorobenzene	<RDL	25
Chloroethane	<RDL	25
Chloroform	<RDL	25
Chloromethane	<RDL	25
Ethylbenzene	1300	50
Methyl-tert-butyl ether (MTBE)	<RDL	250
Methylene chloride	<RDL	130
Tetrachloroethene	<RDL	25
Toluene	<RDL	25
trans-1,2-Dichloroethene	<RDL	25
Trichloroethene	<RDL	25
Vinyl chloride	<RDL	25
Xylenes (Total)	430	50

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	82	
Nitrobenzene-d5	(Range 37-104)	66	
p-Terphenyl-d14	(Range 15-132)	47	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	14	
o-Terphenyl (Range 82-142)	70	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	86	
4-Bromofluorobenzene (86-112)	100	
Toluene-d8 (84-108)	98	

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LABORATORY REPORT

Accura Sample ID #: AC02914 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-5I

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.40JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	84	
Nitrobenzene-d5	(Range 37-104)	82	
p-Terphenyl-d14	(Range 15-132)	100	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	16	
o-Terphenyl (Range 82-142)	112	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	87	
4-Bromofluorobenzene (86-112)	94	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC02915 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-2S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.01	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	1	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	2.5	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	50	1.0

2-Methylnaphthalene	63	1.0
Acenaphthene	2.2	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	2.0	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	110	1.0
Phenanthrene	2.0	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	7.9	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	5.0
1,1,2,2-Tetrachloroethane	<RDL	5.0
1,1,2-Trichloroethane	<RDL	5.0
1,1-Dichloroethane	<RDL	5.0
1,1-Dichloroethene	<RDL	5.0
1,2-Dichloroethane	<RDL	5.0
1,2-Dichloropropane	3.6 J	5.0
1,3-Dichloropropene	<RDL	5.0
2-Chloroethylvinyl ether	<RDL	50
Acrolein	<RDL	50
Acrylonitrile	<RDL	50
Benzene	55	5.0
Bromodichloromethane	<RDL	5.0
Bromoform	<RDL	25
Bromomethane	<RDL	5.0

Carbon tetrachloride	<RDL	5.0
Chlorobenzene	<RDL	5.0
Chloroethane	<RDL	5.0
Chloroform	<RDL	5.0
Chloromethane	<RDL	5.0
Ethylbenzene	1100	50
Methyl-tert-butyl ether (MTBE)	<RDL	50
Methylene chloride	<RDL	25
Tetrachloroethene	<RDL	5.0
Toluene	10	5.0
trans-1,2-Dichloroethene	<RDL	5.0
Trichloroethene	<RDL	5.0
Vinyl chloride	<RDL	5.0
Xylenes (Total)	3100	100

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	78	
Nitrobenzene-d5	(Range 37-104)	76	
p-Terphenyl-d14	(Range 15-132)	46	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	24	
o-Terphenyl (Range 82-142)	95	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	93	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	98	

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LABORATORY REPORT

Accura Sample ID #: AC02916 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF DUP-2

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.37JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	82	
Nitrobenzene-d5	(Range 37-104)	78	
p-Terphenyl-d14	(Range 15-132)	105	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	14	
o-Terphenyl (Range 82-142)	96	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	87	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	94	

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LABORATORY REPORT

Accura Sample ID #: AC02917 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/8/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.35J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/9/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/8/00 Date Analyzed: 11/9/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	82	
Nitrobenzene-d5	(Range 50-103)	82	
p-Terphenyl-d14	(Range 64-113)	102	

ANALYSIS: X_PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	18	
o-Terphenyl (Range 82-142)	89	

ANALYSIS: X_VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	82	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	96	

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LABORATORY REPORT

Accura Sample ID #: AC02922 **Accura Project #: 26137**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/7/00
Client Contact: GERRY WALKER Date Received: 11/8/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/8/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: TRIP BLANK

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	94	
4-Bromofluorobenzene (86-112)	99	
Toluene-d8 (84-108)	91	

Accura Analytical Laboratory, Inc.

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CASE NARRATIVE for Project Number: 26137

Client Project: Former Sherman Field Fuel Farm / CTO 132 / N0516

CTO Manager: Gerry Walker

Samplers: Gary Davis / Dan Hartnett

The following items were noted concerning this project:

1. The following samples were received by Accura Analytical Laboratory on 11/08/00 at 0915:

Client I.D.	Laboratory I.D.
NASPFF EQB-1	AC02910
NASPFF MW-13S	AC02911
NASPFF MW-15S	AC02912
NASPFF MW-1S	AC02913
NASPFF MW-5I	AC02914
NASPFF MW-2S	AC02915
NASPFF DUP-2	AC02916
Trip Blank	AC02922

2. The sample cooler temperature was noted to be 2^0C upon receipt.

3. The pH for all VOC samples was noted to be less than 2 prior to analysis.

4. The "J" values noted for the FL-PRO, PAH and VOC analyses indicate estimated concentrations that were above the method detection limit but below the reporting limit.

5. The "B" values noted for the FL-PRO analyses indicate that the analyte was detected in the Method Blank at a concentration that was above the method detection limit and the concentration in the sample was less than ten times the concentration in the Method Blank. These results should be considered estimated due to Method Blank contamination.

6. The following samples required dilution due to high analyte concentration and/or the nature of the matrix, resulting in elevated detection limits:

VOC SW-846-8260B	TRPH FL-PRO
NASPFF MW-1S	Matrix Spike
NASPFF MW-2S	Matrix Spike Duplicate

7. The recoveries and RPD for the Matrix Spike and Matrix Spike Duplicate associated with the FL-PRO analyses was outside the method specified limits due to high sample concentration and dilution effect. The Laboratory Control Sample was within established in-house limits; therefore the data was accepted.
8. The recovery of Nonatriacontane (C39), was outside the method specified limits for the associated QC and all samples submitted for FL-PRO analyses. However, the recoveries were within established in-house limits; therefore the data was accepted.

9. The recovery of ortho-Terphenyl in sample NASPFF MW-1S submitted for FL-PRO analysis was outside the method specified limits but within established in-house limits; therefore the data was accepted.

10. A subcontract laboratory performed the following analyses:

    Anions EPA-300.0

    Methane RSK-175 Mod.

11. The Matrix Spike and/or Matrix Spike Duplicate recoveries were outside the method specified limit for the following analytes due to matrix interference:

PAH SW-846-8270C

Benzo (a) pyrene
Benzo (b) fluoroanthene
Benzo (g,h,i) perylene
Benzo (k) fluoroanthene
Chrysene
Dibenzo (a,h) anthracene
Indeno (1,2,3-c,d) pyrene

VOC SW-846-8260B

Acrolein

_____

Laboratory Manager

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LABORATORY REPORT

Accura Sample ID #: AC02994 **Accura Project #: 26150**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/8/00
Client Contact: GERRY WALKER Date Received: 11/9/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-16S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.04	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	4	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.011	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	2.9	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	29	1.0

2-Methylnaphthalene	37	1.0
Acenaphthene	0.44J	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	0.44J	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	0.27J	1.0
Fluoranthene	<RDL	1.0
Fluorene	0.42J	1.0
Indeno(1,2,3-cd)pyrene	0.28J	1.0
Naphthalene	75	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	9.6	5.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	10
1,1,2,2-Tetrachloroethane	<RDL	10
1,1,2-Trichloroethane	<RDL	10
1,1-Dichloroethane	<RDL	10
1,1-Dichloroethene	<RDL	10
1,2-Dichloroethane	<RDL	10
1,2-Dichloropropane	<RDL	10
1,3-Dichloropropene	<RDL	10
2-Chloroethylvinyl ether	<RDL	100
Acrolein	<RDL	100
Acrylonitrile	<RDL	100
Benzene	32	10
Bromodichloromethane	<RDL	10
Bromoform	<RDL	50
Bromomethane	<RDL	10

Carbon tetrachloride	<RDL	10
Chlorobenzene	<RDL	10
Chloroethane	<RDL	10
Chloroform	<RDL	10
Chloromethane	<RDL	10
Ethylbenzene	330	10
Methyl-tert-butyl ether (MTBE)	<RDL	100
Methylene chloride	13 J	50
Tetrachloroethene	<RDL	10
Toluene	17	10
trans-1,2-Dichloroethene	<RDL	10
Trichloroethene	<RDL	10
Vinyl chloride	<RDL	10
Xylenes (Total)	2300	50

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	71	
Nitrobenzene-d5	(Range 37-104)	85	
p-Terphenyl-d14	(Range 15-132)	33	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/16/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	9.5	
o-Terphenyl (Range 82-142)	48	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/13/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	79	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	100	

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LABORATORY REPORT

Accura Sample ID #: AC02995 **Accura Project #: 26150**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00
Client Contact: GERRY WALKER Date Received: 11/9/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/9/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.35J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	78	
Nitrobenzene-d5	(Range 50-103)	84	
p-Terphenyl-d14	(Range 64-113)	92	

ANALYSIS: X_PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	18	
o-Terphenyl (Range 82-142)	89	

ANALYSIS: X_VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	86	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	99	

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CASE NARRATIVE for Project Number: 26150

Client Project: Former Sherman Field Fuel Farm / CTO 132 / N0516

CTO Manager: Gerry Walker
Samplers: Dan Hartnett

The following items were noted concerning this project:

1. The following sample was received by Accura Analytical Laboratory on 11/09/00 at 0945:

Client I.D.	Laboratory I.D.
NASPFF MW-16S	AC02994

2. The sample cooler temperature was noted to be 2^0C upon receipt.

3. The pH of the VOC sample was noted to be less than 2 prior to analysis.

4. The "J" values noted for the FL-PRO, PAH and VOC analyses indicate estimated concentrations that were above the method detection limit but below the reporting limit.

5. The Method Blank associated with the FL-PRO analysis had a concentration that was above the method detection limit. However, the concentration in the sample submitted with this project was greater than ten times the concentration in the Method Blank; therefore the contamination was considered to be insignificant.

6. The following samples required dilution due to high analyte concentration and/or the nature of the matrix, resulting in elevated detection limits:

VOC SW-846-8260B	TRPH FL-PRO
NASPFF MW-16S	NASPFF MW-16S

7. The QC associated with the PAH and FL-PRO analyses represents batch QC and consists of a Laboratory Control Sample and Laboratory Control Sample Duplicate.

8. The spike recoveries associated with the FL-PRO analyses were outside the method specified limits. However, all recoveries were within established in-house limits; therefore the data was accepted.

9. The following surrogates were outside the method specified limits due to matrix interference:

VOC SW-856-8260B

Toluene-d8	(NASPFF MW-16S)
Bromofluorobenzene	(NASPFF MW-16S)

10. The recovery of Nonatriacontane (C39), was outside the method specified limits for the associated QC and sample submitted for FL-PRO analysis. However, the recoveries were within established in-house limits; therefore the data was accepted.

11. The recovery of ortho-Terphenyl in sample NASPFF MW-16S submitted for FL-PRO analysis was outside the method specified limits but within established in-house limits; therefore the data was accepted.

12. A subcontract laboratory performed the following analyses:

Anions EPA-300.0
Methane RSK-175 Mod.

_____

Laboratory Manager

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LABORATORY REPORT

Accura Sample ID #: AC03083 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00
Client Contact: GERRY WALKER Date Received: 11/10/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-4S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/11/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.86	0.01
Nitrite by IC	0.02	0.01
Sulfate by IC	5	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	0.21	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.41JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.63 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	1.2	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	1.9 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	0.88 J	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	75	
Nitrobenzene-d5	(Range 37-104)	82	
p-Terphenyl-d14	(Range 15-132)	64	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	6.1	
o-Terphenyl (Range 82-142)	106	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	91	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	98	

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LABORATORY REPORT

Accura Sample ID #: AC03084 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00
Client Contact: GERRY WALKER Date Received: 11/10/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-3S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/11/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	0.08	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	2.1	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	64	1.0

2-Methylnaphthalene	79	1.0
Acenaphthene	0.59J	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	1.4	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	200	10
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/21/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	28	5.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	25
1,1,2,2-Tetrachloroethane	<RDL	25
1,1,2-Trichloroethane	<RDL	25
1,1-Dichloroethane	<RDL	25
1,1-Dichloroethene	<RDL	25
1,2-Dichloroethane	<RDL	25
1,2-Dichloropropane	<RDL	25
1,3-Dichloropropene	<RDL	25
2-Chloroethylvinyl ether	<RDL	250
Acrolein	<RDL	250
Acrylonitrile	<RDL	250
Benzene	280	25
Bromodichloromethane	<RDL	25
Bromoform	<RDL	130
Bromomethane	<RDL	25

Carbon tetrachloride	<RDL	25
Chlorobenzene	<RDL	25
Chloroethane	<RDL	25
Chloroform	<RDL	25
Chloromethane	<RDL	25
Ethylbenzene	1700	100
Methyl-tert-butyl ether (MTBE)	<RDL	250
Methylene chloride	<RDL	130
Tetrachloroethene	<RDL	25
Toluene	16 J	25
trans-1,2-Dichloroethene	<RDL	25
Trichloroethene	<RDL	25
Vinyl chloride	<RDL	25
Xylenes (Total)	4100	200

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	78	
Nitrobenzene-d5	(Range 37-104)	75	
p-Terphenyl-d14	(Range 15-132)	21	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.6	
o-Terphenyl (Range 82-142)	103	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	83	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	97	

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LABORATORY REPORT

Accura Sample ID #: AC03085 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00
Client Contact: GERRY WALKER Date Received: 11/10/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-13D

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.46JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	2.0	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	0.89 J	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	5.1 J	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	82	
Nitrobenzene-d5	(Range 37-104)	90	
p-Terphenyl-d14	(Range 15-132)	67	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.7	
o-Terphenyl (Range 82-142)	104	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	84	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	96	

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LABORATORY REPORT

Accura Sample ID #: AC03086 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/9/00
Client Contact: GERRY WALKER Date Received: 11/10/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: TRIP BLANK

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B
Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	2.1 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	81	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	93	

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LABORATORY REPORT

Accura Sample ID #: AC03087 **Accura Project #: 26163**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/10/00
Client Contact: GERRY WALKER Date Received: 11/10/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/10/00 Date Analyzed: 11/10/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/13/00 Date Analyzed: 11/23/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.45J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/19/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	78	
Nitrobenzene-d5	(Range 50-103)	84	
p-Terphenyl-d14	(Range 64-113)	92	

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	9.4	
o-Terphenyl (Range 82-142)	101	

ANALYSIS: X VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/15/00 Date Analyzed: 11/15/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	80	
4-Bromofluorobenzene (85-111)	98	
Toluene-d8 (88-106)	97	

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CASE NARRATIVE for Project Number: 26163
Client Project: Former Sherman Field Fuel Farm / CTO 132 / N0516
CTO Manager: Gerry Walker
Samplers: D. Hartnett / G. Davis

The following items were noted concerning this project:

1. The following samples were received by Accura Analytical Laboratory on 11/10/00 at 0920:

Client I.D.	Laboratory I.D.
NASPFF MW-4S	AC03083
NASPFF MW-3S	AC03084
NASPFF MW-13D	AC03085
Trip Blank	AC03086

2. The sample cooler temperature was noted to be 2^0C upon receipt.

3. The pH of all VOC samples was noted to be less than 2 prior to analysis.

4. The "J" values noted for the FL-PRO, PAH and VOC analyses indicate estimated concentrations that were above the method detection limit but below the reporting limit.

5. The "B" values noted for the FL-PRO analyses indicate that the analyte was detected in the Method Blank at a concentration that was above the method detection limit and the concentration in the sample was less than ten times the concentration in the Method Blank. These results should be considered estimated due to Method Blank contamination.

6. The following samples required dilution due to high analyte concentration and/or the nature of the matrix, resulting in elevated detection limits:

VOC SW-846-8260B	TRPH FL-PRO
NASPFF MW-3S	NASPFF MW-3S

PAH SW-846-8270C
NASPFF MW-3S

7. The QC associated with the PAH and FL-PRO analyses represents batch QC and consists of a Laboratory Control Sample and Laboratory Control Sample Duplicate.

8. The recovery of Nonatriacontane (C39), was outside the method specified limits for the associated QC and all samples submitted for FL-PRO analyses. However, the recoveries were within established in-house limits; therefore the data was accepted.

9. The Trip Blank submitted with this project for VOC analysis had a concentration of Methylene Chloride that was above the method detection limit.

10. A subcontract laboratory performed the following analyses:
    Anions EPA-300.0
    Methane RSK-175 Mod.

_____

Laboratory Manager

ACCURA ANALYTICAL LABORATORY, INC.

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LABORATORY REPORT

Accura Sample ID #: AC03321 **Accura Project #: 26211**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/15/00
Client Contact: GERRY WALKER Date Received: 11/16/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-9S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.33	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	7	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.35JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.81 J	1.0
Chloromethane	0.56 J	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	0.58 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	87	
Nitrobenzene-d5	(Range 37-104)	87	
p-Terphenyl-d14	(Range 15-132)	87	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.3	
o-Terphenyl (Range 82-142)	101	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	81	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC03322 **Accura Project #: 26211**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/15/00
Client Contact: GERRY WALKER Date Received: 11/16/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-11S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.22	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	8	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	0.041	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.31JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	0.81J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	89	
Nitrobenzene-d5 (Range 37-104)	97	
p-Terphenyl-d14 (Range 15-132)	64	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	6.4	
o-Terphenyl (Range 82-142)	83	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	83	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	90	

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LABORATORY REPORT

Accura Sample ID #: AC03323 **Accura Project #: 26211**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/15/00
Client Contact: GERRY WALKER Date Received: 11/16/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFF MW-21S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/17/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	1.88	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	11	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/29/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.31JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	0.68 J	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	80	
Nitrobenzene-d5	(Range 37-104)	89	
p-Terphenyl-d14	(Range 15-132)	68	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	4.7	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	81	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	94	

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LABORATORY REPORT

Accura Sample ID #: AC03325 **Accura Project #: 26211**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/00
Client Contact: GERRY WALKER Date Received: 11/16/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/5/00
Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER
Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/16/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0094J	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0

Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.43J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0

Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/20/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	83	
Nitrobenzene-d5	(Range 50-103)	96	
p-Terphenyl-d14	(Range 64-113)	94	

ANALYSIS: X PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/16/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	10	
o-Terphenyl (Range 82-142)	95	

ANALYSIS: X VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/17/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	82	
4-Bromofluorobenzene (85-111)	94	
Toluene-d8 (88-106)	94	

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CASE NARRATIVE for Project Number: 26211

Client Project: Former Sherman Field Fuel Farm / CTO 132 / N0516

CTO Manager: Gerry Walker
Samplers: Dan Hartnett

The following items were noted concerning this project:

1. The following samples were received by Accura Analytical Laboratory on 11/16/00 at 0915:

Client I.D.	Laboratory I.D.
NASPFF MW-9S	AC03321
NASPFF MW-11S	AC03322
NASPFF MW-21S	AC03323

2. The sample cooler temperature was noted to be 2^0C upon receipt.

3. The pH of all VOC samples was noted to be less than 2 prior to analysis.

4. The "J" values noted for the FL-PRO, Metals and VOC analyses indicate estimated concentrations that were above the method detection limit but below the reporting limit.

5. The "B" values noted for the FL-PRO analyses indicate that the analyte was detected in the Method Blank at a concentration that was above the method detection limit and the concentration in the sample was less than ten times the concentration in the Method Blank. These results should be considered estimated due to Method Blank contamination.

6. The Method Blank associated with the Metals analyses had a concentration of Lead that was above the method detection limit. However, the concentration of Lead in all samples submitted with this project were less than the method detection limit; therefore the contamination was considered to be insignificant.

7. The QC associated with the PAH and FL-PRO analyses represent batch QC and consists of a Laboratory Control Sample and Laboratory Control Sample Duplicate.

8. The recovery of Nonatriacontane (C39), was outside the method specified limits for the associated QC and all samples submitted for FL-PRO analyses. However, the recoveries were within established in-house limits; therefore the data was accepted.

9. A subcontract laboratory performed the following analyses:
   Anions EPA-300.0
   Methane RSK-175 Mod.

_____

Laboratory Manager

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LABORATORY REPORT

Accura Sample ID #: AC03414 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/00
Client Contact: GERRY WALKER Date Received: 11/17/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/12/00
Client Project Name: FORMER SHERMAN FEILD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFFEQB-2

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/28/00 Date Analyzed: 11/28/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/29/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.72JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	88	
Nitrobenzene-d5	(Range 37-104)	91	
p-Terphenyl-d14	(Range 15-132)	94	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	10	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	98	
4-Bromofluorobenzene (86-112)	94	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC03415 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/00
Client Contact: GERRY WALKER Date Received: 11/17/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/12/00
Client Project Name: FORMER SHERMAN FEILD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFFDUP-3

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/18/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.43	0.01
Nitrite by IC	0.01	0.01
Sulfate by IC	6	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/28/00 Date Analyzed: 11/28/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/29/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	4.8	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	53	1.0

2-Methylnaphthalene	67	1.0
Acenaphthene	1.2	1.0
Acenaphthylene	<RDL	1.0
Anthracene	0.59J	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	1.7	1.0
Fluorene	1.3	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	130	1.0
Phenanthrene	2.5	1.0
Pyrene	0.94J	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	3.8	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	5.0
1,1,2,2-Tetrachloroethane	<RDL	5.0
1,1,2-Trichloroethane	<RDL	5.0
1,1-Dichloroethane	<RDL	5.0
1,1-Dichloroethene	<RDL	5.0
1,2-Dichloroethane	<RDL	5.0
1,2-Dichloropropane	<RDL	5.0
1,3-Dichloropropene	<RDL	5.0
2-Chloroethylvinyl ether	<RDL	50
Acrolein	<RDL	50
Acrylonitrile	<RDL	50
Benzene	560	25
Bromodichloromethane	<RDL	5.0
Bromoform	<RDL	25
Bromomethane	<RDL	5.0

Carbon tetrachloride	<RDL	5.0
Chlorobenzene	<RDL	5.0
Chloroethane	<RDL	5.0
Chloroform	<RDL	5.0
Chloromethane	<RDL	5.0
Ethylbenzene	550	25
Methyl-tert-butyl ether (MTBE)	<RDL	50
Methylene chloride	<RDL	25
Tetrachloroethene	<RDL	5.0
Toluene	11	5.0
trans-1,2-Dichloroethene	<RDL	5.0
Trichloroethene	<RDL	5.0
Vinyl chloride	<RDL	5.0
Xylenes (Total)	320	10

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	86	
Nitrobenzene-d5	(Range 37-104)	90	
p-Terphenyl-d14	(Range 15-132)	35	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.9	
o-Terphenyl (Range 82-142)	87	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	92	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC03416 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/00
Client Contact: GERRY WALKER Date Received: 11/17/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/12/00
Client Project Name: FORMER SHERMAN FEILD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFFMW-12S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/18/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.45	0.01
Nitrite by IC	0.02	0.01
Sulfate by IC	6	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/28/00 Date Analyzed: 11/28/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/29/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	4.4	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	52	1.0

2-Methylnaphthalene	65	1.0
Acenaphthene	1.4	1.0
Acenaphthylene	<RDL	1.0
Anthracene	0.64J	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	1.7	1.0
Fluorene	1.5	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	130	1.0
Phenanthrene	2.6	1.0
Pyrene	0.97J	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	4.0	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	5.0
1,1,2,2-Tetrachloroethane	<RDL	5.0
1,1,2-Trichloroethane	<RDL	5.0
1,1-Dichloroethane	<RDL	5.0
1,1-Dichloroethene	<RDL	5.0
1,2-Dichloroethane	<RDL	5.0
1,2-Dichloropropane	<RDL	5.0
1,3-Dichloropropene	<RDL	5.0
2-Chloroethylvinyl ether	<RDL	50
Acrolein	<RDL	50
Acrylonitrile	<RDL	50
Benzene	590	25
Bromodichloromethane	<RDL	5.0
Bromoform	<RDL	25
Bromomethane	<RDL	5.0

Carbon tetrachloride	<RDL	5.0
Chlorobenzene	<RDL	5.0
Chloroethane	<RDL	5.0
Chloroform	<RDL	5.0
Chloromethane	<RDL	5.0
Ethylbenzene	550	25
Methyl-tert-butyl ether (MTBE)	<RDL	50
Methylene chloride	<RDL	25
Tetrachloroethene	<RDL	5.0
Toluene	11	5.0
trans-1,2-Dichloroethene	<RDL	5.0
Trichloroethene	<RDL	5.0
Vinyl chloride	<RDL	5.0
Xylenes (Total)	320	10

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	84	
Nitrobenzene-d5 (Range 37-104)	87	
p-Terphenyl-d14 (Range 15-132)	36	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.6	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	96	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	94	

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LABORATORY REPORT

Accura Sample ID #: AC03417 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/00
Client Contact: GERRY WALKER Date Received: 11/17/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/12/00
Client Project Name: FORMER SHERMAN FEILD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFFMW-14S

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/18/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.38	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	9	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/28/00 Date Analyzed: 11/28/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/29/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/21/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.34JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	6.6	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	84	
Nitrobenzene-d5	(Range 37-104)	90	
p-Terphenyl-d14	(Range 15-132)	84	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	28	
o-Terphenyl (Range 82-142)	103	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	95	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC03418 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/00
Client Contact: GERRY WALKER Date Received: 11/17/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/12/00
Client Project Name: FORMER SHERMAN FEILD FUEL FARM Sample Matrix: WATER
Client Sample ID: NASPFFMW-14I

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/28/00 Date Analyzed: 11/28/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/29/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	1.1B	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.78 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 43-111)	83	
Nitrobenzene-d5	(Range 37-104)	87	
p-Terphenyl-d14	(Range 15-132)	82	

ANALYSIS: X_PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/28/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	9.5	
o-Terphenyl (Range 82-142)	102	

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	93	

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LABORATORY REPORT

Accura Sample ID #: AC03419 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee
Client Contact: GERRY WALKER
Client Project Number: CTO 132 / N0516
Client Project Name: FORMER SHERMAN FEILD FUEL FARM
Client Sample ID: TRIP BLANK

Date Sampled: 11/16/00
Date Received: 11/17/00
Date Reported: 12/12/00
Sample Matrix: WATER

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	93	

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LABORATORY REPORT

Accura Sample ID #: AC03420 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/17/00
Client Contact: GERRY WALKER Date Received: 11/17/00
Client Project Number: CTO 132 / N0516 Date Reported: 12/12/00
Client Project Name: FORMER SHERMAN FEILD FUEL FARM Sample Matrix: WATER
Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0
Date Ext/Dig/Prep: 11/17/00 Date Analyzed: 11/18/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1
Date Ext/Dig/Prep: 11/28/00 Date Analyzed: 11/28/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B
Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/28/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0094J	0.010

ANALYSIS: Methane Method Ref: RSK-175M
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0

2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/27/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.43J	1.0

ANALYSIS: Sulfide Method Ref: 376.1

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/20/00 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0

Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_Base Neutral QC Surrogates (W Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/00 Date Analyzed: 11/21/00 Result Units: %

Analyte Name		Analytical Results	Reported Detection Limits
2-Fluorobiphenyl	(Range 57-102)	79	
Nitrobenzene-d5	(Range 50-103)	80	
p-Terphenyl-d14	(Range 64-113)	92	

ANALYSIS: X_PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	10	
o-Terphenyl (Range 82-142)	95	

ANALYSIS: X_VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/00 Date Analyzed: 11/27/00 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	90	
4-Bromofluorobenzene (85-111)	95	
Toluene-d8 (88-106)	94	

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CASE NARRATIVE for Project Number: 26225

Client Project: Former Sherman Field Fuel Farm / CTO 132 / N0516

Task Order Manager: Gerry Walker

Samplers: Dan Hartnett

The following items were noted concerning this project:

1. The following samples were received at Accura Analytical Laboratory on 11/17/00 at 0900.

Client I.D.	Laboratory I.D.
NASPFF EQB-2	AC03414
NASPFF DUP-3	AC03415
NASPFF MW-12S	AC03416
NASPFF MW-14S	AC03417
NASPFF MW-14I	AC03418
Trip Blank	AC03419

2. The sample cooler temperature was noted to be 2^0C upon receipt.

3. The pH of all samples submitted for VOC analyses was noted to be less than 2 prior to analysis.

4. Samples NASPFF DUP-3 and NASPFF EQB-2 submitted for Lead analyses, were preserved upon receipt in the laboratory with 3mL of HNO3.

5. The J values noted for the PRO, PAH's and VOC analyses indicate estimated values where the compounds are present at concentrations that are less than the quantitation limits, but above the method detection limits.

6. The B values noted for the PRO analyses indicate that the compound was present in the Method Blank and the concentratrion in the sample was less than ten times the concentration in the Method Blank. These results should be considered estimated due to Blank contamination.

7. A subcontract laboratory performed the following analyses:
   Anions EPA-300.0
   Methane RSK-175

8. The Method Blank associated with the Lead analyses had a concentration that was above the method detection limit. However, the concentration in the samples submitted with this project were less than the method detection limit; therefore the contamination was considered to be insignificant.

9. The QC associated with the PAH and FL-PRO analyses represent batch QC and consists of a Laboratory Control Sample and Laboratory Control Sample Duplicate.

10. The QC associated with the VOC analyses represents batch QC and consists of a Matrix Spike and Matrix Spike Duplicate.

11. The recovery of Nonatriacontane, (C39) surrogate, was outside the FL-PRO specified limit for the associated QC and all samples submitted with this project. However, all recoveries were within established in-house limits; therefore the data was accepted.

12. The following samples required dilution due to high analyte concentration resulting in elevated detection limits:
    VOC SW-846-8260B
    NASPFF DUP-3
    NASPFF MW-12S

_____

Laboratory Manager

Tetra Tech NUS, Inc. Internal Correspondence

TO: Mr. Gerald Walker DATE: August 30, 2000

FROM: William Howard Engle CC: File

SUBJECT: Organic Data Validation – VOA, PAH, TRPH, and SPLP
CTO112 – NAS Pensacola
SDG F7243

SAMPLES: 7/Solids

NASPFFSB12, 20-24'BGS*
NASPFFSB17, 10-12'BGS*
NASPFFSB19, 20-24'BGS
NASPFFSB28, 7-11'BGS
NASPFFSB12, 6-8'BGS
NASPFFSB18, 24-27'BGS
NASPFFSB27, 6-8'BGS

1/Aqueous

Trip Blank

OVERVIEW

The sample set for CTO112, SDG F7243; Naval Air Station Pensacola, Pensacola, Florida consists of seven (7) solid environmental samples and one (1) trip blank. The environmental samples, with the exception of the trip blank, were analyzed for Volatile Organic Carbons (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs). The trip blank was analyzed for VOCs only. The samples designated with a * were also extracted and analyzed by SPLP, followed by VOCs, PAHs, and TRPH analysis.

The samples were collected by Tetra Tech NUS on August 2, 2000 and analyzed by Accutest Southeast Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), SW-846 method 8310 (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

Volatile Fraction

The MS/MSD %R for several compounds was below the lower control limits. The LCS %R was acceptable. No action was taken since the sample spiked was not a sample from this SDG.

Polycylcic Aromatic Hydrocarbon Fraction

All quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

All quality control criteria were met for this fraction.

Executive Summary

Laboratory performance:	MS/MSD %Rs for several compounds was below the lower control limits. No action was taken.
Other factors affecting data quality:	None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

William Howard Engle

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting Documentation

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

DATA QUALIFIER DEFINITIONS:

U	-	Value is a nondetected result as reported by the laboratory and should not be considered present.
J	-	Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.
UJ	-	Nondetected result is considered to be estimated as a result of technical noncompliances.

APPENDIX A

Qualified Analytical Results

F7243

HOLDING TIME
08/25/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
%	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	GRSZ	08/02/00	/ /	08/17/00	0	0	15
MG/KG	NASPFFSB12, 20-24'BGS	F7243-7	NORMAL	F7243	M	08/02/00	08/07/00	08/12/00	5	5	10
MG/L	NASPFFSB17, 10-12'BGS	F7243-5A	NORMAL	F7243	M	08/02/00	08/16/00	08/21/00	14	5	19
UG/KG	NASPFFSB12, 20-24'BGS	F7243-7	NORMAL	F7243	OV	08/02/00	/ /	08/11/00	0	0	9
UG/KG	NASPFFSB12, 6-8'BGS	F7243-6	NORMAL	F7243	OV	08/02/00	/ /	08/10/00	0	0	8
MG/L	NASPFFSB17, 10-12'BGS	F7243-5A	NORMAL	F7243	OV	08/02/00	08/10/00	08/19/00	8	9	17
UG/KG	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	OV	08/02/00	/ /	08/09/00	0	0	7
UG/KG	NASPFFSB19, 20-24'BGS	F7243-3	NORMAL	F7243	OV	08/02/00	/ /	08/09/00	0	0	7
UG/KG	NASPFFSB27, 6-8'BGS	F7243-1	NORMAL	F7243	OV	08/02/00	/ /	08/10/00	0	0	8
UG/KG	NASPFFSB28, 7-11'BGS	F7243-2	NORMAL	F7243	OV	08/02/00	/ /	08/11/00	0	0	9
UG/L	TRIP BLANK	F7243-8	NORMAL	F7243	OV	08/02/00	/ /	08/16/00	0	0	14
MG/L	NASPFFSB12, 20-24'BGS	F7243-7A	NORMAL	F7243	PAH	08/02/00	08/14/00	08/15/00	12	1	13
UG/KG	NASPFFSB12, 6-8'BGS	F7243-6	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB17, 10-12'BGS	F7243-5	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB19, 20-24'BGS	F7243-3	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB27, 6-8'BGS	F7243-1	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB28, 7-11'BGS	F7243-2	NORMAL	F7243	PAH	08/02/00	08/07/00	08/15/00	5	8	13
MG/L	NASPFFSB12, 20-24'BGS	F7243-7A	NORMAL	F7243	TPH	08/02/00	08/16/00	08/17/00	14	1	15
MG/KG	NASPFFSB12, 6-8'BGS	F7243-6	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/L	NASPFFSB17, 10-12'BGS	F7243-5A	NORMAL	F7243	TPH	08/02/00	08/16/00	08/17/00	14	1	15
MG/KG	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/KG	NASPFFSB19, 20-24'BGS	F7243-3	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/KG	NASPFFSB27, 6-8'BGS	F7243-1	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/KG	NASPFFSB28, 7-11'BGS	F7243-2	NORMAL	F7243		08/02/00	08/04/00	08/08/00	2	4	6

NAS PEN COLA
SOIL DAT
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS			NASPFFSB12, 6-8'BGS			NASPFFSB17, 10-12'BGS			NASPFFSB18, 24-27'BGS		
SAMPLE DATE:	08/02/00			08/02/00			08/02/00			08/02/00		
LABORATORY ID:	F7243-7			F7243-6			F7243-5			F7243-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	95.1 %			95.6 %			95.4 %			94.5 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
1,1,2,2-TETRACHLOROETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
1,1,2-TRICHLOROETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
1,1-DICHLOROETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
1,1-DICHLOROETHENE	5.2	U		5.2	U		5.3	U		5.2	U	
1,2 DICHLOROBENZENE	5.2	U		5.2	U		5.3	U		5.2	U	
1,2-DICHLOROETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
1,2-DICHLOROPROPANE	5.2	U		5.2	U		5.3	U		5.2	U	
1,3 DICHLOROBENZENE	5.2	U		5.2	U		5.3	U		5.2	U	
1,4-DICHLOROBENZENE	5.2	U		5.2	U		5.3	U		5.2	U	
2-CHLOROETHYL VINYL ETHER	10	U		10	U		11	U		10	U	
BENZENE	11.5			10.6			5.3	U		5.2	U	
BROMODICHLOROMETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
BROMOFORM	5.2	U		5.2	U		5.3	U		5.2	U	
BROMOMETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
CARBON TETRACHLORIDE	5.2	U		5.2	U		5.3	U		5.2	U	
CHLOROBENZENE	5.2	U		5.2	U		5.3	U		5.2	U	
CHLOROETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
CHLOROFORM	5.2	U		5.2	U		5.3	U		5.2	U	
CHLOROMETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
CIS-1,2-DICHLOROETHENE	5.2	U		5.2	U		5.3	U		5.2	U	
CIS-1,3-DICHLOROPROPENE	5.2	U		5.2	U		5.3	U		5.2	U	
DIBROMOCHLOROMETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
DICHLORODIFLUOROMETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
ETHYLBENZENE	14.6			8.7			5.3	U		5.2	U	
METHYL TERT-BUTYL ETHER	5.2	U		5.2	U		5.3	U		5.2	U	
METHYLENE CHLORIDE	10	U		10	U		11	U		10	U	
TETRACHLOROETHENE	5.2	U		5.2	U		5.3	U		5.2	U	
TOLUENE	5.2	U		5.2	U		5.3	U		5.2	U	
TRANS-1,2-DICHLOROETHENE	5.2	U		5.2	U		5.3	U		5.2	U	
TRANS-1,3-DICHLOROPROPENE	5.2	U		5.2	U		5.3	U		5.2	U	
TRICHLOROETHENE	5.2	U		5.2	U		5.3	U		5.2	U	
TRICHLOROFLUOROMETHANE	5.2	U		5.2	U		5.3	U		5.2	U	
VINYL CHLORIDE	5.2	U		5.2	U		5.3	U		5.2	U	

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS			NASPFFSB12, 6-8'BGS			NASPFFSB17, 10-12'BGS			NASPFFSB18, 24-27'BGS		
SAMPLE DATE:	08/02/00			08/02/00			08/02/00			08/02/00		
LABORATORY ID:	F7243-7			F7243-6			F7243-5			F7243-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	95.1 %			95.6 %			95.4 %			94.5 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
XYLENES, TOTAL	11.9	J		16	U		16	U		15	U	

SAMPLE NUMBER:	NASPFFSB19, 20-24'BGS			NASPFFSB27, 6-8'BGS			NASPFFSB28, 7-11'BGS					
SAMPLE DATE:	08/02/00			08/02/00			08/02/00			/ /		
LABORATORY ID:	F7243-3			F7243-1			F7243-2					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	94.4 %			96.0 %			94.7 %			100.0 %		
UNITS:	UG/KG			UG/KG			UG/KG					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	5.5	U		5.6	U		1200	U				
1,1,2,2-TETRACHLOROETHANE	5.5	U		5.6	U		1200	U				
1,1,2-TRICHLOROETHANE	5.5	U		5.6	U		1200	U				
1,1-DICHLOROETHANE	5.5	U		5.6	U		1200	U				
1,1-DICHLOROETHENE	5.5	U		5.6	U		1200	U				
1,2 DICHLOROBENZENE	5.5	U		5.6	U		1200	U				
1,2-DICHLOROETHANE	5.5	U		5.6	U		1200	U				
1,2-DICHLOROPROPANE	5.5	U		5.6	U		1200	U				
1,3 DICHLOROBENZENE	5.5	U		5.6	U		1200	U				
1,4-DICHLOROBENZENE	5.5	U		5.6	U		1200	U				
2-CHLOROETHYL VINYL ETHER	11	U		11	U		2400	U				
BENZENE	5.5	U		5.6	U		1200	U				
BROMODICHLOROMETHANE	5.5	U		5.6	U		1200	U				
BROMOFORM	5.5	U		5.6	U		1200	U				
BROMOMETHANE	5.5	U		5.6	U		1200	U				
CARBON TETRACHLORIDE	5.5	U		5.6	U		1200	U				
CHLOROBENZENE	5.5	U		5.6	U		1200	U				
CHLOROETHANE	5.5	U		5.6	U		1200	U				
CHLOROFORM	5.5	U		5.6	U		1200	U				
CHLOROMETHANE	5.5	U		5.6	U		1200	U				
CIS-1,2-DICHLOROETHENE	5.5	U		5.6	U		1200	U				
CIS-1,3-DICHLOROPROPENE	5.5	U		5.6	U		1200	U				
DIBROMOCHLOROMETHANE	5.5	U		5.6	U		1200	U				
DICHLORODIFLUOROMETHANE	5.5	U		5.6	U		1200	U				
ETHYLBENZENE	5.5	U		5.6	U		3410					
METHYL TERT-BUTYL ETHER	5.5	U		5.6	U		1200	U				
METHYLENE CHLORIDE	11	U		11	U		2400	U				
TETRACHLOROETHENE	5.5	U		5.6	U		1200	U				
TOLUENE	5.5	U		5.6	U		1200	U				
TRANS-1,2-DICHLOROETHENE	5.5	U		5.6	U		1200	U				
TRANS-1,3-DICHLOROPROPENE	5.5	U		5.6	U		1200	U				
TRICHLOROETHENE	5.5	U		5.6	U		1200	U				
TRICHLOROFLUOROMETHANE	5.5	U		5.6	U		1200	U				
VINYL CHLORIDE	5.5	U		5.6	U		1200	U				

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB19, 20-24'BGS	NASPFFSB27, 6-8'BGS	NASPFFSB28, 7-11'BGS	
SAMPLE DATE:	08/02/00	08/02/00	08/02/00	/ /
LABORATORY ID:	F7243-3	F7243-1	F7243-2	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	94.4 %	96.0 %	94.7 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
XYLENES, TOTAL	16	U		17	U		30500					

NAS PENSACOLA
WATER D.
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	TRIP BLANK											
SAMPLE DATE:	08/02/00			/ /			/ /			/ /		
LABORATORY ID:	F7243-8											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	2	U										
1,1,2,2-TETRACHLOROETHANE	2	U										
1,1,2-TRICHLOROETHANE	2	U										
1,1-DICHLOROETHANE	2	U										
1,1-DICHLOROETHENE	2	U										
1,2 DICHLOROBENZENE	2	U										
1,2-DICHLOROETHANE	2	U										
1,2-DICHLOROPROPANE	2	U										
1,3 DICHLOROBENZENE	2	U										
1,4-DICHLOROBENZENE	2	U										
2-CHLOROETHYL VINYL ETHER	5	U										
BENZENE	1	U										
BROMODICHLOROMETHANE	2	U										
BROMOFORM	2	U										
BROMOMETHANE	5	U										
CARBON TETRACHLORIDE	2	U										
CHLOROBENZENE	2	U										
CHLOROETHANE	5	U										
CHLOROFORM	2	U										
CHLOROMETHANE	5	U										
CIS-1,2-DICHLOROETHENE	2	U										
CIS-1,3-DICHLOROPROPENE	2	U										
DIBROMOCHLOROMETHANE	2	U										
DICHLORODIFLUOROMETHANE	5	U										
ETHYLBENZENE	2	U										
METHYL TERT-BUTYL ETHER	2	U										
METHYLENE CHLORIDE	5	U										
TETRACHLOROETHENE	2	U										
TOLUENE	2	U										
TRANS-1,2-DICHLOROETHENE	2	U										
TRANS-1,3-DICHLOROPROPENE	2	U										
TRICHLOROETHENE	2	U										
TRICHLOROFLUOROMETHANE	5	U										
VINYL CHLORIDE	1	U										

NAS PENSACOLA
WATER DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	TRIP BLANK			
SAMPLE DATE:	08/02/00	/ /	/ /	/ /
LABORATORY ID:	F7243-8			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
XYLENES, TOTAL	6	U										

NAS PENSACOLA
SPLP DAT
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS	NASPFFSB17, 10-12'BGS	/ /	/ /
SAMPLE DATE:	08/02/00	08/02/00		
LABORATORY ID:	F7243-7A	F7243-5A		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	MG/L	MG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	0.002	U		0.002	U							
1,1,2,2-TETRACHLOROETHANE	0.002	U		0.002	U							
1,1,2-TRICHLOROETHANE	0.002	U		0.002	U							
1,1-DICHLOROETHANE	0.002	U		0.002	U							
1,1-DICHLOROETHENE	0.002	U		0.002	U							
1,2-DICHLOROETHANE	0.002	U		0.002	U							
1,2-DICHLOROPROPANE	0.002	U		0.002	U							
2-HEXANONE	0.01	U		0.01	U							
4-METHYL-2-PENTANONE	0.01	U		0.01	U							
ACETONE	0.05	U		0.05	U							
BENZENE	0.002	U		0.002	U							
BROMODICHLOROMETHANE	0.002	U		0.002	U							
BROMOFORM	0.002	U		0.002	U							
BROMOMETHANE	0.005	U		0.005	U							
CARBON DISULFIDE	0.01	U		0.01	U							
CARBON TETRACHLORIDE	0.002	U		0.002	U							
CHLOROBENZENE	0.002	U		0.002	U							
CHLOROETHANE	0.002	U		0.002	U							
CHLOROFORM	0.002	U		0.002	U							
CHLOROMETHANE	0.005	U		0.005	U							
CIS-1,2-DICHLOROETHENE	0.002	U		0.002	U							
CIS-1,3-DICHLOROPROPENE	0.002	U		0.002	U							
DIBROMOCHLOROMETHANE	0.002	U		0.002	U							
ETHYLBENZENE	0.002	U		0.002	U							
METHYL ETHYL KETONE	0.01	U		0.01	U							
METHYLENE CHLORIDE	0.0329			0.0262								
STYRENE	0.002	U		0.002	U							
TETRACHLOROETHENE	0.002	U		0.002	U							
TOLUENE	0.002	U		0.002	U							
TRANS-1,2-DICHLOROETHENE	0.002	U		0.002	U							
TRANS-1,3-DICHLOROPROPENE	0.002	U		0.002	U							
TRICHLOROETHENE	0.002	U		0.002	U							
VINYL CHLORIDE	0.005	U		0.005	U							
XYLENES, TOTAL	0.006	U		0.006	U							

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS			NASPFFSB12, 6-8'BGS			NASPFFSB17, 10-12'BGS			NASPFFSB18, 24-27'BGS		
SAMPLE DATE:	08/02/00			08/02/00			08/02/00			08/02/00		
LABORATORY ID:	F7243-7			F7243-6			F7243-5			F7243-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	95.1 %			95.6 %			95.4 %			94.5 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	350	U		350	U		350	U		350	U	
2-METHYLNAPHTHALENE	350	U		350	U		350	U		350	U	
ACENAPHTHENE	700	U		700	U		700	U		700	U	
ACENAPHTHYLENE	700	U		700	U		700	U		700	U	
ANTHRACENE	350	U		350	U		350	U		350	U	
BENZO(A)ANTHRACENE	70	U		70	U		70	U		70	U	
BENZO(A)PYRENE	70	U		70	U		70	U		70	U	
BENZO(B)FLUORANTHENE	70	U		70	U		70	U		70	U	
BENZO(G,H,I)PERYLENE	70	U		70	U		70	U		70	U	
BENZO(K)FLUORANTHENE	70	U		70	U		70	U		70	U	
CHRYSENE	350	U		350	U		350	U		350	U	
DIBENZO(A,H)ANTHRACENE	70	U		70	U		70	U		70	U	
FLUORANTHENE	350	U		350	U		350	U		350	U	
FLUORENE	350	U		350	U		350	U		350	U	
INDENO(1,2,3-CD)PYRENE	70	U		70	U		70	U		70	U	
NAPHTHALENE	350	U		350	U		350	U		350	U	
PHENANTHRENE	350	U		350	U		350	U		350	U	
PYRENE	350	U		350	U		350	U		350	U	

SAMPLE NUMBER:	NASPFFSB19, 20-24'BGS	NASPFFSB27, 6-8'BGS	NASPFFSB28, 7-11'BGS	
SAMPLE DATE:	08/02/00	08/02/00	08/02/00	/ /
LABORATORY ID:	F7243-3	F7243-1	F7243-2	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	94.4 %	96.0 %	94.7 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	350	U		350	U		3270					
2-METHYLNAPHTHALENE	350	U		350	U		4050					
ACENAPHTHENE	710	U		690	U		700	U				
ACENAPHTHYLENE	710	U		690	U		700	U				
ANTHRACENE	350	U		350	U		350	U				
BENZO(A)ANTHRACENE	71	U		69	U		70	U				
BENZO(A)PYRENE	71	U		69	U		70	U				
BENZO(B)FLUORANTHENE	71	U		69	U		70	U				
BENZO(G,H,I)PERYLENE	71	U		69	U		70	U				
BENZO(K)FLUORANTHENE	71	U		69	U		70	U				
CHRYSENE	350	U		350	U		350	U				
DIBENZO(A,H)ANTHRACENE	71	U		69	U		70	U				
FLUORANTHENE	350	U		350	U		350	U				
FLUORENE	350	U		350	U		350	U				
INDENO(1,2,3-CD)PYRENE	71	U		69	U		70	U				
NAPHTHALENE	350	U		350	U		1380					
PHENANTHRENE	350	U		350	U		350	U				
PYRENE	350	U		350	U		350	U				

NAS PENSACOLA
SPLP DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS	NASPFFSB17, 10-12'BGS		
SAMPLE DATE:	08/02/00	08/02/00	/ /	/ /
LABORATORY ID:	F7243-7A	F7243-5A		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	MG/L	MG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	0.02	U		0.02	U							
2-METHYLNAPHTHALENE	0.02	U		0.02	U							
ACENAPHTHENE	0.04	U		0.04	U							
ACENAPHTHYLENE	0.04	U		0.04	U							
ANTHRACENE	0.02	U		0.02	U							
BENZO(A)ANTHRACENE	0.002	U		0.002	U							
BENZO(A)PYRENE	0.002	U		0.002	U							
BENZO(B)FLUORANTHENE	0.002	U		0.002	U							
BENZO(G,H,I)PERYLENE	0.002	U		0.002	U							
BENZO(K)FLUORANTHENE	0.002	U		0.002	U							
CHRYSENE	0.02	U		0.02	U							
DIBENZO(A,H)ANTHRACENE	0.002	U		0.002	U							
FLUORANTHENE	0.02	U		0.02	U							
FLUORENE	0.02	U		0.02	U							
INDENO(1,2,3-CD)PYRENE	0.002	U		0.002	U							
NAPHTHALENE	0.02	U		0.02	U							
PHENANTHRENE	0.02	U		0.02	U							
PYRENE	0.02	U		0.02	U							

NAS PF COLA
SOIL DA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS			NASPFFSB12, 6-8'BGS			NASPFFSB17, 10-12'BGS			NASPFFSB18, 24-27'BGS		
SAMPLE DATE:	08/02/00			08/02/00			08/02/00			08/02/00		
LABORATORY ID:	F7243-7			F7243-6			F7243-5			F7243-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	95.1 %			95.6 %			95.4 %			94.5 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	10.4			9.79			8.7	U		8.8	U	

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB19, 20-24'BGS			NASPFFSB27, 6-8'BGS			NASPFFSB28, 7-11'BGS					
SAMPLE DATE:	08/02/00			08/02/00			08/02/00			/ /		
LABORATORY ID:	F7243-3			F7243-1			F7243-2					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	94.4 %			96.0 %			94.7 %			100.0 %		
UNITS:	MG/KG			MG/KG			MG/KG					
FIELD DUPLICATE OF:												
	RESULT	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	9.97			8.7	U		2130					

NAS PENSACOLA
SPLP DA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS	NASPFFSB17, 10-12'BGS		
SAMPLE DATE:	08/02/00	08/02/00	/ /	/ /
LABORATORY ID:	F7243-7A	F7243-5A		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	MG/L	MG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	2.5	U		2.5	U							

APPENDIX B

Results as Reported by the Laboratory

Report of Analysis

Client Sample ID:	NASPFFSB12, 20-24'BGS		
Lab Sample ID:	F7243-7	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	95.1
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008874.D	1	08/11/00	JG	n/a	n/a	VH122
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	11.5	5.2	ug/kg	
75-27-4	Bromodichloromethane	ND	5.2	ug/kg	
75-25-2	Bromoform	ND	5.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.2	ug/kg	
75-00-3	Chloroethane	ND	5.2	ug/kg	
67-66-3	Chloroform	ND	5.2	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	10	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.2	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.2	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.2	ug/kg	
124-48-1	Dibromochloromethane	ND	5.2	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.2	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.2	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.2	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.2	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.2	ug/kg	
100-41-4	Ethylbenzene	14.6	5.2	ug/kg	
74-83-9	Methyl bromide	ND	5.2	ug/kg	
74-87-3	Methyl chloride	ND	5.2	ug/kg	
75-09-2	Methylene chloride	ND	10	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.2	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.2	ug/kg	
108-88-3	Toluene	ND	5.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.2	ug/kg	
1330-20-7	Xylene (total)	11.9	16	ug/kg	J

0091

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB12, 20-24'BGS		
Lab Sample ID:	F7243-7	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	95.1
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		71-122%
2037-26-5	Toluene-D8	108%		73-128%
460-00-4	4-Bromofluorobenzene	111%		53-158%
17060-07-0	1,2-Dichloroethane-D4	87%		71-122%

0092

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB12, 6-8'BGS		
Lab Sample ID:	F7243-6	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	95.6
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008873.D	1	08/10/00	JG	n/a	n/a	VH122
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	10.6	5.2	ug/kg	
75-27-4	Bromodichloromethane	ND	5.2	ug/kg	
75-25-2	Bromoform	ND	5.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.2	ug/kg	
75-00-3	Chloroethane	ND	5.2	ug/kg	
67-66-3	Chloroform	ND	5.2	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	10	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.2	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.2	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.2	ug/kg	
124-48-1	Dibromochloromethane	ND	5.2	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.2	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.2	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.2	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.2	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.2	ug/kg	
100-41-4	Ethylbenzene	8.7	5.2	ug/kg	
74-83-9	Methyl bromide	ND	5.2	ug/kg	
74-87-3	Methyl chloride	ND	5.2	ug/kg	
75-09-2	Methylene chloride	ND	10	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.2	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.2	ug/kg	
108-88-3	Toluene	ND	5.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.2	ug/kg	
1330-20-7	Xylene (total)	ND	16	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB12, 6-8'BGS		
Lab Sample ID:	F7243-6	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	95.6
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		71-122%
2037-26-5	Toluene-D8	105%		73-128%
460-00-4	4-Bromofluorobenzene	110%		53-158%
17060-07-0	1,2-Dichloroethane-D4	86%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB17, 10-12'BGS		
Lab Sample ID:	F7243-5	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	95.4
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008872.D	1	08/10/00	JG	n/a	n/a	VH122
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.3	ug/kg	
75-27-4	Bromodichloromethane	ND	5.3	ug/kg	
75-25-2	Bromoform	ND	5.3	ug/kg	
108-90-7	Chlorobenzene	ND	5.3	ug/kg	
75-00-3	Chloroethane	ND	5.3	ug/kg	
67-66-3	Chloroform	ND	5.3	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.3	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.3	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.3	ug/kg	
124-48-1	Dibromochloromethane	ND	5.3	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.3	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.3	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.3	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.3	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.3	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.3	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.3	ug/kg	
100-41-4	Ethylbenzene	ND	5.3	ug/kg	
74-83-9	Methyl bromide	ND	5.3	ug/kg	
74-87-3	Methyl chloride	ND	5.3	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.3	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.3	ug/kg	
108-88-3	Toluene	ND	5.3	ug/kg	
79-01-6	Trichloroethylene	ND	5.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.3	ug/kg	
75-01-4	Vinyl chloride	ND	5.3	ug/kg	
1330-20-7	Xylene (total)	ND	16	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB17, 10-12'BGS		
Lab Sample ID:	F7243-5	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	95.4
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		71-122%
2037-26-5	Toluene-D8	107%		73-128%
460-00-4	4-Bromofluorobenzene	106%		53-158%
17060-07-0	1,2-Dichloroethane-D4	84%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB18, 24-27'BGS		
Lab Sample ID:	F7243-4	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	94.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008857.D	1	08/09/00	JG	n/a	n/a	VH122
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.2	ug/kg	
75-27-4	Bromodichloromethane	ND	5.2	ug/kg	
75-25-2	Bromoform	ND	5.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.2	ug/kg	
75-00-3	Chloroethane	ND	5.2	ug/kg	
67-66-3	Chloroform	ND	5.2	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	10	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.2	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.2	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.2	ug/kg	
124-48-1	Dibromochloromethane	ND	5.2	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.2	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.2	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.2	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.2	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.2	ug/kg	
100-41-4	Ethylbenzene	ND	5.2	ug/kg	
74-83-9	Methyl bromide	ND	5.2	ug/kg	
74-87-3	Methyl chloride	ND	5.2	ug/kg	
75-09-2	Methylene chloride	ND	10	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.2	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.2	ug/kg	
108-88-3	Toluene	ND	5.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.2	ug/kg	
1330-20-7	Xylene (total)	ND	15	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB18, 24-27'BGS		
Lab Sample ID:	F7243-4	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	94.5
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		71-122%
2037-26-5	Toluene-D8	107%		73-128%
460-00-4	4-Bromofluorobenzene	110%		53-158%
17060-07-0	1,2-Dichloroethane-D4	86%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB19, 20-24'BGS		
Lab Sample ID:	F7243-3	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	94.4
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008858.D	1	08/09/00	JG	n/a	n/a	VH122
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.5	ug/kg	
75-25-2	Bromoform	ND	5.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.5	ug/kg	
75-00-3	Chloroethane	ND	5.5	ug/kg	
67-66-3	Chloroform	ND	5.5	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.5	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.5	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.5	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.5	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.5	ug/kg	
74-83-9	Methyl bromide	ND	5.5	ug/kg	
74-87-3	Methyl chloride	ND	5.5	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.5	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.5	ug/kg	
108-88-3	Toluene	ND	5.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.5	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.5	ug/kg	
75-01-4	Vinyl chloride	ND	5.5	ug/kg	
1330-20-7	Xylene (total)	ND	16	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB19, 20-24'BGS		
Lab Sample ID:	F7243-3	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	94.4
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		71-122%
2037-26-5	Toluene-D8	106%		73-128%
460-00-4	4-Bromofluorobenzene	103%		53-158%
17060-07-0	1,2-Dichloroethane-D4	86%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB27, 6-8'BGS		
Lab Sample ID:	F7243-1	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	96.0
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008870.D	1	08/10/00	JG	n/a	n/a	VH122
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.6	ug/kg	
75-27-4	Bromodichloromethane	ND	5.6	ug/kg	
75-25-2	Bromoform	ND	5.6	ug/kg	
108-90-7	Chlorobenzene	ND	5.6	ug/kg	
75-00-3	Chloroethane	ND	5.6	ug/kg	
67-66-3	Chloroform	ND	5.6	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.6	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.6	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.6	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.6	ug/kg	
124-48-1	Dibromochloromethane	ND	5.6	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.6	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.6	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.6	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.6	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.6	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.6	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.6	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.6	ug/kg	
100-41-4	Ethylbenzene	ND	5.6	ug/kg	
74-83-9	Methyl bromide	ND	5.6	ug/kg	
74-87-3	Methyl chloride	ND	5.6	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.6	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.6	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.6	ug/kg	
108-88-3	Toluene	ND	5.6	ug/kg	
79-01-6	Trichloroethylene	ND	5.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.6	ug/kg	
1330-20-7	Xylene (total)	ND	17	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB27, 6-8'BGS		
Lab Sample ID:	F7243-1	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	96.0
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		71-122%
2037-26-5	Toluene-D8	108%		73-128%
460-00-4	4-Bromofluorobenzene	103%		53-158%
17060-07-0	1,2-Dichloroethane-D4	83%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB28, 7-11'BGS		
Lab Sample ID:	F7243-2	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	94.7
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008890.D	250	08/11/00	JG	n/a	n/a	VH122
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1200	ug/kg	
75-27-4	Bromodichloromethane	ND	1200	ug/kg	
75-25-2	Bromoform	ND	1200	ug/kg	
108-90-7	Chlorobenzene	ND	1200	ug/kg	
75-00-3	Chloroethane	ND	1200	ug/kg	
67-66-3	Chloroform	ND	1200	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	2400	ug/kg	
56-23-5	Carbon tetrachloride	ND	1200	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1200	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	1200	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1200	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1200	ug/kg	
124-48-1	Dibromochloromethane	ND	1200	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	1200	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	1200	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1200	ug/kg	
541-73-1	m-Dichlorobenzene	ND	1200	ug/kg	
95-50-1	o-Dichlorobenzene	ND	1200	ug/kg	
106-46-7	p-Dichlorobenzene	ND	1200	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	1200	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1200	ug/kg	
100-41-4	Ethylbenzene	3410	1200	ug/kg	
74-83-9	Methyl bromide	ND	1200	ug/kg	
74-87-3	Methyl chloride	ND	1200	ug/kg	
75-09-2	Methylene chloride	ND	2400	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1200	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1200	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1200	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1200	ug/kg	
127-18-4	Tetrachloroethylene	ND	1200	ug/kg	
108-88-3	Toluene	ND	1200	ug/kg	
79-01-6	Trichloroethylene	ND	1200	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1200	ug/kg	
75-01-4	Vinyl chloride	ND	1200	ug/kg	
1330-20-7	Xylene (total)	30500	3600	ug/kg	

0056

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB28, 7-11'BGS		
Lab Sample ID:	F7243-2	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	94.7
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		71-122%
2037-26-5	Toluene-D8	110%		73-128%
460-00-4	4-Bromofluorobenzene	114%		53-158%
17060-07-0	1,2-Dichloroethane-D4	87%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F7243-8	**Date Sampled:**	08/02/00
Matrix:	AQ - Trip Blank Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0014082.D	1	08/16/00	RAW	n/a	n/a	VG391
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	ug/l	
75-25-2	Bromoform	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	ug/l	
67-66-3	Chloroform	ND	2.0	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	2.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	ug/l	
74-87-3	Methyl chloride	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	6.0	ug/l	

0101

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F7243-8	**Date Sampled:**	08/02/00
Matrix:	AQ - Trip Blank Soil	**Date Received:**	08/03/00
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		80-120%
17060-07-0	1,2-Dichloroethane-D4	90%		69-128%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

0102

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB27, 6-8'BGS		
Lab Sample ID:	F7243-5A	Date Sampled:	08/02/00
Matrix:	SO - Soil	Date Received:	08/03/00
Method:	SW846 8260B	Percent Solids:	95.4
Project:	NAS Pensacola		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	100%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

5035 Sample Prep Log

0303

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment	
9687	F7289-11	H325	H2O / MeOH	5.08	8/9/00		11:20
88	F7294-1	M324	H2O / MeOH	5.32		High!	
89	1	H325	H2O / MeOH	5.36			11:40
90	1	H326	H2O / MeOH	5.12			13:00
91	F7295-2	M324	H2O / MeOH	4.51		High!	
92	2	H326	H2O / MeOH	4.69			
93	2	H326	H2O / MeOH	4.61			
94	F7295-3	M324	H2O / MeOH	4.81		High!	
95	3	H326	H2O / MeOH	4.41			
96	3	H326	H2O / MeOH	4.61			13:15
97	F7294-1	M324	H2O / MeOH	2.94	8/9/00		1400
98	F7294-2	M324	H2O / MeOH	5.31		C	
99	-3	M324	H2O / MeOH	4.16			
9700	-4	M321	H2O / MeOH	5.80			
01	-5	M324	H2O / MeOH	3.07			
02	-6	M324	H2O / MeOH	4.93			
03	-7	M327	H2O / MeOH	5.98			14:15
9704	F7301-1	M327	H2O / MeOH	5.02	8/10/00	Preburn in jar - F7301	1100
05	F7308-1	M327	H2O / MeOH	5.46			
06	-1	H326	H2O / MeOH	5.24			

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

Sequence Name: C:\HPCHEM\1\SEQUENCE\081600.S
Comment:
Operator: RickW
Data Path: C:\HPCHEM\1\DATA\081600\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	G0014067	BFB	BFB tune
2	DailyCal	1	G0014068	8260LL	CC390-20
3	Spike	2	G0014069	8260LL	BS
4	Blank	3	G0014070	8260LL	MB
5	Sample	4	G0014071	8260LL	F7234-1,10mL
6	Sample	5	G0014072	8260LL	F7234-2,10mL
7	Sample	6	G0014073	8260LL	F7234-3,10mL
8	Sample	7	G0014074	8260LL	F7313-1,10mL
9	Sample	8	G0014075	8260LL	F7313-2,10mL
10	Sample	9	G0014076	8260LL	F7313-3,10mL
11	Sample	10	G0014077	8260LL	F7313-4,10mL
12	Sample	11	G0014078	8260LL	F7313-5,10mL
13	Sample	12	G0014079	8260LL	F7313-6,10mL
14	Sample	13	G0014080	8260LL	F7313-7,10mL
15	Sample	14	G0014081	8260LL	F7240-2,10mL
16	Sample	15	G0014082	8260LL	F7243-8,10ml
17	Sample	16	G0014083	8260LL	F7227-1,5ul
18	Sample	17	G0014084	8260LL	F7227-2,10ml
19	Duplicate	18	G0014085	8260LL	F7234-1dup,10ml
20	DailyCal	19	G0014086	8260LL	CC390-20,10ml
21	Spike	20	G0014087	8260LL	BS,10ml
22	Blank	21	G0014088	8260LL	MB,10ml
23	Spike	22	G0014089	8260LL	F7313-2ms,10ml
24	Duplicate	22	G0014090	8260LL	F7313-2msd,10ml
25	Sample	23	G0014091	8260LL	F7252-1,10ml
26	Sample	24	G0014092	8260LL	F7253-1,10ml
27	Sample	25	G0014093	8260LL	F7253-2,10ml
28	Sample	26	G0014094	8260LL	F7257-1,10ml
29	Sample	27	G0014095	8260LL	F7257-2,1ml
30	Sample	28	G0014096	8260LL	F7290-1,10ml
31	Sample	29	G0014097	8260LL	F7290-2,10ml
32	Sample	30	G0014098	8260LL	F7290-3,10ml
33	Sample	31	G0014099	8260LL	F7290-4,10ml
34	Sample	32	G0014100	8260LL	F7290-5,10ml
35	Sample	33	G0014101	8260LL	F7290-6,10ml
36	Sample	34	G0014102	8260LL	F7290-7,10ml
37	Sample	35	G0014103	8260LL	F7290-8,10ml

GC/MS Analysis Log

Date: 8-16-00 Analyst Signature: [illegible] Run Batch: _____

Analysis Method: 8260 Column: DB-624 Detector: 5970MSD

Method File: 8260LL Instrument ID: G Calibration Date: 8-13-00

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
G0014067	BEB								V1679
68	CC390-20	10mL	W		1	1	8260		V1715, V1729, V1706, 1020
69	BS				2				V1723, V1726, V1718
70	MB				3				V1721
71	F7234-1	10mL		1	4			1	✓ MS673, VG391
72	-2			1	5			1	✓
73	-3			1	6			1	✓
74	F7313-1			7	7			2	PH! ✓ ND
75	-2			7	8			2	✓ ND
76	-3			7	9			2	✓ ND
77	-4			8	10			2	✓ ND RR surrogate failed
78	-5			8	11			2	✓ ND RR "
79	-6			8	12			2	✓ ND
80	-7			7	13			2	✓ ✓ ~~ND~~
81	F7240-2			1	14			1	H.S.! ND
82	F7243-8			1	15			1	✓ ND
83	F7217-1	5ml		6	16	10,000		3	✓ TCE 15
84	-2	10ml		1	17	1		3	✓ ND
85	F7234-1DUP		W	1	18		8260	2	✓
86	CC390-20			7	19				✓
87	BS			7	20				✓
88	MB			7	21				✓ TCE 61
89	F7313-2MS			7	22			2	✓
90	-2MSD			7	22			2	✓
91	F7252-1			1	23			1	✓ 1,1 Dichloro ND MS678, VG392
92	F7253-1			1	24			1	✓ matrix
93	-2			1	25			1	H.S.! ✓ ND
94	F7257-1			1	26			1	✓

Notes: _____

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

0305

GC/MS Analysis Log

Date: 8-16-00 Analyst Signature: [illegible] Run Batch: _____

Analysis Method: 8260 Column: DB-624 Detector: 5970MSD

Method File: 8260LL Instrument ID: G Calibration Date: 8-13-00

0306

	Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
1)	GOC14095	F7257-2	1mL	W	1	27	10	8260	1	✓ hR cis 5x
5)	96	F7290-1	10mL	↓	7	28	1	↓	1	pH! ✓
	97	-2	↓	↓	7	29	↓	↓	1	✓ h.R. cis 5x
	98	-3	↓	↓	8	30	↓	↓	1	✓
	99	-4	↓	↓	8	31	↓	↓	1	✓
	100	-5	↓	↓	8	32	↓	↓	1	✓
	1	-6	↓	↓	8	33	↓	↓	1	✓ hR hx
	2	-7	↓	↓	8	34	↓	↓	1	✓ hR 5x vinyl
	3	-8	↓	↓	8	35	↓	↓	1	↓ ✓

CAF

Notes: _____

W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

Sequence Name: C:\HPCHEM\1\SEQUENCE\081300.S
Comment:
Operator: JuanG
Data Path: C:\HPCHEM\1\DATA\081300\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	G0013986	BFB	BFB tune
2	Calibration	1	G0013987	8260LL	IC389-1
3	Calibration	2	G0013988	8260LL	IC389-5
4	Calibration	3	G0013989	8260LL	IC389-10
5	Calibration	4	G0013990	8260LL	ICC390-20
6	Calibration	5	G0013991	8260LL	IC390-35
7	Calibration	6	G0013992	8260LL	IC390-50
8	DailyCal	7	G0013993	8260LL	CC390-20
9	Spike	8	G0013994	8260LL	BS
10	Blank	9	G0013995	8260LL	MB
11	Sample	10	G0013996	8260LL	F7244-1,10ml
12	Sample	11	G0013997	8260LL	F7244-2,10ml
13	Sample	12	G0013998	8260LL	F7244-3,10ml
14	Sample	13	G0013999	8260LL	F7244-4,10ml
15	Sample	14	G0014000	8260LL	F7244-5,10ml
16	Sample	15	G0014001	8260LL	F7244-6,10ml
17	Sample	16	G0014002	8260LL	F7244-7,1ml
18	Sample	17	G0014003	8260LL	F7244-8,10ml
19	Sample	18	G0014004	8260LL	F7244-9,1ml
20	Sample	19	G0014005	8260LL	F7244-10,10ml
21	Sample	20	G0014006	8260LL	F7244-11,10ml
22	Sample	21	G0014007	8260LL	F7244-12,10ml
23	Sample	22	G0014008	8260LL	F7244-13,10ml
24	Sample	23	G0014009	8260LL	F7244-14,10ml
25	Sample	24	G0014010	8260LL	F7209-1,10ml

Date: 8-13-00 Analyst Signature: [illegible] Run Batch:

Analysis Method: 8260 Column: DB624 Detector: 5970MSD

Method File: 8260LL Instrument ID: G Calibration Date: 8-13-00

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
G0013986	BFB	2µl							V1679
87	IC389-1	10ml	W		1	1x	8260	-	V1715, V1716, V1709, 1020
88	390-5				2				V1660, V1726, V1718
89	5W -10				3				
90	-20				4				
91	-35				5				
92	390 -50				6				
93	CC389-20				7				
94	BS				8				
95	MB				9				V1721
96	F7244-1	10ml	W	1	10			1	✓ MS 673,
97	-2				11				✓ PR @ 5X V6390
98	-3				12				✓
99	-4				13			1	✓
1400	-5				14			1	✓
01	-6				15			1	ND
02	-7	1ml			16	10x		1	ND PR @ 1X
03	-8	10ml		3	17	1x		1	PH! ✓
04	-9	1ml		1	18	10x		1	✓ RUN @ 2X
05	-10	10ml			19	1x			ND
06	-11				20				✓ RUN @ 50X
07	-12				21			2	PR, C.O.?
08	-13			6	22			2	PH ✓ RUN @ 10X
09	-14			1	23			1	ND
10	F7209-1			1	24	1x10⁶x	1		Dilution PR @ 100,000X
11									
							Begin		

Notes:

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

Matrix: Designate

0308

Sequence Name: C:\HPCHEM\1\SEQUENCE\080200.S
Comment:
Operator: JuanG
Data Path: C:\HPCHEM\1\DATA\080200\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	H008740	BFB	BFB
2	Calibration	1	H008741	8260S	IC117-2
3	Calibration	2	H008742	8260S	IC117-10
4	Calibration	3	H008743	8260S	IC117-20
5	Calibration	4	H008744	8260S	ICC117-40
6	Calibration	5	H008745	8260S	IC119-70
7	Calibration	6	H008746	8260S	IC119-100
8	Calibration	7	H008747	8260S	CC119-40,5g
9	Spike	8	H008748	8260S	BS,5g
10	Blank	9	H008749	8260S	MB,5g
11	Sample	10	H008750	8260S	F7166-1,5.22g
12	Sample	11	H008751	8260S	F7114-3,5.19g
13	Sample	12	H008752	8260S	F7114-5,5.29g
14	Sample	13	H008753	8260S	F7114-7,5.42g
15	Sample	14	H008754	8260S	F7114-15,5.28g
16	Sample	15	H008755	8260S	F7114-16,5.69g
17	Sample	16	H008756	8260S	F7114-14,4.79g
18	Sample	17	H008757	8260S	F7114-17,5.54g
19	Sample	18	H008758	8260S	F7114-18,5.89g
20	Sample	19	H008759	8260S	F7114-19,5.85g
21	Sample	20	H008760	8260S	F7114-20,6.43g
22	Sample	21	H008761	8260S	F7114-21,5.12g
23	Sample	22	H008762	8260S	F7114-22,5.17g
24	Sample	23	H008763	8260S	F7114-23,5.80g
25	Sample	24	H008764	8260S	F7114-25,5.48g

Report of Analysis

Client Sample ID:	NASPFFSB27, 6-8'BGS		
Lab Sample ID:	F7243-5A	Date Sampled:	08/02/00
Matrix:	SO - Soil	Date Received:	08/03/00
Method:	SW846 8260B	Percent Solids:	95.4
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0014169.D	1	08/19/00	RAW	08/10/00	MS682	VG395
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone	ND			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.0262			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	ND			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

3

GC/MS Analysis Log

Date: 8-2-00 Analyst Signature: [signature] Run Batch: _____

Analysis Method: 8260 Column: DB 624 Detector: 5970MSD

Method File: 8260 S Instrument ID: H Calibration Date: 8-2-00

0310

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
H008740	BFB	2µl	W	-	-	1X	3ED		2µl V1679
41	IC119-2	5g	S		1	1X	8260S	-	5g ~~20ml~~ V1693, V1703, V1692, 10ml 014
42	-10				2				
43	-20				3				
44	ICC -40				4				
45	-70				5				
46	-100				6				
47	CC119-40				7				20µl ....
48	BS				8				12.5µl V1660, V1688, V1670
49	MB				9				ND
50	F7166-1	5.22			10			9462	22 50X MS 656, VH117
51	F7114-3	5.19			11			9309	22 1X MS 659, VH119
52	-5	5.29			12			9312	ND
53	-7	5.42			13			9315	ND
54	-15	5.28			14			9321	ND 77.9 1.
55	-16	5.69			15			9322	83.1.
56	-14	4.79			16			9317	1
57	-17	5.54			17			9325	76.1+ ↓ IS/SS
58	-18	5.89			18	50X			m,p-xylene 16 ppb - [illegible] 0.17 75.0+
59	-19	5.85			19	1X		9331	80.4.1.
60	-20	6.43			20	50X			22 1 < 50.9+. ↓
61	-21	5.12			21	1X		9337	80.2+. ↓ IS/SS
62	-22	5.17			22			9339	81.0+.
63	-23	5.80			23			9342	81.0+. ↓ IS/SS
64	-25	5.48			24			9346	76.3

Notes: _____

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

Sequence Name: C:\HPCHEM\1\SEQUENCE\081100.S
Comment:
Operator: JuanG
Data Path: C:\HPCHEM\1\DATA\081100\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	H008881	BFB	BFB
2	DailyCal	10	H008882	8260S	CC119-40
3	Spike	11	H008883	8260S	BS
4	Blank	12	H008884	8260S	MB
5	Sample	13	H008885	8260S	F7235-7,5.48g (10uL)
6	Sample	14	H008886	8260S	F7240-1,5.00g (50uL)
7	Sample	15	H008887	8260S	F7220-1,2.20g (5uL)
8	Sample	16	H008888	8260S	F7260-1,5.31g (100uL)
9	Sample	17	H008889	8260S	F7279-3,4.29g (10uL)
10	Sample	18	H008890	8260S	F7243-2,5.48g (20uL)
11	Sample	19	H008891	8260S	F7301-1,5.02g (100uL)
12	Sample	20	H008892	8260S	F7316-6,3.89g
13	Sample	21	H008893	8260S	F7316-7,4.50g
14	Sample	22	H008894	8260S	F7316-8,4.23g
15	Sample	23	H008895	8260S	F7316-9,4.03g
16	Sample	24	H008896	8260S	F7316-10,4.01g
17	Sample	25	H008897	8260S	F7248-1,6.12g

GC/MS Analysis Log

Date: 8-11-00 Analyst Signature: [illegible] Run Batch:

Analysis Method: 8260 Column: DB 624 Detector: 5970MSD

Method File: 8260S Instrument ID: H Calibration Date: 8-2-00

0312

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
4008881	BFB								V1679
82	CC119-40	5g	S	–	10	1x	8260	–	✓ V1715, V1716, V1709, 1014
83	BS				11			–	✓ V1669, V1706, V1718
84	MB soil				12			–	ND
85	F7235-7	5.48			13	500		9553	✓
86	F7240-1	5.00			14	100		9556	✓
87	F7220-1	2.20			15	1000		9511	✓
88	F7260-1	5.31			16	50		9605	✓
89	F7279-3	4.29			17	500		9661	✓ RL @ 1000x
90	F7243-2	5.48			18	250		9560	✓ MS670
91	F7301-1	5.02			19	50		9704	✓ RL 1x only Neat avail. VH 122
92	F7316-6	3.89			20	1		9731	ND
93	-7	4.50			21			9734	ND
94	-8	4.23			22			9737	ND
95	-9	4.03			23			9741	ND
96	-10	4.01			24			9743	ND
97	F7248-1	6.12			25			9580	✓ ↑ High ↓ IS/SS

Notes:

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

ORGANICS RUN NARRATIVE

Instrument H Date 8-11-00

Initial Calibration or Initial Continuing Calibration Check met method criteria except as noted:

#8, #13, #14, #20, #35, #38, #51 non detect in samples

Continuing Calibration Check(s) met method criteria except as noted:

N/A

Acceptable Initial and Continuing Calibration Checks bracketed all samples with detected target analytes.

N/A

Method blank met method criteria except as noted:

QC Samples met method criteria except as noted:

Note any unusual run occurrences below:

F7248-1 ↓ IS/SS re analyze

0313

5035 Sample Prep Log

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment	
9505	F7211-1	M315	H2O / MeOH	3.95	8-1-00 RJ	High	9:25 AM
9506	-1	M318	H2O / MeOH	3.32			
9507	-1	↓	H2O / MeOH	4.35			
9508	F7216-12	M315	H2O / MeOH	4.76			
9509	-12	M318	H2O / MeOH	4.95			
9510	-12	↓	H2O / MeOH	4.95			
9511	F7220-1	M315	H2O / MeOH	2.20			2:00 PM
9512	-1	M318	H2O / MeOH	2.44			
9513	-1	↓	H2O / MeOH	2.00			
9514	F7222-1	M315	H2O / MeOH	4.46	8-2-00 RJ		9:55 AM
9515	-1	M318	H2O / MeOH	4.16			
9516	-1	↓	H2O / MeOH	4.31			
9517	F7228-1	M315	H2O / MeOH	4.49		5030VA	1:43 P.M
9518	-1	M318	H2O / MeOH	4.88			
9519	-1	↓	H2O / MeOH	5.20			
9520	F7228-1	M315	H2O / MeOH	5.18			
9521	-1	M318	H2O / MeOH	4.77			
9522	-1	↓	H2O / MeOH	5.38			
9523	F7228-2	M315	H2O / MeOH	4.04			
9524	-2	M318	H2O / MeOH	4.17			

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

5035 Sample Prep Log

0315

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment	
9545	F7235-4	H319	H2O / MeOH	5.40	8-3-00 RJ	5030A	10:22
9546	-4	↓	H2O / MeOH	5.02			
9547	F7235-5	M315	H2O / MeOH	5.27			
9548	-5	H319	H2O / MeOH	5.63			
9549	-5	↓	H2O / MeOH	4.85			
9550	F7235-6	M315	H2O / MeOH	4.98		High	
9551	-6	H319	H2O / MeOH	5.03		↓	
9552	-6	↓	H2O / MeOH	5.15			
9553	F7235-7	M315	H2O / MeOH	5.48		High	
9554	-7	H319	H2O / MeOH	4.94		↓	
9555	-7	↓	H2O / MeOH	4.58		↓	
9556	F7240-1	M315	H2O / MeOH	5.00		High	
9557	F7243-1	M315	H2O / MeOH	4.56			
9558	-1	H319 ↓	H2O / MeOH	4.66			
9559	-1	H319	H2O / MeOH	4.66			12:10 P.
9560	F7243-2	M315	H2O / MeOH	4.58		High	
9561	-2	H319	H2O / MeOH	4.66		↓	
9562	-2	↓	H2O / MeOH	4.66			
9563	F7243-3	M315	H2O / MeOH	4.18			
9564	-3	H319	H2O / MeOH	4.83			

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

5035 Sample Prep Log

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment
9565	F7243-3	H319	H2O / MeOH	4.79	8-3-00 RJ	12:35 P.M.
9566	F7243-4	M315	H2O / MeOH	5.09		
9567	-4	H320	H2O / MeOH	5.13		
9568	-4	d	H2O / MeOH	5.17		
9569	F7243-5	M315	H2O / MeOH	5.01		
9570	-5	H320	H2O / MeOH	4.82		
9571	-5	d	H2O / MeOH	4.95		
9572	F7243-6	M315	H2O / MeOH	4.98		
9573	-6	H320	H2O / MeOH	5.00		
9574	-6	↓	H2O / MeOH	4.96		
9575	F7243-7	~~M315~~ M322	H2O / MeOH	5.09		P
9576	-7	H320	H2O / MeOH	5.07		
9577	-7	↓	H2O / MeOH	4.90		
9578	F7248-1	M322	H2O / MeOH	5.04		
9579	-1	H320	H2O / MeOH	5.64		
9580	-1	d	H2O / MeOH	6.12		
9581	F7254-1	M322	H2O / MeOH	5.25	8-4-00	10:20 AM
9582	-1	H320	H2O / MeOH	5.03		
9583	-1	d	H2O / MeOH	5.16		
9584	F7254-2	M322	H2O / MeOH	4.58		High

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

0316

5035 Sample Prep Log

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment
9605	F7260-1	M322	H2O / MeOH	5.31	8500 PAM	5030, light! 1232
9606	-1	H321	H2O / MeOH	4.67		
9607	-1		H2O / MeOH	4.88		
9608	F7263-2	M322	H2O / MeOH	4.67		light!
9609	-2	H321	H2O / MeOH	4.69		
9610	-2	H321	H2O / MeOH	4.65		
11	F7263-3	M322	H2O / MeOH	4.60		
12	-3	H321	H2O / MeOH	4.43		
13	-3	H321	H2O / MeOH	4.79		P
9614	F7263-4	M322	H2O / MeOH	4.69		light!
15	-4	H321	H2O / MeOH	4.63		
16	-4		H2O / MeOH	4.57		
9617	F7263-5	M322	H2O / MeOH	4.40		light
18	-5	H321	H2O / MeOH	4.48		
19	-5		H2O / MeOH	4.43		
9620	F7263-6	M322	H2O / MeOH	4.36		
21	-6	H321	H2O / MeOH	4.87		
22	-6		H2O / MeOH	4.34		
9623	F7263-7	M322	H2O / MeOH	4.91		light
24	-7	H321	H2O / MeOH	3.96		

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

0317

5035 Sample Prep Log

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment
9647	F7271-5	H323	H2O / MeOH	5.56	8/7/00	P
9648	F7271-5	H323	H2O / MeOH	5.05		P
49	-5	M324	H2O / MeOH	5.76		P
50	-5	H323	H2O / MeOH	5.01		P
51	-5	H323	H2O / MeOH	5.82		P
52	F7271-1	M324	H2O / MeOH	5.18		P
53		H323	H2O / MeOH	5.12		P
54		H325	H2O / MeOH	4.69		P
9655	F7279-1	M324	H2O / MeOH	4.12	8800 RAM	Light smell / Kro
56	-1	H323	H2O / MeOH	4.26		
57	-1	H325	H2O / MeOH	4.24		
9658	F7279-2	M324	H2O / MeOH	4.16		
59	-2	H325	H2O / MeOH	4.52		
60	-2	H325	H2O / MeOH	4.29		
9661	F7279-3	M324	H2O / MeOH	4.29		High!
62	-3	H325	H2O / MeOH	4.66		
63	-3		H2O / MeOH	4.55		
9664	F7284-1	M324	H2O / MeOH	4.73		high
65	-1	H325	H2O / MeOH	4.80		
66	-1		H2O / MeOH	4.78		

16:15

16:30

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

0318

5035 Sample Prep Log

0319

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment	
9687	F7289-11	H325	H2O / MeOH	5.08	8/9/00		11:20
88	F7294-1	M324	H2O / MeOH	5.32		High!	
89	1	H325	H2O / MeOH	5.36			11:40
90	1	H326	H2O / MeOH	5.12			13:00
91	F7295-2	M324	H2O / MeOH	4.51		High!	
92	2	H326	H2O / MeOH	4.69			
93	2	H326	H2O / MeOH	4.61			
94	F7295-3	M324	H2O / MeOH	4.81		High!	
95	3	H326	H2O / MeOH	4.41			
96	3	H326	H2O / MeOH	4.61			13:15
97	F7294-1	M324	H2O / MeOH	2.94	8/9/00		H2O
98	F7294-2	M324	H2O / MeOH	5.31		C	
99	-3	M324	H2O / MeOH	4.16			
9700	-4	M324	H2O / MeOH	5.80			
01	-5	M324	H2O / MeOH	3.07			
02	-6	M324	H2O / MeOH	4.93			
03	-7	M327	H2O / MeOH	5.98			14:15
9704	F7301-1	M327	H2O / MeOH	5.02	8/10/00	Preburn in jar - 10 oz	1100
05	F7308-1	M327	H2O / MeOH	5.46			
06	-1	H326	H2O / MeOH	5.24			

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

5035 Sample Prep Log

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment	
9745	F7316 -10	H328	H2O / MeOH	4.43	8/11/00	p	1125
46	10	H328	H2O / MeOH	3.65		p	
47	10	H328	H2O / MeOH	3.40		pc	1130
9748	F7321 -1	M337	H2O / MeOH	6.17	8/11/00 KAM	5030A	1200
49	-1	H328	H2O / MeOH	4.58			
50	-1		H2O / MeOH	5.79			
9751	-2	M327	H2O / MeOH	4.98			
52	2	H328	H2O / MeOH	5.32			
53	2	H328	H2O / MeOH	5.27			
54	F7321- 3	M327	H2O / MeOH	5.43		R	
55	3	H328	H2O / MeOH	5.31		P	
56	3	H328	H2O / MeOH	5.11		PC	
57	F7321- 4	M327	H2O / MeOH	4.94			
58	4	H328	H2O / MeOH	4.51		PC	
59	4	H328	H2O / MeOH	4.60		C	
60	F7321 -5	M327	H2O / MeOH	5.42	1 Encore Empty	C	
61	5	H328	H2O / MeOH	5.61			
62	F7331 -1	M327	H2O / MeOH	4.61			
63	-1	H328	H2O / MeOH	4.43			
64	-1	H328	H2O / MeOH	4.47			1415

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

5035 Sample Prep Log

Serial #	Sample #	Cont. Lot	Preserv.	Sample Wt. (g)	Date/Init.	Comment
9725	F7308 -8	H326	H2O / MeOH	5.17 g	8/10/00 RAH	high!
26	↓ -8	H328	H2O / MeOH	4.85		
9727	F7308-9	H327	H2O / MeOH	5.04		
28	-9	H328	H2O / MeOH	5.18		
29	↓ -9	↓	H2O / MeOH	4.56	↓	↓ 1340
9730	F7316 - 6	M327	H2O / MeOH	4.13	8/11/00 CAB	PC 10:45
31	6	H328	H2O / MeOH	3.89		PC
32	↓ 6	H328	H2O / MeOH	4.15		PC
33	F7316 - 7	M327	H2O / MeOH	4.56		P
34	7	H328	H2O / MeOH	4.50		P
35	↓ 7	H328	H2O / MeOH	3.54		P
36	F7316 - 8	M327	H2O / MeOH	4.33		PC
37	8	H328	H2O / MeOH	4.23		P
38	↓ 8	H328	H2O / MeOH	4.07		PC
39	F7316 - 9	M327	H2O / MeOH	~~4.02~~ 3.88		PC
40	9	H328	H2O / MeOH	3.67		PC
41	↓ 9	H328	H2O / MeOH	4.03		PC
42	F7316 -10	M327	H2O / MeOH	4.35		P
43		H328	H2O / MeOH	4.01		PC
44	↓	H328	H2O / MeOH	3.51		P 1125

Comment: C for sampler incorrectly capped; P for plunger not locked for shipment; F for sampler not filled completely.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F7243
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F7313-2MS	G0014089.D	1	08/16/00	RAW	n/a	n/a	VG391
F7313-2MSD	G0014090.D	1	08/16/00	RAW	n/a	n/a	VG391
F7313-2 [a]	G0014075.D	1	08/16/00	RAW	n/a	n/a	VG391

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7243-8

CAS No.	Compound	F7313-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	24.6	98	23.5	94	4	61-141/16
75-27-4	Bromodichloromethane	ND		25	17.5	70*	16.5	66*	6	72-125/10
75-25-2	Bromoform	ND		25	11.2	45*	10.6	42*	6	62-126/15
108-90-7	Chlorobenzene	ND		25	22.0	88	21.6	86	2	75-125/10
75-00-3	Chloroethane	ND		25	29.2	117	26.3	105	10	58-134/12
67-66-3	Chloroform	ND		25	22.8	91	21.6	86	5	73-125/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	110	88	101	81	8	5-191/73
56-23-5	Carbon tetrachloride	ND		25	18.5	74	18.1	72	2	62-126/17
75-34-3	1,1-Dichloroethane	ND		25	22.5	90	21.3	85	5	75-125/10
75-35-4	1,1-Dichloroethylene	ND		25	26.6	106	25.0	100	6	73-125/10
107-06-2	1,2-Dichloroethane	ND		25	21.6	86	20.5	82	5	66-130/18
78-87-5	1,2-Dichloropropane	ND		25	24.6	98	23.6	94	4	75-125/10
124-48-1	Dibromochloromethane	ND		25	15.1	60*	14.5	58*	4	75-125/11
75-71-8	Dichlorodifluoromethane	ND		25	31.4	126	28.9	116	8	22-165/23
156-59-2	cis-1,2-Dichloroethylene	ND		25	24.6	98	23.5	94	4	65-131/11
10061-01-5	cis-1,3-Dichloropropene	ND		25	14.2	57*	13.3	53*	6	58-136/13
541-73-1	m-Dichlorobenzene	ND		25	22.2	89	21.1	84	5	75-125/10
95-50-1	o-Dichlorobenzene	ND		25	21.8	87	20.5	82	6	75-125/10
106-46-7	p-Dichlorobenzene	ND		25	23.3	93	21.7	87	7	75-125/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	20.8	83	19.1	76	8	65-133/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	14.6	58	13.6	54	7	49-139/19
100-41-4	Ethylbenzene	ND		25	25.5	102	24.5	98	4	67-128/10
74-83-9	Methyl bromide	ND		25	17.6	70	17.1	68	3	32-149/27
74-87-3	Methyl chloride	ND		25	30.4	122	27.0	108	12	59-143/18
75-09-2	Methylene chloride	ND		25	23.4	94	22.1	88	6	73-125/11
1634-04-4	Methyl Tert Butyl Ether	ND		25	21.4	86	20.0	80	7	72-125/14
71-55-6	1,1,1-Trichloroethane	ND		25	22	88	21.6	86	2	72-125/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	23.5	94	22.0	88	6	68-125/12
79-00-5	1,1,2-Trichloroethane	ND		25	21.7	87	21.7	87	0	75-125/12
127-18-4	Tetrachloroethylene	ND		25	23.3	93	22.6	90	3	75-125/10
108-88-3	Toluene	ND		25	24.0	96	23.5	94	2	72-125/10
79-01-6	Trichloroethylene	ND		25	22.9	92	22.8	91	0	72-125/10
75-69-4	Trichlorofluoromethane	ND		25	27.5	110	25.5	102	8	37-126/13
75-01-4	Vinyl chloride	ND		25	31.9	128	28.2	113	12	63-138/17
1330-20-7	Xylene (total)	ND		75	75.4	100	73.3	98	3	69-127/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F7243
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F7313-2MS	G0014089.D	1	08/16/00	RAW	n/a	n/a	VG391
F7313-2MSD	G0014090.D	1	08/16/00	RAW	n/a	n/a	VG391
F7313-2 [a]	G0014075.D	1	08/16/00	RAW	n/a	n/a	VG391

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7243-8

CAS No.	Surrogate Recoveries	MS	MSD	F7313-2	Limits
1868-53-7	Dibromofluoromethane	93%	89%	86%	80-120%
17060-07-0	1,2-Dichloroethane-D4	92%	90%	88%	69-128%
2037-26-5	Toluene-D8	95%	93%	92%	80-120%
460-00-4	4-Bromofluorobenzene	103%	96%	100%	80-120%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

Blank Spike Summary

Job Number: F7243
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG391-BS3	G0014069.D	1	08/16/00	RAW	n/a	n/a	VG391

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7243-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.0	92	61-141
75-27-4	Bromodichloromethane	25	20.7	83	72-125
75-25-2	Bromoform	25	20.2	81	62-126
108-90-7	Chlorobenzene	25	23.2	93	75-125
75-00-3	Chloroethane	25	25.5	102	58-134
67-66-3	Chloroform	25	20.7	83	73-125
110-75-8	2-Chloroethyl vinyl ether	125	99.5	80	5-191
56-23-5	Carbon tetrachloride	25	21.9	88	62-126
75-34-3	1,1-Dichloroethane	25	20.6	82	75-125
75-35-4	1,1-Dichloroethylene	25	22.7	91	73-125
107-06-2	1,2-Dichloroethane	25	20.1	80	66-130
78-87-5	1,2-Dichloropropane	25	23.2	93	75-125
124-48-1	Dibromochloromethane	25	20.7	83	75-125
75-71-8	Dichlorodifluoromethane	25	29.3	117	22-165
156-59-2	cis-1,2-Dichloroethylene	25	23.3	93	65-131
10061-01-5	cis-1,3-Dichloropropene	25	18.7	75	58-136
541-73-1	m-Dichlorobenzene	25	22.6	90	75-125
95-50-1	o-Dichlorobenzene	25	22.1	88	75-125
106-46-7	p-Dichlorobenzene	25	22.5	90	75-125
156-60-5	trans-1,2-Dichloroethylene	25	19.0	76	65-133
10061-02-6	trans-1,3-Dichloropropene	25	18.4	74	49-139
100-41-4	Ethylbenzene	25	24.3	97	67-128
74-83-9	Methyl bromide	25	22.3	89	32-149
74-87-3	Methyl chloride	25	27.0	108	59-143
75-09-2	Methylene chloride	25	20.7	83	73-125
1634-04-4	Methyl Tert Butyl Ether	25	19.6	78	72-125
71-55-6	1,1,1-Trichloroethane	25	21.5	86	72-125
79-34-5	1,1,2,2-Tetrachloroethane	25	22.2	89	68-125
79-00-5	1,1,2-Trichloroethane	25	21.1	84	75-125
127-18-4	Tetrachloroethylene	25	22.6	90	75-125
108-88-3	Toluene	25	24.2	97	72-125
79-01-6	Trichloroethylene	25	22.2	89	72-125
75-69-4	Trichlorofluoromethane	25	26.2	105	37-126
75-01-4	Vinyl chloride	25	29.3	117	63-138
1330-20-7	Xylene (total)	75	73.1	97	69-127

Blank Spike Summary

Job Number: F7243
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG391-BS3	G0014069.D	1	08/16/00	RAW	n/a	n/a	VG391

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7243-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	88%	80-120%
17060-07-0	1,2-Dichloroethane-D4	88%	69-128%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	100%	80-120%

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA003250	01:01		8310 L1 STDs811
No	2	2	8310_46	AA003251	02:01		8310 L2 STD s810
No	3	3	8310_46	AA003252	03:01		8310 L3 STD s809
No	4	4	8310_46	AA003253	04:01		8310 L5 STD s808
No	5	5	8310_46	AA003254	05:01		8310 L5 STD s807
No	6	6	8310_46	AA003255	06:01		8310 L6 STD s806
No	7	7	8310_46	AA003256	07:01		8310 L4 STD s808
No	8	8	8310_46	AA003257	08:01		8310 20 ppm ICV
No	9	9	8310_46	AA003258	09:01		OP1872-MB
No	10	10	8310_46	AA003259	10:01		OP1872-BS
No	11	11	8310_46	AA003260	11:01		F7115-1
No	12	12	8310_46	AA003261	12:01		F7120-1
No	13	13	8310_46	AA003262	13:01		F7122-2
No	14	14	8310_46	AA003263	14:01		F7122-5
No	15	15	8310_46	AA003264	15:01		F7122-6
No	16	16	8310_46	AA003265	16:01		F7122-7
No	17	17	8310_46	AA003266	17:01		F7122-8
No	18	8	8310_46	AA003267	18:01		8310 20 ppm ICV
No	19	18	8310_46	AA003268	19:01		F7138-1
No	20	19	8310_46	AA003269	20:01		F7138-1,4x
No	21	20	8310_46	AA003270	21:01		F7138-2,5x
No	22	21	8310_46	AA003271	22:01		F7138-3
No	23	22	8310_46	AA003272	23:01		F7138-4
[illegible]	24	23	8310_46	AA003273	24:01		F7138-5
[illegible]	25	24	8310_46	AA003274	25:01		F7139-1,10x
No	26	25	8310_46	AA003275	26:01		F7139-2,5x
No	27	8	8310_46	AA003276	27:01		8310 20 ppm ICV
No	28	26	8310_46	AA003277	28:01		F7139-3,10x
No	29	27	8310_46	AA003278	29:01		F7139-4,5x
No	30	28	8310_46	AA003279	30:01		F7139-5,5x
No	31	29	8310_46	AA003280	31:01		F7139-6,5x
No	32	30	8310_46	AA003281	32:01		F7139-7
No	33	31	8310_46	AA003282	33:01		F7139-8
No	34	32	8310_46	AA003283	34:01		OP1872-MS
No	35	33	8310_46	AA003284	35:01		OP1872-MSD
No	36	8	8310_46	AA003285	36:01		8310 20 ppm ICV

HPLC ANALYSIS LOG

DATE: 07/27/00 A
COLUMN TYPE: Pinnacle PAH
INSTRUMENT: HPLC1

METHODS: 8310
METHOD FILE: 8310_46
CALIB. DATE: 07/27/00

ANALYST: Chelsea
RUN BATCH: GAA108
AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
AA00 3250	1	8310 L1 STD	8310		S811		1.0	✓	✓
3251	2	L2			S810			✓	✓
3252	3	L3			S809			✓	✓
3253	4	L5			S808			✓	✓
3254	5	L5			S807			✓	✓
3255	6	L6			S806			✓	✓
3256	7	L4			S808			✓	✓
3257	8	8310 20 ppm ICV			S891			✓	passes
3258	9	OP1872 - MB		1000/1mL	W	OP1872		✓	BDL
3259	10	- BS						✓	✓
3260	11	F7115-1		990/1mL				✓	BDL
3261	12	F7120-1		910/1mL				✓	
3262	13	F7122-2		920/1mL				✓	
3263	14	-5		890/1mL				✓	
3264	15	-6		920/1mL				✓	
3265	16	-7		810/1mL				✓	
3266	17	-8		910/1mL				✓	
3267	8	8310 20 ppm ICV		—	S891			✓	Rerun sample
3268	18	F7138-1		980/1mL	W			✓	✓
3269	19	-1, 4x					4.0	✓	✓
3270	20	-2, 5x					5.0	✓	RL @ 2X
3271	21	-3					1.0	✓	BDL
3272	22	-4		970/1mL				✓	RL @ 2X
3273	23	-5		980/1mL				✓	BDL

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume

Analyst's Signature: Chelsea

DATE: 07/27/00-A
COLUMN TYPE: Pinnacle PAH
INSTRUMENT: HPLC1

METHODS: [illegible]
METHOD FILE: [illegible]
CALIB. DATE: [illegible]

ANALYST: [illegible]
RUN BATCH: [illegible]
AMOUNT INJECTED: [illegible]

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
AA00 3274	24	F7139-1, 10x	8310	990/1mL	W	OP1872	10.0	✓	RRC 1x
3275	25	-2, 5x	↓	980/1mL	↓	↓	5.0	✓	RRC 4x
3276	8	8310 20 ppm ICV	↓	—	S891	↓	1.0	✓	Rerun samples
3277	26	F7139-3, 10x	↓	980/1mL	W	↓	10.0	✓	RRC 2x
3278	27	-4, 5x	↓	990/1mL	↓	↓	5.0	✓	RRC 3x
3279	28	-5, ↓	↓	950/1mL	↓	↓	↓	✓	RRC 4x 40?
3280	29	-6, ↓	↓	980/1mL	↓	↓	↓	✓	✓
3281	30	-7	↓	940/1mL	↓	↓	1.0	✓	BDL
3282	31	-8	↓	980/1mL	↓	↓	↓	✓	✓
3283	32	OP1872-MS	↓	490/1mL	↓	↓	↓	✓	✓
3284	33	-MSD	↓	↓	↓	↓	↓	✓	✓
3285	8	8310 20 ppm ICV	↓	—	S891	↓	↓	✓	Rerun samples

07/28/00

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Chelsea

Partial Sequence: C:\HPCHEM\1\SEQUENCE\0815PAH.S

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA003763	01:01		8310 L4 CCV s808
No	2	2	8310_46	AA003764	02:01		op1920-mb
No	3	3	8310_46	AA003765	03:01		f7243-2,5
No	4	4	8310_46	AA003766	04:01		f7254-2,5
No	5	5	8310_46	AA003767	05:01		f7254-4,5
No	6	6	8310_46	AA003768	06:01		f7254-7,5
No	7	7	8310_46	AA003769	07:01		f7254-8,10*2
No	8	8	8310_46	AA003770	08:01		f7243-2
No	9	9	8310_46	AA003771	09:01		f7254-2
No	10	10	8310_46	AA003772	10:01		f7254-4,2
No	11	1	8310_46	AA003773	11:01		ccv
No	12	11	8310_46	AA003774	12:01		op1933-mb
No	13	12	8310_46	AA003775	13:01		f7279-3,5
No	14	13	8310_46	AA003776	14:01		f7263-2,20
No	15	14	8310_46	AA003777	15:01		f7263-3,20
No	16	15	8310_46	AA003778	16:01		f7263-6,2
No	17	16	8310_46	AA003779	17:01		f7263-8,5
No	18	17	8310_46	AA003780	18:01		f7263-9,2
No	19	18	8310_46	AA003781	19:01		f7263-10,20
No	20	1	8310_46	AA003782	20:01		ccv
No	21	19	8310_46	AA003783	21:01		f7284-1,20
No	22	20	8310_46	AA003784	22:01		f7284-3
No	23	21	8310_46	AA003785	23:01		f7284-4,4
No	24	22	8310_46	AA003786	24:01		f7284-5,20
No	25	23	8310_46	AA003787	25:01		f7263-8,2
No	26	1	8310_46	AA003788	26:01		ccv
No	27	1	8310_46	AA003789	27:01		ccv
No	28	24	8310_46	AA003790	28:01		op1945-LBS
No	29	25	8310_46	AA003791	29:01		op1945-LB
No	30	26	8310_46	AA003792	30:01		f7243-5a
No	31	27	8310_46	AA003793	31:01		f7243-7a
No	32	28	8310_46	AA003794	32:01		op1945-LS
No	33	1	8310_46	AA003795	33:01		CCV
No	34	29	8310_46	AA003796	34:01		op1938-bs
No	35	30	8310_46	AA003797	35:01		op1938-mb
No	36	31	8310_46	AA003798	36:01		f7308-1
No	37	32	8310_46	AA003799	37:01		f7308-2
No	38	33	8310_46	AA003800	38:01		f7308-5
No	39	34	8310_46	AA003801	39:01		f7308-6
No	40	2	8310_46	AA003802	40:01		op1938-ms
No	41	3	8310_46	AA003803	41:01		op1938-msd
No	42	1	8310_46	AA003804	42:01		ccv
No	43	4	8310_46	AA003805	43:01		f7308-3,20*2
No	44	5	8310_46	AA003806	44:01		f7308-4,20*2
No	45	6	8310_46	AA003807	45:01		f7308-7,20*2
No	46	7	8310_46	AA003808	46:01		f7308-8,20*2
No	47	8	8310_46	AA003809	47:01		f7308-9,10
No	48	9	8310_46	AA003810	48:01		f7295-1,10
No	49	10	8310_46	AA003811	49:01		f7295-2,10
No	50	11	8310_46	AA003812	50:01		f7295-3,10*2
No	51	1	8310_46	AA003813	51:01		CCV
No	52	1	8310_46	AA003814	52:01		CCV

HPLC ANALYSIS 3

TE: 8/16/00	METHODS: 8310		ANALYST: [illegible]
LUMN TYPE: Pin PAH	METHOD FILE: 8310-46		RUN BATCH: GAA120
TRUMENT: HPLC1	CALIB. DATE: 7/27/00		AMOUNT INJECTED: 15 ul

TA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
4003763	1	L4CCV	8310					✓	Passed
64	2	OP1920-MB		30/5	S	OP1920	2x	✓	ND
65	3	F7243-2					5x	AR	1x
66	4	F7254-2					5x	AR	1x
67	5	4					5x	RR	2x
68	6	7					5x	✓	✓
69	7	8		30/10			10 (2)	✓	✓
70	8	F7243-2		30/5			1x	✓	✓
71	9	F7254-2					1x	✓	✓
72	10	4					2	✓	✓
73	1	CCV						✓	Passed
74	11	OP1933-MB		30/5	S	OP1933	1x	✓	ND
75	12	F7274-3					5x	✓	✓ TRAA 2x
76	13	F7263-2					20x	✓	✓
77	14	3					20x	✓	✓
78	15	6					2x	✓	✓
79	16	8					5x	AR	2x
80	17	9					2x	✓	✓ Double SS
81	18	10					20x	✓	✓
82	1	CCV						✓	Passed
83	19	F7284-1					20x	✓	✓
84	20	F7284-3					1x	✓	RDL
85	21	4					4x	✓	✓
86	22	5					20x	✓	✓

ix: Designate "W" for Water, "S" for Soil, and "O" for Oil

ıple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

HPLC ANALYSIS LOG

E: 8/15/00	METHODS: 8310	ANALYST: [illegible]
UMN TYPE: Pin AAH	METHOD FILE: '8310-46	RUN BATCH: GAH120
TRUMENT: HPLC1	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 15 ul

A FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
03787	23	F7263-8	8310	30/5ml	S	OP1933	2x	✓	✓
88	1	CCV						✓	Passed
89	1	CCV						✓	"
90	24	OP1945-LBS		100/1ml	Leach	OP1945	1x	✓	✓
91	25	LB						✓	ND
92	26	F7243-5a						✓	ND
93	27	7a						✓	ND
94	28	OP1945-LS						✓	✓
95	1	CCV						✓	Passed
96	29	OP1938-MS			S	OP1938	10	✓	✓
97	30	MB						✓	ND
98	31	F7308-1		30/5ml				✓	ND
99	32	2						✓	ND
03800	33	5						✓	ND
01	34	6						✓	ND
02	2	OP1938-MS		30/5ml				✓	✓
03	3	-MSD						✓	✓
04	1	CCV						✓	Passed
05	4	F7308-3		30/10ml			(2)20x	✓	50x ↑ BAA to Chry
06	5	4		30/10ml				✓	" "
07	6	7		30/10ml				✓	50x ↑ BAA to Chry
08	7	8		30/10ml				✓	✓ Matrix ↑ BAA to Chry
09	8	9		30/5			10x	✓	✓ ↑ BAA to Chry
10	9	~~OP7395~~ F7295-1						✓	25x

406

ix: Designate "W" for Water, "S" for Soil, and "O" for Oil

ple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature:_____

HPLC ANALYSIS LOG

E: 8-1-00	METHODS: 8310		ANALYST: [illegible]
JMN TYPE: PinPAH	METHOD FILE: 8310-46		RUN BATCH: 0PA120
RUMENT: HPLC1	CALIB. DATE: 7/27/00		AMOUNT INJECTED: 15 ul

A FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
03811	10	F7255-2	8310	30/5	S	0PA935	10	✓	✓
12	11	3		30/10	↓	↓	10(2)	✓	✓
13	1	CCV						✓	Passed
14	1	CCV	↓					✓	Passed

rix: Designate "W" for Water, "S" for Soil, and "O" for Oil

nple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA003710	01:01		8310 L4 CCV s808
No	2	2	8310_46	AA003711	02:01		op1920-bs
No	3	3	8310_46	AA003712	03:01		op1920-mb
No	4	4	8310_46	AA003713	04:01		f7231-1
No	5	5	8310_46	AA003714	05:01		f7243-1
No	6	6	8310_46	AA003715	06:01		op1920-ms
No	7	7	8310_46	AA003716	07:01		op1920-msd
No	8	8	8310_46	AA003717	08:01		f7243-2,50
No	9	9	8310_46	AA003718	09:01		f7243-3
No	10	10	8310_46	AA003719	10:01		f7243-4
No	11	11	8310_46	AA003720	11:01		f7243-5
No	12	1	8310_46	AA003721	12:01		ccv
No	13	12	8310_46	AA003722	13:01		f7243-6
No	14	13	8310_46	AA003723	14:01		f7243-7
No	15	14	8310_46	AA003724	15:01		f7254-1
No	16	15	8310_46	AA003725	16:01		f7254-2,50
No	17	16	8310_46	AA003726	17:01		f7254-3
No	18	17	8310_46	AA003727	18:01		f7254-4,50
No	19	18	8310_46	AA003728	19:01		f7254-5
No	20	19	8310_46	AA003729	20:01		f7254-6
No	21	20	8310_46	AA003730	21:01		f7254-7,100
No	22	21	8310_46	AA003731	22:01		f7254-8,100*2
No	23	1	8310_46	AA003732	23:01		ccv
No	24	1	8310_46	AA003733	24:01		ccv
No	25	22	8310_46	AA003734	25:01		op1933-bs
No	26	23	8310_46	AA003735	26:01		op1933-mb
No	27	24	8310_46	AA003736	27:01		f7279-1
No	28	25	8310_46	AA003737	28:01		f7279-2
No	29	26	8310_46	AA003738	29:01		f7279-3,10
No	30	27	8310_46	AA003739	30:01		f7289-9
No	31	28	8310_46	AA003740	31:01		f7289-10
No	32	29	8310_46	AA003741	32:01		f7289-11
No	33	30	8310_46	AA003742	33:01		op1933-ms
No	34	31	8310_46	AA003743	34:01		op1933-msd
No	35	1	8310_46	AA003744	35:01		ccv
No	36	32	8310_46	AA003745	36:01		f7263-2,100
No	37	33	8310_46	AA003746	37:01		f7263-3,100
No	38	34	8310_46	AA003747	38:01		f7263-4
No	39	2	8310_46	AA003748	39:01		f7263-5
No	40	3	8310_46	AA003749	40:01		f7263-6,10
No	41	4	8310_46	AA003750	41:01		f7263-7
No	42	5	8310_46	AA003751	42:01		f7263-8,50
No	43	1	8310_46	AA003752	43:01		ccv
No	44	1	8310_46	AA003753	44:01		ccv
No	45	6	8310_46	AA003754	45:01		f7263-9,20
No	46	7	8310_46	AA003755	46:01		f7263-10,100
No	47	8	8310_46	AA003756	47:01		f7284-1,100
No	48	9	8310_46	AA003757	48:01		f7284-2
No	49	10	8310_46	AA003758	49:01		f7284-3,10
No	50	11	8310_46	AA003759	50:01		f7284-4,20
No	51	12	8310_46	AA003760	51:01		f7284-5,100
No	52	1	8310_46	AA003761	52:01		ccv
No	53	1	8310_46	AA003762	53:01		ccv

HPLC ANALYSIS LOG

ATE: 8/14/00
OLUMN TYPE: Pinpak
STRUMENT: HPLC 1

METHODS: 8310
METHOD FILE: 8310-46
CALIB. DATE: 7/27/00

ANALYST: [illegible]
RUN BATCH: 0-AA119
AMOUNT INJECTED: 15 ul

ATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
A003710	1	CCV L4	8310		SBCS			✓	Passed
11	2	OP1920-BS		30/5ml	S	OP1920	1x	✓	✓
12	3	MB						✓	ND
13	4	F7231-1						✓	Trace
14	5	~~Blg~~ F7243-1						✓	ND
15	6	OP1920-MS						✓	✓
16	7	MSD						✓	✓
17	8	F7243-2					50x	RR	5x
18	9	3					1x	✓	ND
19	10	4						✓	ND
20	11	5						✓	ND
21	1	CCV						✓	Passed
22	12	F7243-6		30/5ml	S	OP1920	1x	✓	BAL
23	13	7						✓	BAL
24	14	F7254-1						✓	BAL
25	15	2					50x	RR	5x
26	16	3					1x	✓	BAL
27	17	4					50x	RR	5x
28	18	5					1x	✓	BAL
29	19	6					1x	✓	BAL
30	20	7					100x	RR	10x
31	21	4		30/10ml			(2x(10)) 200x	RR	20x
32	1	CCV						✓	Passed
33	1	CCV						✓	Passed

rix: Designate "W" for Water, "S" for Soil, and "O" for Oil
mple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

HPLC ANALYSIS LOG

TE: 5/19/00	METHODS: 5310	ANALYST: [illegible]
LUMN TYPE: Pin PDA	METHOD FILE: 8310-46	RUN BATCH: 0-AA 119
TRUMENT: HPLC1	CALIB. DATE: 4/27/00	AMOUNT INJECTED: 15 ul

TA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
003734	22	OP1933-BS	5310	30/5ml	S	OP1933	1x	✓	✓
35	23	MB						✓	ND
36	24	F7279-1						✓	BDL
37	25	2						✓	trace
38	26	3					10x	✓	✓
39	27	F7289-9					1x	✓	✓
40	28	10						✓	BDL
41	29	11						✓	BDL
42	30	OP1933-MS						✓	✓
43	31	MSD						✓	✓
44	1	CCV						✓	Passed
45	32	F7263-2					100x	RR	20x
46	33	3					100x	RR	20x
47	34	4					1x	✓	BDL
48	2	5					1x	✓	✓
49	3	6					10x	RR	2x
50	4	7					1x	✓	BDL
51	5	8					50x	RR	5x
52	1	CCV						✓	Passed
53	1	CCV						✓	Passed
54	6	F7263-9					20x	RR	2x Double SS
55	7	10					100x	RR	20x
56	8	F7284-1					100x	RR	20x
57	9	2					1x	✓	BDL

rix: Designate "W" for Water, "S" for Soil, and "O" for Oil

nple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

410

HPLC ANALYSIS LOG

E: 8-14-00	METHODS: 8310		ANALYST: [illegible]
LUMN TYPE: Rim PAH	METHOD FILE: 8310-46		RUN BATCH: GPA119
TRUMENT: 1APCC1	CALIB. DATE: 7/27/00		AMOUNT INJECTED: 15 ul

A FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
003758	10	F724-3	8310	30/5ml	S	OM933	10 x	RR	1x
59	11	4	↓	↓	↓	↓	20 x	RR	4x
60	12	5	↓	↓	↓	↓	100 x	RR	20x
61	1	CCV	↓					✓	Passed
62	1	CCV	↓					✓	Passed

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ix: Designate "W" for Water, "S" for Soil, and "O" for Oil

ple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

LIQUID SAMPLE PREP REPORT

Date: 8-14-00 Method*: 8310 SPH Batch#: OP1945.

Batch Started On: 8-14-00 Prior Number Of Samples in Batch: Ø Analyst: MS/mcy

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 1945-LMB	–	100/100 mL	4	NA	0.5 mL		1.0 mL	
OP -LBS	–		4		0.5 mL	0.5 mL		
F7243-5A	–		5					
-7A	–		9					
OP1945-LS	–		5			0.5 mL		F7243-5A
OP MS								
OP MSD								
OP DUP								

MS 8/14/00

Surrogate ID: E699 Conc: 40 ppm Exp. Date: 1/31/01 Bath Temp.: 68°C

Spike ID: E688 Conc: 40/20 ppm Exp. Date: 1/6/01 Bath Temp2.: —

verified by mcy

CH2CL2 Lot # 003216 Hexane Lot # Na2SO4 Lot#

Reagent # CH3CN-003346 Reagent # Reagent #

Comments:

Relinquished By: Date: 8-15-00

SOLID SAMPLE PREP REPORT

D 8-7-00 Method*: 8310 PAH Batch#: OP1920

Batch Started On: 8-7-00 Prior Number Of Samples in Batch : Ø Analyst: NJ

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 1920 - MB	—	30.0	0.5 mL	-	5.0 mL	
OP - BS	-	30.0		0.5 mL	-	
F7231-1	7	30.0				
F7243-1	6	30.0				
-2	6	30.0				
-3	6	30.0				
-4	6	30.0				
-5	6	30.0				
-6	6	30.1				
-7	6	30.0				
F7254-1	6	30.0				
-2	7	30.0				
-3	6	30.1				
-4	5	30.0				
-5	5	30.0				
-6	6	30.0				
-7	7	29.9				
-8	5	29.9			10.0 ml	Sample would not blow down 10.0 ml final volume
					MS 8/7/00	
		MS 8/7/00				
OP 1920 - MS	6	30.0	0.5 mL	0.5 mL	5.0 mL	F7243-1
OP - MSD	6	30.0				
OP ~~DUP~~						

Surrogate ID: E682 Conc: 200 ppm Exp. Date: 12-26-00 Bath Temp.: 74°C

Spike ID: E691 Conc: 200/200 ppm Exp. Date: 1-14-01 Bath Temp2.: —

Verified By

CH2CL2 Lot# 003216 Hexane Lot# — Na2SO4 Lot# 004853

Reagent #: CH2CN-000931 Reagent #: — Reagent #: —

Comments:

Relinquished By: Michael Spinelli Date: 8/7/00

Sequence Name: C:\HPCHEM\2\SEQUENCE\0807PRO.S
Comment:
Operator: marke
Data Path: C:\HPCHEM\2\DATA\0807PRO\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	OP10021	FL_PRO	1020ppm TPHS ccv s885
2	Sample	2	OP10022	FL_PRO	340ppm TPHS s887
3	Sample	3	OP10023	FL_PRO	solvent blank
4	Sample	4	OP10024	FL_PRO	op1893-mb
5	Sample	5	OP10025	FL_PRO	f7172-4,10
6	Sample	6	OP10026	FL_PRO	f7172-5
7	Sample	7	OP10027	FL_PRO	f7208-1,50
8	Sample	8	OP10028	FL_PRO	f7208-2,20
9	Sample	9	OP10029	FL_PRO	f7208-4,50
10	Sample	10	OP10030	FL_PRO	f7208-9,20
11	Sample	11	OP10031	FL_PRO	f7208-10,50
12	Sample	12	OP10032	FL_PRO	1020ppm TPHS ccv
13	Sample	13	OP10033	FL_PRO	op1917-mb
14	Sample	14	OP10034	FL_PRO	op1917-bs
15	Sample	15	OP10035	FL_PRO	f7231-1,10
16	Sample	16	OP10036	FL_PRO	f7235-1
17	Sample	17	OP10037	FL_PRO	f7235-2,10
18	Sample	18	OP10038	FL_PRO	f7235-3
19	Sample	19	OP10039	FL_PRO	f7235-4
20	Sample	20	OP10040	FL_PRO	f7235-5
21	Sample	21	OP10041	FL_PRO	f7235-6
22	Sample	22	OP10042	FL_PRO	f7235-7,10
23	Sample	23	OP10043	FL_PRO	1020ppm TPHS ccv
24	Sample	24	OP10044	FL_PRO	f7240-1,10
25	Sample	25	OP10045	FL_PRO	f7243-1
26	Sample	26	OP10046	FL_PRO	op1917-ms
27	Sample	27	OP10047	FL_PRO	op1917-msd
28	Sample	28	OP10048	FL_PRO	f7243-2
29	Sample	29	OP10049	FL_PRO	f7243-3
30	Sample	30	OP10050	FL_PRO	f7243-4
31	Sample	31	OP10051	FL_PRO	f7243-5
32	Sample	32	OP10052	FL_PRO	f7243-6
33	Sample	33	OP10053	FL_PRO	f7243-7
34	Sample	34	OP10054	FL_PRO	1020ppm TPHS ccv
35	Sample	35	OP10055	FL_PRO	op1894-mb2
36	Sample	36	OP10056	FL_PRO	op1894-bs2
37	Sample	37	OP10057	FL_PRO	f7216-12
38	Sample	38	OP10058	FL_PRO	f7197-2
39	Sample	39	OP10059	FL_PRO	1020ppm TPHS ccv
40	Sample	40	OP10060	FL_PRO	340ppm TPHS ccv
41	Sample	41	OP10061	FL_PRO	solvent blank
42	Sample	42	OP10062	FL_PRO	f7231-1,2
43	Sample	43	OP10063	FL_PRO	f7235-2,4

Sequence Name: C:\HPCHEM\2\SEQUENCE\0807PRO.S

Line	Type	Vial	DataFile	Method	Sample Name
44	Sample	44	OP10064	FL_PRO	f7243-2,80
45	Sample	45	OP10065	FL_PRO	f7243-3
46	Sample	46	OP10066	FL_PRO	1020ppm TPHS ccv
47	Sample	47	OP10067	FL_PRO	op1910-mb
48	Sample	48	OP10068	FL_PRO	op1910-bs
49	Sample	49	OP10069	FL_PRO	f7205-1
50	Sample	50	OP10070	FL_PRO	op1910-ms
51	Sample	51	OP10071	FL_PRO	op1910-msd
52	Sample	52	OP10072	FL_PRO	f7205-2
53	Sample	53	OP10073	FL_PRO	f7205-3
54	Sample	54	OP10074	FL_PRO	f7205-4,4
55	Sample	55	OP10075	FL_PRO	f7205-5
56	Sample	56	OP10076	FL_PRO	1020ppm TPHS ccv
57	Sample	57	OP10077	FL_PRO	f7205-7
58	Sample	58	OP10078	FL_PRO	f7205-9
59	Sample	59	OP10079	FL_PRO	f7205-10
60	Sample	60	OP10080	FL_PRO	f7205-11
61	Sample	61	OP10081	FL_PRO	f7205-12
62	Sample	62	OP10082	FL_PRO	f7221-1
63	Sample	63	OP10083	FL_PRO	f7221-2,10
64	Sample	64	OP10084	FL_PRO	f7221-3,10
65	Sample	65	OP10085	FL_PRO	f7221-4
66	Sample	66	OP10086	FL_PRO	1020ppm TPHS ccv

GC ANALYSIS LOG

DATE: 7/27/00	METHODS: FLPMD	ANALYST: MF
COLUMN TYPE: DB-5/17	METHOD FILE: FLPM2	RUN BATCH: 00P420
INSTRUMENT: FID2	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
0P10021	1	1020ppm TPHS ccv	FLPMD					—	SSS passed
22	2	340ppm TPHS						—	SSS2 passed
23	3	Solvent Blank						—	BDL
24	4	0P1893-MB		1000ml/1ml	W	0P1893	x1	—	BDL
25	5	F7177-4		900ml/1ml			x10	—	TPH=1.0(10)
26	6	-5		450ml/1ml			x1	—	TPH=0.48
27	7	F7268-1		760ml/1ml			x40	—	TPH=0.71(40)
28	8	-2		↓			x20	—	TPH=0.89(20)
29	9	-4		1000ml/1ml			x50	—	TPH=0.82(50)
30	10	-9		1000ml/1ml			x20	—	TPH=1.0(20)
31	11	-10		960ml/1ml	↓	↓	x50	—	TPH=0.92(50)
32	12	1020ppm TPHS ccv						—	SSS passed.
33	13	0P1917-MB		30.0g/1ml	S	0P1917	x1	—	BDL
34	14	-BS					↓	—	✓
35	15	F7231-1					x10	—	BMX2
36	16	F7235-1					x1	—	BDL
37	17	-2					x10	—	BMX4
38	18	-3					x1	—	BDL
39	19	-4						—	BDL
40	20	-5						—	BDL
41	21	-6					↓	—	TPH=30
42	22	-7		↓	↓	↓	x10	—	TPH=27(10)
43	23	1020ppm TPHS ccv						—	SSS passed
44	24	F7240-1	↓	30.0g/1ml	S	0P1917	x10	—	TPH=29(10)

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [signature]

GC ANALYSIS LOG

DATE: 8/7/00
COLUMN TYPE: DB-5/17
INSTRUMENT: FID 2

METHODS: FLPHO
METHOD FILE: FLPHO
CALIB. DATE: 7/27/00

ANALYST: ME
RUN BATCH: 60/420
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP10045	25	F7243-1	FLPHO	30.0g/1ml	S	OP1917	x1	✓	BDL
46	26	OP1917-MS	↓	↓	↓	↓	↓	✓	✓
47	27	-MSD						✓	✓
48	28	F7243-2						✓	(MRx80)
49	29	-3						✓	(Chromatogram)
50	30	-4						✓	BDL
51	31	-5						✓	BDL
52	32	-6						✓	TPH=9.4
53	33	-7		↓	↓	↓	↓	✓	TPH=10
54	34	1020ppm TPHS ccv						✓	5885 passed
55	35	OP1894-MB2		30.0g/1ml	S	OP1917	x1	✓	BDL
56	36	-BS2		↓	↓	↓	↓	✓	✓
57	37	F7216-12						✓	TPH=18
58	38	F7197-2		↓	↓	↓	↓	✓	TPH=47
59	39	1020ppm TPHS ccv						✓	5885 passed
60	40	340ppm TPHS						✓	5885 passed
61	41	solvent Blank						✓	BDL
62	42	F7231-1		30.0g/1ml	S	OP1917	x2	✓	TPH=18(2)
63	43	F7231-2		↓	↓	↓	x4	✓	TPH=26(4)
64	44	F7243-2					x80	✓	TPH=25(80)
65	45	-3		↓	↓	↓	x1	✓	TPH=9.5
66	46	1020ppm TPHS ccv						✓	5885 passed
67	47	OP1910-MB		10.0ml/1ml	W	OP1910	x1	✓	BDL
68	48	-MS	↓	↓	↓	↓	↓	✓	✓

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [signature]

GC ANALYSIS LOG

DATE: 8/2/00
COLUMN TYPE: DB-5/17
INSTRUMENT: FID

METHODS: FLPAO
METHOD FILE: FLPAO
CALIB. DATE: 7/21/00

ANALYST: ME
RUN BATCH: 0P420
AMOUNT INJECTED: 1

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
0P10069	49	F7205-1	FLPAO	950ml/ml	W	0D1910	x1	✓	BMXTD
70	50	0D1910-MS		900ml/ml				✓	BMXTD
71	51	-MSD		970ml/ml				✓	BMXTD
72	52	F7205-2		960ml/ml				✓	BMXS
73	53	-3		980ml/ml				✓	BMXS toluene
74	54	-4					x4	✓	TPH=0.20(4)
75	55	-5		890ml/ml			x1	✓	TPH=0.70
76	56	1020ppm TPHSCCV						✓	SBSS passed
77	57	F7205-7		980ml/ml	W	0D1910	x1	✓	BDL
78	58	-9						✓	TPH=0.24
79	59	-10						✓	BDL
80	60	-11		990ml/ml				✓	BDL
81	61	-12		950ml/ml				✓	BDL
82	62	F7221-1		970ml/ml				✓	BDL
83	63	-2		900ml/ml			x10	✓	BMX2
84	64	-3		960ml/ml				✓	BMX4
85	65	-4		920ml/ml			x1	✓	BDL
86	66	1020ppm TPHSCCV						✓	SBSS passed

8/9/00

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature:

Sequence Name: C:\HPCHEM\2\SEQUENCE\0727PRO.S
Comment:
Operator: ChelseaJ
Data Path: C:\HPCHEM\2\DATA\0727PRO\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	OP09782	FL_PRO	340 ppm TPHS
2	Sample	2	OP09783	FL_PRO	680 ppm TPHS
3	Sample	3	OP09784	FL_PRO	1020 ppm TPHS
4	Sample	4	OP09785	FL_PRO	1360 ppm TPHS
5	Sample	5	OP09786	FL_PRO	1700 ppm TPHS
6	Sample	6	OP09787	FL_PRO	SB
7	Sample	7	OP09788	FL_PRO	OP1866-MB
8	Sample	8	OP09789	FL_PRO	OP1866-BS
9	Sample	9	OP09790	FL_PRO	F7110-1,20x
10	Sample	10	OP09791	FL_PRO	F7110-2,10x
11	Sample	11	OP09792	FL_PRO	F7125-1,10x
12	Sample	12	OP09793	FL_PRO	F7098-1,4x
13	Sample	13	OP09794	FL_PRO	F7098-2
14	Sample	14	OP09795	FL_PRO	F7098-3
15	Sample	15	OP09796	FL_PRO	F7098-5
16	Sample	16	OP09797	FL_PRO	F7098-7
17	Sample	17	OP09798	FL_PRO	1020 ppm CCV
18	Sample	18	OP09799	FL_PRO	F7098-8,20x
19	Sample	19	OP09800	FL_PRO	F7098-9
20	Sample	20	OP09801	FL_PRO	F7098-10,10x
21	Sample	21	OP09802	FL_PRO	F7114-3
22	Sample	22	OP09803	FL_PRO	F7114-22,20x
23	Sample	23	OP09804	FL_PRO	F7114-24,20x
24	Sample	24	OP09805	FL_PRO	F7121-1,4x
25	Sample	25	OP09806	FL_PRO	F7133-1,50x
26	Sample	26	OP09807	FL_PRO	OP1866-MS
27	Sample	27	OP09808	FL_PRO	OP1866-MSD
28	Sample	17	OP09809	FL_PRO	1020 ppm CCV
29	Sample	28	OP09810	FL_PRO	OP1864-MB
30	Sample	29	OP09811	FL_PRO	OP1864-BS
31	Sample	30	OP09812	FL_PRO	F7106-1
32	Sample	31	OP09813	FL_PRO	F7106-2
33	Sample	32	OP09814	FL_PRO	F7106-3,4x
34	Sample	33	OP09815	FL_PRO	F7106-4,4x
35	Sample	34	OP09816	FL_PRO	F7106-5
36	Sample	35	OP09817	FL_PRO	F7106-6
37	Sample	36	OP09818	FL_PRO	F7113-1
38	Sample	37	OP09819	FL_PRO	F7113-2,10x
39	Sample	17	OP09820	FL_PRO	1020 ppm CCV
40	Sample	38	OP09821	FL_PRO	340 ppm CCV
41	Sample	39	OP09822	FL_PRO	SB
42	Sample	40	OP09823	FL_PRO	850 ppm ICV s858
43	Sample	41	OP09824	FL_PRO	F7110-1,10x

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Sequence Name: C:\HPCHEM\2\SEQUENCE\0727PRO.S

Line	Type	Vial	DataFile	Method	Sample Name
44	Sample	42	OP09825	FL_PRO	F7110-2
45	Sample	43	OP09826	FL_PRO	F7125-1
46	Sample	44	OP09827	FL_PRO	F7098-1
47	Sample	45	OP09828	FL_PRO	F7098-8,4x
48	Sample	46	OP09829	FL_PRO	F7098-10,2x
49	Sample	47	OP09830	FL_PRO	F7133-1,150x
50	Sample	48	OP09831	FL_PRO	1020 ppm CCV
51	Sample	49	OP09832	FL_PRO	F7113-3,4x
52	Sample	50	OP09833	FL_PRO	F7113-4,4x
53	Sample	51	OP09834	FL_PRO	F7113-5,4x
54	Sample	52	OP09835	FL_PRO	F7113-6,4x
55	Sample	53	OP09836	FL_PRO	F7113-7,10x
56	Sample	54	OP09837	FL_PRO	F7120-1
57	Sample	55	OP09838	FL_PRO	F7129-1,4x
58	Sample	56	OP09839	FL_PRO	F7129-2
59	Sample	57	OP09840	FL_PRO	F7129-3,4x
60	Sample	48	OP09841	FL_PRO	1020 ppm CCV
61	Sample	58	OP09842	FL_PRO	OP1864-MS,4x
62	Sample	59	OP09843	FL_PRO	OP1864-MSD,4x
63	Sample	60	OP09844	FL_PRO	F7106-3,2x
64	Sample	61	OP09845	FL_PRO	F7106-4
65	Sample	48	OP09846	FL_PRO	1020 ppm CCV
66	Sample	62	OP09847	FL_PRO	OP1876-MB
67	Sample	63	OP09848	FL_PRO	OP1876-BS
68	Sample	64	OP09849	FL_PRO	F7122-1
69	Sample	65	OP09850	FL_PRO	F7122-2
70	Sample	66	OP09851	FL_PRO	F7122-3
71	Sample	67	OP09852	FL_PRO	F7122-4
72	Sample	68	OP09853	FL_PRO	F7122-5
73	Sample	69	OP09854	FL_PRO	F7122-6
74	Sample	48	OP09855	FL_PRO	1020 ppm CCV
75	Sample	70	OP09856	FL_PRO	F7122-7
76	Sample	71	OP09857	FL_PRO	F7122-8
77	Sample	72	OP09858	FL_PRO	F7139-3,20x
78	Sample	73	OP09859	FL_PRO	F7139-4,5x
79	Sample	74	OP09860	FL_PRO	F7148-1
80	Sample	75	OP09861	FL_PRO	F7148-2,4x
81	Sample	76	OP09862	FL_PRO	F7148-3
82	Sample	48	OP09863	FL_PRO	1020 ppm CCV
83	Sample	77	OP09864	FL_PRO	340 ppm CCV
84	Sample	78	OP09865	FL_PRO	SB
85	Sample	79	OP09866	FL_PRO	F7148-4
86	Sample	80	OP09867	FL_PRO	F7148-5,4x
87	Sample	81	OP09868	FL_PRO	F7148-6,4x

GC ANALY: _OG

DATE: 6/27/00
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 07/27/00

ANALYST: Thelson
RUN BATCH: GOP416
AMOUNT INJECTED: 1 ul

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DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP 0 9782	1	340 ppm TPHS	FL PRO		S857		1.0	✓	✓
9783	2	680			S856			✓	✓
9784	3	1020			S855			✓	✓
9785	4	1360			S854			✓	✓
9786	5	1700			S853			✓	✓
9787	6	SB						✓	BDL
9788	7	OP1866-MB		30g/1mL	S	OP1866		✓	↓
9789	8	-BS						✓	✓
9790	9	F7110-1, 20x					20.0	✓	RR @ 10x
9791	10	-2, 10x					10.0	✓	RR @ 1x
9792	11	F7125-1, ↓					↓	✓	RR @ 1x
9793	12	F7098-1, 4x					4.0	✓	RR @ 1x
9794	13	-2					1.0	✓	BDL
9795	14	-3						✓	
9796	15	-5						✓	
9797	16	-7						✓	
9798	17	1020 ppm CCV		—	S855			✓	passes
9799	18	F7098-8, 20x		30g/1mL	S		20.0	✓	RR @ 4x
9800	19	-9					1.0	✓	✓
9801	20	-10, 10x					10.0	✓	RR @ 2x
9802	21	F7114-3					1.0	✓	✓
9803	22	-22, 20x					20.0	✓	✓
9804	23	-24, 20x					↓	✓	✓
9805	24	F7121-1, 4x					4.0	✓	✓

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Thelson

GC ANALYSIS LOG

DATE: 07/27/00 cont'd
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 07/27/00

ANALYST: Chelsea
RUN BATCH: GOP416 cont'd
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OPO 9806	25	F7133-1, 50x	FL PRO	30g/1mL	S	OP1866	50.0	✓	RRC 150x
9807	26	OP1866-MS					1.0	✓	✓
9808	27	-MSD						✓	✓
9809	17	1020 ppm CCV		—	S855			✓	passes
9810	28	OP1864-MB		100g/1mL	W	OP1864		✓	BDL
9811	29	-BS						✓	✓
9812	30	F7106-1		870/1mL				✓	BDL
9813	31	-2		940/1mL				✓	✓
9814	32	-3, 4x		970/1mL			4.0	✓	RRC 2x
9815	33	-4						✓	RRC 1x
9816	34	-5		920/1mL			1.0	✓	BDL
9817	35	-6		950/1mL				✓	
9818	36	F7113-1						✓	
9819	37	-2, 10x		960/1mL			10.0	✓	✓
9820	17	1020 ppm CCV		—	S855		1.0	✓	passes
9821	38	340 ppm CCV		—	S857			✓	passes
9822	39	SB						✓	BDL
9823	40	850 ppm ICV			S858			✓	passes
9824	41	F7110-1 10x		30g/1mL	S	OP1866	10.0	✓	✓
9825	42	F7110-2					1.0	✓	✓
9826	43	F7125-1						✓	✓
9827	44	F7098-1						✓	✓
9828	45	-8, 4x					4.0	✓	✓
9829	46	-10, 2x					2.0	✓	✓

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Chelsea

GC ANALYSIS G

DATE: 07/27/00 cont'd
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL Pro
METHOD FILE: FL Pro
CALIB. DATE: 07/27/00

ANALYST: Rhelan
RUN BATCH: ~~GAA~~ GOP416 cont'd
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP 09830	47	F7133-1 150X	FL PRO	30g/1mL	W	OP1866	150.0	✓	✓
9831	48	1020 ppm CCV		—	S855		1.0	✓	passes
9832	49	F7113-4 (-3) 4x		980ml/ml	W	OP1864	x4	✓	BMX1
9833	50	-5 (-4) 4x		↓	↓	↓	↓	✓	BMX1
9834	51	07/28/00 -6 (-5) 4x		↓	↓	↓	↓	✓	TPH=0.55(4)
9835	52	-7 (-6) 4x		970ml/ml	↓	↓	↓	✓	TPH=0.66(4)
9836	53	F7113-7		960ml/ml	↓	↓	x10	✓	TPH=1.0(10)
9837	54	F7120-1		910ml/ml	↓	↓	x1	✓	TPH=0.26
9838	55	F7129-1, 4x		800ml/ml	↓	↓	x4	✓	BMX1
9839	56	-2		830ml/ml	↓	↓	x1	✓	BDL
9840	57	-3, 4x		900ml/ml	↓	↓	x4	✓	BMX1
9841	48	1020 ppm CCV		—	S855			✓	passed
9842	58	OP1864-MS, 4x		470ml/ml	W	OP1864	x4	✓	BMX1
9843	59	-MSD, ↓		↓	↓	↓	↓	✓	BMX1
9844	60	F7106-3, 2x		970ml/ml	↓	↓	x2	✓	TPH=0.82(2)
9845	61	-4		↓	↓	↓	x1	✓	TPH=0.46
9846	48	1020 ppm CCV		—	S855			✓	passed
9847	62	OP1876-MB		1000ml/ml	W	OP1876	x1	✓	BDL
9848	63	-BS		↓	↓	↓	↓	✓	✓
9849	64	F7122-1		940ml/ml	↓	↓	↓	✓	TPH=0.90
9850	65	-2		850ml/ml	↓	↓	↓	✓	BB tolerant, surr. ↓
9851	66	-3		860ml/ml	↓	↓	↓	✓	TPH=0.55
9852	67	-4		850ml/ml	↓	↓	↓	✓	TPH=0.44 BB tolerant
9853	68	-5	↓	890ml/ml	↓	↓	↓	✓	TPH=0.38 ↓

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Rhelan

GC ANALYSIS LOG

DATE: 07/27/00 cont'd
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 07/27/00

ANALYST: Thelma
RUN BATCH: GOP416 cont'd
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP 0 9854	69	F7122-6	FL PRO	890ml/ml	W	081576	x1	–	BA to cont.
9855	48	1020 ppm CCV		—	S855			–	flushed
9856	70	F7122-7		800ml/ml			x1	–	BDL BA
9857	71	-8		920ml/ml			↓	–	BDL
9858	72	F7139-3, 20x		980ml/ml			x20	–	BMX8
9859	73	-4, 5x		1000ml/ml			x5	–	BMX5
9860	74	F7148-1		950ml/ml			x1	–	BMX2
9861	75	-2, 4x		↓			x4	–	BMX2
9862	76	-3		↓			x1	–	BMX2
9863	48	1020 ppm CCV		—	S855			–	failed
9864	77	340 ppm CCV			S857			–	
9865	78	SB						–	
9866	79	F7148-4		940ml/ml			x1	–	BMX2
9867	80	-5, 4x		880ml/ml			x4	–	BMX4
9868	81	-6,		↓				–	BMX1
9869	82	-7,		950ml/ml					
9870	83	-8,		890ml/ml					
9871	84	-9, 10x							
9872	85	OP1876-MS							
9873	86	-MSD							
9874	48	1020 ppm CCV			7/27/00				

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [signature]

SOLID SAMPLE PREP REPORT

ate -4-00 Method*: FL. PRO Batch#: OP 1917

atch Started On: 8-4-00 Prior Number Of Samples in Batch : Φ Analyst: NJ/MY

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 1917- MB	—	30.0	0.5 mL	-	1.0 mL	
OP - BS	-	30.0		0.5 mL		
F7231-1	6	29.9				
F7235-1	2	30.1				
-2	2	30.0				
-3	2	29.9				
-4	2	30.0				
-5	2	30.0				
-6	2	30.0				
-7	2	30.1				
F7240-1	3	30.1				
F7243-1	5	30.0				
-2	5	29.9				
-3	5	29.9				
-4	5	30.1				
-5	5	30.0				
-6	5	30.0				
-7	5	30.0				
			MS			
OP 1917- MS	5	30.0	0.5 mL	0.5 mL	1.0 mL	F7243-1
OP -MSD	5	30.0				
OP ~~DUP~~						

Surrogate ID: E700A Conc: 100ppm Exp. Date: 1/31/01 Bath Temp.: 70°C

Spike ID: E693 Conc: 100ppm Exp. Date: 1/20/01 Bath Temp2.: —

CH2CL2 Lot# 003216 Hexane Lot# — Na2SO4 Lot# 004858

Reagent #: silica gell 995185 Reagent #: — Reagent #: —

Comments:

Michael A Apuillo Date: 8/4/00

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	Mr. Gerald Walker	DATE:	October 3, 2000
FROM:	William Howard Engle	CC:	File
SUBJECT:	Organic Data Validation – VOC, PAH, and TRPH CTO112 – NAS Pensacola SDG F7254		
SAMPLES:	8/Solid		

S:H20 — NASP20SB-1, 6' NASP20SB-2, 6'
NASPFFDUP-1 NASPFFSB-11, 4-8'BGS
NASPFFSB-13, 14-16'BGS NASPFFSB-14, 24-27'BGS
NASPFFSB-15, 8-12'BGS NASPFFSB-16, 22-26'BGS

1/Aqueous

Trip Blank

OVERVIEW

The sample set for CTO112, SDG F7254; Naval Air Station Pensacola, Pensacola, Florida consists of eight (8) solid environmental samples and one (1) trip blank. This SDG contains one (1) duplicate set: NASPFFDUP-1/NASPFFSB-14, 24-27'BGS. The environmental samples were analyzed for Volatile Organic Carbons (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs). The trip blank was analyzed only for VOCs.

The samples were collected by Tetra Tech NUS on August 3, 2000 and analyzed by Accutest Southeast Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), SW-846 method 8310 (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

Volatile Fraction

The MS/MSD analyzed on 8/19/00 contained %Rs for 2-CEVE below the lower control limit. The sample spiked, NASPFFSB-16, 22-26'BGS, was qualified estimated "J" due to MS/MSD analysis noncompliance.

Polycylcic Aromatic Hydrocarbon Fraction

All quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

All quality control criteria were met for this fraction.

Duplicate Summary

Compound	NASPFFDUP-1 (ug/kg)	NASPFFSB-14, 24-27'BGS (ug/kg)	%D
	None Detected	None Detected	

Executive Summary

Laboratory performance: The MS/MS %R for 2-CEVE was below the lower control limits. The spiked sample was qualified estimated "J", due to MS/MSD noncompliance.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

_____

William Howard Engle

Project Chemist
Tetra Tech NUS, Inc.

_____

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting Documentation

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
= Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning r < 0.995 (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

DATA QUALIFIER DEFINITIONS:

U	-	Value is a nondetected result as reported by the laboratory and should not be considered present.
J	-	Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.
UJ	-	Nondetected result is considered to be estimated as a result of technical noncompliances.

APPENDIX A

Qualified Analytical Results

F7254

HOLDING TIME
09/08/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
%	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	GRSZ	08/03/00	/ /	08/17/00	0	0	14
MG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	HG	08/03/00	08/11/00	08/14/00	8	3	11
MG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	M	08/03/00	08/10/00	08/14/00	7	4	11
UG/KG	NASP20SB-1,6'	F7254-7	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/KG	NASP20SB-2,6'	F7254-8	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/KG	NASPFFDUP-1	F7254-6	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-11,4-8'BGS	F7254-4	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/KG	NASPFFSB-13,14-16'BGS	F7254-1	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/L	TRIP BLANK	F7254-9	NORMAL	F7254	OV	08/03/00	/ /	08/19/00	0	0	16
UG/KG	NASP20SB-1,6'	F7254-7	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
UG/KG	NASP20SB-2,6'	F7254-8	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
UG/KG	NASPFFDUP-1	F7254-6	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-11,4-8'BGS	F7254-4	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
UG/KG	NASPFFSB-13,14-16'BGS	F7254-1	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
MG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	TOC	08/03/00	08/17/00	08/17/00	14	0	14
MG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	TOC	08/03/00	08/17/00	08/17/00	14	0	14
MG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	TOX	08/03/00	08/28/00	08/30/00	25	2	27
MG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	TOX	08/03/00	08/28/00	08/30/00	25	2	27
MG/KG	NASP20SB-1,6'	F7254-7	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9

Units	[illegible]mple	Lab Id	Qc Type	Sdg	[illegible]	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	[illegible]P_DATE TO ANAL_DATE
MG/KG	NASP20SB-2,6'	F7254-8	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9
MG/KG	NASPFFDUP-1	F7254-6	NORMAL	F7254	TPH	08/03/00	08/08/00	08/11/00	5	3	8
MG/KG	NASPFFSB-11,4-8'BGS	F7254-4	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9
MG/KG	NASPFFSB-13,14-16'BGS	F7254-1	NORMAL	F7254	TPH	08/03/00	08/08/00	08/10/00	5	2	7
MG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	TPH	08/03/00	08/08/00	08/11/00	5	3	8
MG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	TPH	08/03/00	08/08/00	08/11/00	5	3	8
MG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9

NAS PENSACOLA
SOIL DAT
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASP20SB-1,6'			NASP20SB-2,6'			NASPFFDUP-1			NASPFFSB-11,4-8'BGS		
SAMPLE DATE:	08/03/00			08/03/00			08/03/00			08/03/00		
LABORATORY ID:	F7254-7			F7254-8			F7254-6			F7254-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	95.0 %			95.6 %			96.2 %			93.3 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	280	U		580	U		5.6	U		600	U	
1,1,2,2-TETRACHLOROETHANE	280	U		580	U		5.6	U		600	U	
1,1,2-TRICHLOROETHANE	280	U		580	U		5.6	U		600	U	
1,1-DICHLOROETHANE	280	U		580	U		5.6	U		600	U	
1,1-DICHLOROETHENE	280	U		580	U		5.6	U		600	U	
1,2 DICHLOROBENZENE	280	U		580	U		5.6	U		600	U	
1,2-DICHLOROETHANE	280	U		580	U		5.6	U		600	U	
1,2-DICHLOROPROPANE	280	U		580	U		5.6	U		600	U	
1,3 DICHLOROBENZENE	280	U		580	U		5.6	U		600	U	
1,4-DICHLOROBENZENE	280	U		580	U		5.6	U		600	U	
2-CHLOROETHYL VINYL ETHER	560	U		1200	U		11	U		1200	U	
BENZENE	280	U		580	U		5.6	U		600	U	
BROMODICHLOROMETHANE	280	U		580	U		5.6	U		600	U	
BROMOFORM	280	U		580	U		5.6	U		600	U	
BROMOMETHANE	280	U		580	U		5.6	U		600	U	
CARBON TETRACHLORIDE	280	U		580	U		5.6	U		600	U	
CHLOROBENZENE	280	U		580	U		5.6	U		600	U	
CHLOROETHANE	280	U		580	U		5.6	U		600	U	
CHLOROFORM	280	U		580	U		5.6	U		600	U	
CHLOROMETHANE	280	U		580	U		5.6	U		600	U	
CIS-1,2-DICHLOROETHENE	280	U		580	U		5.6	U		600	U	
CIS-1,3-DICHLOROPROPENE	280	U		580	U		5.6	U		600	U	
DIBROMOCHLOROMETHANE	280	U		580	U		5.6	U		600	U	
DICHLORODIFLUOROMETHANE	280	U		580	U		5.6	U		600	U	
ETHYLBENZENE	280	U		252	J		5.6	U		5050		
METHYL TERT-BUTYL ETHER	280	U		580	U		5.6	U		600	U	
METHYLENE CHLORIDE	560	U		1200	U		11	U		1200	U	
TETRACHLOROETHENE	280	U		580	U		5.6	U		600	U	
TOLUENE	280	U		580	U		5.6	U		600	U	
TRANS-1,2-DICHLOROETHENE	280	U		580	U		5.6	U		600	U	
TRANS-1,3-DICHLOROPROPENE	280	U		580	U		5.6	U		600	U	
TRICHLOROETHENE	280	U		580	U		5.6	U		600	U	
TRICHLOROFLUOROMETHANE	280	U		580	U		5.6	U		600	U	

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASP20SB-1,6'	NASP20SB-2,6'	NASPFFDUP-1	NASPFFSB-11,4-8'BGS
SAMPLE DATE:	08/03/00	08/03/00	08/03/00	08/03/00
LABORATORY ID:	F7254-7	F7254-8	F7254-6	F7254-4
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	95.0 %	95.6 %	96.2 %	93.3 %
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
VINYL CHLORIDE	280	U		580	U		5.6	U		600	U	
XYLENES, TOTAL	840	U		1700	U		17	U		12300		

SAMPLE NUMBER:	NASPFFSB-13,14-16'BGS			NASPFFSB-14,24-27'BGS			NASPFFSB-15,8-12'BGS			NASPFFSB-16,22-26'BGS		
SAMPLE DATE:	08/03/00			08/03/00			08/03/00			08/03/00		
LABORATORY ID:	F7254-1			F7254-5			F7254-3			F7254-2		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	93.5 %			94.5 %			86.5 %			96.6 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	5.3	U		5.7	U		6.4	U		560	U	
1,1,2,2-TETRACHLOROETHANE	5.3	U		5.7	U		6.4	U		560	U	
1,1,2-TRICHLOROETHANE	5.3	U		5.7	U		6.4	U		560	U	
1,1-DICHLOROETHANE	5.3	U		5.7	U		6.4	U		560	U	
1,1-DICHLOROETHENE	5.3	U		5.7	U		6.4	U		560	U	
1,2 DICHLOROBENZENE	5.3	U		5.7	U		6.4	U		560	U	
1,2-DICHLOROETHANE	5.3	U		5.7	U		6.4	U		560	U	
1,2-DICHLOROPROPANE	5.3	U		5.7	U		6.4	U		560	U	
1,3 DICHLOROBENZENE	5.3	U		5.7	U		6.4	U		560	U	
1,4-DICHLOROBENZENE	5.3	U		5.7	U		6.4	U		560	U	
2-CHLOROETHYL VINYL ETHER	11	U		11	U		13	U		1100	U	
BENZENE	1.8	J		5.7	U		6.4	U		113	J	
BROMODICHLOROMETHANE	5.3	U		5.7	U		6.4	U		560	U	
BROMOFORM	5.3	U		5.7	U		6.4	U		560	U	
BROMOMETHANE	5.3	U		5.7	U		6.4	U		560	U	
CARBON TETRACHLORIDE	5.3	U		5.7	U		6.4	U		560	U	
CHLOROBENZENE	5.3	U		5.7	U		6.4	U		560	U	
CHLOROETHANE	5.3	U		5.7	U		6.4	U		560	U	
CHLOROFORM	5.3	U		5.7	U		6.4	U		560	U	
CHLOROMETHANE	5.3	U		5.7	U		6.4	U		560	U	
CIS-1,2-DICHLOROETHENE	5.3	U		5.7	U		6.4	U		560	U	
CIS-1,3-DICHLOROPROPENE	5.3	U		5.7	U		6.4	U		560	U	
DIBROMOCHLOROMETHANE	5.3	U		5.7	U		6.4	U		560	U	
DICHLORODIFLUOROMETHANE	5.3	U		5.7	U		6.4	U		560	U	
ETHYLBENZENE	17.7			5.7	U		6.4	U		6700		
METHYL TERT-BUTYL ETHER	5.3	U		5.7	U		6.4	U		560	U	
METHYLENE CHLORIDE	11	U		11	U		13	U		1100	U	
TETRACHLOROETHENE	5.3	U		5.7	U		6.4	U		560	U	
TOLUENE	5.3	U		5.7	U		6.4	U		560	U	
TRANS-1,2-DICHLOROETHENE	5.3	U		5.7	U		6.4	U		560	U	
TRANS-1,3-DICHLOROPROPENE	5.3	U		5.7	U		6.4	U		560	U	
TRICHLOROETHENE	5.3	U		5.7	U		6.4	U		560	U	
TRICHLOROFLUOROMETHANE	5.3	U		5.7	U		6.4	U		560	U	

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASPFFSB-13,14-16'BGS			NASPFFSB-14,24-27'BGS			NASPFFSB-15,8-12'BGS			NASPFFSB-16,22-26'BGS		
SAMPLE DATE:	08/03/00			08/03/00			08/03/00			08/03/00		
LABORATORY ID:	F7254-1			F7254-5			F7254-3			F7254-2		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	93.5 %			94.5 %			86.5 %			96.6 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
VINYL CHLORIDE	5.3	U		5.7	U		6.4	U		560	U	
XYLENES, TOTAL	14.4	J		17	U		19	U		13300		

NAS PENSACOLA
WATER DA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	TRIP BLANK											
SAMPLE DATE:	08/03/00			/ /			/ /			/ /		
LABORATORY ID:	F7254-9											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	2	U										
1,1,2,2-TETRACHLOROETHANE	2	U										
1,1,2-TRICHLOROETHANE	2	U										
1,1-DICHLOROETHANE	2	U										
1,1-DICHLOROETHENE	2	U										
1,2 DICHLOROBENZENE	2	U										
1,2-DICHLOROETHANE	2	U										
1,2-DICHLOROPROPANE	2	U										
1,3 DICHLOROBENZENE	2	U										
1,4-DICHLOROBENZENE	2	U										
2-CHLOROETHYL VINYL ETHER	5	U										
ACROLEIN	10	U										
ACRYLONITRILE	10	U										
BENZENE	1	U										
BROMODICHLOROMETHANE	2	U										
BROMOFORM	2	U										
BROMOMETHANE	5	U										
CARBON TETRACHLORIDE	2	U										
CHLOROBENZENE	2	U										
CHLOROETHANE	5	U										
CHLOROFORM	2	U										
CHLOROMETHANE	5	U										
CIS-1,3-DICHLOROPROPENE	2	U										
DIBROMOCHLOROMETHANE	2	U										
ETHYLBENZENE	2	U										
METHYLENE CHLORIDE	5	U										
TETRACHLOROETHENE	2	U										
TOLUENE	2	U										
TRANS-1,2-DICHLOROETHENE	2	U										
TRANS-1,3-DICHLOROPROPENE	2	U										
TRICHLOROETHENE	2	U										
TRICHLOROFLUOROMETHANE	5	U										
VINYL CHLORIDE	1	U										

NAS PENSACOLA
WATER DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	TRIP BLANK			
SAMPLE DATE:	08/03/00	/ /	/ /	/ /
LABORATORY ID:	F7254-9			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
XYLENES, TOTAL	6	U										

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASP20SB-1,6'			NASP20SB-2,6'			NASPFFDUP-1			NASPFFSB-11,4-8'BGS		
SAMPLE DATE:	08/03/00			08/03/00			08/03/00			08/03/00		
LABORATORY ID:	F7254-7			F7254-8			F7254-6			F7254-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	95.0 %			95.6 %			96.2 %			93.3 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	3690			18200			350	U		8650		
2-METHYLNAPHTHALENE	3910			24400			350	U		9280		
ACENAPHTHENE	3500	U		14000	U		690	U		1400	U	
ACENAPHTHYLENE	3500	U		14000	U		690	U		1400	U	
ANTHRACENE	1800	U		7000	U		350	U		710	U	
BENZO(A)ANTHRACENE	685			1400	U		69	U		140	U	
BENZO(A)PYRENE	397			1400	U		69	U		140	U	
BENZO(B)FLUORANTHENE	486			1400	U		69	U		140	U	
BENZO(G,H,I)PERYLENE	270	J		1400	U		69	U		140	U	
BENZO(K)FLUORANTHENE	269	J		1400	U		69	U		140	U	
CHRYSENE	1800	U		7000	U		350	U		710	U	
DIBENZO(A,H)ANTHRACENE	350	U		1400	U		69	U		140	U	
FLUORANTHENE	1920			7000	U		350	U		710	U	
FLUORENE	1800	U		3950	J		350	U		710	U	
INDENO(1,2,3-CD)PYRENE	445			1400	U		69	U		140	U	
NAPHTHALENE	1800	U		5610	J		350	U		2850		
PHENANTHRENE	2340			12500			350	U		710	U	
PYRENE	1580	J		7000	U		350	U		710	U	

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASPFFSB-13,14-16'BGS			NASPFFSB-14,24-27'BGS			NASPFFSB-15,8-12'BGS			NASPFFSB-16,22-26'BGS		
SAMPLE DATE:	08/03/00			08/03/00			08/03/00			08/03/00		
LABORATORY ID:	F7254-1			F7254-5			F7254-3			F7254-2		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	93.5 %			94.5 %			86.5 %			96.6 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	360	U		350	U		380	U		2320		
2-METHYLNAPHTHALENE	360	U		350	U		380	U		2700		
ACENAPHTHENE	710	U		700	U		770	U		690	U	
ACENAPHTHYLENE	710	U		700	U		770	U		690	U	
ANTHRACENE	360	U		350	U		380	U		340	U	
BENZO(A)ANTHRACENE	71	U		70	U		77	U		69	U	
BENZO(A)PYRENE	71	U		70	U		77	U		69	U	
BENZO(B)FLUORANTHENE	71	U		70	U		77	U		69	U	
BENZO(G,H,I)PERYLENE	71	U		70	U		77	U		69	U	
BENZO(K)FLUORANTHENE	71	U		70	U		77	U		69	U	
CHRYSENE	360	U		350	U		380	U		340	U	
DIBENZO(A,H)ANTHRACENE	71	U		70	U		77	U		69	U	
FLUORANTHENE	360	U		350	U		380	U		340	U	
FLUORENE	360	U		350	U		380	U		340	U	
INDENO(1,2,3-CD)PYRENE	71	U		70	U		77	U		69	U	
NAPHTHALENE	360	U		350	U		380	U		566		
PHENANTHRENE	360	U		350	U		380	U		340	U	
PYRENE	360	U		350	U		380	U		340	U	

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASP20SB-1,6'			NASP20SB-2,6'			NASPFFDUP-1			NASPFFSB-11,4-8'BGS		
SAMPLE DATE:	08/03/00			08/03/00			08/03/00			08/03/00		
LABORATORY ID:	F7254-7			F7254-8			F7254-6			F7254-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	95.0 %			95.6 %			96.2 %			93.3 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	10200			8520			8.6	U		2530		

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASPFFSB-13,14-16'BGS	NASPFFSB-14,24-27'BGS	NASPFFSB-15,8-12'BGS	NASPFFSB-16,22-26'BGS
SAMPLE DATE:	08/03/00	08/03/00	08/03/00	08/03/00
LABORATORY ID:	F7254-1	F7254-5	F7254-3	F7254-2
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	93.5 %	94.5 %	86.5 %	96.6 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	14.7			8.8	U		9.6	U		810		

APPENDIX B

Results as Reported by the Laboratory

Report of Analysis

Client Sample ID:	NASP20SB-1,6'		
Lab Sample ID:	F7254-7	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	95.0
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H008945.D	50	08/15/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	280	ug/kg	
75-27-4	Bromodichloromethane	ND	280	ug/kg	
75-25-2	Bromoform	ND	280	ug/kg	
108-90-7	Chlorobenzene	ND	280	ug/kg	
75-00-3	Chloroethane	ND	280	ug/kg	
67-66-3	Chloroform	ND	280	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	560	ug/kg	
56-23-5	Carbon tetrachloride	ND	280	ug/kg	
75-34-3	1,1-Dichloroethane	ND	280	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	280	ug/kg	
107-06-2	1,2-Dichloroethane	ND	280	ug/kg	
78-87-5	1,2-Dichloropropane	ND	280	ug/kg	
124-48-1	Dibromochloromethane	ND	280	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	280	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	280	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	280	ug/kg	
541-73-1	m-Dichlorobenzene	ND	280	ug/kg	
95-50-1	o-Dichlorobenzene	ND	280	ug/kg	
106-46-7	p-Dichlorobenzene	ND	280	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	280	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	280	ug/kg	
100-41-4	Ethylbenzene	ND	280	ug/kg	
74-83-9	Methyl bromide	ND	280	ug/kg	
74-87-3	Methyl chloride	ND	280	ug/kg	
75-09-2	Methylene chloride	ND	560	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	280	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	280	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	280	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	280	ug/kg	
127-18-4	Tetrachloroethylene	ND	280	ug/kg	
108-88-3	Toluene	ND	280	ug/kg	
79-01-6	Trichloroethylene	ND	280	ug/kg	
75-69-4	Trichlorofluoromethane	ND	280	ug/kg	
75-01-4	Vinyl chloride	ND	280	ug/kg	
1330-20-7	Xylene (total)	ND	840	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASP20SB-1,6'		
Lab Sample ID:	F7254-7	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	95.0
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		71-122%
2037-26-5	Toluene-D8	106%		73-128%
460-00-4	4-Bromofluorobenzene	111%		53-158%
17060-07-0	1,2-Dichloroethane-D4	86%		71-122%

(a) Dilution required due to matrix interference (non-target analytes present above calibration range).

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASP20SB-2,6'		
Lab Sample ID:	F7254-8	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	95.6
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H008946.D	100	08/15/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	580	ug/kg	
75-27-4	Bromodichloromethane	ND	580	ug/kg	
75-25-2	Bromoform	ND	580	ug/kg	
108-90-7	Chlorobenzene	ND	580	ug/kg	
75-00-3	Chloroethane	ND	580	ug/kg	
67-66-3	Chloroform	ND	580	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	1200	ug/kg	
56-23-5	Carbon tetrachloride	ND	580	ug/kg	
75-34-3	1,1-Dichloroethane	ND	580	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	580	ug/kg	
107-06-2	1,2-Dichloroethane	ND	580	ug/kg	
78-87-5	1,2-Dichloropropane	ND	580	ug/kg	
124-48-1	Dibromochloromethane	ND	580	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	580	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	580	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	580	ug/kg	
541-73-1	m-Dichlorobenzene	ND	580	ug/kg	
95-50-1	o-Dichlorobenzene	ND	580	ug/kg	
106-46-7	p-Dichlorobenzene	ND	580	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	580	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	580	ug/kg	
100-41-4	Ethylbenzene	252	580	ug/kg	J
74-83-9	Methyl bromide	ND	580	ug/kg	
74-87-3	Methyl chloride	ND	580	ug/kg	
75-09-2	Methylene chloride	ND	1200	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	580	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	580	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	580	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	580	ug/kg	
127-18-4	Tetrachloroethylene	ND	580	ug/kg	
108-88-3	Toluene	ND	580	ug/kg	
79-01-6	Trichloroethylene	ND	580	ug/kg	
75-69-4	Trichlorofluoromethane	ND	580	ug/kg	
75-01-4	Vinyl chloride	ND	580	ug/kg	
1330-20-7	Xylene (total)	ND	1700	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASP20SB-2,6'		
Lab Sample ID:	F7254-8	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	95.6
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		71-122%
2037-26-5	Toluene-D8	106%		73-128%
460-00-4	4-Bromofluorobenzene	112%		53-158%
17060-07-0	1,2-Dichloroethane-D4	86%		71-122%

(a) Dilution required due to matrix interference (non-target analytes present above calibration range).

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFDUP-1		
Lab Sample ID:	F7254-6	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	96.2
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008925.D	1	08/14/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.6	ug/kg	
75-27-4	Bromodichloromethane	ND	5.6	ug/kg	
75-25-2	Bromoform	ND	5.6	ug/kg	
108-90-7	Chlorobenzene	ND	5.6	ug/kg	
75-00-3	Chloroethane	ND	5.6	ug/kg	
67-66-3	Chloroform	ND	5.6	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.6	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.6	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.6	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.6	ug/kg	
124-48-1	Dibromochloromethane	ND	5.6	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.6	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.6	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.6	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.6	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.6	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.6	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.6	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.6	ug/kg	
100-41-4	Ethylbenzene	ND	5.6	ug/kg	
74-83-9	Methyl bromide	ND	5.6	ug/kg	
74-87-3	Methyl chloride	ND	5.6	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.6	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.6	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.6	ug/kg	
108-88-3	Toluene	ND	5.6	ug/kg	
79-01-6	Trichloroethylene	ND	5.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.6	ug/kg	
1330-20-7	Xylene (total)	ND	17	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFDUP-1		
Lab Sample ID:	F7254-6	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	96.2
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		71-122%
2037-26-5	Toluene-D8	106%		73-128%
460-00-4	4-Bromofluorobenzene	101%		53-158%
17060-07-0	1,2-Dichloroethane-D4	100%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-11,4-8'BGS		
Lab Sample ID:	F7254-4	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	93.3
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008934.D	100	08/15/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	600	ug/kg	
75-27-4	Bromodichloromethane	ND	600	ug/kg	
75-25-2	Bromoform	ND	600	ug/kg	
108-90-7	Chlorobenzene	ND	600	ug/kg	
75-00-3	Chloroethane	ND	600	ug/kg	
67-66-3	Chloroform	ND	600	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	1200	ug/kg	
56-23-5	Carbon tetrachloride	ND	600	ug/kg	
75-34-3	1,1-Dichloroethane	ND	600	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	600	ug/kg	
107-06-2	1,2-Dichloroethane	ND	600	ug/kg	
78-87-5	1,2-Dichloropropane	ND	600	ug/kg	
124-48-1	Dibromochloromethane	ND	600	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	600	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	600	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	600	ug/kg	
541-73-1	m-Dichlorobenzene	ND	600	ug/kg	
95-50-1	o-Dichlorobenzene	ND	600	ug/kg	
106-46-7	p-Dichlorobenzene	ND	600	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	600	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	600	ug/kg	
100-41-4	Ethylbenzene	5050	600	ug/kg	
74-83-9	Methyl bromide	ND	600	ug/kg	
74-87-3	Methyl chloride	ND	600	ug/kg	
75-09-2	Methylene chloride	ND	1200	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	600	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	600	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	600	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	600	ug/kg	
127-18-4	Tetrachloroethylene	ND	600	ug/kg	
108-88-3	Toluene	ND	600	ug/kg	
79-01-6	Trichloroethylene	ND	600	ug/kg	
75-69-4	Trichlorofluoromethane	ND	600	ug/kg	
75-01-4	Vinyl chloride	ND	600	ug/kg	
1330-20-7	Xylene (total)	12300	1800	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-11,4-8'BGS		
Lab Sample ID:	F7254-4	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	93.3
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		71-122%
2037-26-5	Toluene-D8	110%		73-128%
460-00-4	4-Bromofluorobenzene	111%		53-158%
17060-07-0	1,2-Dichloroethane-D4	88%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-13,14-16'BGS		
Lab Sample ID:	F7254-1	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	93.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008922.D	1	08/14/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	1.8	5.3	ug/kg	J
75-27-4	Bromodichloromethane	ND	5.3	ug/kg	
75-25-2	Bromoform	ND	5.3	ug/kg	
108-90-7	Chlorobenzene	ND	5.3	ug/kg	
75-00-3	Chloroethane	ND	5.3	ug/kg	
67-66-3	Chloroform	ND	5.3	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.3	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.3	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.3	ug/kg	
124-48-1	Dibromochloromethane	ND	5.3	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.3	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.3	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.3	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.3	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.3	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.3	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.3	ug/kg	
100-41-4	Ethylbenzene	17.7	5.3	ug/kg	
74-83-9	Methyl bromide	ND	5.3	ug/kg	
74-87-3	Methyl chloride	ND	5.3	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.3	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.3	ug/kg	
108-88-3	Toluene	ND	5.3	ug/kg	
79-01-6	Trichloroethylene	ND	5.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.3	ug/kg	
75-01-4	Vinyl chloride	ND	5.3	ug/kg	
1330-20-7	Xylene (total)	14.4	16	ug/kg	J

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-13,14-16'BGS		
Lab Sample ID:	F7254-1	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	93.5
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		71-122%
2037-26-5	Toluene-D8	112%		73-128%
460-00-4	4-Bromofluorobenzene	109%		53-158%
17060-07-0	1,2-Dichloroethane-D4	100%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-14,24-27'BGS		
Lab Sample ID:	F7254-5	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	94.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008924.D	1	08/14/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.7	ug/kg	
75-25-2	Bromoform	ND	5.7	ug/kg	
108-90-7	Chlorobenzene	ND	5.7	ug/kg	
75-00-3	Chloroethane	ND	5.7	ug/kg	
67-66-3	Chloroform	ND	5.7	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.7	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.7	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.7	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.7	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.7	ug/kg	
124-48-1	Dibromochloromethane	ND	5.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.7	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.7	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.7	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.7	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.7	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.7	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.7	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.7	ug/kg	
100-41-4	Ethylbenzene	ND	5.7	ug/kg	
74-83-9	Methyl bromide	ND	5.7	ug/kg	
74-87-3	Methyl chloride	ND	5.7	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.7	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.7	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.7	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.7	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.7	ug/kg	
108-88-3	Toluene	ND	5.7	ug/kg	
79-01-6	Trichloroethylene	ND	5.7	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.7	ug/kg	
75-01-4	Vinyl chloride	ND	5.7	ug/kg	
1330-20-7	Xylene (total)	ND	17	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-14,24-27'BGS		
Lab Sample ID:	F7254-5	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	94.5
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		71-122%
2037-26-5	Toluene-D8	105%		73-128%
460-00-4	4-Bromofluorobenzene	101%		53-158%
17060-07-0	1,2-Dichloroethane-D4	99%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-15,8-12'BGS		
Lab Sample ID:	F7254-3	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	86.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008923.D	1	08/14/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	6.4	ug/kg	
75-27-4	Bromodichloromethane	ND	6.4	ug/kg	
75-25-2	Bromoform	ND	6.4	ug/kg	
108-90-7	Chlorobenzene	ND	6.4	ug/kg	
75-00-3	Chloroethane	ND	6.4	ug/kg	
67-66-3	Chloroform	ND	6.4	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	13	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.4	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	6.4	ug/kg	
107-06-2	1,2-Dichloroethane	ND	6.4	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.4	ug/kg	
124-48-1	Dibromochloromethane	ND	6.4	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.4	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	6.4	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.4	ug/kg	
541-73-1	m-Dichlorobenzene	ND	6.4	ug/kg	
95-50-1	o-Dichlorobenzene	ND	6.4	ug/kg	
106-46-7	p-Dichlorobenzene	ND	6.4	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	6.4	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.4	ug/kg	
100-41-4	Ethylbenzene	ND	6.4	ug/kg	
74-83-9	Methyl bromide	ND	6.4	ug/kg	
74-87-3	Methyl chloride	ND	6.4	ug/kg	
75-09-2	Methylene chloride	ND	13	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	6.4	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.4	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.4	ug/kg	
127-18-4	Tetrachloroethylene	ND	6.4	ug/kg	
108-88-3	Toluene	ND	6.4	ug/kg	
79-01-6	Trichloroethylene	ND	6.4	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.4	ug/kg	
75-01-4	Vinyl chloride	ND	6.4	ug/kg	
1330-20-7	Xylene (total)	ND	19	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-15,8-12'BGS		
Lab Sample ID:	F7254-3	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	86.5
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		71-122%
2037-26-5	Toluene-D8	104%		73-128%
460-00-4	4-Bromofluorobenzene	102%		53-158%
17060-07-0	1,2-Dichloroethane-D4	95%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-16,22-26'BGS		
Lab Sample ID:	F7254-2	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	96.6
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H008933.D	100	08/15/00	JG	n/a	n/a	VH123
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	113	560	ug/kg	J
75-27-4	Bromodichloromethane	ND	560	ug/kg	
75-25-2	Bromoform	ND	560	ug/kg	
108-90-7	Chlorobenzene	ND	560	ug/kg	
75-00-3	Chloroethane	ND	560	ug/kg	
67-66-3	Chloroform	ND	560	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	1100	ug/kg	
56-23-5	Carbon tetrachloride	ND	560	ug/kg	
75-34-3	1,1-Dichloroethane	ND	560	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	560	ug/kg	
107-06-2	1,2-Dichloroethane	ND	560	ug/kg	
78-87-5	1,2-Dichloropropane	ND	560	ug/kg	
124-48-1	Dibromochloromethane	ND	560	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	560	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	560	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	560	ug/kg	
541-73-1	m-Dichlorobenzene	ND	560	ug/kg	
95-50-1	o-Dichlorobenzene	ND	560	ug/kg	
106-46-7	p-Dichlorobenzene	ND	560	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	560	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	560	ug/kg	
100-41-4	Ethylbenzene	6700	560	ug/kg	
74-83-9	Methyl bromide	ND	560	ug/kg	
74-87-3	Methyl chloride	ND	560	ug/kg	
75-09-2	Methylene chloride	ND	1100	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	560	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	560	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	560	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	560	ug/kg	
127-18-4	Tetrachloroethylene	ND	560	ug/kg	
108-88-3	Toluene	ND	560	ug/kg	
79-01-6	Trichloroethylene	ND	560	ug/kg	
75-69-4	Trichlorofluoromethane	ND	560	ug/kg	
75-01-4	Vinyl chloride	ND	560	ug/kg	
1330-20-7	Xylene (total)	13300	1700	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-16,22-26'BGS		
Lab Sample ID:	F7254-2	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	96.6
Project:	NAS Pensacola		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		71-122%
2037-26-5	Toluene-D8	113%		73-128%
460-00-4	4-Bromofluorobenzene	109%		53-158%
17060-07-0	1,2-Dichloroethane-D4	90%		71-122%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F7254-9	**Date Sampled:**	08/03/00
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0014203.D	1	08/19/00	RAW	n/a	n/a	VG394
Run #2							

VOA PPL List

CAS No.	Compound	Result	RL	Units	Q
107-02-8	Acrolein	ND	10	ug/l	
107-13-1	Acrylonitrile	ND	10	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	ug/l	
75-25-2	Bromoform	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	ug/l	
67-66-3	Chloroform	ND	2.0	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	2.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	ug/l	
74-87-3	Methyl chloride	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	6.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F7254-9	**Date Sampled:**	08/03/00
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/04/00
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NAS Pensacola		

VOA PPL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-120%
17060-07-0	1,2-Dichloroethane-D4	101%		69-128%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASP20SB-1,6'		
Lab Sample ID:	F7254-7	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	95.0
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA003768.D	5	08/15/00	NF	08/07/00	OP1920	GAA120
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	3500	ug/kg	
208-96-8	Acenaphthylene	ND	3500	ug/kg	
120-12-7	Anthracene	ND	1800	ug/kg	
56-55-3	Benzo(a)anthracene	685	350	ug/kg	
50-32-8	Benzo(a)pyrene	397	350	ug/kg	
205-99-2	Benzo(b)fluoranthene	486	350	ug/kg	
191-24-2	Benzo(g,h,i)perylene	270	350	ug/kg	J
207-08-9	Benzo(k)fluoranthene	269	350	ug/kg	J
218-01-9	Chrysene	ND	1800	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	350	ug/kg	
206-44-0	Fluoranthene	1920	1800	ug/kg	
86-73-7	Fluorene	ND	1800	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	445	350	ug/kg	
91-20-3	Naphthalene	ND	1800	ug/kg	
90-12-0	1-Methylnaphthalene	3690	1800	ug/kg	
91-57-6	2-Methylnaphthalene	3910	1800	ug/kg	
85-01-8	Phenanthrene	2340	1800	ug/kg	
129-00-0	Pyrene	1580	1800	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	136% [b]		22-130%
92-94-4	p-Terphenyl	101%		53-130%

(a) Dilution required due to matrix interference.
(b) Outside control limits due to matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASP20SB-2,6'		
Lab Sample ID:	F7254-8	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	95.6
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA003769.D	20	08/15/00	NF	08/07/00	OP1920	GAA120
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	14000	ug/kg	
208-96-8	Acenaphthylene	ND	14000	ug/kg	
120-12-7	Anthracene	ND	7000	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1400	ug/kg	
50-32-8	Benzo(a)pyrene	ND	1400	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1400	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	1400	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1400	ug/kg	
218-01-9	Chrysene	ND	7000	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1400	ug/kg	
206-44-0	Fluoranthene	ND	7000	ug/kg	
86-73-7	Fluorene	3950	7000	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1400	ug/kg	
91-20-3	Naphthalene	5610	7000	ug/kg	J
90-12-0	1-Methylnaphthalene	18200	7000	ug/kg	
91-57-6	2-Methylnaphthalene	24400	7000	ug/kg	
85-01-8	Phenanthrene	12500	7000	ug/kg	
129-00-0	Pyrene	ND	7000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [b]		22-130%
92-94-4	p-Terphenyl	0% [b]		53-130%

(a) Dilution required due to matrix interference.
(b) Outside control limits due to dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFDUP-1		
Lab Sample ID:	F7254-6	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	96.2
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA003729.D	1	08/14/00	NF	08/07/00	OP1920	GAA119
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	690	ug/kg	
208-96-8	Acenaphthylene	ND	690	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg	
56-55-3	Benzo(a)anthracene	ND	69	ug/kg	
50-32-8	Benzo(a)pyrene	ND	69	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	69	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	69	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	69	ug/kg	
218-01-9	Chrysene	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	69	ug/kg	
206-44-0	Fluoranthene	ND	350	ug/kg	
86-73-7	Fluorene	ND	350	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	69	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg	
85-01-8	Phenanthrene	ND	350	ug/kg	
129-00-0	Pyrene	ND	350	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		22-130%
92-94-4	p-Terphenyl	91%		53-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-11,4-8'BGS		
Lab Sample ID:	F7254-4	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	93.3
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA003772.D	2	08/15/00	NF	08/07/00	OP1920	GAA120
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	1400	ug/kg	
208-96-8	Acenaphthylene	ND	1400	ug/kg	
120-12-7	Anthracene	ND	710	ug/kg	
56-55-3	Benzo(a)anthracene	ND	140	ug/kg	
50-32-8	Benzo(a)pyrene	ND	140	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	140	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	140	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	140	ug/kg	
218-01-9	Chrysene	ND	710	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	140	ug/kg	
206-44-0	Fluoranthene	ND	710	ug/kg	
86-73-7	Fluorene	ND	710	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	140	ug/kg	
91-20-3	Naphthalene	2850	710	ug/kg	
90-12-0	1-Methylnaphthalene	8650	710	ug/kg	
91-57-6	2-Methylnaphthalene	9280	710	ug/kg	
85-01-8	Phenanthrene	ND	710	ug/kg	
129-00-0	Pyrene	ND	710	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	119%		22-130%
92-94-4	p-Terphenyl	88%		53-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-13,14-16'BGS		
Lab Sample ID:	F7254-1	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	93.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA003724.D	1	08/14/00	NF	08/07/00	OP1920	GAA119
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	710	ug/kg	
208-96-8	Acenaphthylene	ND	710	ug/kg	
120-12-7	Anthracene	ND	360	ug/kg	
56-55-3	Benzo(a)anthracene	ND	71	ug/kg	
50-32-8	Benzo(a)pyrene	ND	71	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	71	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	71	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	71	ug/kg	
218-01-9	Chrysene	ND	360	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg	
206-44-0	Fluoranthene	ND	360	ug/kg	
86-73-7	Fluorene	ND	360	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	ug/kg	
91-20-3	Naphthalene	ND	360	ug/kg	
90-12-0	1-Methylnaphthalene	ND	360	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg	
85-01-8	Phenanthrene	ND	360	ug/kg	
129-00-0	Pyrene	ND	360	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		22-130%
92-94-4	p-Terphenyl	92%		53-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-14,24-27'BGS		
Lab Sample ID:	F7254-5	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	94.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA003728.D	1	08/14/00	NF	08/07/00	OP1920	GAA119
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	700	ug/kg	
208-96-8	Acenaphthylene	ND	700	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg	
56-55-3	Benzo(a)anthracene	ND	70	ug/kg	
50-32-8	Benzo(a)pyrene	ND	70	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	70	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	70	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	70	ug/kg	
218-01-9	Chrysene	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg	
206-44-0	Fluoranthene	ND	350	ug/kg	
86-73-7	Fluorene	ND	350	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	70	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg	
85-01-8	Phenanthrene	ND	350	ug/kg	
129-00-0	Pyrene	ND	350	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		22-130%
92-94-4	p-Terphenyl	94%		53-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-15,8-12'BGS		
Lab Sample ID:	F7254-3	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	86.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA003726.D	1	08/14/00	NF	08/07/00	OP1920	GAA119
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	770	ug/kg	
208-96-8	Acenaphthylene	ND	770	ug/kg	
120-12-7	Anthracene	ND	380	ug/kg	
56-55-3	Benzo(a)anthracene	ND	77	ug/kg	
50-32-8	Benzo(a)pyrene	ND	77	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	77	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	77	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	77	ug/kg	
218-01-9	Chrysene	ND	380	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	77	ug/kg	
206-44-0	Fluoranthene	ND	380	ug/kg	
86-73-7	Fluorene	ND	380	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	77	ug/kg	
91-20-3	Naphthalene	ND	380	ug/kg	
90-12-0	1-Methylnaphthalene	ND	380	ug/kg	
91-57-6	2-Methylnaphthalene	ND	380	ug/kg	
85-01-8	Phenanthrene	ND	380	ug/kg	
129-00-0	Pyrene	ND	380	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		22-130%
92-94-4	p-Terphenyl	93%		53-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-16,22-26'BGS		
Lab Sample ID:	F7254-2	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	EPA 8310	**Percent Solids:**	96.6
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA003771.D	1	08/15/00	NF	08/07/00	OP1920	GAA120
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	690	ug/kg	
208-96-8	Acenaphthylene	ND	690	ug/kg	
120-12-7	Anthracene	ND	340	ug/kg	
56-55-3	Benzo(a)anthracene	ND	69	ug/kg	
50-32-8	Benzo(a)pyrene	ND	69	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	69	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	69	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	69	ug/kg	
218-01-9	Chrysene	ND	340	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	69	ug/kg	
206-44-0	Fluoranthene	ND	340	ug/kg	
86-73-7	Fluorene	ND	340	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	69	ug/kg	
91-20-3	Naphthalene	566	340	ug/kg	
90-12-0	1-Methylnaphthalene	2320	340	ug/kg	
91-57-6	2-Methylnaphthalene	2700	340	ug/kg	
85-01-8	Phenanthrene	ND	340	ug/kg	
129-00-0	Pyrene	ND	340	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	105%		22-130%
92-94-4	p-Terphenyl	91%		53-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASP20SB-1,6'		
Lab Sample ID:	F7254-7	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	95.0
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10164.D	400	08/12/00	ME	08/08/00	OP1924	GOP423
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	10200	3500	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASP20SB-2,6'		
Lab Sample ID:	F7254-8	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	95.6
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10165.D	200	08/12/00	ME	08/08/00	OP1924	GOP423
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	8520	1700	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFDUP-1		
Lab Sample ID:	F7254-6	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	96.2
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10141.D	1	08/11/00	ME	08/08/00	OP1924	GOP422
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	8.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	106%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-11,4-8'BGS		
Lab Sample ID:	F7254-4	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	93.3
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10163.D	80	08/12/00	ME	08/08/00	OP1924	GOP423
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	2530	720	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-13,14-16'BGS		
Lab Sample ID:	F7254-1	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	93.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10133.D	1	08/10/00	ME	08/08/00	OP1924	GOP422
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	14.7	8.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-14,24-27'BGS		
Lab Sample ID:	F7254-5	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	94.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10140.D	1	08/11/00	ME	08/08/00	OP1924	GOP422
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	8.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-15,8-12'BGS		
Lab Sample ID:	F7254-3	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	86.5
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10137.D	1	08/11/00	ME	08/08/00	OP1924	GOP422
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	9.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NASPFFSB-16,22-26'BGS		
Lab Sample ID:	F7254-2	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
Method:	FLORIDA-PRO	**Percent Solids:**	96.6
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP10160.D	25	08/12/00	ME	08/08/00	OP1924	GOP423
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	810	220	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

APPENDIX C

Support Documentation

ACCUTEST.

Sample Summary

Tetra-Tech, NUS

Job No: F7254

NAS Pensacola
Project No: CTO#112, JOB#0401

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F7254-1	08/03/00	08:00 DH	08/04/00	SO	Soil	NASPFFSB-13,14-16'BGS
F7254-2	08/03/00	09:00 DH	08/04/00	SO	Soil	NASPFFSB-16,22-26'BGS
F7254-3	08/03/00	09:30 DH	08/04/00	SO	Soil	NASPFFSB-15,8-12'BGS
F7254-4	08/03/00	09:55 DH	08/04/00	SO	Soil	NASPFFSB-11,4-8'BGS
F7254-5	08/03/00	10:30 DH	08/04/00	SO	Soil	NASPFFSB-14,24-27'BGS
F7254-6	08/03/00	00:00 DH	08/04/00	SO	Soil	NASPFFDUP-1
F7254-7	08/03/00	15:00 DH	08/04/00	SO	Soil	NASP20SB-1,6'
F7254-8	08/03/00	15:45 DH	08/04/00	SO	Soil	NASP20SB-2,6'
F7254-9	08/03/00	00:00 DH	08/04/00	AQ	Trip Blank Water	TRIP BLANK

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F7254
ACCUTEST QUOTE #:

0041

CLIENT INFORMATION

NAME: Tetra Tech NUS
ADDRESS: 401 Oven Park Dr.
CITY: Tallahassee STATE: FL ZIP: 32301
SEND REPORT TO: Gerry Walker
PHONE #: 850-385-9899

FACILITY INFORMATION

NAS Pensacola
PROJECT NAME: Sherman Fuel Farm
LOCATION: 0401
PROJECT NO.: 0401
FAX #: 850-385-9860

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOC (Encore) 8021	PAH (4oz)	TRPH (4oz)	SVOC (8oz) SPLP	8 RCRA (4oz)	TOC/TOX (4oz)	Grain Size (8oz)	LAB USE ONLY
9	Trip Blank	7/22/00	1030		W	2	✓												
1	NASPFFSB-13, 14-16' BGS	8/3/00	0800	DH	SO	6						3	1	1	1				
2	NASPFFSB-16, 22-26' BGS	"	0900	DH	SO	6						3	1	1		1			Hot
3	NASPFFSB-15, 8-12' BGS	"	0930	DH	SO	9						3	1	1			3	1	
4	NASPFFSB-11, 4-8' BGS	"	0955	DH	SO	6						3	1	1	1				Hot
5	NASPFFSB-14, 24-27' BGS	"	1030	DH	SO	8						3	1	1			3		
6	NASPFF DUP-1	"	—	DH	SO	5						3	1	1					

DATA TURNAROUND INFORMATION

STANDARD
48 HOUR RUSH
24 HOUR EMERGENCY
OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

☑ STANDARD
☐ COMMERCIAL "B"
☐ DISK DELIVERABLE
☐ STATE FORMS
☐ OTHER (SPECIFY)

COMMENTS/REMARKS

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
Dan Hartnett	8/3/00 1815	1. 8/4 0900	2.		2.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 10 C

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND ROA SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F7254
ACCUTEST QUOTE #:

0047

CLIENT INFORMATION

NAME: NAS Pensacola
COMPANY: Tetra Tech NUS
ADDRESS: 7401 Oven Park Dr.
CITY: Tallahassee STATE: FL ZIP: 32301
SEND REPORT TO: Gerry Walker
PHONE #: 850-385-9899

FACILITY INFORMATION

PROJECT NAME: Nas Pensacola
LOCATION: Site 20
PROJECT NO.: 0401
FAX #: 850-385-9860

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOC (encore)	PAH (4 oz)	TRPH (4 oz)	LAB USE ONLY
7	NASP20SB-1, 6'	8/3/00	1500	DH	SO	5						3	1	1	HOT
8	NASP20SB-2, 6'	8/3/00	1545	DH	SO	5						3	1	1	

DATA TURNAROUND INFORMATION

STANDARD
48 HOUR RUSH
24 HOUR EMERGENCY
OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

☒ STANDARD
☐ COMMERCIAL "B"
☐ DISK DELIVERABLE
☐ STATE FORMS
☐ OTHER (SPECIFY)

COMMENTS/REMARKS

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
Dan Hartnett	8/3/00 1815	1. [illegible] 8/4 0900	2.		2.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 2.0 C

ACCUTEST

SO

CHAIN OF CUSTODY

4405 VINELAND ROAD, SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #:

ACCUTEST QUOTE #:

0043

CLIENT INFORMATION

ME: ALSE

DRESS:

Y, STATE ZIP:

D REPORT TO:

ONE #:

FACILITY INFORMATION

PROJECT NAME: F7254

LOCATION:

PROJECT NO.:

FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

CUTEST MPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE		TOC										LAB USE ONLY
	F7254-3	8/3/00		TT	So	1							X										(IW)
	F7254-5	↓		↓	↓	1							X										

DATA TURNAROUND INFORMATION

STANDARD
48 HOUR RUSH
24 HOUR EMERGENCY
OTHER 14 DAY

APPROVED BY:

ERGENCY OR RUSH IS FAX DATA
LESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☐ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☒ OTHER (SPECIFY) FT1

COMMENTS/REMARKS

NJ

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
INQUISHED BY SAMPLER: Mike Finell	8/8/00 1450	1. FED EX	2. FED EX	8-9-00 1030	2. T B
INQUISHED BY:	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
INQUISHED BY:	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 4.5 C

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.:_____

Samples: _____

Analysis Performed: _____

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes ( )	No ( )
Custody Seals in Tact?	Yes ( )	No ( )
Chain of Custody Sealed in Plastic?	Yes ( )	No ( )
Chain of Custody Filled out Properly?	Yes ( )	No ( )
Enough ice and Packing material?	Yes ( )	No ( )
All Bottles Sealed?	Yes ( )	No ( )
Any Bottles Broken?	Yes ( )	No ( )
Labels in good condition?	Yes ( )	No ( )
Labels agree with chain of custody?	Yes ( )	No ( )
Correct Containers Used?	Yes ( )	No ( )
Preserved Properly?	Yes ( )	No ( )
Sufficient Sample?	Yes ( )	No ( )

Comments: _____

Linda Williams

From: Linda Williams
Sent: Monday, August 07, 2000 10:34 AM
To: Heather Wandrey
Cc: Harry Behzadi
Subject: FW: F7L54

Heather

Can you please cancel the SPLP analysis per email below?

Thanks
Linda R. Williams
Project Manager
Accutest Laboratories, SE
Ph: 407-425-6700
Fax: 407-425-0707
email: lindaw@accutest.com

----Original Message----
From: Walker, Gerald [SMTP:WalkerG@ttnus.com]
Sent: Monday, August 07, 2000 9:14 AM
To: Linda Williams
Subject: RE:

Linda:
In discussing the SPLP analysis we decided that the analysis may be premature. At this time we don't want to extract or analyze the samples collected for SPLP. If SPLP analysis is required in the future, we will recollect the required sample. Sorry for the inconvenience and confusion.

Gerry

> -----Original Message-----
> From: Linda Williams [SMTP:LindaW@Accutest.com]
> Sent: Friday, August 04, 2000 12:53 PM
> To: Gerry Walker (E-mail)
> Subject: FW:
> Importance: High
>
> Gerry
>
> Can you please help me out with this, so I can get the samples logged in?
>
> Thanks
> Linda R. Williams
> Project Manager
> Accutest Laboratories, SE
> Ph: 407-425-6700
> Fax: 407-425-0707
> email: lindaw@accutest.com
>
> > -----Original Message-----
> > From: Linda Williams
> > Sent: Friday, August 04, 2000 11:56 AM
> > To: Howard Engle (E-mail)
> > Subject:
> >
> > Howard
> >
> > We received some samples in today from NAS Pensacola. On the chain of

> > custody it just states SPLP. We need to know what analysis you are
> > requesting SPLPs on. I am faxing the COC over to you. Please list the
> > requested analysis for SPLP on the COC and fax it back to us.
> >
> > Also, if there is anyway possible can you please have the field crew
> list
> > the requested analysis for SPLP clearly (i.e. SPLP-PAH, SPLP-8260,
> SPLP-FL
> > PRO etc.). This will aid in the job being logged in more efficiently
> and
> > correctly.
> >
> > Thanks
> > Linda R. Williams
> > Project Manager
> > Accutest Laboratories, SE
> > Ph: 407-425-6700
> > Fax: 407-425-0707
> > email: lindaw@accutest.com
> >

Sequence Name: C:\HPCHEM\1\SEQUENCE\081400.S
Comment:
Operator: JuanG
Data Path: C:\HPCHEM\1\DATA\081400\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	H008917	BFB	BFB
2	DailyCal	1	H008918	8260S	CC119-40
3	Spike	2	H008919	8260S	BS
4	Blank	3	H008920	8260S	MB
5	Sample	4	H008921	8260S	F7248-1,5.04g
6	Sample	5	H008922	8260S	F7254-1,5.03g
7	Sample	6	H008923	8260S	F7254-3,4.52g
8	Sample	7	H008924	8260S	F7254-5,4.62g
9	Sample	8	H008925	8260S	F7254-6,4.64g
10	Sample	9	H008926	8260S	F7254-7,4.97g
11	Sample	10	H008927	8260S	F7331-1,4.43g
12	Sample	11	H008928	8260S	F7331-2,4.19g
13	Sample	12	H008929	8260S	F7331-3,4.39g
14	Sample	13	H008930	8260S	F7331-4,4.57g
15	Sample	14	H008931	8260S	F7321-5MS,5.01g
16	Sample	15	H008932	8260S	F7321-5MSD,5.03g
17	Sample	16	H008933	8260S	F7254-2,4.58g (50uL)
18	Sample	17	H008934	8260S	F7254-4,4.49g (50uL)
19	Sample	18	H008935	8260S	F7254-8,4.54g (50uL)

GC/MS Analysis Log

Date: 8-14-00 Analyst Signature: [signature] Run Batch: _____

Analysis Method: 8260 Column: DB 624 Detector: 5970MSD

Method File: 8260S Instrument ID: H Calibration Date: 8-2-00

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
H00 8917	BFB	2 ul	–	–	–	–	BFB	–	V1679
18	CC119-40	5g	S	–	1	1	8260S	–	V1715, V1716, V1709, 1020
19	BS	↓	↓	↓	2		↓	–	V1660, V1706, V1718
20	MB	↓			3			–	ND
21	F7248-1	5.04g			4	1000		9578	ND MS670, VH122
22	F7254-1	5.03			5	1		9582	✓ MS671, VH123
23	-3	4.32			6				✓
24	-5	4.62			7			9595	ND
25	-6	4.64			8			9597	✓
26	-7	4.97			9			9600	✓ RQ SOX ↑D/SS
27	F7331-1	4.43			10			9763	ND MS674, VH124
28	-2	4.19			11			9767	ND
29	-3	4.39			12			9770	ND
30	-4	4.57			13			9773	ND
31	F7321-5MS	5.01			14			–	✓ MS671, VH123
32	-5MSD	5.03			15	↓		–	✓ ↓
33	F7254-2	4.58			16	100x		9584	✓
34	-4	4.49			17	↓		9590	✓
35	-8	4.54		↓	18	↓		9602	✓ RQ SOX
3									

Notes: _____

Matrix: Desig for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for l s.

Sequence Name: C:\HPCHEM\1\OLDDATA\081500.S
Comment:
Operator: JuanG
Data Path: C:\HPCHEM\1\DATA\081500\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	H008936	BFB	BFB
2	DailyCal	1	H008937	8260S	CC119-40
3	Spike	2	H008938	8260S	BS
4	Blank	3	H008939	8260S	MB
5	Sample	4	H008940	8260S	T750-1,4.02g (100uL)
6	Sample	5	H008941	8260S	T750-2,4.88g (50uL)
7	Sample	6	H008942	8260S	T750-3,5.73g (100uL)
8	Sample	7	H008943	8260S	T750-4,5.11g (100uL)
9	Sample	8	H008944	8260S	T750-1,4.12g
10	Sample	9	H008945	8260S	F7254-7,4.72g (100uL)
11	Sample	10	H008946	8260S	F7254-8,4.54g (50uL)
12	Sample	11	H008947	8260S	F7331-5,4.62g
13	Sample	12	H008948	8260S	F7331-6,4.35g
14	Sample	13	H008949	8260S	F7331-7,4.06g
15	Sample	14	H008950	8260S	F7331-8,5.22g
16	Sample	15	H008951	8260S	F7331-9,4.57g
17	Sample	16	H008952	8260S	F7331-10,4.09g
18	Sample	17	H008953	8260S	T750-3,3.77g
19	Sample	18	H008954	8260S	T750-4,4.86g
20	Sample	19	H008955	8260S	T750-2,4.88g (100uL)

GC/MS Analysis Log

Date: 8-15-00 Analyst Signature: [signature] Run Batch: _____

Analysis Method: 8260 Column: DB624 Detector: 5970MSD

Method File: 8260 S Instrument ID: H Calibration Date: 7-2-00

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
H00 8936	BFB						BFB		V1679
37	CC119-40	5g	S	—	1	1	8260	—	V1715, V1716, V1709, 1020
38	BS				2			—	V1660, V1706, V1706
39	MB				3			—	
40	T750-1	4.02			4	50x		—	✓ RR 1X MS674 VH124
41	-2	4.88			5	100x		9802	✓ RR 50X
42	-3	5.73			6	50x		9801	✓ RR 1X
43	-4	5.11			7	50x		9808	✓ RR 1X
44	-1	4.12			8	1X		9801	✓
45	F7254-7	4.72			9	50X		9799	✓
46	-8	4.54			10	100x		~~9754~~	✓ 9602
47	F7331-5	4.62			11	1x		9776	ND
48	-6	4.32			12			9778	ND
49	-7	4.00			13			9782	ND
50	-8	5.22			14			9785	ND
51	-9	4.57			15			9787	ND
52	-10	4.09			16			9470	ND
53	T750-3	3.77			17			9806	✓
54	-4	4.84			18			9810	✓
	-2								

Notes: _____

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

Sequence Name: C:\HPCHEM\1\SEQUENCE\081900.S
Comment:
Operator: RickW
Data Path: C:\HPCHEM\1\DATA\081900\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	G0014182	BFB	BFB tune
2	Calibration	1	G0014183	8260LL	IC393-1
3	Calibration	2	G0014184	8260LL	IC393-5
4	Calibration	3	G0014185	8260LL	IC393-10
5	Calibration	4	G0014186	8260LL	ICC393-20
6	Calibration	5	G0014187	8260LL	IC393-35
7	Calibration	6	G0014188	8260LL	IC393-50
8	Blank	7	G0014189	8260LL	MB
9	Calibration	8	G0014190	8260LL	IC393-1
10	DailyCal	9	G0014191	8260LL	CC393-20
11	Spike	10	G0014192	8260LL	BS
12	Blank	11	G0014193	8260LL	MB
13	Sample	12	G0014194	8260LL	WP-66,10mL
14	Sample	13	G0014195	8260LL	F7334-2,200uL
15	Sample	14	G0014196	8260LL	F7286-1,10mL
16	Sample	15	G0014197	8260LL	F7286-2,10mL
17	Sample	16	G0014198	8260LL	F7286-3,10mL
18	Sample	17	G0014199	8260LL	F7286-4,10mL
19	Spike	18	G0014200	8260LL	LBS,10mL
20	Spike	19	G0014201	8260LL	F7243-7ams,10mL
21	Sample	20	G0014202	8260LL	F7303-1,10mL
22	Sample	21	G0014203	8260LL	F7254-9,10mL
23	Sample	22	G0014204	8260LL	F7263-1,10mL
24	Sample	23	G0014205	8260LL	F7304-2,10mL
25	Sample	24	G0014206	8260LL	F7304-1,0.1g/10mL-100uL
26	Blank	25	G0014207	8260LL	blank,10mL
27	Sample	26	G0014208	8260LL	F7294-8,10mL
28	Sample	27	G0014209	8260LL	F7289-15,500uL
29	Sample	28	G0014210	8260LL	F7289-16,500uL
30	Sample	29	G0014211	8260LL	F7289-17,10mL

GC/MS Analysis Log

0250

Date: 8-19-00 Analyst Signature: [illegible] Run Batch: _____

Analysis Method: 8260/624 Column: DB-624 Detector: 5970MSD

Method File: 826CLL Instrument ID: G Calibration Date: 3-19-00

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
G0014182	BFB								
83	IC393-1	10mL	W	7	1	1			V1715, V1729, V1733, 1020
84	-5				2				
85	-10				3				
86	-20				4				
87	-35				5				
88	-50				6				
89	MB				7				
90	IC393-1				8				
~~91~~	~~BS~~				~~9~~				~~V1723, V1722, V1718~~
~~92~~	~~MB~~				~~10~~				~~V1731~~
~~93~~	~~F7334-2~~	~~200uL~~			~~11~~	~~50~~	~~8260~~	~~3~~	~~MS679, VG393~~ } Raw
91	CC393-20	10mL	W		9	1			✓
92	BS				10				✓ V1723, V1722, V1718
93	MB				11				ND V1731
~~94~~	~~F7334-2~~	~~200uL~~		~~7~~	~~12~~	~~50~~	~~8260~~	~~3~~	~~MS679, VG393~~ Raw
94	WP-66	10mL	W	7	12	1			✓
95	F7334-2	200uL		7	13	50	8260	3	PH! ✓ E MS679, VG393
96	F7286-1	10mL		1	14	1		1	✓
97	-2			7	15			1	PH! ND
98	-3			1	16			1	ND
99	-4			7	17			1	PH! ND
200	LBS				18				✓ MS682, VG395
1	F7243-7ANS				19				✓
2	F7303-1			1	20			1	ND MS681, VG394
3	F7254-9			1	21			1	ND
4	F7263-1			1	22			1	ND
5	F7304-2			1.5	23			1	ND

Notes: _____

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

GC/MS Analysis Log

Date: 8-19-00 Analyst Signature: [illegible] Run Batch: _____

Analysis Method: 8260/624 Column: DB-624 Detector: 5970MSD

Method File: 8260LL Instrument ID: G Calibration Date: 8-19-00

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
G0014206	F7304-1	10mL	O		24	50K	8260	1	ND RUN @ 5,000X
7	BLANK	↓	W	7	25	1	↓		ND
8	F7294-8	↓	↓	1	26	1	↓	1	✓ MS ETI, VG313
9	F7289-15	500mL	↓	1	27	20	624	1	✓ RUN @ 1X MS683, VG396
10	-16	500mL	↓	1	28	20	↓	1	✓ RUN @ 100X ?
11	-17	10mL	↓	1	29	1	↓	1	✓

RUN

Notes: _____

Matrix: Designat r water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leach

0251

Sequence Name: C:\MSDCHEM\1\SEQUENCE\080200.S
Comment:
Operator: RickW
Data Path: C:\MSDCHEM\1\data\080200\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
- ( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	100	B001497	BFB	BFB tune
2	Calibration	1	B001498	8260LL	IC48-1
3	Calibration	2	B001499	8260LL	IC48-5
4	Calibration	3	B001500	8260LL	IC48-20
5	Calibration	4	B001501	8260LL	ICC48-40
6	Calibration	5	B001502	8260LL	IC48-70
7	Calibration	6	B001503	8260LL	IC48-100
8	DailyCal	7	B001504	8260LL	CC48-40
9	Spike	8	B001505	8260LL	BS,5mL
10	Blank	9	B001506	8260LL	MB,5mL
11	Sample	10	B001507	8260LL	F7089-2,100uL
12	Sample	11	B001508	8260LL	F7089-11,5mL
13	Sample	12	B001509	8260LL	F7089-12,5mL
14	Sample	13	B001510	8260LL	F7092-1,5mL
15	Spike	14	B001511	8260LL	F7089-1ms,5mL
16	Duplicate	14	B001512	8260LL	F7089-1msd,5mL
17	Sample	15	B001513	8260LL	F7135-1,5mL
18	Sample	16	B001514	8260LL	F7135-2,5mL
19	Sample	17	B001515	8260LL	F7135-5,1mL
20	Pause	- F7135-5,1mL			
21	Sample	18	B001516	8260LL	F7135-7,1mL
22	Sample	19	B001517	8260LL	F7100-1,5mL
23	Sample	20	B001518	8260LL	F7100-2,5mL
24	Sample	21	B001519	8260LL	F7100-3,5mL
25	Sample	22	B001520	8260LL	F7100-4,5mL
26	Sample	23	B001521	8260LL	F7100-5,5mL
27	Sample	24	B001522	8260LL	F7135-8,500uL
28	Sample	25	B001523	8260LL	F7135-9,500uL
29	Sample	26	B001524	8260LL	F7135-10,5mL
30	Sample	27	B001525	8260LL	F7135-11,5mL
31	Sample	28	B001526	8260LL	F7135-14,5mL
32	Sample	29	B001527	8260LL	F7135-13,5mL
33	Sample	30	B001528	8260LL	F7135-12,500uL
34	Sample	31	B001529	8260LL	F7077-1,1mL
35	Sample	32	B001530	8260LL	F7077-1,1mL

W

GC/MS Analysis Log

Date: 8-2-00 Analyst Signature: [illegible] Run Batch: _____

Analysis Method: 624 / 8260 Column: DB-624 Detector: HP5970MSD

Method File: 8260LL Instrument ID: ~~H~~ B (Jlb) Calibration Date: 8-2-00

	Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
	BC01497	BFB								V1679
(2)	98	IC45-1	5mL	W	7	1	1			V1693, V1703, V1692, 1014
	99	-5				2				
	500	-20				3				
	1	-40				4				
	2	-70				5				
	3	-100				6				
	4	CC45-40				7				
	5	BS				8				V1660, V1688, V1670
	6	MB				9				V1683
(3)	7	F7089-2	100mL		1	10	50	8260	2	✓ MS650
(4)	8	-11	5mL		1	11	1		1	✓ VB45
	9	-12			1	12			2	✓
	10	F7092-1			1	13			4	ND
	11	F7089-1MS				14			2	✓
(5)	12	-1MSD				14			2	✓
	13	F7135-1			1	15			1	✓ MS655
	14	-2			1	16			2	✓ VB48
(6)	15	-5	1mL		1	17	5		1	✓
	16	-7	1mL		6	18	5		2	HS PH! ✓ RUNE 10X
(7)	17	F7100-1	5mL		1	19	1		1	✓ ND
	18	-2			1	20			1	ND
	19	-3			1	21			1	✓
	20	-4			1	22			1	✓ RUNE 5X
	21	-5			1	23			1	✓
(8)	22	F7135-8	500mL		1	24	10		1	✓ RUNE 1X
	23	-9	500mL		1	25	10		1	✓ RUNE 1X
(9)	24	-10	5mL		1	26	1		1	✓
	25	-11			1	27			1	✓
	26	-14			1	28			1	✓
	27	-13			1	29			1	✓
(10)	28	-12	500mL		1	30	10		1	✓ ND RUNE 1X
(11)	29	F7077-1	1mL			31	5		1	CR ✓
	30	-1	1mL			32	5		2	CR ✓

Notes: _____

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F7254
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F7262-3MS	G0014171.D	1	08/19/00	RAW	n/a	n/a	VG394
F7262-3MSD	G0014172.D	1	08/19/00	RAW	n/a	n/a	VG394
F7262-3	G0014147.D	1	08/18/00	RAW	n/a	n/a	VG394

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7254-9

CAS No.	Compound	F7262-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-02-8	Acrolein	ND		125	90.8	73	108	86	17	5-187/24
107-13-1	Acrylonitrile	ND		125	136	109	139	111	2	5-178/15
71-43-2	Benzene	ND		25	24.7	99	23.6	94	4	61-141/16
75-27-4	Bromodichloromethane	ND		25	23.8	95	22.5	90	6	72-125/10
75-25-2	Bromoform	ND		25	21.2	85	21.3	85	0	62-126/15
108-90-7	Chlorobenzene	ND		25	23.9	96	23.4	94	2	75-125/10
75-00-3	Chloroethane	ND		25	28.6	114	30.0	120	5	58-134/12
67-66-3	Chloroform	ND		25	23.4	94	22.2	89	5	73-125/10
110-75-8	2-Chloroethyl vinyl ether	ND		120	ND	0*	ND	0*	nc	5-191/73
56-23-5	Carbon tetrachloride	ND		25	24.9	100	24.4	98	2	62-126/17
75-34-3	1,1-Dichloroethane	ND		25	24.5	98	24.4	98	0	75-125/10
75-35-4	1,1-Dichloroethylene	ND		25	25.6	102	27.3	109	6	73-125/10
107-06-2	1,2-Dichloroethane	ND		25	23.8	95	23.1	92	3	66-130/18
78-87-5	1,2-Dichloropropane	ND		25	26.7	107	25.5	102	4	75-125/10
124-48-1	Dibromochloromethane	ND		25	23.7	95	22.4	90	6	75-125/11
10061-01-5	cis-1,3-Dichloropropene	ND		25	20.7	83	19.9	80	4	58-136/13
541-73-1	m-Dichlorobenzene	ND		25	22.4	90	21.7	87	3	75-125/10
95-50-1	o-Dichlorobenzene	ND		25	22.2	89	21.4	86	4	75-125/10
106-46-7	p-Dichlorobenzene	ND		25	22.0	88	22.0	88	0	75-125/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	21.2	85	21.2	85	0	65-133/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	19.8	79	19.2	77	3	49-139/19
100-41-4	Ethylbenzene	ND		25	25.0	100	25.4	102	2	67-128/10
74-83-9	Methyl bromide	ND		25	11.4	46	15.6	62	31*	32-149/27
74-87-3	Methyl chloride	ND		25	32.2	129	33.0	132	2	59-143/18
75-09-2	Methylene chloride	ND		25	24.1	96	23.7	95	2	73-125/11
71-55-6	1,1,1-Trichloroethane	ND		25	24.8	99	23.2	93	7	72-125/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	26.1	104	23.8	95	9	68-125/12
79-00-5	1,1,2-Trichloroethane	ND		25	25.1	100	23.3	93	7	75-125/12
127-18-4	Tetrachloroethylene	ND		25	24.0	96	24.8	99	3	75-125/10
108-88-3	Toluene	ND		25	24.8	99	24.0	96	3	72-125/10
79-01-6	Trichloroethylene	ND		25	25.2	101	22.8	91	10	72-125/10
75-69-4	Trichlorofluoromethane	ND		25	27.9	112	29.2	117	4	37-126/13
75-01-4	Vinyl chloride	ND		25	32.4	130	33.7	135	4	63-138/17
1330-20-7	Xylene (total)	ND		75	77.3	103	76.9	102	0	69-127/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F7254
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F7262-3MS	G0014171.D	1	08/19/00	RAW	n/a	n/a	VG394
F7262-3MSD	G0014172.D	1	08/19/00	RAW	n/a	n/a	VG394
F7262-3	G0014147.D	1	08/18/00	RAW	n/a	n/a	VG394

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7254-9

CAS No.	Surrogate Recoveries	MS	MSD	F7262-3	Limits
1868-53-7	Dibromofluoromethane	100%	98%	88%	80-120%
17060-07-0	1,2-Dichloroethane-D4	104%	100%	90%	69-128%
2037-26-5	Toluene-D8	103%	96%	92%	80-120%
460-00-4	4-Bromofluorobenzene	107%	99%	99%	80-120%

Blank Spike Summary

Job Number: F7254
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG394-BS3	G0014192.D	1	08/19/00	RAW	n/a	n/a	VG394

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7254-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
107-02-8	Acrolein	125	98.8	79	5-187
107-13-1	Acrylonitrile	125	117	94	5-178
71-43-2	Benzene	25	23.9	96	61-141
75-27-4	Bromodichloromethane	25	22.6	90	72-125
75-25-2	Bromoform	25	23.0	92	62-126
108-90-7	Chlorobenzene	25	23.5	94	75-125
75-00-3	Chloroethane	25	26.4	106	58-134
67-66-3	Chloroform	25	23.3	93	73-125
110-75-8	2-Chloroethyl vinyl ether	125	110	88	5-191
56-23-5	Carbon tetrachloride	25	23.0	92	62-126
75-34-3	1,1-Dichloroethane	25	23.7	95	75-125
75-35-4	1,1-Dichloroethylene	25	23.7	95	73-125
107-06-2	1,2-Dichloroethane	25	22.7	91	66-130
78-87-5	1,2-Dichloropropane	25	25.1	100	75-125
124-48-1	Dibromochloromethane	25	23.1	92	75-125
10061-01-5	cis-1,3-Dichloropropene	25	22.8	91	58-136
541-73-1	m-Dichlorobenzene	25	22.5	90	75-125
95-50-1	o-Dichlorobenzene	25	22.2	89	75-125
106-46-7	p-Dichlorobenzene	25	21.0	84	75-125
156-60-5	trans-1,2-Dichloroethylene	25	22.6	90	65-133
10061-02-6	trans-1,3-Dichloropropene	25	24.6	98	49-139
100-41-4	Ethylbenzene	25	24.1	96	67-128
74-83-9	Methyl bromide	25	26.9	108	32-149
74-87-3	Methyl chloride	25	27.1	108	59-143
75-09-2	Methylene chloride	25	22.5	90	73-125
71-55-6	1,1,1-Trichloroethane	25	23.7	95	72-125
79-34-5	1,1,2,2-Tetrachloroethane	25	22.8	91	68-125
79-00-5	1,1,2-Trichloroethane	25	24.9	100	75-125
127-18-4	Tetrachloroethylene	25	24.5	98	75-125
108-88-3	Toluene	25	25.0	100	72-125
79-01-6	Trichloroethylene	25	24.0	96	72-125
75-69-4	Trichlorofluoromethane	25	24.8	99	37-126
75-01-4	Vinyl chloride	25	27.9	112	63-138
1330-20-7	Xylene (total)	75	73.6	98	69-127

Blank Spike Summary

Job Number: F7254
Account: TETRFLTA Tetra-Tech, NUS
Project: NAS Pensacola

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG394-BS3	G0014192.D	1	08/19/00	RAW	n/a	n/a	VG394

The QC reported here applies to the following samples: **Method:** SW846 8260B

F7254-9

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	69-128%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	99%	80-120%

l	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA003763	01:01		8310 L4 CCV s808
No	2	2	8310_46	AA003764	02:01		op1920-mb
No	3	3	8310_46	AA003765	03:01		f7243-2,5
No	4	4	8310_46	AA003766	04:01		f7254-2,5
No	5	5	8310_46	AA003767	05:01		f7254-4,5
No	6	6	8310_46	AA003768	06:01		f7254-7,5
No	7	7	8310_46	AA003769	07:01		f7254-8,10*2
No	8	8	8310_46	AA003770	08:01		f7243-2
No	9	9	8310_46	AA003771	09:01		f7254-2
No	10	10	8310_46	AA003772	10:01		f7254-4,2
No	11	1	8310_46	AA003773	11:01		ccv
No	12	11	8310_46	AA003774	12:01		op1933-mb
No	13	12	8310_46	AA003775	13:01		f7279-3,5
No	14	13	8310_46	AA003776	14:01		f7263-2,20
No	15	14	8310_46	AA003777	15:01		f7263-3,20
No	16	15	8310_46	AA003778	16:01		f7263-6,2
No	17	16	8310_46	AA003779	17:01		f7263-8,5
No	18	17	8310_46	AA003780	18:01		f7263-9,2
No	19	18	8310_46	AA003781	19:01		f7263-10,20
No	20	1	8310_46	AA003782	20:01		ccv
No	21	19	8310_46	AA003783	21:01		f7284-1,20
No	22	20	8310_46	AA003784	22:01		f7284-3
No	23	21	8310_46	AA003785	23:01		f7284-4,4
o	24	22	8310_46	AA003786	24:01		f7284-5,20
No	25	23	8310_46	AA003787	25:01		f7263-8,2
No	26	1	8310_46	AA003788	26:01		ccv
No	27	1	8310_46	AA003789	27:01		ccv
No	28	24	8310_46	AA003790	28:01		op1945-LBS
No	29	25	8310_46	AA003791	29:01		op1945-LB
No	30	26	8310_46	AA003792	30:01		f7243-5a
No	31	27	8310_46	AA003793	31:01		f7243-7a
No	32	28	8310_46	AA003794	32:01		op1945-LS
No	33	1	8310_46	AA003795	33:01		CCV
No	34	29	8310_46	AA003796	34:01		op1938-bs
No	35	30	8310_46	AA003797	35:01		op1938-mb
No	36	31	8310_46	AA003798	36:01		f7308-1
No	37	32	8310_46	AA003799	37:01		f7308-2
No	38	33	8310_46	AA003800	38:01		f7308-5
No	39	34	8310_46	AA003801	39:01		f7308-6
No	40	2	8310_46	AA003802	40:01		op1938-ms
No	41	3	8310_46	AA003803	41:01		op1938-msd
No	42	1	8310_46	AA003804	42:01		ccv
No	43	4	8310_46	AA003805	43:01		f7308-3,20*2
No	44	5	8310_46	AA003806	44:01		f7308-4,20*2
No	45	6	8310_46	AA003807	45:01		f7308-7,20*2
No	46	7	8310_46	AA003808	46:01		f7308-8,20*2
No	47	8	8310_46	AA003809	47:01		f7308-9,10
No	48	9	8310_46	AA003810	48:01		f7295-1,10
No	49	10	8310_46	AA003811	49:01		f7295-2,10
No	50	11	8310_46	AA003812	50:01		f7295-3,10*2
No	51	1	8310_46	AA003813	51:01		CCV
No	52	1	8310_46	AA003814	52:01		CCV

HPLC ANALYSIS LOG

ATE: 8/16/00	METHODS: 8310	ANALYST: [illegible]
OLUMN TYPE: Pin PAH	METHOD FILE: 8310-46	RUN BATCH: GAA120
STRUMENT: HPLC1	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 15 ul

ATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
-A003763	1	L4CCV	8310					✓	Passed
64	2	OP1920-MB		30/5	S	OP1920	2x	✓	ND
65	3	F7243-2					5x	RR	1x
66	4	F7254-2					5x	RR	1x
67	5	4					5x	RR	2x
68	6	7					5x	✓	✓
69	7	8		30/10			10 (2)	✓	✓
70	8	F7243-2		30/5			1x	✓	✓
71	9	F7254-2					1x	✓	✓
72	10	4					2	✓	✓
73	1	CCV						✓	Passed
74	11	OP1933-MB		30/5	S	OP1933	1x	✓	ND
75	12	F7279-3					5x	✓	✓ ↑RAA 2x
76	13	F7263-2					20x	✓	✓
77	14	3					20x	✓	✓
78	15	6					2x	✓	✓
79	16	8					5x	RR	2x
80	17	9					2x	✓	✓ Double SS
81	18	10					20x	✓	✓
82	1	CCV						✓	Passed
83	19	F7284-1					20x	✓	✓
84	20	F7284-3					1x	✓	RDL
85	21	4					4x	✓	✓
86	22	5					20x	✓	✓

atrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

ample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

HPLC ANALYSIS ' G

TE: 8/15/00	METHODS: 8310	ANALYST: [illegible]
LUMN TYPE: Pin PAH	METHOD FILE: '8310-46	RUN BATCH: GPH120
STRUMENT: HPLC1	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 15 ul

TA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
003287	23	F7263-5	8310	30/5ml	S	OP1933	2x	✓	✓
88	1	CCV						✓	Passed
89	1	CCV						✓	"
90	24	OP1945-LBS		100/1ml	Leach	OP1945	1x	✓	✓
91	25	LB						✓	ND
92	26	F7243-5a						✓	ND
93	27	7a						✓	ND
94	28	OP1945-LS						✓	✓
95	1	CCV						✓	Passed
96	29	OP1938-MS			S	OP1938	1x	✓	✓
97	30	MB						✓	ND
98	31	F7308-1		30/5ml				✓	ND
99	32	2						✓	ND
003800	33	5						✓	ND
01	34	6						✓	ND
02	2	OP1938-MS		30/5ml				✓	✓
03	3	-MSD		"				✓	✓
04	1	CCV						✓	Passed
05	4	F7308-3		30/10ml			12.20x	~~✓~~ MBA	50x ↑ BAA to chry
06	5	4		30/10ml				✓	" "
07	6	7		30/10ml				MBA	50x ↑ BAA to chry
08	7	8		30/10ml				✓	✓ matrix ↑ BAA to chry
09	8	9		30/5			10x	✓	✓ ↑ BAA to chry
10	9	~~OP7395-1~~ F7295-1						MBA	25x

atrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

ample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature:_____

HPLC ANALYSIS LOG

TE: 8- -00	METHODS: 5310	ANALYST:
LUMN TYPE: PinPAH	METHOD FILE: 8310_46	RUN BATCH: 0AA120
STRUMENT: HPLC1	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 15 ul

TA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
003811	10	F7255-2	5310	30/5	S	019335	10	✓	✓
12	11	3		30/10	L	L	10(2)	✓	✓
13	1	CCV						✓	Passed
14	1	CCV						✓	Passed

atrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

ample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature:

Cal	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA003710	01:01		8310 L4 CCV s808
No	2	2	8310_46	AA003711	02:01		op1920-bs
No	3	3	8310_46	AA003712	03:01		op1920-mb
No	4	4	8310_46	AA003713	04:01		f7231-1
No	5	5	8310_46	AA003714	05:01		f7243-1
No	6	6	8310_46	AA003715	06:01		op1920-ms
No	7	7	8310_46	AA003716	07:01		op1920-msd
No	8	8	8310_46	AA003717	08:01		f7243-2,50
No	9	9	8310_46	AA003718	09:01		f7243-3
No	10	10	8310_46	AA003719	10:01		f7243-4
No	11	11	8310_46	AA003720	11:01		f7243-5
No	12	1	8310_46	AA003721	12:01		ccv
No	13	12	8310_46	AA003722	13:01		f7243-6
No	14	13	8310_46	AA003723	14:01		f7243-7
No	15	14	8310_46	AA003724	15:01		f7254-1
No	16	15	8310_46	AA003725	16:01		f7254-2,50
No	17	16	8310_46	AA003726	17:01		f7254-3
No	18	17	8310_46	AA003727	18:01		f7254-4,50
No	19	18	8310_46	AA003728	19:01		f7254-5
No	20	19	8310_46	AA003729	20:01		f7254-6
No	21	20	8310_46	AA003730	21:01		f7254-7,100
No	22	21	8310_46	AA003731	22:01		f7254-8,100*2
No	23	1	8310_46	AA003732	23:01		ccv
	24	1	8310_46	AA003733	24:01		ccv
	25	22	8310_46	AA003734	25:01		op1933-bs
No	26	23	8310_46	AA003735	26:01		op1933-mb
No	27	24	8310_46	AA003736	27:01		f7279-1
No	28	25	8310_46	AA003737	28:01		f7279-2
No	29	26	8310_46	AA003738	29:01		f7279-3,10
No	30	27	8310_46	AA003739	30:01		f7289-9
No	31	28	8310_46	AA003740	31:01		f7289-10
No	32	29	8310_46	AA003741	32:01		f7289-11
No	33	30	8310_46	AA003742	33:01		op1933-ms
No	34	31	8310_46	AA003743	34:01		op1933-msd
No	35	1	8310_46	AA003744	35:01		ccv
No	36	32	8310_46	AA003745	36:01		f7263-2,100
No	37	33	8310_46	AA003746	37:01		f7263-3,100
No	38	34	8310_46	AA003747	38:01		f7263-4
No	39	2	8310_46	AA003748	39:01		f7263-5
No	40	3	8310_46	AA003749	40:01		f7263-6,10
No	41	4	8310_46	AA003750	41:01		f7263-7
No	42	5	8310_46	AA003751	42:01		f7263-8,50
No	43	1	8310_46	AA003752	43:01		ccv
No	44	1	8310_46	AA003753	44:01		ccv
No	45	6	8310_46	AA003754	45:01		f7263-9,20
No	46	7	8310_46	AA003755	46:01		f7263-10,100
No	47	8	8310_46	AA003756	47:01		f7284-1,100
No	48	9	8310_46	AA003757	48:01		f7284-2
No	49	10	8310_46	AA003758	49:01		f7284-3,10
	50	11	8310_46	AA003759	50:01		f7284-4,20
No	51	12	8310_46	AA003760	51:01		f7284-5,100
No	52	1	8310_46	AA003761	52:01		ccv
No	53	1	8310_46	AA003762	53:01		ccv

HPLC ANALYSIS LOG

TE: 8/4/00	METHODS: 8310	ANALYST: [illegible]
OLUMN TYPE: PinPak	METHOD FILE: 8310-46	RUN BATCH: 0-A#119
STRUMENT: HPLC 1	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 15 ul

TA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
4003710	1	CCV L4	8310		SOIL			✓	Passed
11	2	OP1920-KS		30/5ml	S	OP1920	1X	✓	✓
12	3	MB						✓	ND
13	4	F7231-1						✓	Trace
14	5	~~[illegible]~~ F7243-1						✓	ND
15	6	OP1920-MS						✓	✓
16	7	MSD						✓	✓
17	8	F7243-2					50X	RR	5X
18	9	3					1X	✓	ND
19	10	4						✓	ND
20	11	5						✓	ND
21	1	CCV						✓	Passed
22	12	F7243-6		30/5ml	S	OP1920	1X	✓	BAL
23	13	7						✓	BAL
24	14	F7254-1						✓	BAL
25	15	2					50X	RR	5X
26	16	3					1X	✓	BAL
27	17	4					50X	RR	5X
28	18	5					1X	✓	BAL
29	19	6					1X	✓	BAL
30	20	7					100X	RR	10X
31	21	4		30/10ml			(2X100) 200X	RR	20X
32	1	CCV						✓	Passed
33	1	CCV						✓	Passed

atrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

mple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

HPLC ANALYSIS LOG

E: 5/7/00	METHODS: 5310		ANALYST: [illegible]		
LUMN TYPE: Pin PAH	METHOD FILE: 8310-46		RUN BATCH: 0-AA 117		
TRUMENT: HPLC1	CALIB. DATE: 7/27/00		AMOUNT INJECTED: 15 ul		

TA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
.003734	22	OP1933-BS	5310	30/5ml	S	OP1933	1x	✓	✓
35	23	MB						✓	ND
36	24	F7279-1						✓	BDL
37	25	2						✓	trace
38	26	3					10x	✓	✓
39	27	F7289-9					1x	✓	✓
40	28	10						✓	BDL
41	29	11						✓	BDL
42	30	OP1933-MS						✓	✓
43	31	MSD						✓	✓
44	1	CCV						✓	Passed
45	32	F7263-2					100x	RR	20x
46	33	3					100x	RR	20x
47	34	4					1x	✓	BDL
48	2	5					1x	✓	✓
49	3	6					10x	RR	2x
50	4	7					1x	✓	BDL
51	5	8					50x	RR	5x
52	1	CCV						✓	Passed
53	1	CCV						✓	Passed
54	6	F7263-9					20x	RR	2x Double SS
55	7	10					100x	RR	20x
56	8	F7284-1					10x	RR	20x
57	9	2					1x	✓	BDL

atrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

mple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

E: S[illegible]4-00	METHODS: 8310	ANALYST: [illegible]
UMN TYPE: Min PAH	METHOD FILE: 8310-46	RUN BATCH: GAA119
TRUMENT: 1HPLC1	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 15 ul

A FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
003758	10	F F24-3	8310	30/5ml	S	OPG33	10 x	RR	1x
59	11	4	↓	↓	↓	↓	20 x	RR	4x
60	12	5	↓	↓	↓	↓	100 x	RR	20x
61	1	CCV	↓					✓	Passed
62	1	CCV	↓					✓	Passed

rix: Designate "W" for Water, "S" for Soil, and "O" for Oil

nple Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

Partial Sequence: C:\HPCHEM\1\SEQUENCE\0727PAHA.S GAA108

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA003250	01:01		8310 L1 STDs811
No	2	2	8310_46	AA003251	02:01		8310 L2 STD s810
No	3	3	8310_46	AA003252	03:01		8310 L3 STD s809
No	4	4	8310_46	AA003253	04:01		8310 L5 STD s808
No	5	5	8310_46	AA003254	05:01		8310 L5 STD s807
No	6	6	8310_46	AA003255	06:01		8310 L6 STD s806
No	7	7	8310_46	AA003256	07:01		8310 L4 STD s808
No	8	8	8310_46	AA003257	08:01		8310 20 ppm ICV
No	9	9	8310_46	AA003258	09:01		OP1872-MB
No	10	10	8310_46	AA003259	10:01		OP1872-BS
No	11	11	8310_46	AA003260	11:01		F7115-1
No	12	12	8310_46	AA003261	12:01		F7120-1
No	13	13	8310_46	AA003262	13:01		F7122-2
No	14	14	8310_46	AA003263	14:01		F7122-5
No	15	15	8310_46	AA003264	15:01		F7122-6
No	16	16	8310_46	AA003265	16:01		F7122-7
No	17	17	8310_46	AA003266	17:01		F7122-8
No	18	8	8310_46	AA003267	18:01		8310 20 ppm ICV
No	19	18	8310_46	AA003268	19:01		F7138-1
No	20	19	8310_46	AA003269	20:01		F7138-1,4x
No	21	20	8310_46	AA003270	21:01		F7138-2,5x
No	22	21	8310_46	AA003271	22:01		F7138-3
No	23	22	8310_46	AA003272	23:01		F7138-4
No	24	23	8310_46	AA003273	24:01		F7138-5
No	25	24	8310_46	AA003274	25:01		F7139-1,10x
No	26	25	8310_46	AA003275	26:01		F7139-2,5x
No	27	8	8310_46	AA003276	27:01		8310 20 ppm ICV
No	28	26	8310_46	AA003277	28:01		F7139-3,10x
No	29	27	8310_46	AA003278	29:01		F7139-4,5x
No	30	28	8310_46	AA003279	30:01		F7139-5,5x
No	31	29	8310_46	AA003280	31:01		F7139-6,5x
No	32	30	8310_46	AA003281	32:01		F7139-7
No	33	31	8310_46	AA003282	33:01		F7139-8
No	34	32	8310_46	AA003283	34:01		OP1872-MS
No	35	33	8310_46	AA003284	35:01		OP1872-MSD
No	36	8	8310_46	AA003285	36:01		8310 20 ppm ICV

HPLC ANALYSIS LOG

DATE: 07/27/00 A
COLUMN TYPE: Pinnacle PAH
INSTRUMENT: HPLC1

METHODS: 8310
METHOD FILE: 8310-46
CALIB. DATE: 07/27/00

ANALYST: Chelsea
RUN BATCH: GAA108
AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
AA00 3250	1	8310 L1 STD	8310		S811		1.0	✓	✓
3251	2	L2			S810			✓	✓
3252	3	L3			S809			✓	✓
3253	4	L5			S808			✓	✓
3254	5	L5			S807			✓	✓
3255	6	L6			S806			✓	✓
3256	7	L4			S808			✓	✓
3257	8	8310 20 ppm ICV			S891			✓	passes
3258	9	OP1872-MB		1000/1mL	W	OP1872		✓	BDL
3259	10	-BS						✓	✓
3260	11	F7115-1		990/1mL				✓	BDL
3261	12	F7120-1		910/1mL				✓	
3262	13	F7122-2		920/1mL				✓	
3263	14	-5		890/1mL				✓	
3264	15	-6		920/1mL				✓	
3265	16	-7		810/1mL				✓	
3266	17	-8		910/1mL				✓	
3267	8	8310 20 ppm ICV		—	S891			✓	Rerun samples
3268	18	F7138-1		980/1mL	W			✓	✓
3269	19	-1, 4x					4.0	✓	✓
3270	20	-2, 5x					5.0	✓	RL @ 2x
3271	21	-3					1.0	✓	BDL
3272	22	-4		970/1mL				✓	RL @ 2x
3273	23	-5		980/1mL				✓	BDL

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Chelsea

DATE: 07/27/00 7:A.M. [illegible]
COLUMN TY Pinnacle PAH
INSTRUMENT: HPLC1

METHODS: [illegible]
METHOD FILE: [illegible]
CALIB. DATE: [illegible]

ANALYST: [illegible]
RUN BATCH: [illegible]
AMOUNT INJECTED: [illegible]

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
AA00 3274	24	F7139-1, 10x	8310	990/1mL	W	OP1872	10.0	✓	RRC 1x
3275	25	-2, 5x	↓	980/1mL	↓	↓	5.0	✓	RRC 4x
3276	8	8310 20 ppm ICV	↓	—	S891	↓	1.0	✓	Rerun samples
3277	26	F7139-3, 10x	↓	980/1mL	W	↓	10.0	✓	RR C2x
3278	27	-4, 5x	↓	990/1mL	↓	↓	5.0	✓	RR C3x
3279	28	-5, ↓	↓	950/1mL	↓	↓	↓	✓	RRC 4x
3280	29	-6, ↓	↓	980/1mL	↓	↓	↓	✓	✓
3281	30	-7	↓	940/1mL	↓	↓	1.0	✓	1 BDL
3282	31	-8	↓	980/1mL	↓	↓	↓	✓	✓
3283	32	OP1872-MS	↓	490/1mL	↓	↓	↓	✓	✓
3284	33	-MSD	↓	↓	↓	↓	↓	✓	✓
3285	8	8310 20 ppm ICV	↓	—	S891	↓	↓	✓	Rerun samples

07/28/00

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Chelsea

SOLID SAMPLE PREP REPORT

Da[redacted]8-7-00 Method*: 8310 PAH Batch#: OP1920

Batch Started On: 8-7-00 Prior Number Of Samples In Batch : Ø Analyst: NJ

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 1920 - MB	—	30.0	0.5 mL	-	5.0 mL	
OP - BS	-	30.0		0.5 mL		
F7231-1	7	30.0				
F7243-1	6	30.0				
-2	6	30.0				
-3	6	30.0				
-4	6	30.0				
-5	6	30.0				
-6	6	30.1				
-7	6	30.0				
F7254-1	6	30.0				
-2	7	30.0				
-3	6	30.1				
-4	5	30.0				
-5	5	30.0				
-6	6	30.0				
-7	7	29.9				
-8	5	29.9			10.0 ml	Sample would not blow down 10.0 ml final volume
					MS-8/7/00	
		MS 8/7/00				
OP 1920 - MS	6	30.0	0.5 mL	0.5 mL	5.0 mL	F7243-1
OP - MSD	6	30.0				
OP ~~DUP~~						

Surrogate ID: E682 Conc: 200 ppm Exp. Date: 12-26-00 Bath Temp.: 74°C

Spike ID: E691 Conc: 200/200 ppm Exp. Date: 1-14-01 Bath Temp2.: —

Verified By

CH2CL2 Lot# 003216 Hexane Lot# — Na2SO4 Lot# 004853

[redacted]gent #: CH2CN-000931 Reagent #: — Reagent #: —

Comments:

Relinquished By: Michael Apinelli Date: 8/7/00

Partial Sequence: C:\HPCHEM\1\SEQUENCE\0727PAHA.S GAA108

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA003250	01:01		8310 L1 STDs811
No	2	2	8310_46	AA003251	02:01		8310 L2 STD s810
No	3	3	8310_46	AA003252	03:01		8310 L3 STD s809
No	4	4	8310_46	AA003253	04:01		8310 L5 STD s808
No	5	5	8310_46	AA003254	05:01		8310 L5 STD s807
No	6	6	8310_46	AA003255	06:01		8310 L6 STD s806
No	7	7	8310_46	AA003256	07:01		8310 L4 STD s808
No	8	8	8310_46	AA003257	08:01		8310 20 ppm ICV
No	9	9	8310_46	AA003258	09:01		OP1872-MB
No	10	10	8310_46	AA003259	10:01		OP1872-BS
No	11	11	8310_46	AA003260	11:01		F7115-1
No	12	12	8310_46	AA003261	12:01		F7120-1
No	13	13	8310_46	AA003262	13:01		F7122-2
No	14	14	8310_46	AA003263	14:01		F7122-5
No	15	15	8310_46	AA003264	15:01		F7122-6
No	16	16	8310_46	AA003265	16:01		F7122-7
No	17	17	8310_46	AA003266	17:01		F7122-8
No	18	8	8310_46	AA003267	18:01		8310 20 ppm ICV
No	19	18	8310_46	AA003268	19:01		F7138-1
No	20	19	8310_46	AA003269	20:01		F7138-1,4x
No	21	20	8310_46	AA003270	21:01		F7138-2,5x
No	22	21	8310_46	AA003271	22:01		F7138-3
No	23	22	8310_46	AA003272	23:01		F7138-4
No	24	23	8310_46	AA003273	24:01		F7138-5
No	25	24	8310_46	AA003274	25:01		F7139-1,10x
No	26	25	8310_46	AA003275	26:01		F7139-2,5x
No	27	8	8310_46	AA003276	27:01		8310 20 ppm ICV
No	28	26	8310_46	AA003277	28:01		F7139-3,10x
No	29	27	8310_46	AA003278	29:01		F7139-4,5x
No	30	28	8310_46	AA003279	30:01		F7139-5,5x
No	31	29	8310_46	AA003280	31:01		F7139-6,5x
No	32	30	8310_46	AA003281	32:01		F7139-7
No	33	31	8310_46	AA003282	33:01		F7139-8
No	34	32	8310_46	AA003283	34:01		OP1872-MS
No	35	33	8310_46	AA003284	35:01		OP1872-MSD
No	36	8	8310_46	AA003285	36:01		8310 20 ppm ICV

HPLC ANALYSIS LOG

DATE: 07/07/00 A
COLUMN TYPE: Pinnacle PAH
INSTRUMENT: HPLC1

METHODS: 8310
METHOD FILE: 8310_46
CALIB. DATE: 07/27/00

ANALYST: Chelsea
RUN BATCH: GAA108
AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
AA00 3250	1	8310 L1 STD	8310		S811		1.0	✓	✓
3251	2	L2			S810			✓	✓
3252	3	L3			S809			✓	✓
3253	4	L5			S808			✓	✓
3254	5	L5			S807			✓	✓
3255	6	L6			S806			✓	✓
3256	7	L4			S808			✓	✓
3257	8	8310 20 ppm ICV			S891			✓	passes
3258	9	OP1872-MB		1000/1mL	W	OP1872		✓	BDL
3259	10	-BS						✓	✓
3260	11	F7115-1		990/1mL				✓	BDL
3261	12	F7120-1		910/1mL				✓	
3262	13	F7122-2		920/1mL				✓	
3263	14	-5		890/1mL				✓	
3264	15	-6		920/1mL				✓	
3265	16	-7		810/1mL				✓	
3266	17	-8		910/1mL				✓	
3267	8	8310 20 ppm ICV		—	S891			✓	Rerun samples
3268	18	F7138-1		980/1mL	W			✓	✓
3269	19	-1, 4x					4.0	✓	✓
3270	20	-2, 5x					5.0	✓	RL @ 2x
3271	21	-3					1.0	✓	BDL
3272	22	-4		970/1mL				✓	RL @ 2x
3273	23	-5		980/1mL				✓	BDL

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Chelsea

Sequence Name: C:\HPCHEM\2\SEQUENCE\0812PRO.S
Comment:
Operator: marke
Data Path: C:\HPCHEM\2\DATA\0812PRO\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	OP10156	FL_PRO	1020ppm TPHS ccv s885
2	Sample	2	OP10157	FL_PRO	340ppm TPHS s887
3	Sample	3	OP10158	FL_PRO	solvent blank
4	Sample	4	OP10159	FL_PRO	op1924-mb
5	Sample	5	OP10160	FL_PRO	f7254-2,25
6	Sample	6	OP10161	FL_PRO	op1924-ms,25
7	Sample	7	OP10162	FL_PRO	op1924-msd,25
8	Sample	8	OP10163	FL_PRO	f7254-4,80
9	Sample	9	OP10164	FL_PRO	f7254-7,400
10	Sample	10	OP10165	FL_PRO	f7254-8,200
11	Sample	11	OP10166	FL_PRO	1020ppm TPHS ccv
12	Sample	12	OP10167	FL_PRO	f7263-2,200
13	Sample	13	OP10168	FL_PRO	f7263-3,200
14	Sample	14	OP10169	FL_PRO	f7263-6,200
15	Sample	15	OP10170	FL_PRO	f7263-7
16	Sample	16	OP10171	FL_PRO	f7263-8,100
17	Sample	17	OP10172	FL_PRO	f7263-9,40
18	Sample	18	OP10173	FL_PRO	f7263-10,200
19	Sample	19	OP10174	FL_PRO	1020ppm TPHS ccv
20	Sample	20	OP10175	FL_PRO	op1936-mb
21	Sample	21	OP10176	FL_PRO	op1936-bs
22	Sample	22	OP10177	FL_PRO	f7301-1,200
23	Sample	23	OP10178	FL_PRO	f7308-1
24	Sample	24	OP10179	FL_PRO	f7308-2
25	Sample	25	OP10180	FL_PRO	f7308-3,200
26	Sample	26	OP10181	FL_PRO	f7308-4,200
27	Sample	27	OP10182	FL_PRO	solvent blank
28	Sample	28	OP10183	FL_PRO	1020ppm TPHS ccv
29	Sample	29	OP10184	FL_PRO	f7308-5
30	Sample	30	OP10185	FL_PRO	f7308-6
31	Sample	31	OP10186	FL_PRO	f7308-7,200
32	Sample	32	OP10187	FL_PRO	f7308-8,200
33	Sample	33	OP10188	FL_PRO	f7308-9,200
34	Sample	34	OP10189	FL_PRO	f7321-1
35	Sample	35	OP10190	FL_PRO	f7321-2
36	Sample	36	OP10191	FL_PRO	1020ppm TPHS ccv
37	Sample	37	OP10192	FL_PRO	f7321-3
38	Sample	38	OP10193	FL_PRO	f7321-4
39	Sample	39	OP10194	FL_PRO	f7321-5
40	Sample	40	OP10195	FL_PRO	f7322-1,4
41	Sample	41	OP10196	FL_PRO	f7322-2,4
42	Sample	42	OP10197	FL_PRO	op1936-ms
43	Sample	43	OP10198	FL_PRO	op1936-msd

Sequence Name: C:\HPCHEM\2\SEQUENCE\0812PRO.S

Line	Type	Vial	DataFile	Method	Sample Name
44	Sample	44	OP10199	FL_PRO	1020ppm TPHS ccv

GC ANALYSIS LOG

DATE: 8/12/00
COLUMN TYPE: DB-5/17
INSTRUMENT: FID2

METHODS: FLPHO
METHOD FILE: FLPHO
CALIB. DATE: 7/22/00

ANALYST: MC
RUN BATCH: Gol 423
AMOUNT INJECTED: 1 ul

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DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
0P10180	25	F73083	FLPHO	300g/5ml	S	011936	x200 (10/5)	–	(MRX500)
81	26	-4	↓	↓	↓	↓	↓	–	TPH=50/500
82	27	solvent blank						–	BPL
83	28	10ppm TPHS cov						–	SSSS passed
84	29	F73085-5		300g/1ml	S	011936	x1	–	BPL
85	30	-6		↓	↓	↓	↓	–	BPL
86	31	-7		300g/15ml			x200 (10/5)	–	(MRX500)
87	32	-8		↓			↓	–	(MRX400)
88	33	-9		↓			↓	–	TPH=26(200)
89	34	F7321-1		300g/1ml			x1	–	BPL
90	35	-2		↓	↓	↓	↓	–	BPL
91	36	10ppm TPHS cov						–	SSSS passed
92	37	F7321-3		300g/1ml	S	011936	x1	–	TPH=11
93	38	-4		↓	↓	↓	↓	–	BPL
94	39	-5					↓	–	BPL
95	40	F7322-1					x4	–	(MRX1)
96	41	-2					↓	–	(MRX1)
97	42	011936-MS		↓	↓	↓	x1	–	✓
98	43	-MSD					↓	–	✓
99	44	10ppm TPHS cov	↓					–	SSSS passed
				8/13/00					

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [signature]

GC ANALYSIS

DATE: 8/12/00
COLUMN TYPE: DB-5/17
INSTRUMENT: FID2

METHODS: FLPHO
METHOD FILE: FLPHO
CALIB. DATE: 7/27/00

ANALYST: MC
RUN BATCH: G01423
AMOUNT INJECTED: G01422 / ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
0801156	1	1020ppm TPHS CCV	FLPHO					✓	SSS passed
57	2	340ppm TPHS						✓	SSS2 passed
58	3	Solvent Blank						✓	BAL
59	4	OP1424-MB		30.0g/1ml	S	OP1424	x1	✓	BAL
60	5	F7254-2					x25	✓	TPH=31(25)
61	6	OP1424-MS						✓	
62	7	-MSD						✓	
63	8	F7254-4					x80	✓	TPH=29(80)
64	9	-7					x400	✓	TPH=24(400)
65	10	-8					x200	✓	TPH=41(200)
66	11	1020ppm TPHS CCV						✓	SSS passed
67	12	F7263-2		30.0g/1ml	S	OP1424	x200	✓	TPH=31(200)
68	13	-3							TPH=23(200)
69	14	-6						✓	TPH=25(200)
70	15	-7					x1	✓	TPH=8.4
71	16	-8					x100	✓	TPH=27(100)
72	17	-9					x40	✓	TPH=30(40)
73	18	-10					x200		TPH=23(200)
74	19	1020ppm TPHS CCV						✓	SSS2 passed
75	20	OP1436-MB		30.0g/1ml	S	OP1436	x1	✓	BAL
76	21	-MS						✓	
77	22	F7301-1		30.0g/50ml			x200 (10ml/5)	✓	BAX10
78	23	F7308-1		30.0g/1ml			x1	✓	BAL
79	24	-2						✓	BAL

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [signature]

Sequence Name: C:\HPCHEM\2\SEQUENCE\0810PRO.S
Comment:
Operator: marke
Data Path: C:\HPCHEM\2\DATA\0810PRO\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	OP10117	FL_PRO	1020ppm TPHS ccv s885
2	Sample	2	OP10118	FL_PRO	340ppm TPHS s887
3	Sample	3	OP10119	FL_PRO	solvent blank
4	Sample	4	OP10120	FL_PRO	op1905-mb
5	Sample	5	OP10121	FL_PRO	f7194-1,10
6	Sample	6	OP10122	FL_PRO	f7194-2,10
7	Sample	7	OP10123	FL_PRO	f7194-6,10
8	Sample	8	OP10124	FL_PRO	f7194-8
9	Sample	9	OP10125	FL_PRO	f7194-9,2
10	Sample	10	OP10126	FL_PRO	f7194-10,2
11	Sample	11	OP10127	FL_PRO	op1905-ms,2
12	Sample	12	OP10128	FL_PRO	op1905-msd,2
13	Sample	13	OP10129	FL_PRO	f7194-15,2
14	Sample	14	OP10130	FL_PRO	1020ppm TPHS ccv
15	Sample	15	OP10131	FL_PRO	op1924-mb
16	Sample	16	OP10132	FL_PRO	op1924-bs
17	Sample	17	OP10133	FL_PRO	f7254-1
18	Sample	18	OP10134	FL_PRO	f7254-2
19	Sample	19	OP10135	FL_PRO	op1924-ms
20	Sample	20	OP10136	FL_PRO	op1924-msd
21	Sample	21	OP10137	FL_PRO	f7254-3
22	Sample	22	OP10138	FL_PRO	1020ppm TPHS ccv
23	Sample	23	OP10139	FL_PRO	f7254-4,4
24	Sample	24	OP10140	FL_PRO	f7254-5
25	Sample	25	OP10141	FL_PRO	f7254-6
26	Sample	26	OP10142	FL_PRO	f7254-7,40
27	Sample	27	OP10143	FL_PRO	f7254-8,40
28	Sample	28	OP10144	FL_PRO	f7263-2,40
29	Sample	29	OP10145	FL_PRO	f7263-3,40
30	Sample	30	OP10146	FL_PRO	1020ppm TPHS ccv
31	Sample	31	OP10147	FL_PRO	f7263-4
32	Sample	32	OP10148	FL_PRO	f7263-5,4
33	Sample	33	OP10149	FL_PRO	f7263-6,20
34	Sample	34	OP10150	FL_PRO	op1924-mb
35	Sample	35	OP10151	FL_PRO	f7263-7,10
36	Sample	36	OP10152	FL_PRO	f7263-8,40
37	Sample	37	OP10153	FL_PRO	f7263-9,10
38	Sample	38	OP10154	FL_PRO	f7263-10,40
39	Sample	39	OP10155	FL_PRO	1020ppm TPHS ccv

GC ANALYSIS LOG

DATE: 8/10/00	METHODS: FLPHO	ANALYST: ME
COLUMN TYPE: DB-5/17	METHOD FILE: FLPHO	RUN BATCH: GOP422
INSTRUMENT: FID2	CALIB. DATE: 7/27/00	AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP10017	1	1020ppm TPHSCW	FLPHO					✓	SSRS passed
18	2	3400ppm TPHS						✓	SSRS passed
19	3	solvent blank						✓	BDL
20	4	OP1905-MB		1000ml/1ml	W	OP1905	x1	✓	BDL
21	5	F7194-1		980ml/1ml			x10	✓	TPH=0.87(10)
22	6	-2		↓			↓	✓	TPH=1.0(10)
23	7	-6		990ml/1ml			↓	✓	TPH=1.3(10)
24	8	-8		950ml/1ml			x1	✓	TPH=1.0
25	9	-9		980ml/1ml			x2	✓	TPH=0.72(2)
26	10	-10		1000ml/1ml			↓	✓	TPH=0.98(2)
27	11	OP1905-MS		500ml/1ml				✓	✓
28	12	-MSD		↓				✓	✓
29	13	F7194-15		980ml/1ml	↓	↓	↓	✓	TPH=1.0(2)
30	14	1020ppm TPHSCW						✓	SSRS passed
31	15	OP1924-MB		30.0g/1ml	S	OP1924	x1	✓	RA to matrix
32	16	-BS		↓	↓	↓	↓	✓	✓
33	17	F7254-1						✓	TPH=14
34	18	-2						✓	RAx25
35	19	OP1924-MS						✓	RAx25
36	20	-MSD						✓	RAx25
37	21	F7254-3		↓	↓	↓	↓	✓	BDL
38	22	1020ppm TPHSCW						✓	SSRS passed
39	23	F7254-4	↓	30.0g/1ml	S	OP1924	x4	✓	RAx80
40	24	-5		↓	↓	↓	x1	✓	BDL

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [signature]

GC ANALYSIS LOG

DATE: 8/10/00
COLUMN TYPE: DB-5
INSTRUMENT: FID2

METHODS: FLPAO
METHOD FILE: FLPAO
CALIB. DATE: 7/27/00

ANALYST: ME
RUN BATCH: 60P422
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP10141	25	F7254-6	FLPAO	30.0g/1ml	S	OP1924	x1	—	BLK
42	26	-7					x40	—	BMX400
43	27	-8						—	BMX200
44	28	F7263-2						—	BMX200
45	29	-3						—	BMX200
46	30	1020ppm TPH5ccv						—	SSRS passed
47	31	F72634		30.0g/1ml	S	OP1924	x1	—	TPH=8.3
48	32	-5					x4	—	TPH=24(4)
49	33	-6					x20	—	BMX200
50	34	-7 OP1924-MB					x1	—	BLK
51	35	F7263-7					x10	—	BMXD
52	36	-8					x40	—	BMX400
53	37	-9					x10	—	BMXD
54	38	-10					x40	—	BMX200
55	39	1020ppm TPH5ccv						—	SSRS passed

8/11/00

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature:

0421

Sequence Name: C:\HPCHEM\2\SEQUENCE\0727PRO.S
Comment:
Operator: ChelseaJ
Data Path: C:\HPCHEM\2\DATA\0727PRO\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	OP09782	FL_PRO	340 ppm TPHS
2	Sample	2	OP09783	FL_PRO	680 ppm TPHS
3	Sample	3	OP09784	FL_PRO	1020 ppm TPHS
4	Sample	4	OP09785	FL_PRO	1360 ppm TPHS
5	Sample	5	OP09786	FL_PRO	1700 ppm TPHS
6	Sample	6	OP09787	FL_PRO	SB
7	Sample	7	OP09788	FL_PRO	OP1866-MB
8	Sample	8	OP09789	FL_PRO	OP1866-BS
9	Sample	9	OP09790	FL_PRO	F7110-1,20x
10	Sample	10	OP09791	FL_PRO	F7110-2,10x
11	Sample	11	OP09792	FL_PRO	F7125-1,10x
12	Sample	12	OP09793	FL_PRO	F7098-1,4x
13	Sample	13	OP09794	FL_PRO	F7098-2
14	Sample	14	OP09795	FL_PRO	F7098-3
15	Sample	15	OP09796	FL_PRO	F7098-5
16	Sample	16	OP09797	FL_PRO	F7098-7
17	Sample	17	OP09798	FL_PRO	1020 ppm CCV
18	Sample	18	OP09799	FL_PRO	F7098-8,20x
19	Sample	19	OP09800	FL_PRO	F7098-9
20	Sample	20	OP09801	FL_PRO	F7098-10,10x
21	Sample	21	OP09802	FL_PRO	F7114-3
22	Sample	22	OP09803	FL_PRO	F7114-22,20x
23	Sample	23	OP09804	FL_PRO	F7114-24,20x
24	Sample	24	OP09805	FL_PRO	F7121-1,4x
25	Sample	25	OP09806	FL_PRO	F7133-1,50x
26	Sample	26	OP09807	FL_PRO	OP1866-MS
27	Sample	27	OP09808	FL_PRO	OP1866-MSD
28	Sample	17	OP09809	FL_PRO	1020 ppm CCV
29	Sample	28	OP09810	FL_PRO	OP1864-MB
30	Sample	29	OP09811	FL_PRO	OP1864-BS
31	Sample	30	OP09812	FL_PRO	F7106-1
32	Sample	31	OP09813	FL_PRO	F7106-2
33	Sample	32	OP09814	FL_PRO	F7106-3,4x
34	Sample	33	OP09815	FL_PRO	F7106-4,4x
35	Sample	34	OP09816	FL_PRO	F7106-5
36	Sample	35	OP09817	FL_PRO	F7106-6
37	Sample	36	OP09818	FL_PRO	F7113-1
38	Sample	37	OP09819	FL_PRO	F7113-2,10x
39	Sample	17	OP09820	FL_PRO	1020 ppm CCV
40	Sample	38	OP09821	FL_PRO	340 ppm CCV
41	Sample	39	OP09822	FL_PRO	SB
42	Sample	40	OP09823	FL_PRO	850 ppm ICV s858
43	Sample	41	OP09824	FL_PRO	F7110-1,10x

Sequence Name: C:\HPCHEM\2\SEQUENCE\0727PRO.S

Line	Type	Vial	DataFile	Method	Sample Name
44	Sample	42	OP09825	FL_PRO	F7110-2
45	Sample	43	OP09826	FL_PRO	F7125-1
46	Sample	44	OP09827	FL_PRO	F7098-1
47	Sample	45	OP09828	FL_PRO	F7098-8,4x
48	Sample	46	OP09829	FL_PRO	F7098-10,2x
49	Sample	47	OP09830	FL_PRO	F7133-1,150x
50	Sample	48	OP09831	FL_PRO	1020 ppm CCV
51	Sample	49	OP09832	FL_PRO	F7113-3,4x
52	Sample	50	OP09833	FL_PRO	F7113-4,4x
53	Sample	51	OP09834	FL_PRO	F7113-5,4x
54	Sample	52	OP09835	FL_PRO	F7113-6,4x
55	Sample	53	OP09836	FL_PRO	F7113-7,10x
56	Sample	54	OP09837	FL_PRO	F7120-1
57	Sample	55	OP09838	FL_PRO	F7129-1,4x
58	Sample	56	OP09839	FL_PRO	F7129-2
59	Sample	57	OP09840	FL_PRO	F7129-3,4x
60	Sample	48	OP09841	FL_PRO	1020 ppm CCV
61	Sample	58	OP09842	FL_PRO	OP1864-MS,4x
62	Sample	59	OP09843	FL_PRO	OP1864-MSD,4x
63	Sample	60	OP09844	FL_PRO	F7106-3,2x
64	Sample	61	OP09845	FL_PRO	F7106-4
65	Sample	48	OP09846	FL_PRO	1020 ppm CCV
66	Sample	62	OP09847	FL_PRO	OP1876-MB
67	Sample	63	OP09848	FL_PRO	OP1876-BS
68	Sample	64	OP09849	FL_PRO	F7122-1
69	Sample	65	OP09850	FL_PRO	F7122-2
70	Sample	66	OP09851	FL_PRO	F7122-3
71	Sample	67	OP09852	FL_PRO	F7122-4
72	Sample	68	OP09853	FL_PRO	F7122-5
73	Sample	69	OP09854	FL_PRO	F7122-6
74	Sample	48	OP09855	FL_PRO	1020 ppm CCV
75	Sample	70	OP09856	FL_PRO	F7122-7
76	Sample	71	OP09857	FL_PRO	F7122-8
77	Sample	72	OP09858	FL_PRO	F7139-3,20x
78	Sample	73	OP09859	FL_PRO	F7139-4,5x
79	Sample	74	OP09860	FL_PRO	F7148-1
80	Sample	75	OP09861	FL_PRO	F7148-2,4x
81	Sample	76	OP09862	FL_PRO	F7148-3
82	Sample	48	OP09863	FL_PRO	1020 ppm CCV
83	Sample	77	OP09864	FL_PRO	340 ppm CCV
84	Sample	78	OP09865	FL_PRO	SB
85	Sample	79	OP09866	FL_PRO	F7148-4
86	Sample	80	OP09867	FL_PRO	F7148-5,4x
87	Sample	81	OP09868	FL_PRO	F7148-6,4x

GC ANALYSIS LOG

DATE: 07/27/00
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 07/27/00

ANALYST: Thelma
RUN BATCH: GOP416
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP 0 9782	1	340 ppm TPHS	FL PRO		S857		1.0	✓	✓
9783	2	680			S856			✓	✓
9784	3	1020			S855			✓	✓
9785	4	1360			S854			✓	✓
9786	5	1700			S853			✓	✓
9787	6	SB						✓	BDL
9788	7	OP1866-MB		30g/1mL	S	OP1866		✓	↓
9789	8	-BS						✓	✓
9790	9	F7110-1, 20x					20.0	✓	RRC 10x
9791	10	-2, 10x					10.0	✓	RRC 1x
9792	11	F7125-1, ↓					↓	✓	RRC 1x
9793	12	F7098-1, 4x					4.0	✓	RRC 1x
9794	13	-2					1.0	✓	BDL
9795	14	-3						✓	
9796	15	-5						✓	
9797	16	-7						✓	
9798	17	1020 ppm CCV		—	S855			✓	passes
9799	18	F7098-8, 20x		30g/1mL	S		20.0	✓	RRC 4x
9800	19	-9					1.0	✓	✓
9801	20	-10, 10x					10.0	✓	RRC 2x
9802	21	F7114-3					1.0	✓	✓
9803	22	-22, 20x					20.0	✓	✓
9804	23	-24, 20x					↓	✓	✓
9805	24	F7121-1, 4x					4.0	✓	✓

Matrix: Desig[illegible]e "W" for Water, "S" for Soil, and "O" for Oil
Sample Amou[illegible] Initial Sample Weight (g) or Volume (ml) / Final Volume (l[illegible]

Analyst's Signature: Thelma

GC ANALYSIS LOG

DATE: 07/27/00 cont'd
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 07/27/00

ANALYST: Thelma
RUN BATCH: GOP416 cont'd
AMOUNT INJECTED: 1 ul

0425

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP0 9806	25	F7133-1, 50x	FL PRO	30g/1mL	S	OP1866	50.0	✓	RRC 150x
9807	26	OP1866-MS	↓	↓	↓	↓	1.0	✓	✓
9808	27	-MSD					↓	✓	✓
9809	17	1020 ppm CCV		—	S855			✓	passes
9810	28	OP1864-MB		100g/1mL	W	OP1864		✓	BDL
9811	29	-BS		↓	↓	↓		✓	✓
9812	30	F7106-1		87g/1mL				✓	BDL
9813	31	-2		94g/1mL			↓	✓	✓
9814	32	-3, 4x		97g/1mL			4.0	✓	RRC 2x
9815	33	-4, ↓		↓			↓	✓	RRC 1x
9816	34	-5		92g/1mL			1.0	✓	BDL
9817	35	-6		95g/1mL			↓	✓	↓
9818	36	F7113-1		↓			↓	✓	↓
9819	37	-2, 10X		96g/1mL	↓	↓	10.0	✓	✓
9820	17	1020 ppm CCV		—	S855		1.0	✓	passes
9821	38	340 ppm CCV		—	S857		↓	✓	passes
9822	39	SB					↓	✓	BDL
9823	40	850 ppm ICV			S858		↓	✓	passes
9824	41	F7110-1 10X		30g/1mL	S	OP1866	10.0	✓	✓
9825	42	F7110-2		↓	↓	↓	1.0	✓	✓
9826	43	F7125-1					↓	✓	✓
9827	44	F7098-1					↓	✓	✓
9828	45	-8, 4x					4.0	✓	✓
9829	46	-10, 2x	↓	↓	↓	↓	2.0	✓	✓

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: Thelma

GC ANALYSIS LOG

DATE: 07/27/00 cont'd
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 07/27/00

ANALYST: Phelaco
RUN BATCH: GAA GOP46 cont'd
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP 00830	47	F7133-1, 150X	FL PRO	30g/1mL	W	OP1866	150.0	✓	✓
9831	48	1020 ppm CCV		—	S855		1.0	✓	passed
9832	49	F7113-(-3) 4X		980ml/ml	W	OP1864	x4	✓	(BA x1)
9833	50	-(-4) 4X		↓	↓	↓	↓	✓	(BA x1)
9834	51	07/27/00 -(-5) 4X		↓				✓	TPH=0.55(4)
9835	52	-(-6) 4X		970ml/ml			↓	✓	TPH=0.66(4)
9836	53	F7113-7		960ml/ml			x10	✓	TPH=1.0(10)
9837	54	F7120-1		910ml/ml			x1	✓	TPH=0.26
9838	55	F7129-1, 4X		800ml/ml			x4	✓	(BA x1)
9839	56	-2		830ml/ml			x1	✓	BDL
9840	57	-3, 4X		900ml/ml	↓	↓	x4	✓	(BA x1)
9841	48	1020 ppm CCV		—	S855			✓	passed
9842	58	OP1864-MS, 4X		470ml/ml	W	OP1864	x4	✓	(BA x1)
9843	59	-MSD, ↓		↓			↓	✓	(BA x1)
9844	60	F7106-3, 2X		970ml/ml			x2	✓	TPH=0.82(2)
9845	61	-4		↓	↓	↓	x1	✓	TPH=0.46
9846	48	1020 ppm CCV		—	S855			✓	passed
9847	62	OP1876-MB		1000ml/ml	W	OP1876	x1	✓	BDL
9848	63	-BS		↓				✓	✓
9849	64	F7122-1		940ml/ml				✓	TPH=0.90
9850	65	-2		850ml/ml				✓	(BA) toluene, surr. ↓
9851	66	-3		860ml/ml				✓	TPH=0.55
9852	67	-4		850ml/ml				✓	TPH=0.44 (BA toluene)
9853	68	-5	↓	890ml/ml	↓	↓	↓		TPH=0.38 ↓

Matrix: Desig[illegible]te "W" for Water, "S" for Soil, and "O" for Oil
Sample Amo[illegible] Initial Sample Weight (g) or Volume (ml) / Final Volume (

Analyst's Signature: Phelaco

GC ANALYSIS LOG

DATE: 07/27/00 cont'd
COLUMN TYPE: DB 5/17
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 07/27/00

ANALYST: [illegible]
RUN BATCH: GOP416 cont'd.
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP 0 9854	69	F7122-6	FL PRO	890ml/ml	W	081576	x1	✓	Autocont.
9855	48	1020 ppm CCV		—	S855			✓	passed
9856	70	F7122-7		800ml/ml			x1	✓	BDL BB
9857	71	-8		970ml/ml			↓	✓	BDL
9858	72	F7139-3, 20x		980ml/ml			x20	✓	Mix8
9859	73	-4, 5x		1000ml/ml			x5	✓	Mix5
9860	74	F7148-1		950ml/ml			x1	✓	Mix2
9861	75	-2, 4x		↓			x4	✓	Mix2
9862	76	-3		↓			x1	✓	Mix2
9863	48	1020 ppm CCV		—	S855			✓	failed
9864	77	340 ppm CCV			S857			✓	
9865	78	SB						✓	
9866	79	F7148-4		940ml/ml			x1	✓	Mix2
9867	80	-5, 4x		880ml/ml			x4	✓	Mix4
9868	81	-6,		↓				✓	Mix1
9869	82	-7,		950ml/ml					
9870	83	-8,		890ml/ml					
9871	84	-9, 10x							
9872	85	OP1876-MS							
9873	86	-MSD							
9874	48	1020 ppm CCV				7/29/00			

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

SOLID SAMPLE PREP REPORT

Da[redacted] 8-8-00 Method*: FL-Pro Batch#: OP1924

Batch Started On: 8-8-00 Prior Number Of Samples in Batch : Ø Analyst: NJ/KP

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 1924 - MB	-	30.0	0.5 mL	-	1.0 mL	
OP - BS	-	30.0		0.5 mL		
F7254 - 1	6	30.0				
- 2	7	30.0				
- 3	6	30.0				
- 4	5	30.0				
- 5	5	30.0				
- 6	6	30.1				
- 7	6	30.0				
- 8	5	30.0				
F7263 - 2	5	30.0				
- 3	5	30.1				
- 4	6	30.1				
- 5	5	30.0				
- 6	6	29.9				
- 7	6	30.1				
- 8	6	30.1				
- 9	5	30.0				
- 10	7	30.0				
OP 1924 - MS	7	30.0	0.5 mL	0.5 mL	1.0 mL	F7254 - 2
OP - MSD	7	30.0				
~~OP - DUP~~						

KP

P Surrogate ID: E700A (NJ verified) Conc: 100ppm Exp. Date: 1-31-01 Bath Temp.: 70°C

P Spike ID: E693 (NJ verified) Conc: 100ppm Exp. Date: 1-20-01 Bath Temp2.: —

CH2CL2 Lot# 003216 Hexane Lot# — Na2SO4 Lot# 004858

[redacted]gent #: Silicagel: 995185 Reagent #: — Reagent #: —

Comments:

[redacted]linquished By: Kendra L. Portader Date: 08-08-00

SOLID SAMPLE PREP REPORT

Date: 8-11-00 Method*: FL. PRO Batch#: OP1936

Batch Started On: 8-11-00 Prior Number Of Samples In Batch: Ø Analyst: NJ / RL

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP1936 - MB	-	30.0	0.5mL	-	1.0mL	
OP - BS	-	30.0		0.5mL		
F7301-1	1	30.0				Final Vol. 5.0mL
F7308-1	7	30.0				
-2	7	29.9				
-3	7	30.0				Final Vol. 5.0mL
-4	7	30.0				↓
-5	7	30.0				
-6	7	30.0				
-7	7	30.1				Final Vol. 5.0mL
-8	7	30.0				
-9	7	30.1				↓
1 321-1	3	30.1				
-2	2	29.9				
-3	5	30.0				
-4	5	30.1				
F7322-1	2	30.0				
-2	2	30.1				
F7321-5	5	29.9	↓		↓	
OP1936 - MS	7	30.0	0.5mL	0.5mL	1.0mL	F7308-5
OP - MSD	7	30.0	↓	↓	↓	↓
OP ~~DUP~~						

Surrogate ID: E700B Conc: 100ppm Exp. Date: 1/31/01 Bath Temp.: 74°C

Spike ID: E707 Conc: 100ppm Exp. Date: 2/9/01 Bath Temp2.:

CH2CL2 Lot# 003216 Hexane Lot# Na2SO4 Lot# 005399

Reagent #: Sigma - 995135 Reagent #: Reagent #:

Comments:

Date: 8-11-00

0130

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Gerald Walker**	**DATE:**	**January 8, 2001**
FROM:	**Suzanne I. Smith**	**CC:**	**File**
SUBJECT:	**Inorganic Data Validation – Lead and Anions** **CTO132 – NAS Pensacola** **SDG 26225**		
SAMPLES:	**5/Aqueous**		

NASPFFDUP-3	**NASPFFEQB-2**	**NASPFFMW-12S**
NASPFF MW-14I	**NASPFF MW-14S**	**TRIP BLANK**

OVERVIEW

The sample set for CTO132, SDG 26225; Naval Air Station Pensacola, Pensacola, Florida consists of four (4) aqueous environmental samples, and one (1) equipment blank. The environmental samples and equipment blank were analyzed for Lead. Only NASPFFMW-12S, NASPFFMW-14S, and NASPFFDUP-3 were analyzed for Anions. One pair of duplicate samples was analyzed with this sample set: NASPFFMW-12S/NASPFFDUP-3.

The samples were collected by Tetra Tech NUS on November 16, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010B (VOCs) and EPA Methods 300 and 376.1 (Anions) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
  • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Lead Fraction

Laboratory Blank Analysis

Affected samples: none

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
Lead	0.0094	0.047

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination. No lead was detected in the associated samples therefore no action was taken.

All other quality control criteria were met for this fraction.

Anion Fraction

All quality control criteria were met for this fraction.

Field Duplicate Summary

Analyte	NASPFFMW-12S(ug/L)	NASPFFDUP-3(ug/L)	%RPD
Nitrate	0.45	0.43	4.5
Nitrite	0.02	0.01	67
Sulfate	6	6	0

Detects for Nitrite in samples NASPFFMW-12S and NASPFFDUP-3 were qualified as estimated "J" due to field duplicate imprecision.

Executive Summary

Laboratory performance: Detects for Nitrite in samples NASPFFMW-12S and NASPFFDUP-3 were qualified as estimated "J" due to field duplicate imprecision.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne J. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132- NAS PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFDUP-3			NASPFFEQB-2			NASPFFMW-12S			NASPFFMW-14I		
SAMPLE DATE:	11/16/00			11/16/00			11/16/00			11/16/00		
LABORATORY ID:	AC03415			AC03414			AC03416			AC03418		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			MG/L			MG/L			MG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	0.010	U		0.010	U		0.010	U		0.010	U	

CTC132- NAS PENSACOLA
WA DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFMW-14S			
SAMPLE DATE:	11/16/00	/ /	/ /	/ /
LABORATORY ID:	AC03417			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	MG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
LEAD	0.010	U										

CTO132- NAS PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFDUP-3	NASPFFMW-12S	NASPFFMW-14S	
SAMPLE DATE:	11/16/00	11/16/00	11/16/00	/ /
LABORATORY ID:	AC03415	AC03416	AC03417	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMETERS												
NITRATE(MG/L)	0.43			0.45			0.38					
NITRITE(MG/L)	0.01	J	G	0.02	J	G	0.01	U				
SULFATE(MG/L)	6			6			9					
SULFIDE(MG/L)	1.0	U		~~0~~ 1.0	U		~~0~~ 1.0	U				

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFEQB-2	AC03414	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFMW-14I	AC03418	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
UG/ML	NASPFFDUP-3	AC03415	NORMAL	26225	METH	11/16/00	11/21/00	11/21/00	5	0	5
UG/ML	NASPFFMW-12S	AC03416	NORMAL	26225	METH	11/16/00	11/21/00	11/21/00	5	0	5
UG/ML	NASPFFMW-14S	AC03417	NORMAL	26225	METH	11/16/00	11/21/00	11/21/00	5	0	5
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	NTA	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	NTA	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	NTA	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	NTI	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	NTI	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	NTI	11/16/00	11/17/00	11/18/00	1	1	2
UG/L	NASPFFDUP-3	AC03415	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	NASPFFEQB-2	AC03414	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	NASPFFMW-12S	AC03416	NORMAL	26225	OV	11/16/00	11/27/00	11/27/00	11	0	11
UG/L	NASPFFMW-14I	AC03418	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	NASPFFMW-14S	AC03417	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	TRIP BLANK	AC03419	NORMAL	26225	OV	11/16/00	11/27/00	11/27/00	11	0	11
UG/L	NASPFFDUP-3	AC03415	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NASPFFEQB-2	AC03414	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NASPFFMW-12S	AC03416	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NASPFFMW-14I	AC03418	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NASPFFMW-14S	AC03417	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	[illegible]	5

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	SO4	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	SO4	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	SO4	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	SUL	11/16/00	11/20/00	11/20/00	4	0	4
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	SUL	11/16/00	11/20/00	11/20/00	4	0	4
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	SUL	11/16/00	11/20/00	11/20/00	4	0	4
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12
MG/L	NASPFFEQB-2	AC03414	NORMAL	26225	TPH	11/16/00	11/21/00	11/27/00	5	6	11
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12
MG/L	NASPFFMW-14I	AC03418	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC03414 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/2000

Client Contact: GERRY WALKER Date Received: 11/17/2000

Client Project Number: CTO 132 / N0516 Date Reported: 12/27/2000

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFFEQB-2

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/28/2000 Date Analyzed: 11/28/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/29/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/27/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.72JB	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	88	
Nitrobenzene-d5 (Range 37-104)	91	
p-Terphenyl-d14 (Range 15-132)	94	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	10	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	98	
4-Bromofluorobenzene (86-112)	94	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC03415 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/2000

Client Contact: GERRY WALKER Date Received: 11/17/2000

Client Project Number: CTO 132 / N0516 Date Reported: 12/27/2000

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFFDUP-3

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/17/2000 Date Analyzed: 11/18/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.43	0.01
Nitrite by IC	0.01	0.01
Sulfate by IC	6	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/28/2000 Date Analyzed: 11/28/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/29/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/21/2000 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	4.8	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	53	1.0
2-Methylnaphthalene	67	1.0
Acenaphthene	1.2	1.0
Acenaphthylene	<RDL	1.0
Anthracene	0.59J	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	1.7	1.0

Fluorene	1.3	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	130	1.0
Phenanthrene	2.5	1.0
Pyrene	0.94J	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	3.8	1.0

ANALYSIS: Sulfide Method Ref: 376.1
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/20/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B
Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	5.0
1,1,2,2-Tetrachloroethane	<RDL	5.0
1,1,2-Trichloroethane	<RDL	5.0
1,1-Dichloroethane	<RDL	5.0
1,1-Dichloroethene	<RDL	5.0
1,2-Dichloroethane	<RDL	5.0
1,2-Dichloropropane	<RDL	5.0
1,3-Dichloropropene	<RDL	5.0
2-Chloroethylvinyl ether	<RDL	50
Acrolein	<RDL	50
Acrylonitrile	<RDL	50
Benzene	560	25
Bromodichloromethane	<RDL	5.0
Bromoform	<RDL	25
Bromomethane	<RDL	5.0
Carbon tetrachloride	<RDL	5.0
Chlorobenzene	<RDL	5.0
Chloroethane	<RDL	5.0
Chloroform	<RDL	5.0
Chloromethane	<RDL	5.0
Ethylbenzene	550	25
Methyl-tert-butyl ether (MTBE)	<RDL	50
Methylene chloride	<RDL	25
Tetrachloroethene	<RDL	5.0
Toluene	11	5.0
trans-1,2-Dichloroethene	<RDL	5.0
Trichloroethene	<RDL	5.0
Vinyl chloride	<RDL	5.0
Xylenes (Total)	320	10

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	86	

Nitrobenzene-d5	(Range 37-104)	90
p-Terphenyl-d14	(Range 15-132)	35

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.9	
o-Terphenyl (Range 82-142)	87	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	92	
4-Bromofluorobenzene (86-112)	95	
Toluene-d8 (84-108)	95	

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LABORATORY REPORT

Accura Sample ID #: AC03416 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/2000

Client Contact: GERRY WALKER Date Received: 11/17/2000

Client Project Number: CTO 132 / N0516 Date Reported: 12/27/2000

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFFMW-12S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/17/2000 Date Analyzed: 11/18/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.45	0.01
Nitrite by IC	0.02	0.01
Sulfate by IC	6	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/28/2000 Date Analyzed: 11/28/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/29/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/21/2000 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	4.4	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	52	1.0
2-Methylnaphthalene	65	1.0
Acenaphthene	1.4	1.0
Acenaphthylene	<RDL	1.0
Anthracene	0.64J	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	1.7	1.0

Fluorene	1.5	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	130	1.0
Phenanthrene	2.6	1.0
Pyrene	0.97J	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	4.0	1.0

ANALYSIS: Sulfide Method Ref: 376.1
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/20/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B
Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	5.0
1,1,2,2-Tetrachloroethane	<RDL	5.0
1,1,2-Trichloroethane	<RDL	5.0
1,1-Dichloroethane	<RDL	5.0
1,1-Dichloroethene	<RDL	5.0
1,2-Dichloroethane	<RDL	5.0
1,2-Dichloropropane	<RDL	5.0
1,3-Dichloropropene	<RDL	5.0
2-Chloroethylvinyl ether	<RDL	50
Acrolein	<RDL	50
Acrylonitrile	<RDL	50
Benzene	590	25
Bromodichloromethane	<RDL	5.0
Bromoform	<RDL	25
Bromomethane	<RDL	5.0
Carbon tetrachloride	<RDL	5.0
Chlorobenzene	<RDL	5.0
Chloroethane	<RDL	5.0
Chloroform	<RDL	5.0
Chloromethane	<RDL	5.0
Ethylbenzene	550	25
Methyl-tert-butyl ether (MTBE)	<RDL	50
Methylene chloride	<RDL	25
Tetrachloroethene	<RDL	5.0
Toluene	11	5.0
trans-1,2-Dichloroethene	<RDL	5.0
Trichloroethene	<RDL	5.0
Vinyl chloride	<RDL	5.0
Xylenes (Total)	320	10

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	84	

Nitrobenzene-d5	(Range 37-104)	87
p-Terphenyl-d14	(Range 15-132)	36

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	7.6	
o-Terphenyl (Range 82-142)	91	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	96	
4-Bromofluorobenzene (86-112)	97	
Toluene-d8 (84-108)	94	

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LABORATORY REPORT

Accura Sample ID #: AC03417 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/2000

Client Contact: GERRY WALKER Date Received: 11/17/2000

Client Project Number: CTO 132 / N0516 Date Reported: 12/27/2000

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFFMW-14S

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/17/2000 Date Analyzed: 11/18/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	0.38	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	9	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/28/2000 Date Analyzed: 11/28/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/29/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/21/2000 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0

Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.34JB	1.0

ANALYSIS: Sulfide Method Ref: 376.1
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/20/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B
Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	6.6	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X_B/N Sample Surrogates (Waters Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	84	

Nitrobenzene-d5	(Range 37-104)	90
p-Terphenyl-d14	(Range 15-132)	84

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	28	
o-Terphenyl (Range 82-142)	103	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	95	
4-Bromofluorobenzene (86-112)	98	
Toluene-d8 (84-108)	92	

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LABORATORY REPORT

Accura Sample ID #: AC03418 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/2000

Client Contact: GERRY WALKER Date Received: 11/17/2000

Client Project Number: CTO 132 / N0516 Date Reported: 12/27/2000

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: NASPFFMW-14I

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/28/2000 Date Analyzed: 11/28/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/29/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0
Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	1.1B	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B
Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	0.78 J	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X B/N Sample Surrogates (Waters Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 43-111)	83	
Nitrobenzene-d5 (Range 37-104)	87	
p-Terphenyl-d14 (Range 15-132)	82	

ANALYSIS: X PRO Sample Surrogates (Water) Method Ref: FL-PRO
Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/28/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	9.5	
o-Terphenyl (Range 82-142)	102	

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B
Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	96	
Toluene-d8 (84-108)	93	

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LABORATORY REPORT

Accura Sample ID #: AC03419 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/16/2000

Client Contact: GERRY WALKER Date Received: 11/17/2000

Client Project Number: CTO 132 / N0516 Date Reported: 12/27/2000

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: TRIP BLANK

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X VOC Sample Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-128)	88	
4-Bromofluorobenzene (86-112)	95	

Toluene-d8 (84-108)	93

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AC03420 **Accura Project #: 26225**

Client: Tetra Tech Nus -Tallahassee Date Sampled: 11/17/2000

Client Contact: GERRY WALKER Date Received: 11/17/2000

Client Project Number: CTO 132 / N0516 Date Reported: 12/27/2000

Client Project Name: FORMER SHERMAN FIELD FUEL FARM Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: Anions Method Ref: 300.0

Date Ext/Dig/Prep: 11/17/2000 Date Analyzed: 11/18/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Nitrate by IC	<RDL	0.01
Nitrite by IC	<RDL	0.01
Sulfate by IC	<RDL	1

ANALYSIS: EDB Method Ref: 504.1

Date Ext/Dig/Prep: 11/28/2000 Date Analyzed: 11/28/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dibromoethane (EDB)	<RDL	0.05

ANALYSIS: Metals - Lead Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/28/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Lead	0.0094J	0.010

ANALYSIS: Methane Method Ref: RSK-175M

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/20/2000 Result Units: ug/ml

Analyte Name	Analytical Results	Reported Detection Limits
Methane	<RDL	0.010

ANALYSIS: PAH's - Low Level Method Ref: 8270C

Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	1.0
2-Methylnaphthalene	<RDL	1.0
Acenaphthene	<RDL	1.0
Acenaphthylene	<RDL	1.0
Anthracene	<RDL	1.0
Benzo(a)anthracene	<RDL	1.0
Benzo(a)pyrene	<RDL	1.0
Benzo(b)fluoranthene	<RDL	1.0
Benzo(g,h,i)perylene	<RDL	1.0
Benzo(k)fluoranthene	<RDL	1.0
Chrysene	<RDL	1.0
Dibenz(a,h)anthracene	<RDL	1.0
Fluoranthene	<RDL	1.0

Fluorene	<RDL	1.0
Indeno(1,2,3-cd)pyrene	<RDL	1.0
Naphthalene	<RDL	1.0
Phenanthrene	<RDL	1.0
Pyrene	<RDL	1.0

ANALYSIS: Petroleum Range Organics (PRO) Method Ref: FL-PRO
Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/27/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Petroleum Range Organics (PRO)	0.43J	1.0

ANALYSIS: Sulfide Method Ref: 376.1
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/20/2000 Result Units: mg/L

Analyte Name	Analytical Results	Reported Detection Limits
Sulfide	<RDL	1.0

ANALYSIS: VOC's - CTO 132 (25 ml purge) Method Ref: 8260B
Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	1.0
1,1,2,2-Tetrachloroethane	<RDL	1.0
1,1,2-Trichloroethane	<RDL	1.0
1,1-Dichloroethane	<RDL	1.0
1,1-Dichloroethene	<RDL	1.0
1,2-Dichloroethane	<RDL	1.0
1,2-Dichloropropane	<RDL	1.0
1,3-Dichloropropene	<RDL	1.0
2-Chloroethylvinyl ether	<RDL	10
Acrolein	<RDL	10
Acrylonitrile	<RDL	10
Benzene	<RDL	1.0
Bromodichloromethane	<RDL	1.0
Bromoform	<RDL	5.0
Bromomethane	<RDL	1.0
Carbon tetrachloride	<RDL	1.0
Chlorobenzene	<RDL	1.0
Chloroethane	<RDL	1.0
Chloroform	<RDL	1.0
Chloromethane	<RDL	1.0
Ethylbenzene	<RDL	1.0
Methyl-tert-butyl ether (MTBE)	<RDL	10
Methylene chloride	<RDL	5.0
Tetrachloroethene	<RDL	1.0
Toluene	<RDL	1.0
trans-1,2-Dichloroethene	<RDL	1.0
Trichloroethene	<RDL	1.0
Vinyl chloride	<RDL	1.0
Xylenes (Total)	<RDL	2.0

ANALYSIS: X Base Neutral QC Surrogates (W Method Ref: 8270C
Date Ext/Dig/Prep: 11/20/2000 Date Analyzed: 11/21/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
2-Fluorobiphenyl (Range 57-102)	79	

Nitrobenzene-d5	(Range 50-103)	80
p-Terphenyl-d14	(Range 64-113)	92

ANALYSIS: X_PRO QC Surrogates (Water) Method Ref: FL-PRO

Date Ext/Dig/Prep: 11/21/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
C(39) (Range 42-193)	10	
o-Terphenyl (Range 82-142)	95	

ANALYSIS: X_VOC QC Surrogates-Waters Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/27/2000 Date Analyzed: 11/27/2000 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
1,2-Dichloroethane-d4 (78-114)	90	
4-Bromofluorobenzene (85-111)	95	
Toluene-d8 (88-106)	94	

Accura Analytical Laboratory, Inc.

27542

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

CHAIN OF CUSTODY

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

Company Name: Tetra Tech NUS
Address: 1401 Oren Park Dr. Tallahassee, FL
Report Sent to: (Client Contact): Gerry Walker
Contact Phone # 8503859899 Fax # 8503859860
Project Name: Former Sherman Field Fuel Farm
Project Number: N0516 CTO132

Billing address:
Client P.O. #

For Laboratory Use Only
Custody Seal: Page 1 of 1
QC Level: Initial Temp: 4.0/2.0
Sample Condition: Analytical Project: 0225

Samplers: (signature): Dan Hartnett
Samplers: (printed): Dan Hartnett

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	VOC	EDB	Methane	PAH's	TRPH	Pb	Sulfide	Anions	Remarks	Accura Sample ID No. ~~AB~~ AC
NASPFFEQB-2	11/16/00 0800		✓	A	✓	Former Sherman Field Fuel Farm	11	3	3		2	2	1				03414
NASPFFDUP-3	11/16/00		✓	A	✓	↓	16	3	3	3	2	2	1	1	1		03415
NASPFF MW-12S	11/16/00 1000		✓	A	✓	↓		3	3	3	2	2	1	1	1		03416
NASPFF MW-14S	11/16/00 1300		✓	A	✓	↓		3	3	3	3	3	1	1	1		03417
NASPFFMW-14I	11/16/00 1555		✓	A	✓	↓		3	3		2	2	1				03418
Trip Blank			✓	A	✓	Accura		B2									03419
								DD 11/17/00									

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
Daniel Hartnett	11/16/00 1800	Fedex		
Relinquished By: Fedex	Date / Time 11/17/00 9:00	Received By:	Date / Time 11/17/00 9:00	Turnaround Time Requested:

COC97-2.XLS

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Gerald Walker**	**DATE:**	**January 8, 2001**
FROM:	**Suzanne I. Smith**	**CC:**	**File**
SUBJECT:	**Organic Data Validation – VOC, EDB, Methane, PAH, and TRPH** **CTO132 – NAS Pensacola** **SDG 26225**		
SAMPLES:	**6/Aqueous**		

NASPFFDUP-3	**NASPFFEQB-2**	**NASPFFMW-12S**
NASPFF MW-14I	**NASPFF MW-14S**	**TRIP BLANK**

OVERVIEW

The sample set for CTO132, SDG 26225; Naval Air Station Pensacola, Pensacola, Florida consists of four (4) aqueous environmental samples, one (1) equipment blank, and one (1) trip blank. The environmental samples and equipment blank were analyzed for Volatile Organic Carbons (VOCs), Ethylene Dibromide (EDB), Polycyclic Aromatic Hydrocarbons (PAHs), and Total Residual Petroleum Hydrocarbons (TRPHs). Only NASPFFMW-12S, NASPFFMW-14S, and NASPFFDUP-3 were analyzed for Methane. The trip blank was only analyzed for VOCs. One pair of duplicate samples was analyzed with this sample set: NASPFFMW-12S/NASPFFDUP-3.

The samples were collected by Tetra Tech NUS on November 16, 2000 and analyzed by Accura Analytical Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOCs), EPA Method 504.1 (EDB), RSK-175 (Methane), SW-846 Method 8270C (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
- Laboratory method/field quality control blank results
- Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Volatile Fraction

All quality control criteria were met for this fraction.

EDB Fraction

All quality control criteria were met for this fraction.

Methane Fraction

All quality control criteria were met for this fraction.

Polycyclic Aromatic Hydrocarbon Fraction

All other quality control criteria were met for this fraction.

Total Residual Petroleum Fraction

Laboratory Blank Analysis

Affected samples: NASPFFEQB-2, NASPFFMW-14I, and NASPFFMW-14S

Analyte	Maximum Concentration (mg/L)	Action Level (mg/L)
TRPH	0.43	2.15

An action level of 5X the maximum concentration has been used to evaluate the sample for contamination in preparation blanks. Dilution factors and sample aliquots were taken into account when evaluating for blank contamination. Results less than the action level and reporting limit (RL) were reported as a nondetect at the RL value. Results less than the action limit were reported as nondetects.

The equipment blank also had low level TRPH contamination, but all affected samples were modified due to laboratory blank contamination so no further action was taken.

All other quality control criteria were met for this fraction.

Field Duplicate Summary

Analyte	NASPFFMW-12S(ug/L)	NASPFFDUP-3(ug/L)	%RPD
Benzene	590	560	5.2
Ethylbenzene	550	550	0
Toluene	11	11	0
Xylenes, total	320	320	0
1-Methylnaphthalene	52	53	1.9
2-Methylnaphthalene	65	67	3.0
Acenaphthene	1.4	1.2	15
Anthracene	0.64	0.59	8.1
Fluoranthene	1.7	1.7	0
Fluorene	1.5	1.3	14
Naphthalene	130	130	0
Phenanthrene	2.6	2.5	3.9
Pyrene	0.97	0.94	3.1
TRPH	4	3.8	5.1
Methane	4.4	4.8	8.7

Executive Summary

Laboratory performance: Detects for TRPH less than the action level were reported as nondetects.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Suzanne I. Smith

Project Chemist
Tetra Tech NUS, Inc.

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFDUP-3	NASPFFDUP-3	NASPFFEQB-2	NASPFFMW-12S
SAMPLE DATE:	11/16/00	11/16/00	11/16/00	11/16/00
LABORATORY ID:	AC03415	AC03415	AC03414	AC03416
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/ML	UG/L	UG/L
FIELD DUPLICATE OF:	MW-12S			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	5.0	U		0	U		~~0~~ 1.0	U		~~0~~ 5.0	U	
1,1,2,2-TETRACHLOROETHANE	5.0	U		0	U		~~0~~	U		~~0~~	U	
1,1,2-TRICHLOROETHANE	5.0	U		0	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHANE	5.0	U		0	U		~~0~~	U		~~0~~	U	
1,1-DICHLOROETHENE	5.0	U		0	U		~~0~~	U		~~0~~	U	
1,2-DIBROMOETHANE	0.05	U		0	U		0.05	U		0.05	U	
1,2-DICHLOROETHANE	5.0	U		0	U		~~0~~ 1.0	U		~~0~~ 5.0	U	
1,2-DICHLOROPROPANE	5.0	U		0	U		~~0~~	U		~~0~~	U	
1,3-DICHLOROPROPENE	5.0	U		0	U		~~0~~	U		~~0~~	U	
2-CHLOROETHYL VINYL ETHER	50	U		0	U		~~0~~ 10	U		~~0~~ 50	U	
ACROLEIN	50	U		0	U		~~0~~ 10	U		~~0~~	U	
ACRYLONITRILE	50	U		0	U		~~0~~ 10	U		~~0~~	U	
BENZENE	560			560			~~0~~ 1.0	U		590		
BROMODICHLOROMETHANE	5.0	U		0	U		~~0~~	U		~~0~~ 5.0	U	
BROMOFORM	~~0~~ 25	U		0	U		~~0~~ 5.0	U		~~0~~ 25	U	
BROMOMETHANE	5.0	U		0	U		~~0~~ 1.0	U		~~0~~ 5.0	U	
CARBON TETRACHLORIDE	5.0	U		0	U		~~0~~	U		~~0~~	U	
CHLOROBENZENE	5.0	U		0	U		~~0~~	U		~~0~~	U	
CHLOROETHANE	5.0	U		0	U		~~0~~	U		~~0~~	U	
CHLOROFORM	5.0	U		0	U		~~0~~	U		~~0~~	U	
CHLOROMETHANE	5.0	U		0	U		~~0~~	U		~~0~~	U	
ETHYLBENZENE	550			550			~~0~~	U		550		
~~METHANE~~	~~4.8~~			~~4.8~~						~~4.4~~		
METHYL TERT-BUTYL ETHER	50	U		0	U		~~0~~ 10	U		~~0~~ 50	U	
METHYLENE CHLORIDE	~~0~~ 25	U		0	U		~~0~~ 5.0	U		~~0~~ 25	U	
TETRACHLOROETHENE	5.0	U		0	U		~~0~~ 1.0	U		~~0~~ 5.0	U	
TOLUENE	11			11			~~0~~	U		11		
TRANS-1,2-DICHLOROETHENE	5.0	U		0	U		~~0~~	U		~~0~~ 5.0	U	
TRICHLOROETHENE	5.0	U		0	U		~~0~~	U		~~0~~	U	
VINYL CHLORIDE	5.0	U		0	U		~~0~~	U		~~0~~	U	
XYLENES, TOTAL	320			320			~~0~~ 2.0	U		320		

CTO132-N PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFMW-12S			NASPFFMW-14I			NASPFFMW-14S			NASPFFMW-14S		
SAMPLE DATE:	11/16/00			11/16/00			11/16/00			11/16/00		
LABORATORY ID:	AC03416			AC03418			AC03417			AC03417		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/ML			UG/L			UG/L			UG/ML		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		0	U	
1,1,2,2-TETRACHLOROETHANE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,1,2-TRICHLOROETHANE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,1-DICHLOROETHANE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,1-DICHLOROETHENE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,2-DIBROMOETHANE	0	U		~~0~~ 0.05	U		~~0~~ 0.05	U		0	U	
1,2-DICHLOROETHANE	0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		0	U	
1,2-DICHLOROPROPANE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
1,3-DICHLOROPROPENE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
2-CHLOROETHYL VINYL ETHER	0	U		~~0~~ 10	U		~~0~~ 10	U		0	U	
ACROLEIN	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
ACRYLONITRILE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
BENZENE	590			~~0~~ 1.0	U		~~0~~ 1.0	U		0	U	
BROMODICHLOROMETHANE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
BROMOFORM	0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		0	U	
BROMOMETHANE	0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		0	U	
CARBON TETRACHLORIDE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
CHLOROBENZENE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
CHLOROETHANE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
CHLOROFORM	0	U		0.78	J	P	6.6			6.6		
CHLOROMETHANE	0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		0	U	
ETHYLBENZENE	550			~~0~~ ↓	U		~~0~~ ↓	U		0	U	
~~METHANE~~	~~4.4~~						~~0~~	~~U~~		~~0~~	~~U~~	
METHYL TERT-BUTYL ETHER	0	U		~~0~~ 10	U		~~0~~ 10	U		0	U	
METHYLENE CHLORIDE	0	U		~~0~~ 5.0	U		~~0~~ 5.0	U		0	U	
TETRACHLOROETHENE	0	U		~~0~~ 1.0	U		~~0~~ 1.0	U		0	U	
TOLUENE	1			~~0~~ ↓	U		~~0~~ ↓	U		0	U	
TRANS-1,2-DICHLOROETHENE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
TRICHLOROETHENE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
VINYL CHLORIDE	0	U		~~0~~ ↓	U		~~0~~ ↓	U		0	U	
XYLENES, TOTAL	320			~~0~~ 2.0	U		~~0~~ 2.0	U		0	U	

CTO132-NAS PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	TRIP BLANK			
SAMPLE DATE:	11/16/00	/ /	/ /	/ /
LABORATORY ID:	AC03419			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1-TRICHLOROETHANE	1.0	U										
1,1,2,2-TETRACHLOROETHANE	1.0	U										
1,1,2-TRICHLOROETHANE	1.0	U										
1,1-DICHLOROETHANE	1.0	U										
1,1-DICHLOROETHENE	1.0	U										
1,2-DICHLOROETHANE	1.0	U										
1,2-DICHLOROPROPANE	1.0	U										
1,3-DICHLOROPROPENE	1.0	U										
2-CHLOROETHYL VINYL ETHER	10	U										
ACROLEIN	10	U										
ACRYLONITRILE	10	U										
BENZENE	1.0	U										
BROMODICHLOROMETHANE	1.0	U										
BROMOFORM	5.0	U										
BROMOMETHANE	1.0	U										
CARBON TETRACHLORIDE	1.0	U										
CHLOROBENZENE	1.0	U										
CHLOROETHANE	1.0	U										
CHLOROFORM	1.0	U										
CHLOROMETHANE	1.0	U										
ETHYLBENZENE	1.0	U										
METHYL TERT-BUTYL ETHER	10	U										
METHYLENE CHLORIDE	5.0	U										
TETRACHLOROETHENE	1.0	U										
TOLUENE	1.0	U										
TRANS-1,2-DICHLOROETHENE	1.0	U										
TRICHLOROETHENE	1.0	U										
VINYL CHLORIDE	1.0	U										
XYLENES, TOTAL	2.0	U										

CTO132- N PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFDUP-3			NASPFFEQB-2			NASPFFMW-12S			NASPFFMW-14I		
SAMPLE DATE:	11/16/00			11/16/00			11/16/00			11/16/00		
LABORATORY ID:	AC03415			AC03414			AC03416			AC03418		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	53			~~0~~ 1.0	U		52			~~0~~ 1.0	U	
2-METHYLNAPHTHALENE	67			~~0~~	U		65			~~0~~	U	
ACENAPHTHENE	1.2			~~0~~	U		1.4			~~0~~	U	
ACENAPHTHYLENE	1.0	U		~~0~~	U		~~0~~ 1.0	U		~~0~~	U	
ANTHRACENE	0.59	J	P	~~0~~	U		0.64	J	P	~~0~~	U	
BENZO(A)ANTHRACENE	1.0	U		~~0~~	U		~~0~~ 1.0	U		~~0~~	U	
BENZO(A)PYRENE	1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(B)FLUORANTHENE	1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(G,H,I)PERYLENE	1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
BENZO(K)FLUORANTHENE	1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
CHRYSENE	1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
DIBENZO(A,H)ANTHRACENE	1.0	U		~~0~~	U		~~0~~	U		~~0~~	U	
FLUORANTHENE	1.7			~~0~~	U		1.7			~~0~~	U	
FLUORENE	1.3			~~0~~	U		1.5			~~0~~	U	
INDENO(1,2,3-CD)PYRENE	1.0	U		~~0~~	U		~~0~~ 1.0	U		~~0~~	U	
NAPHTHALENE	130			~~0~~	U		130			~~0~~	U	
PHENANTHRENE	2.5			~~0~~	U		2.6			~~0~~	U	
PYRENE	0.94	J	P	~~0~~	U		0.97	J	P	~~0~~	U	

CTO132- N PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFMW-14S			
SAMPLE DATE:	11/16/00	/ /	/ /	/ /
LABORATORY ID:	AC03417			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	~~0~~ 1.0	U										
2-METHYLNAPHTHALENE	0	U										
ACENAPHTHENE	0	U										
ACENAPHTHYLENE	0	U										
ANTHRACENE	0	U										
BENZO(A)ANTHRACENE	0	U										
BENZO(A)PYRENE	0	U										
BENZO(B)FLUORANTHENE	0	U										
BENZO(G,H,I)PERYLENE	0	U										
BENZO(K)FLUORANTHENE	0	U										
CHRYSENE	0	U										
DIBENZO(A,H)ANTHRACENE	0	U										
FLUORANTHENE	0	U										
FLUORENE	0	U										
INDENO(1,2,3-CD)PYRENE	0	U										
NAPHTHALENE	0	U										
PHENANTHRENE	0	U										
PYRENE	0	U										

CTO132- PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFDUP-3			NASPFFEQB-2			NASPFFMW-12S			NASPFFMW-14I		
SAMPLE DATE:	11/16/00			11/16/00			11/16/00			11/16/00		
LABORATORY ID:	AC03415			AC03414			AC03416			AC03418		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			MG/L			MG/L			MG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	3.8			~~0.72~~ 1.0	~~JB~~ U		4			1.1	U ~~B~~	

CTO132- N[illegible] PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFMW-14S			
SAMPLE DATE:	11/16/00	/ /	/ /	/ /
LABORATORY ID:	AC03417			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	MG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	~~0.84~~ 1.0	~~JB~~ U										

CTO132- N PENSACOLA
WATER DATA
AAL
SDG: 26225

SAMPLE NUMBER:	NASPFFDUP-3			NASPFFMW-12S			NASPFFMW-14S					
SAMPLE DATE:	11/16/00			11/16/00			11/16/00			/ /		
LABORATORY ID:	AC03415			AC03416			AC03417					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	UG/ML			UG/ML			UG/ML					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
DISSOLVED GASES												
METHANE	4.8			4.4			0.010	U				

26225

HOLDING TIME
01/02/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFEQB-2	AC03414	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFMW-14I	AC03418	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	M	11/16/00	11/27/00	11/29/00	11	2	13
UG/ML	NASPFFDUP-3	AC03415	NORMAL	26225	METH	11/16/00	11/21/00	11/21/00	5	0	5
UG/ML	NASPFFMW-12S	AC03416	NORMAL	26225	METH	11/16/00	11/21/00	11/21/00	5	0	5
UG/ML	NASPFFMW-14S	AC03417	NORMAL	26225	METH	11/16/00	11/21/00	11/21/00	5	0	5
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	NTA	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	NTA	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	NTA	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	NTI	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	NTI	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	NTI	11/16/00	11/17/00	11/18/00	1	1	2
UG/L	NASPFFDUP-3	AC03415	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	NASPFFEQB-2	AC03414	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	NASPFFMW-12S	AC03416	NORMAL	26225	OV	11/16/00	11/27/00	11/27/00	11	0	11
UG/L	NASPFFMW-14I	AC03418	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	NASPFFMW-14S	AC03417	NORMAL	26225	OV	11/16/00	11/28/00	11/28/00	12	0	12
UG/L	TRIP BLANK	AC03419	NORMAL	26225	OV	11/16/00	11/27/00	11/27/00	11	0	11
UG/L	NASPFFDUP-3	AC03415	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NASPFFEQB-2	AC03414	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NASPFFMW-12S	AC03416	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NASPFFMW-14I	AC03418	NORMAL	26225	PAH	11/16/00	11/20/00	11/21/00	4	1	5
UG/L	NA MW-14S	AC03417	NORMAL	26225	P.	11/16/00	11/20/00	11/21/00	4	1	5

Units	N[illegible]	Lab Id	Qc Type	Sdg	S[illegible]	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	S[illegible]DATE ANAL_DATE
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	SO4	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	SO4	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	SO4	11/16/00	11/17/00	11/18/00	1	1	2
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	SUL	11/16/00	11/20/00	11/20/00	4	0	4
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	SUL	11/16/00	11/20/00	11/20/00	4	0	4
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	SUL	11/16/00	11/20/00	11/20/00	4	0	4
MG/L	NASPFFDUP-3	AC03415	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12
MG/L	NASPFFEQB-2	AC03414	NORMAL	26225	TPH	11/16/00	11/21/00	11/27/00	5	6	11
MG/L	NASPFFMW-12S	AC03416	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12
MG/L	NASPFFMW-14I	AC03418	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12
MG/L	NASPFFMW-14S	AC03417	NORMAL	26225	TPH	11/16/00	11/21/00	11/28/00	5	7	12

Tetra Tech NUS, Inc. **Internal Correspondence**

TO: **Mr. Gerald Walker** **DATE: August 30, 2000**

FROM: **William Howard Engle** **CC: File**

SUBJECT: **Inorganic Data Validation – RCRA Metals, SPLP, and Grain Size**
CTO112 – NAS Pensacola
SDG F7243

SAMPLES: **3/Solids**

NASPFFSB12, 20-24'BGS **NASPFFSB12, 20-24'BGS***
NASPFFSB17, 10-12'BGS* **NASPFFSB18, 24-27'BGS****

OVERVIEW

The sample set for CTO112, SDG F7243; Naval Air Station Pensacola, Pensacola, Florida consists of three (2) solid environmental samples. The environmental sample not designated with a * was analyzed for RCRA Metals. The environmental samples designated with a * were extracted and analyzed by SPLP, followed by metals analysis. The environmental sample designated with a ** was analyzed for grain size.

The samples were collected by Tetra Tech NUS on August 2, 2000 and analyzed by Accutest Southeast Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010A (RCRA Metals), SW-846 Method 1311 (SPLP), and ASTM E422-63 (Grain Size) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/continuing calibrations
• Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in continuing calibration blank. Dilution factors and sample aliquots were taken into consideration when evaluating for blank contamination. Positive results < action level for iron were qualified nondetected "U" due to blank contamination.

All other quality control criteria were met for this fraction.

Grain Size Fraction

All quality control criteria were met for this fraction.

Executive Summary

Laboratory performance:	Iron was detected in the calibration blanks for the SPLP analysis. One sample was qualified for blank contamination.
Other factors affecting data quality:	None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (February, 1994), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

William Howard Engle

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting Documentation

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

DATA QUALIFIER DEFINITIONS:

U	-	Value is a nondetected result as reported by the laboratory and should not be considered present.
J	-	Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.
UJ	-	Nondetected result is considered to be estimated as a result of technical noncompliances.

APPENDIX A

Qualified Analytical Results

F7243

HOLDING TIME
08/25/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
%	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	GRSZ	08/02/00	/ /	08/17/00	0	0	15
MG/KG	NASPFFSB12, 20-24'BGS	F7243-7	NORMAL	F7243	M	08/02/00	08/07/00	08/12/00	5	5	10
MG/L	NASPFFSB17, 10-12'BGS	F7243-5A	NORMAL	F7243	M	08/02/00	08/16/00	08/21/00	14	5	19
UG/KG	NASPFFSB12, 20-24'BGS	F7243-7	NORMAL	F7243	OV	08/02/00	/ /	08/11/00	0	0	9
UG/KG	NASPFFSB12, 6-8'BGS	F7243-6	NORMAL	F7243	OV	08/02/00	/ /	08/10/00	0	0	8
MG/L	NASPFFSB17, 10-12'BGS	F7243-5A	NORMAL	F7243	OV	08/02/00	08/10/00	08/19/00	8	9	17
UG/KG	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	OV	08/02/00	/ /	08/09/00	0	0	7
UG/KG	NASPFFSB19, 20-24'BGS	F7243-3	NORMAL	F7243	OV	08/02/00	/ /	08/09/00	0	0	7
UG/KG	NASPFFSB27, 6-8'BGS	F7243-1	NORMAL	F7243	OV	08/02/00	/ /	08/10/00	0	0	8
UG/KG	NASPFFSB28, 7-11'BGS	F7243-2	NORMAL	F7243	OV	08/02/00	/ /	08/11/00	0	0	9
UG/L	TRIP BLANK	F7243-8	NORMAL	F7243	OV	08/02/00	/ /	08/16/00	0	0	14
MG/L	NASPFFSB12, 20-24'BGS	F7243-7A	NORMAL	F7243	PAH	08/02/00	08/14/00	08/15/00	12	1	13
UG/KG	NASPFFSB12, 6-8'BGS	F7243-6	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB17, 10-12'BGS	F7243-5	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB19, 20-24'BGS	F7243-3	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB27, 6-8'BGS	F7243-1	NORMAL	F7243	PAH	08/02/00	08/07/00	08/14/00	5	7	12
UG/KG	NASPFFSB28, 7-11'BGS	F7243-2	NORMAL	F7243	PAH	08/02/00	08/07/00	08/15/00	5	8	13
MG/L	NASPFFSB12, 20-24'BGS	F7243-7A	NORMAL	F7243	TPH	08/02/00	08/16/00	08/17/00	14	1	15
MG/KG	NASPFFSB12, 6-8'BGS	F7243-6	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/L	NASPFFSB17, 10-12'BGS	F7243-5A	NORMAL	F7243	TPH	08/02/00	08/16/00	08/17/00	14	1	15
MG/KG	NASPFFSB18, 24-27'BGS	F7243-4	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/KG	NASPFFSB19, 20-24'BGS	F7243-3	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/KG	NASPFFSB27, 6-8'BGS	F7243-1	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6
MG/KG	NASPFFSB28, 7-11'BGS	F7243-2	NORMAL	F7243	TPH	08/02/00	08/04/00	08/08/00	2	4	6

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS			
SAMPLE DATE:	08/02/00	/ /	/ /	/ /
LABORATORY ID:	F7243-7			
QC_TYPE:	NORMAL			
% SOLIDS:	95.1 %	100.0 %	100.0 %	100.0 %
UNITS:	MG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ARSENIC	0.35	U										
BARIUM	5.7	B										
CADMIUM	0.03	U										
CHROMIUM	4.3											
LEAD	1.1	B										
MERCURY	0.05	B										
SELENIUM	0.29	B										
SILVER	0.15	B										

NAS PENSACOLA
SPLP DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB12, 20-24'BGS	NASPFFSB17, 10-12'BGS	/ /	/ /
SAMPLE DATE:	08/02/00	08/02/00		
LABORATORY ID:	F7243-7A	F7243-5A		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	MG/L	MG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	0.03	U		0.03	U							
ANTIMONY	0.00239	U		0.00239	U							
ARSENIC	0.00345	U		0.00345	U							
BARIUM	0.00039	U		0.00039	U							
BERYLLIUM	0.00036	U		0.00036	U							
CADMIUM	0.00033	U		0.00033	U							
CALCIUM	0.0195	U		0.0195	U							
CHROMIUM	0.00063	U		0.00063	U							
COBALT	0.00079	U		0.00079	U							
COPPER	0.00074	U		0.00074	U							
IRON	0.1			0.032	U							
LEAD	0.00159	U		0.00159	U							
MAGNESIUM	0.0176	U		0.0176	U							
MANGANESE	0.00016	U		0.00016	U							
MERCURY	0.012			0.0028								
MOLYBDENUM	0.00068	U		0.00068	U							
NICKEL	0.001	U		0.001	U							
POTASSIUM	0.0282	U		0.0282	U							
SELENIUM	0.00204	U		0.00204	U							
SILVER	0.00096	U		0.00096	U							
SODIUM	0.153	U		0.153	U							
THALLIUM	0.00269	U		0.00269	U							
TIN	0.00223	U		0.00223	U							
VANADIUM	0.00071	U		0.00071	U							
ZINC	0.00083	U		0.00083	U							

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7243

SAMPLE NUMBER:	NASPFFSB18, 24-27'BGS			
SAMPLE DATE:	08/02/00	/ /	/ /	/ /
LABORATORY ID:	F7243-4			
QC_TYPE:	NORMAL			
% SOLIDS:	94.5 %	100.0 %	100.0 %	100.0 %
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMETERS												
NO. 10 SIEVE(%)	100											
NO. 120 SIEVE(%)	1.4											
NO. 18 SIEVE(%)	100											
NO. 230 SIEVE(%)	1.1											
NO. 4 SIEVE(%)	100											
NO. 40 SIEVE(%)	83.4											
NO. 60 SIEVE(%)	15.6											

APPENDIX B

Results as Reported by the Laboratory

Report of Analysis

Client Sample ID:	NASPFFSB12, 20-24'BGS		
Lab Sample ID:	F7243-7	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
		Percent Solids:	95.1
Project:	NAS Pensacola		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method
Arsenic	0.35 U	0.51	mg/kg	1	08/07/00	08/12/00	SJL	SW846 6010A
Barium	5.7 B	20.4	mg/kg	1	08/07/00	08/12/00	SJL	SW846 6010A
Cadmium	0.03 U	0.41	mg/kg	1	08/07/00	08/12/00	SJL	SW846 6010A
Chromium	4.3	1.0	mg/kg	1	08/07/00	08/12/00	SJL	SW846 6010A
Lead	1.1 B	10.2	mg/kg	1	08/07/00	08/12/00	SJL	SW846 6010A
Mercury	0.05 B	0.16	mg/kg	1	08/10/00	08/10/00	BP	SW846 7471A
Selenium	0.29 B	10.2	mg/kg	1	08/07/00	08/12/00	SJL	SW846 6010A
Silver	0.15 B	1.0	mg/kg	1	08/07/00	08/12/00	SJL	SW846 6010A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	NASPFFSB27, 6-8'BGS		
Lab Sample ID:	F7243-5A	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
		Percent Solids:	95.4
Project:	NAS Pensacola		

Metals Analysis, SPLP Leachate

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method
Aluminum	<0.20			0.20	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Antimony	<0.20			0.20	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Arsenic	<0.50	D004		0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Barium	<1.0	D005		1.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Beryllium	<0.0050			0.0050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Cadmium	<0.050	D006		0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Calcium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Chromium	<0.050	D007		0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Cobalt	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Copper	<0.025			0.025	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Iron	<0.10			0.10	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Lead	<0.50	D008		0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Magnesium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Manganese	<0.015			0.015	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Mercury	0.0028	D009		0.0020	mg/l	1	08/16/00	08/17/00	BP	SW846 7470A
Molybdenum	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Nickel	<0.040			0.040	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Potassium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Selenium	<0.50	D010		0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Silver	<0.050	D011		0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Sodium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Thallium	<0.50			0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Tin	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Vanadium	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Zinc	<0.020			0.020	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A

RL = Reporting Limit
MCL = Maximum Contamination Level (not available)

Report of Analysis

Client Sample ID:	NASPFFSB27, 6-8'BGS		
Lab Sample ID:	F7243-7A	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
		Percent Solids:	95.1
Project:	NAS Pensacola		

Metals Analysis, SPLP Leachate

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method
Aluminum	<0.20			0.20	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Antimony	<0.20			0.20	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Arsenic	<0.50	D004		0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Barium	<1.0	D005		1.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Beryllium	<0.0050			0.0050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Cadmium	<0.050	D006		0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Calcium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Chromium	<0.050	D007		0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Cobalt	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Copper	<0.025			0.025	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Iron	0.10			0.10	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Lead	<0.50	D008		0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Magnesium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Manganese	<0.015			0.015	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Mercury	0.012	D009		0.0020	mg/l	1	08/16/00	08/17/00	BP	SW846 7470A
Molybdenum	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Nickel	<0.040			0.040	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Potassium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Selenium	<0.50	D010		0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Silver	<0.050	D011		0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Sodium	<5.0			5.0	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Thallium	<0.50			0.50	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Tin	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Vanadium	<0.050			0.050	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A
Zinc	<0.020			0.020	mg/l	1	08/16/00	08/21/00	JK	SW846 6010A

RL = Reporting Limit
MCL = Maximum Contamination Level (not available)

Report of Analysis

Client Sample ID:	NASPFFSB18, 24-27'BGS		
Lab Sample ID:	F7243-4	**Date Sampled:**	08/02/00
Matrix:	SO - Soil	**Date Received:**	08/03/00
		Percent Solids:	94.5
Project:	NAS Pensacola		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed By		Method
Sieve Test - Particle Sizing							
No. 4 Sieve	100		%	1	08/17/00	HB	ASTM E422-63
No. 10 Sieve	100		%	1	08/17/00	HB	ASTM E422-63
No. 18 Sieve	100		%	1	08/17/00	HB	ASTM E422-63
No. 40 Sieve	83.4		%	1	08/17/00	HB	ASTM E422-63
No. 60 Sieve	15.6		%	1	08/17/00	HB	ASTM E422-63
No. 120 Sieve	1.4		%	1	08/17/00	HB	ASTM E422-63
No. 230 Sieve	1.1		%	1	08/17/00	HB	ASTM E422-63
Solids, Percent	94.5		%	1	08/10/00	BP	EPA 160.3 M

RL = Reporting Limit

APPENDIX C

Support Documentation

ACCUTEST

Sample Summary

Tetra-Tech, NUS

Job No: F7243

NAS Pensacola
Project No: CTO#112, JOB#0401

Sample Number	Collected Date	Collected Time By	Received	Matrix Code	Matrix Type	Client Sample ID
F7243-1	08/02/00	08:05 DH	08/03/00	SO	Soil	NASPFFSB27, 6-8'BGS
F7243-2	08/02/00	08:35 DH	08/03/00	SO	Soil	NASPFFSB28, 7-11'BGS
F7243-3	08/02/00	09:55 DH	08/03/00	SO	Soil	NASPFFSB19, 20-24'BGS
F7243-4	08/02/00	11:20 DH	08/03/00	SO	Soil	NASPFFSB18, 24-27'BGS
F7243-5	08/02/00	15:35 DH	08/03/00	SO	Soil	NASPFFSB17, 10-12'BGS
F7243-6	08/02/00	16:10 DH	08/03/00	SO	Soil	NASPFFSB12, 6-8'BGS
F7243-7	08/02/00	16:45 DH	08/03/00	SO	Soil	NASPFFSB12, 20-24'BGS
F7243-8	08/02/00	00:00 DH	08/03/00	AQ	Trip Blank Soil	TRIP BLANK
F7243-5A	08/02/00	15:35 DH	08/03/00	SO	Soil	NASPFFSB27, 6-8'BGS
F7243-7A	08/02/00	16:45 DH	08/03/00	SO	Soil	NASPFFSB27, 6-8'BGS

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND RO[illegible] SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F7243
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Tetra Tech NUS
ADDRESS: 1401 Oven Park Dr.
CITY, STATE, ZIP: Tallahassee, FL 32301
SEND REPORT TO: Gerry Walker
PHONE #: 850-385-9399

FACILITY INFORMATION

PROJECT NAME: NAS Pensacola, Sherman Field Fuel Farm
LOCATION: Pensacola, FL
PROJECT NO.: 0401
FAX #: 850-385-9860

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOC Encore	PAH (% solid)	TRPH (4oz)	% Sol (4oz)	Grain Size (8oz)	SPLP (8oz)	8RCRA (4oz)
1	NASPFFSB27, 6-8' BGS	8/2/00	0805	DH	SO	6					✓	3	1	1	1			
2	NASPFFSB-28, 7-11' "	"	0835	DH	SO	6					✓	3	1	1	1			
3	NASPFFSB-19, 20-24' "	"	0955	DH	SO	5					✓	3	1	1		1 DH		
4	NASPFFSB-18, 24-27' BGS	"	1120	DH	SO	6					✓	3	1	1		1		
5	NASPFFSB-17, 10-12' BGS	"	1535	DH	SO	6					✓	3	1	1			1	
6	NASPFFSB-~~13~~ DH 12, 6-8' BGS	"	1610	DH	SO	5					✓	3	1	1				
7	NASPFFSB-12, 20-24' BGS	"	1645	DH	SO	7					✓	3	1	1			1	1
8	Trip Blank	7/22/00	1030		W	2	✓					2						

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

LAB USE ONLY

DATA TURNAROUND INFORMATION

- [x] STANDARD
- [ ] 48 HOUR RUSH
- [ ] 24 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [ ] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

0045

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Dan Hartnett	8/2/00 1830	1. [illegible] 8/3 0900	2.		2.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
BY:	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 21 C

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.:_____

Samples: _____

Analysis Performed: _____

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes ( )	No ( )
Custody Seals in Tact?	Yes ( )	No ( )
Chain of Custody Sealed in Plastic?	Yes ( )	No ( )
Chain of Custody Filled out Properly?	Yes ( )	No ( )
Enough ice and Packing material?	Yes ( )	No ( )
All Bottles Sealed?	Yes ( )	No ( )
Any Bottles Broken?	Yes ( )	No ( )
Labels in good condition?	Yes ( )	No ( )
Labels agree with chain of custody?	Yes ( )	No ( )
Correct Containers Used?	Yes ( )	No ( )
Preserved Properly?	Yes ( )	No ( )
Sufficient Sample?	Yes ( )	No ( )

Comments: _____

_____

MP 2927

Metals Digestion Log: Soil

Method Digestion: 3050B Temp: 95 Thermometer ID#: 36

HNO_3	HCl	H_2O_2
Fischer	Fischer	Fischer
1100010	419100	983019

Sample	Wt	Final Vol	% Solid	Digestion Factor	Date	Comments
F7194-13 -DUP	1.10	100ml			8-7-00	
-13 -MS	1.04	↓			↓	spiked with 2.0 ml ACC 1185 + 1.0 ml 6N ~~1485~~ 1485 + 5.5 ml ACC 182
-13 MSD	1.05					same as MS
F7194-14	0.96					
F7166-1	1.19					
F7220-1	1.00					
F7232-1	1.22					
F7240-1	1.09					
F7243-7	1.03					
F7248-1	1.04					
F7194-13	1.21	✓			✓	
MB/SB						
MB/SB						same as MS

Analyst's Signature: Emily M. Mayo Date: 8-7-00

QC Review: Date:

@ wrong w.c. mj 8-10-00
(b) wrong page mj 8-10-00

MP 2939

Mercury Digestion Log: Water and Soil

Method Of Digestion: SW 846 7471A

~~Temp~~ Pressure: 15psi @ 15min

Analyst: an

Thermometer #: —

Time Started: _____

Time Ended: _____

Reagents Added:	HNO3	HCL	H2SO4	Pot. Perm.	Pot. Persulfate
Mfg: Fischer	→	→	→	→	
Lot#:	110010	419100	318084	GN1517	

Sample #	Wt(g)	Init.Vol.(ml)	Final Vol.(ml)	Date	Comments
F7114 -17 Dup	0.65		100 ml	8-9-00	
-17 MS	0.70				
1 -17 MSD	0.61				
2 -25	0.72				
3 -26	0.69				
4 -27	0.70				
5 -28	0.71				
6 F7136 -1A	0.63				
7 F7140 -1	0.65				
8 -2	0.70				
9 -3	0.61				
10 -4	0.64				
11 -5	0.62				
12 -6	0.61				
13 -7	0.61				
14 -8	0.60				
15 F7220-1	0.59				
16 F7240-1	0.62				
17 F7194-13	0.64				
18 -14	0.64				
19 F7243-7	0.64				
20 F7114-17	0.64				
MB					
SB					

Analyst's Signature: Emily A. Mayo

Date: 8-9-00

MP2966

Metals Digestion Log: Water

Method Of Digestion: SW 846 3010A Temp: _____ Thermometer ID#: _____

	HNO_3	HCl	H_2O_2
Added:			
Mfg:	Fischer →		
Lot #:	1100010	419100	

Sample #	Init. Vol / Wt	Final Vol / Wt	Date	Comments
F7243-5A -DUP	50	50	8-16-00	
-5A -MS	↓	↑	↓	spiked w/ 1.0 ml ACC 203 + 0.5 ml QN 1485 + 0.25 ml ACC 182
1- -MSD				Same as MS
2- F7243-5A				
3- -7A	↓	↑	↓	
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
MB/SB MB2	↓	↓	↓	
MB/SB	↓	↓	↓	Same as MS

570

Analyst's Signature: Emily M. Mays Date: 8-16-00

QC Review: _____ Date: _____

MP2964

TCLP

Mercury Digestion Log: Water and Soil

Method Of Digestion:_____ Temp:_____

Analyst:_____ Thermometer #:_____

Time Started:_____ Time Ended:_____

Reagents Added:	HNO3	HCL	H2SO4	Pot. Perm.	Pot. Persulfate
Mfg:					
Lot#:					

Sample #	Wt(g)	Init.Vol.(ml)	Final Vol.(ml)	Date	Comments
F7243-5A Dup		100 ml	100ml		
-5A MS					
1 F7243 -5AMSD					
2 F7243 -5A					
3 F7243 -7A					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
MB, MB2					
SB					

Analyst's Signature: Emily M. Mayo Date: 8-16-00

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0821M1.ASC Date Analyzed: 08/21/00 Methods: SW846 6010A
Analyst: JK Run ID: MA1999
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Tl,Sn,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:02	MA1999-ICV1	1		
10:26	MA1999-ICB1	1		
10:31	MA1999-CCV1	1		
10:36	MA1999-CCB1	1		
10:42	MA1999-CRI1	1		
10:47	MA1999-CRIA1	1		
10:56	MA1999-ICSA1	1		
11:03	MA1999-ICSAB1	1		
11:12	MA1999-CCV2	1		
11:20	MA1999-CCB2	1		
11:29	MP2965-MB1	1		
11:34	MP2965-B1	1		
11:39	MP2965-D1	1		
11:45	F7335-2	1		(sample used for QC only; not part of login F7243)
11:50	MP2965-S1	1		
11:55	MP2965-S2	1		
12:00	MP2965-SD1	5		
12:05	ZZZZZZ	1		
12:10	ZZZZZZ	1		
12:16	MA1999-CCV3	1		
12:21	MA1999-CCB3	1		
12:26	MP2966-MB1	1		
12:31	MP2966-B1	1		
12:36	MP2966-D1	1		
12:41	F7243-5A	1		
12:46	MP2966-S1	1		
12:51	MP2966-S2	1		
12:56	MP2966-SD1	5		
13:01	F7243-7A	1		
13:06	MP2966-MB2	1		
13:11	MA1999-CCV4	1		
13:16	MA1999-CCB4	1		
13:21	MP2973-MB1	1		

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Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0821M1.ASC Date Analyzed: 08/21/00 Methods: SW846 6010A
Analyst: JK Run ID: MA1999
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Tl,Sn,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:26	MP2973-B1	1		
13:31	MP2973-D1	1		
13:36	F7336-17A	1		(sample used for QC only; not part of login F7243)
13:41	MP2973-S1	1		
13:47	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:57	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:14	MA1999-CCV5	1		
14:19	MA1999-CCB5	1		
14:27	MA1999-CCB6	1		
14:38	MP2973-S2	1		
14:43	MP2973-SD1	5		
14:48	ZZZZZZ	1		
14:53	MP2955-MB1	1		
14:58	MP2955-B1	1		
15:03	MA1999-CCV6	1		
15:08	MA1999-CCB7	1		
15:13	MP2955-D1	1		
15:18	F7341-2	1		(sample used for QC only; not part of login F7243)
15:23	MP2955-S1	1		
15:28	MP2955-S2	1		
15:33	MP2955-SD1	5		
15:38	ZZZZZZ	1		
15:43	ZZZZZZ	1		
15:48	ZZZZZZ	1		
15:53	ZZZZZZ	1		
15:58	MA1999-CCV7	1		
16:03	MA1999-CCB8	1		
16:08	ZZZZZZ	1		
16:13	ZZZZZZ	1		
16:18	ZZZZZZ	1		

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Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0821M1.ASC Date Analyzed: 08/21/00 Methods: SW846 6010A
Analyst: JK Run ID: MA1999
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Tl,Sn,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:23	ZZZZZZ	1		
16:28	ZZZZZZ	1		
16:33	ZZZZZZ	1		
16:38	MA1999-CCV8	1		
16:43	MA1999-CCB9	1		
16:48	ZZZZZZ	1		
16:53	ZZZZZZ	1		
16:58	ZZZZZZ	1		
17:03	ZZZZZZ	1		
17:08	ZZZZZZ	1		
17:15	ZZZZZZ	1		
17:20	ZZZZZZ	1		
17:25	MA1999-CCV9	1		
17:30	MA1999-CCB10	1		
17:35	ZZZZZZ	1		
17:41	ZZZZZZ	1		
17:46	ZZZZZZ	1		
17:51	ZZZZZZ	1		
17:56	ZZZZZZ	1		
18:01	MA1999-CCV10	1		
18:06	MA1999-CCB11	1		
18:11	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:21	ZZZZZZ	1		
18:26	ZZZZZZ	1		
18:31	ZZZZZZ	1		
18:36	ZZZZZZ	1		
18:41	ZZZZZZ	1		
18:46	MA1999-CCV11	1		
18:51	MA1999-CCB12	1		

Refer to raw data for calibration curve and standards.

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Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: HG0817W1.HGX
Analyst: BP
Parameters: Hg

Date Analyzed: 08/17/00
Run ID: MA1993

Methods: EPA 245.1, SW846 7470A

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:00	MA1993-ICV1	1		
00:00	MA1993-ICB1	1		
00:00	MA1993-CCV1	1		
00:00	MA1993-CCB1	1		
00:00	MA1993-CRI1	1		
00:00	MP2953-MB1	1		
00:00	MP2953-B1	1		
00:00	MP2953-S1	1		
00:00	MP2953-S2	1		
00:00	MP2953-D1	1		
00:00	F7335-2	1		(sample used for QC only; not part of login F7243)
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	MA1993-CCV2	1		
00:00	MA1993-CCB2	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	MA1993-CCV3	1		
00:00	MA1993-CCB3	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	5		

576

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: HG0817W1.HGX Date Analyzed: 08/17/00 Methods: EPA 245.1, SW846 7470A
Analyst: BP Run ID: MA1993
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:00	MP2959-MB1	1		
00:00	MP2959-B1	1		
00:00	MA1993-CCV4	1		
00:00	MA1993-CCB4	1		
00:00	F7187-1	1		(sample used for QC only; not part of login F7243)
00:00	MP2959-D1	1		
00:00	MP2964-MB1	1		
00:00	MP2964-B1	1		
00:00	F7243-5A	1		
00:00	MP2964-S1	1		
00:00	MP2964-S2	1		
00:00	MP2964-D1	1		
00:00	F7243-7A	1		
00:00	MA1993-CCV5	1		
00:00	MA1993-CCB5	1		

Refer to raw data for calibration curve and standards.

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Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0812M1.ASC Date Analyzed: 08/12/00 Methods: SW846 6010A
Analyst: SJL Run ID: MA1985
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:34	MA1985-ICV1	1		
08:38	MA1985-ICB1	1		
08:43	MA1985-CCV1	1		
08:50	MA1985-CCB1	1		
08:56	MA1985-CRI1	1		
09:01	MA1985-CRIA1	1		
09:07	MA1985-CRIA2	1		
09:16	MA1985-ICSA1	1		
09:28	MA1985-ICSAB1	1		
09:33	MA1985-CCV2	1		
09:38	MA1985-CCB2	1		
09:43	MP2912-MB1	1		
09:48	MP2912-B1	1		
09:53	MP2912-D1	1		
09:58	F7156-2	1		(sample used for QC only; not part of login F7243)
10:03	MP2912-S1	1		
10:08	MP2912-S2	1		
10:13	MP2927-SD1	5		
10:18	ZZZZZZ	1		
10:23	ZZZZZZ	1		
10:28	MA1985-CCV3	1		
10:33	MA1985-CCB3	1		
10:37	ZZZZZZ	1		
10:42	ZZZZZZ	1		
10:47	ZZZZZZ	1		
10:52	ZZZZZZ	1		
10:57	ZZZZZZ	1		
11:02	ZZZZZZ	1		
11:07	ZZZZZZ	1		
11:12	ZZZZZZ	1		
11:17	ZZZZZZ	1		
11:22	MA1985-CCV4	1		
11:27	MA1985-CCB4	1		

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Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0812M1.ASC Date Analyzed: 08/12/00 Methods: SW846 6010A
Analyst: SJL Run ID: MA1985
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:32	ZZZZZZ	1		
11:36	ZZZZZZ	1		
11:41	ZZZZZZ	1		
11:46	ZZZZZZ	1		
11:51	ZZZZZZ	1		
11:56	ZZZZZZ	1		
12:01	ZZZZZZ	1		
12:06	ZZZZZZ	1		
12:11	MP2927-MB1	1		
12:16	MA1985-CCV5	1		
12:21	MA1985-CCB5	1		
12:26	MP2927-B1	1		
12:31	MP2927-D1	1		
12:35	F7194-13	1		(sample used for QC only; not part of login F7243)
12:40	MP2927-S1	1		
12:45	MP2927-S2	1		
12:50	MP2927-SD1	5		
12:55	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:10	MA1985-CCV6	1		
13:15	MA1985-CCB6	1		
13:20	ZZZZZZ	1		
13:25	F7243-7	1		
13:30	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:39	MA1985-CCV7	1		
13:44	MA1985-CCB7	1		

Refer to raw data for calibration curve and standards.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: HG0810S1.HGX Date Analyzed: 08/10/00 Methods: SW846 7471A
Analyst: BP Run ID: MA1981
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:00	MA1981-ICV1	1		
00:00	MA1981-ICB1	1		
00:00	MA1981-CCV1	1		
00:00	MA1981-CCB1	1		
00:00	MA1981-CRI1	1		
00:00	MP2937-MB1	1		
00:00	MP2937-B1	1		
00:00	MP2937-D1	1		
00:00	MP2937-S1	1		
00:00	MP2937-S2	1		
00:00	F7105-15	1		(sample used for QC only; not part of login F7243)
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	MA1981-CCV2	1		
00:00	MA1981-CCB2	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	MP2939-MB1	1		
00:00	MP2939-B1	1		
00:00	MA1981-CCV3	1		
00:00	MA1981-CCB3	1		
00:00	ZZZZZZ	1		
00:00	MP2939-D1	1		
00:00	MP2939-S1	1		
00:00	MP2939-S2	1		
00:00	F7114-17	1		(sample used for QC only; not part of login F7243)
00:00	ZZZZZZ	1		

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Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: HG0810S1.HGX Date Analyzed: 08/10/00 Methods: SW846 7471A
Analyst: BP Run ID: MA1981
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	MA1981-CCV4	1		
00:00	MA1981-CCB4	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	MA1981-CCV5	1		
00:00	MA1981-CCB5	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	F7243-7	1		
00:00	MA1981-CCV6	1		
00:00	MA1981-CCB6	1		

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0812M1.ASC
QC Limits: result < RL

Date Analyzed: 08/12/00
Run ID: MA1985

Methods: SW846 6010A
Units: ug/l

Metal	RL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	1.8	<10	-0.83	<10	-0.52	<10	-0.47	<10
Barium	200	.39	1.6	<200	1.0	<200	0.73	<200	0.71	<200
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	1.8	<5.0<	1.2	<5.0<	0.65	<5.0	0.54	<5.0
Calcium	1000	19.5	anr							
Chromium	10	.637	1.3	<10	0.74	<10	0.92	<10	0.59	<10
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	2.3	<5.0	1.6	<5.0	1.5	<5.0	1.2	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68								
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	5.0	<10	3.0	<10	3.7	<10	3.4	<10
Silver	10	.96	0.72	<10	0.44	<10	0.98	<10	1.0	<10
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2								
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0812M1.ASC
QC Limits: result < RL

Date Analyzed: 08/12/00
Run ID: MA1985

Methods: SW846 6010A
Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	-0.60	<10.0	-2.5	<10	1.3	<10	-0.60	<10
Barium	200	.39	0.80	<200B	0.74	<200	0.89	<200	0.84	<200
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	0.70	<5.0B	0.67	<5.0	0.64	<5.0	0.55	<5.0
Calcium	1000	19.5	anr							
Chromium	10	.637	0.70	<10.0B	0.47	<10	0.33	<10	0.56	<10
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	0.30	<5.0	0.98	<5.0	0.72	<5.0	0.90	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68								
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	3.9	<10.0B	3.1	<10	4.2	<10	4.0	<10
Silver	10	.96	1.3	<10.0B	1.5	<10	1.6	<10	1.7	<10
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2								
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

ACCUTEST

Test: Total Organic Carbon Units = mg/kg GNBatch ID: 32807

Product: TOC Date: 8/17/00

Method: Corp. Eng. 81 M or EPA Region 2 Lloyd Kahn (circle one) Analyst: Saluna G NV

RDL = 1000 mg/kg or 100 mg/kg (circle one)

Calibration Information

	Blank	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6	Std 7
Known:								
Absorbance:	See attached sheet							
Prep Date:								

Calibration Units = mg/l

Corr. Coefficient = _____

Intercept = _____

Slope = _____

Sample ID	%Sol.	Weight in g	Area Counts	Result in %	Result in mg/kg	%CV	Comments
5 E74129-3		0.0114	40857	43.89			OVERRANGE
↓		0.0112					
CCV			20721	2.543			

Analyst: _____ Date: _____ QCReviewer: _____ Date: _____

Manager Review: _____ Date: _____

Comments:

Form: GN-058

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7254
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: ALSE13989 - TETRFLTA: NAS Pensacola

File ID: 000817S1.TOC Date Analyzed: 08/17/00 Methods: CORP ENG 81 M
Analyst: JK Run ID: GN32807
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:55	GN32807-CRI1	1		
09:06	GN32807-HSTD1	1		
09:18	GN32807-ICV1	1		
09:31	GN32807-CCV1	1		
09:45	GP10504-MB3	1		
09:45	GP10523-MB2	1		Sample shown for QC tracking purposes only.
10:01	GP10504-B3	1		
10:01	GP10523-B2	1		Sample shown for QC tracking purposes only.
11:15	ZZZZZZ	1		
11:30	ZZZZZZ	1		
11:42	ZZZZZZ	1		
11:57	F7254-3	1		
12:11	F7254-5	1		
12:34	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:50	GN32807-CCV2	1		

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0814M1.ASC Date Analyzed: 08/14/00 Methods: SW846 6010A
QC Limits: result < RL Run ID: MA1989 Units: ug/l

Metal	RL	IDL	CCB raw	final
Aluminum	200	30	anr	
Antimony	5.0	2.39	anr	
Arsenic	10	3.4	0.80	<10
Barium	200	.39	1.6	<200
Beryllium	5.0	.36	anr	
Cadmium	5.0	.33	1.5	<5.0<
Calcium	1000	19.5	anr	
Chromium	10	.637	3.7	<10<
Cobalt	50	.797	anr	
Copper	25	.747	anr	
Iron	300	32	anr	
Lead	5.0	1.59	2.5	<5.0
Magnesium	5000	17.6	anr	
Manganese	15	.16	anr	
Molybdenum	50	.68		
Nickel	40	1	anr	
Potassium	5000	28.2	anr	
Selenium	10	2	1.1	<10
Silver	10	.96	-1.2	<10
Sodium	5000	153	anr	
Thallium	10	2.69	anr	
Tin	50	2.2		
Vanadium	50	.717	anr	
Zinc	20	.83	anr	

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0814M1.ASC
QC Limits: result < RL

Date Analyzed: 08/14/00
Run ID: MA1989

Methods: SW846 6010A
Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	-1.7	<10.0	0.75	<10	-1.5	<10.0	0.70	<10
Barium	200	.39	1.6	<200B	1.4	<200	1.5	<200B	1.5	<200
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	1.4	<5.0B	1.1	<5.0<	1.4	<5.0B	1.3	<5.0<
Calcium	1000	19.5	anr							
Chromium	10	.637	3.8	<10.0B	2.8	<10<	3.0	<10.0B	3.4	<10<
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	1.7	<5.0B	1.7	<5.0	1.5	<5.0	1.5	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68								
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	1.0	<10.0	1.8	<10	1.7	<10.0	1.7	<10
Silver	10	.96	0.20	<10.0	-0.010	<10	-0.60	<10.0	-0.80	<10
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2								
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0814M1.ASC
QC Limits: result < RL

Date Analyzed: 08/14/00
Run ID: MA1989

Methods: SW846 6010A
Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	-1.9	<10.0	1.0	<10	0.50	<10.0	-0.30	<10.0
Barium	200	.39	0.30	<200	1.3	<200	1.4	<200B	1.4	<200B
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	0.30	<5.0	0.69	<5.0	0.80	<5.0B	1.1	<5.0B
Calcium	1000	19.5	anr							
Chromium	10	.637	0.40	<10.0	2.6	<10<	4.4	<10.0B	3.3	<10.0B
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	1.0	<5.0	1.1	<5.0	2.2	<5.0B	1.6	<5.0B
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68								
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	-0.80	<10.0	-0.070	<10	1.9	<10.0	0.80	<10.0
Silver	10	.96	0.40	<10.0	-0.19	<10	-0.30	<10.0	0.30	<10.0
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2								
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0814M1.ASC
QC Limits: result < RL

Date Analyzed: 08/14/00
Run ID: MA1989

Methods: SW846 6010A
Units: ug/l

Metal	RL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	0.32	<10	-0.42	<10	-0.72	<10		
Barium	200	.39	0.64	<200	0.81	<200	1.2	<200		
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	0.64	<5.0	0.82	<5.0	1.2	<5.0<		
Calcium	1000	19.5	anr							
Chromium	10	.637	0.71	<10	1.0	<10	0.94	<10		
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	1.2	<5.0	1.4	<5.0	0.66	<5.0		
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68								
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	0.58	<10	2.0	<10	-0.49	<10		
Silver	10	.96	0.15	<10	0.060	<10	1.3	<10		
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2								
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0814M1.ASC Date Analyzed: 08/14/00 Methods: SW846 6010A
Analyst: JK Run ID: MA1989
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:33	ZZZZZZ	1		
18:38	MA1989-CCV8	1		
18:43	MA1989-CCB9	1		
18:48	ZZZZZZ	1		
18:53	ZZZZZZ	1		
18:58	ZZZZZZ	1		
19:03	ZZZZZZ	1		
19:08	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:18	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:33	MA1989-CCV9	1		
19:38	MA1989-CCB10	1		
19:43	ZZZZZZ	1		
19:48	ZZZZZZ	1		
19:53	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:03	ZZZZZZ	1		
20:08	ZZZZZZ	1		
20:13	ZZZZZZ	1		
20:18	ZZZZZZ	1		
20:23	ZZZZZZ	1		
20:28	MA1989-CCV10	1		
20:33	MA1989-CCB11	1		
20:38	ZZZZZZ	1		
20:43	ZZZZZZ	1		
20:48	ZZZZZZ	1		
20:53	ZZZZZZ	1		
20:58	MA1989-CCV11	1		
21:03	MA1989-CCB12	1		

Refer to raw data for calibration curve and standards.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0814M1.ASC Date Analyzed: 08/14/00 Methods: SW846 6010A
Analyst: JK Run ID: MA1989
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:35	MP2913-SD1	5		
15:40	F7254-2	1		
15:45	ZZZZZZ	1		
15:50	ZZZZZZ	1		
15:55	ZZZZZZ	1		
16:00	F7105-33	1		(sample used for QC only; not part of login F7254)
16:05	ZZZZZZ	1		
16:10	MA1989-CCV5	1		
16:16	MA1989-CCB6	1		
16:22	ZZZZZZ	1		
16:27	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:37	ZZZZZZ	1		
16:42	ZZZZZZ	1		
16:47	ZZZZZZ	1		
16:52	ZZZZZZ	1		
16:57	ZZZZZZ	1		
17:02	ZZZZZZ	1		
17:07	MA1989-CCV6	1		
17:12	MA1989-CCB7	1		
17:17	ZZZZZZ	1		
17:22	ZZZZZZ	1		
17:27	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:37	ZZZZZZ	1		
17:42	MA1989-CCV7	1		
17:47	MA1989-CCB8	1		
17:59	ZZZZZZ	1		
18:04	ZZZZZZ	1		
18:09	ZZZZZZ	1		
18:14	ZZZZZZ	1		
18:19	ZZZZZZ	1		
18:24	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0814M1.ASC Date Analyzed: 08/14/00 Methods: SW846 6010A
Analyst: JK Run ID: MA1989
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:12	MA1989-ICV1	1		
11:17	MA1989-ICB1	1		
11:22	MA1989-CCV1	1		
11:27	MA1989-CCB1	1		
11:36	MA1989-CRI1	1		
11:41	MA1989-CRIA1	1		
11:46	MA1989-ICSA1	1		
11:52	MA1989-ICSAB1	1		
13:03	MA1989-CCV2	1		
13:09	MA1989-CCB2	1		
13:28	MP2945-MB1	1		
13:33	MP2945-B1	1		
13:38	MP2945-D1	1		
13:43	F7293-1	1		(sample used for QC only; not part of login F7254)
13:48	MP2945-S1	1		
13:53	MP2945-S2	1		
13:58	MP2945-SD1	5		
14:03	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:21	MA1989-CCV3	1		
14:26	MA1989-CCB3	1		
14:32	MA1989-CCB4	1		
14:39	ZZZZZZ	1		
14:44	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:54	MP2913-MB1	1		
15:00	MP2913-B1	1		
15:05	MP2913-D1	1		
15:10	F7196-1	1		(sample used for QC only; not part of login F7254)
15:15	MP2913-S1	1		
15:20	MP2913-S2	1		
15:25	MA1989-CCV4	1		
15:30	MA1989-CCB5	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F7254
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: HG0814S1.HGX Date Analyzed: 08/14/00 Methods: SW846 7471A
Analyst: BP Run ID: MA1987
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:00	MA1987-ICV1	1		
00:00	MA1987-ICB1	1		
00:00	MA1987-CCV1	1		
00:00	MA1987-CCB1	1		
00:00	MA1987-CRI1	1		
00:00	MP2947-MB1	1		
00:00	MP2947-B1	1		
00:00	MP2947-D1	1		
00:00	MP2947-S1	1		
00:00	MP2947-S2	1		
00:00	F7293-1	1		(sample used for QC only; not part of login F7254)
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	MA1987-CCV2	1		
00:00	MA1987-CCB2	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	10		
00:00	ZZZZZZ	10		
00:00	ZZZZZZ	1		
00:00	ZZZZZZ	10		
00:00	MA1987-CCV3	1		
00:00	MA1987-CCB3	1		
00:00	ZZZZZZ	1		
00:00	F7254-2	1		
00:00	MA1987-CCV4	1		
00:00	MA1987-CCB4	1		

Refer to raw data for calibration curve and standards.

MP 2945

Metals Digestion Log: Soil

Method Of Digestion: 3050 B Temp: 95 Thermometer ID#: 36

	HNO_3	HCl	H_2O_2
Added:	—	—	—
Mfg:	Fischer	Fischer	Fischer
Lot #:	1100010	419100	983019

Sample #	Wt	Final Vol	% Solid	Digestion Factor	Date	Comments
F7293-1 -DUP	1.02	100ml			8-10-00	
-MS	0.97					spiked with 2.0ml ACC 145 + 1.0ml GN 145 + 0.5ml ACC 182
1- MSD	1.02					same as MSD
2- F7293-1	1.02					
3- -2	0.96					
4- -3	0.98					
5- -4	1.00					
6- -5	1.04					
-6	1.01					
8- F7254-2	1.00					
9- F7260-1	1.05					
10- F7289-9	1.12					
11- -10	1.02					
12- -11	0.98					
13- F7283-1	1.10					
14- -2	1.00					
15- -3	1.10					
16- -4	1.02					
17- -5	1.04					
18- -6	1.12					
19- -7	1.03					
20-						
MB/SB						
MB/SB						same as MS

Analyst's Signature: Emily M. Mangi Date: 8-10-00

QC Review: Date:

> > custody it just states SPLP. We need to know what analysis you are
> > requesting SPLPs on. I am faxing the COC over to you. Please list the
requested analysis for SPLP on the COC and fax it back to us.

> > Also, if there is anyway possible can you please have the field crew
> list
> > the requested analysis for SPLP clearly (i.e. SPLP-PAH, SPLP-8260,
> SPLP-FL
> > PRO etc.). This will aid in the job being logged in more efficiently
> and
> > correctly.
> >
> > Thanks
> > Linda R. Williams
> > Project Manager
> > Accutest Laboratories, SE
> > Ph: 407-425-6700
> > Fax: 407-425-0707
> > email: lindaw@accutest.com
> >

Linda Williams

From: Linda Williams
Sent: Monday, August 07, 2000 10:34 AM
To: Heather Wandrey
Cc: Harry Behzadi
Subject: FW: F7L54

Heather

Can you please cancel the SPLP analysis per email below?

Thanks
Linda R. Williams
Project Manager
Accutest Laboratories, SE
Ph: 407-425-6700
Fax: 407-425-0707
email: lindaw@accutest.com

—Original Message—
From: Walker, Gerald [SMTP:WalkerG@ttnus.com]
Sent: Monday, August 07, 2000 9:14 AM
To: Linda Williams
Subject: RE:

Linda:
In discussing the SPLP analysis we decided that the analysis may be premature. At this time we don't want to extract or analyze the samples collected for SPLP. If SPLP analysis is required in the future, we will recollect the required sample. Sorry for the inconvenience and confusion.

Gerry

> —Original Message—
> From: Linda Williams [SMTP:LindaW@Accutest.com]
> Sent: Friday, August 04, 2000 12:53 PM
> To: Gerry Walker (E-mail)
> Subject: FW:
> Importance: High
>
> Gerry
>
> Can you please help me out with this, so I can get the samples logged in?
>
> Thanks
> Linda R. Williams
> Project Manager
> Accutest Laboratories, SE
> Ph: 407-425-6700
> Fax: 407-425-0707
> email: lindaw@accutest.com
>
> > —Original Message—
> > From: Linda Williams
> > Sent: Friday, August 04, 2000 11:56 AM
> > To: Howard Engle (E-mail)
> > Subject:
> >
> > Howard
> >
> > We received some samples in today from NAS Pensacola. On the chain of

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: [illegible]

Samples: [illegible]

Analysis Performed: [illegible]

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes (✓)	No ( )
Custody Seals in Tact?	Yes (✓)	No ( )
Chain of Custody Sealed in Plastic?	Yes (✓)	No ( )
Chain of Custody Filled out Properly?	Yes (✓)	No ( )
Enough ice and Packing material?	Yes (✓)	No ( )
All Bottles Sealed?	Yes ( )	No ( )
Any Bottles Broken?	Yes ( )	No (✓)
Labels in good condition?	Yes (✓)	No ( )
Labels agree with chain of custody?	Yes (✓)	No ( )
Correct Containers Used?	Yes (✓)	No ( )
Preserved Properly?	Yes (✓)	No ( )
Sufficient Sample?	Yes (✓)	No ( )

Comments: See attached memo

ACCUTEST

So

CHAIN OF CUSTODY

4405 VINELAND ROAD, SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #:

ACCUTEST QUOTE #:

0043

CLIENT INFORMATION

NAME: ALSE

ADDRESS:

CITY, STATE, ZIP:

SEND REPORT TO:
PHONE #:

FACILITY INFORMATION

PROJECT NAME: F7254

LOCATION:

PROJECT NO.:

FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE		TOC										LAB USE ONLY
	F7254-3	8/3/00		TT	So	1							X										(1W)
	F7254-5	↓		↓	↓	1							X										

DATA TURNAROUND INFORMATION

- STANDARD
- 48 HOUR RUSH
- 24 HOUR EMERGENCY
- OTHER 14 DAY

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☐ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☒ OTHER (SPECIFY) FTI

COMMENTS/REMARKS

NJ

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
Mike Farrell	8/8/00 1450	1. FED EX	2. FED EX	8-9-00 1030	2. [illegible]
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 4.5 C

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND RO[illegible] SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F7258
ACCUTEST QUOTE #:

004

CLIENT INFORMATION

NAME: NAS Pensacola
COMPANY: Tetra Tech NUS
ADDRESS: 1401 Oven Park Dr.
CITY: Tallahassee STATE: FL ZIP: 32301
SEND REPORT TO: Gerry Walker
PHONE #: 850-385-9899

FACILITY INFORMATION

PROJECT NAME: Nas Pensacola
LOCATION: Site 20
PROJECT NO.: 0401
FAX #: 850-385-9860

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOC (encore)	PAH (4 oz)	TRPH (4 oz)	LAB USE ONLY
7	NASP20SB-1, 6'	8/3/00	1500	DH	SO	5						3	1	1	HOT
8	NASP20SB-2, 6'	8/3/00	1545	DH	SO	5						3	1	1	

DATA TURNAROUND INFORMATION

☒ STANDARD
☐ 48 HOUR RUSH
☐ 24 HOUR EMERGENCY
☐ OTHER _____

APPROVED BY: _____

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

☒ STANDARD
☐ COMMERCIAL "B"
☐ DISK DELIVERABLE
☐ STATE FORMS
☐ OTHER (SPECIFY) _____

COMMENTS/REMARKS

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
Dan Hartsell	8/3/00 1815	1. [illegible] 8/4 0900	2.		2.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.		3.	4.		4.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐
5.		5.			TEMPERATURE 2.0 C

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND RO, SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: 7252
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: TetraTech NUS
ADDRESS: 1401 Oven Park Dr.
CITY: Tallahassee STATE: FL ZIP: 32301
SEND REPORT TO: Gerry Walker
PHONE #: 850-385-9899

FACILITY INFORMATION

NAS Pensacola
PROJECT NAME: Sherman Fuel Farm
LOCATION: 0401
PROJECT NO.: 0401
FAX #: 850-385-9860

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOC (Encore) 8021	PAH (4 oz)	TRPH (4 oz)	SPLP (8 oz)	8 RCRA (4 oz)	TOC/TOX (4 oz)	Grain Size (8 oz)	LAB USE ONLY
9	Trip Blank	7/22/00	1030		W	2	✓												
1	NASPFFSB-13, 14-16' BGS	8/3/00	0800	DH	SO	6						3	1	1	1				
2	NASPFFSB-16, 22-26' BGS	"	0900	DH	SO	6						3	1	1		1			Hot
3	NASPFFSB-15, 8-12' BGS	"	0930	DH	SO	9						3	1	1			3	1	
4	NASPFFSB-11, 4-8' BGS	"	0955	DH	SO	6						3	1	1	1				Hot
5	NASPFFSB-14, 24-27' BGS	"	1030	DH	SO	8						3	1	1			3		
6	NASPFF DUP-1	"	—	DH	SO	5						3	1	1					

DATA TURNAROUND INFORMATION

☒ STANDARD
☐ 48 HOUR RUSH
☐ 24 HOUR EMERGENCY
☐ OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

☒ STANDARD
☐ COMMERCIAL "B"
☐ DISK DELIVERABLE
☐ STATE FORMS
☐ OTHER (SPECIFY)

COMMENTS/REMARKS

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
Dan Hartnett	8/3/00 1845	1. 8/4 0900	2.		2.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 2.0 C

ACCUTEST.

Sample Summary

Tetra-Tech, NUS

Job No: F7254

NAS Pensacola
Project No: CTO#112, JOB#0401

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
F7254-1	08/03/00	08:00 DH	08/04/00	SO	Soil	NASPFFSB-13,14-16'BGS
F7254-2	08/03/00	09:00 DH	08/04/00	SO	Soil	NASPFFSB-16,22-26'BGS
F7254-3	08/03/00	09:30 DH	08/04/00	SO	Soil	NASPFFSB-15,8-12'BGS
F7254-4	08/03/00	09:55 DH	08/04/00	SO	Soil	NASPFFSB-11,4-8'BGS
F7254-5	08/03/00	10:30 DH	08/04/00	SO	Soil	NASPFFSB-14,24-27'BGS
F7254-6	08/03/00	00:00 DH	08/04/00	SO	Soil	NASPFFDUP-1
F7254-7	08/03/00	15:00 DH	08/04/00	SO	Soil	NASP20SB-1,6'
F7254-8	08/03/00	15:45 DH	08/04/00	SO	Soil	NASP20SB-2,6'
F7254-9	08/03/00	00:00 DH	08/04/00	AQ	Trip Blank Water	TRIP BLANK

APPENDIX C

Support Documentation

Report of Analysis

Client Sample ID:	NASPFFSB-15,8-12'BGS		
Lab Sample ID:	F7254-3	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
		Percent Solids:	86.5
Project:	NAS Pensacola		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed By		Method
Sieve Test - Particle Sizing							
No. 4 Sieve	100		%	1	08/17/00	HB	ASTM E422-63
No. 10 Sieve	100		%	1	08/17/00	HB	ASTM E422-63
No. 18 Sieve	100		%	1	08/17/00	HB	ASTM E422-63
No. 40 Sieve	77.4		%	1	08/17/00	HB	ASTM E422-63
No. 60 Sieve	11.2		%	1	08/17/00	HB	ASTM E422-63
No. 120 Sieve	0.50		%	1	08/17/00	HB	ASTM E422-63
No. 230 Sieve	0.0		%	1	08/17/00	HB	ASTM E422-63
Solids, Percent	86.5		%	1	08/10/00	BP	EPA 160.3 M
Total Organic Carbon	<1200	1200	mg/kg	1	08/17/00	ANJ	CORP ENG 81 M

RL = Reporting Limit

Report of Analysis

Client Sample ID:	NASPFFSB-14,24-27'BGS		
Lab Sample ID:	F7254-5	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
		Percent Solids:	94.5
Project:	NAS Pensacola		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed By		Method
Solids, Percent	94.5		%	1	08/10/00	BP	EPA 160.3 M
Total Organic Carbon	<1000	1000	mg/kg	1	08/17/00	ANJ	CORP ENG 81 M

RL = Reporting Limit

Report of Analysis

Client Sample ID:	NASPFFSB-16,22-26'BGS		
Lab Sample ID:	F7254-2	**Date Sampled:**	08/03/00
Matrix:	SO - Soil	**Date Received:**	08/04/00
		Percent Solids:	96.6
Project:	NAS Pensacola		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method
Arsenic	0.36 U	0.52	mg/kg	1	08/10/00	08/14/00	JK	SW846 6010A
Barium	4.2 B	20.7	mg/kg	1	08/10/00	08/14/00	JK	SW846 6010A
Cadmium	0.03 U	0.41	mg/kg	1	08/10/00	08/14/00	JK	SW846 6010A
Chromium	2.2	1.0	mg/kg	1	08/10/00	08/14/00	JK	SW846 6010A
Lead	0.51 B	10.4	mg/kg	1	08/10/00	08/14/00	JK	SW846 6010A
Mercury	0.01 B	0.10	mg/kg	1	08/11/00	08/14/00	BP	SW846 7471A
Selenium	0.21 U	10.4	mg/kg	1	08/10/00	08/14/00	JK	SW846 6010A
Silver	0.1 U	1.0	mg/kg	1	08/10/00	08/14/00	JK	SW846 6010A

RL = Reporting Limit

APPENDIX B

Results as Reported by the Laboratory

NAS PE[illegible]COLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASPFFSB-14,24-27'BGS			NASPFFSB-15,8-12'BGS			NASPFFSB-15,8-12'BGS					
SAMPLE DATE:	08/03/00			08/03/00			08/03/00			/ /		
LABORATORY ID:	F7254-5			F7254-3			F7254-3					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	94.5 %			86.5 %			86.5 %			100.0 %		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMETERS												
NO. 10 SIEVE(%)				100			100					
NO. 120 SIEVE(%)				0.5			0.5					
NO. 18 SIEVE(%)				100			100					
NO. 230 SIEVE(%)				0			0					
NO. 4 SIEVE(%)				100			100					
NO. 40 SIEVE(%)				77.4			77.4					
NO. 60 SIEVE(%)				11.2			11.2					
TOTAL ORGANIC CARBON(MG/KG)	1060	U		1160	U		1160	U				
TOTAL ORGANIC HALIDES(MG/KG)	10	U		10	U		10	U				

NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F7254

SAMPLE NUMBER:	NASPFFSB-16,22-26'BGS			
SAMPLE DATE:	08/03/00	/ /	/ /	/ /
LABORATORY ID:	F7254-2			
QC_TYPE:	NORMAL			
% SOLIDS:	96.6 %	100.0 %	100.0 %	100.0 %
UNITS:	MG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ARSENIC	0.36	U										
BARIUM	4.2	B										
CADMIUM	0.03	U										
CHROMIUM	2.2											
LEAD	0.51	B										
MERCURY	0.01	B										
SELENIUM	0.21	U										
SILVER	0.1	U										

Units	[illegible]mple	Lab Id	Qc Type	Sdg	[illegible]	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	[illegible]P_DATE TO ANAL_DATE
MG/KG	NASP20SB-2,6'	F7254-8	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9
MG/KG	NASPFFDUP-1	F7254-6	NORMAL	F7254	TPH	08/03/00	08/08/00	08/11/00	5	3	8
MG/KG	NASPFFSB-11,4-8'BGS	F7254-4	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9
MG/KG	NASPFFSB-13,14-16'BGS	F7254-1	NORMAL	F7254	TPH	08/03/00	08/08/00	08/10/00	5	2	7
MG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	TPH	08/03/00	08/08/00	08/11/00	5	3	8
MG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	TPH	08/03/00	08/08/00	08/11/00	5	3	8
MG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9

F7254

HOLDING TIME
09/08/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
%	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	GRSZ	08/03/00	/ /	08/17/00	0	0	14
MG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	HG	08/03/00	08/11/00	08/14/00	8	3	11
MG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	M	08/03/00	08/10/00	08/14/00	7	4	11
UG/KG	NASP20SB-1,6'	F7254-7	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/KG	NASP20SB-2,6'	F7254-8	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/KG	NASPFFDUP-1	F7254-6	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-11,4-8'BGS	F7254-4	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/KG	NASPFFSB-13,14-16'BGS	F7254-1	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	OV	08/03/00	/ /	08/14/00	0	0	11
UG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	OV	08/03/00	/ /	08/15/00	0	0	12
UG/L	TRIP BLANK	F7254-9	NORMAL	F7254	OV	08/03/00	/ /	08/19/00	0	0	16
UG/KG	NASP20SB-1,6'	F7254-7	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
UG/KG	NASP20SB-2,6'	F7254-8	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
UG/KG	NASPFFDUP-1	F7254-6	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-11,4-8'BGS	F7254-4	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
UG/KG	NASPFFSB-13,14-16'BGS	F7254-1	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	PAH	08/03/00	08/07/00	08/14/00	4	7	11
UG/KG	NASPFFSB-16,22-26'BGS	F7254-2	NORMAL	F7254	PAH	08/03/00	08/07/00	08/15/00	4	8	12
MG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	TOC	08/03/00	08/17/00	08/17/00	14	0	14
MG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	TOC	08/03/00	08/17/00	08/17/00	14	0	14
MG/KG	NASPFFSB-14,24-27'BGS	F7254-5	NORMAL	F7254	TOX	08/03/00	08/28/00	08/30/00	25	2	27
MG/KG	NASPFFSB-15,8-12'BGS	F7254-3	NORMAL	F7254	TOX	08/03/00	08/28/00	08/30/00	25	2	27
MG/KG	NASP20SB-1,6'	F7254-7	NORMAL	F7254	TPH	08/03/00	08/08/00	08/12/00	5	4	9

APPENDIX A

Qualified Analytical Results

DATA QUALIFIER DEFINITIONS:

U - Value is a nondetected result as reported by the laboratory and should not be considered present.

J - Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.

UJ - Nondetected result is considered to be estimated as a result of technical noncompliances.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995
K = ICP Interference - Include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
[illegible] = Internal Standard Noncompliance
[illegible] = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning r < 0.995 (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (February, 1994), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

William Howard Engle

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting Documentation

RCRA Metals Fraction

Laboratory Blank Analysis

The following metals were detected in the laboratory method blank at the following maximum concentration:

Affected samples: NASPFFSB-16, 22-26'BGS

Analyte	Maximum Concentration (mg/kg)	Action Level (mg/kg)
Arsenic	1.0	5.0
Barium	1.6	8.0
Cadmium	1.5	7.5
Chromium	4.4	22
Lead	2.5	12.5
Selenium	2.0	10
Silver	1.3	6.5

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in continuing calibration blank. Dilution factors and sample aliquots were taken into consideration when evaluating for blank contamination. Positive results < action level for barium, chromium, and lead were qualified nondetected "U" due to blank contamination.

All other quality control criteria were met for this fraction.

TOC Fraction

All quality control criteria were met for this fraction.

Grain Size

All quality control criteria were met for this fraction.

Executive Summary

Laboratory performance: Barium, Chromium, and lead were detected in the calibration blanks. One sample was qualified for blank contamination.

Other factors affecting data quality: None.

Tetra Tech NUS, Inc. Internal Correspondence

TO: Mr. Gerald Walker DATE: October 3, 2000

FROM: William Howard Engle CC: File

SUBJECT: Inorganic Data Validation – RCRA Metals , TOC, and Grain Size
CTO112 – NAS Pensacola
SDG F7254

SAMPLES: 3/Solids

NASPFFSB-16, 22-26'BGS NASPFFSB-14, 24-27'BGS
NASPFFSB-15, 8-12'BGS

OVERVIEW

The sample set for CTO112, SDG F7254; Naval Air Station Pensacola, Pensacola, Florida consists of three (3) solid environmental samples. Sample, NASPFFSB-16, 22-26'BGS was analyzed for RCRA metals only. Sample NASPFFSB-14, 24-27'BGS was analyzed for TOC only. Sample NASPFFSB-15, 8-12'BGS was analyzed for TOC and Grain Size.

The samples were collected by Tetra Tech NUS on August 3, 2000 and analyzed by Accutest Southeast Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010A (RCRA Metals), Corps of Engineers Method 81 (TOC), and ASTM E422-63 (Grain Size) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- * Data Completeness
- * Holding Times
- * Initial/continuing calibrations
- Laboratory method/field quality control blank results
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: HG0817W1.HGX Date Analyzed: 08/17/00 Methods: EPA 245.1, SW846 7470A
QC Limits: result < RL Run ID: MA1993 Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final
Mercury	1.0	.06	0.024	<1.0	0.024	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: HG0817W1.HGX Date Analyzed: 08/17/00 Methods: EPA 245.1, SW846 7470A
QC Limits: result < RL Run ID: MA1993 Units: ug/l

Metal	RL	IDL	ICB raw	ICB final	CCB raw	CCB final	CCB raw	CCB final	CCB raw	CCB final
Mercury	1.0	.06	0	<1.0	0	<1.0	0.066	<1.0	0.024	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0821M1.ASC Date Analyzed: 08/21/00 Methods: SW846 6010A
QC Limits: result < RL Run ID: MA1999 Units: ug/l

Metal	RL	IDL	CCB raw	final
Aluminum	200	30	22.4	<200
Antimony	5.0	2.39	0.48	<5.0
Arsenic	10	3.4	-2.3	<10
Barium	200	.39	0.76	<200
Beryllium	5.0	.36	1.0	<5.0
Cadmium	5.0	.33	1.1	<5.0<
Calcium	1000	19.5	20.4	<1000
Chromium	10	.637	0.59	<10
Cobalt	50	.797	0.80	<50
Copper	25	.747	0.42	<25
Iron	300	32	6.5	<300
Lead	5.0	1.59	1.6	<5.0
Magnesium	5000	17.6	15.6	<5000
Manganese	15	.16	0.93	<15
Molybdenum	50	.68	5.7	<50<
Nickel	40	1	0.68	<40
Potassium	5000	28.2	145	<5000
Selenium	10	2	1.2	<10
Silver	10	.96	0.66	<10
Sodium	5000	153	-440	<5000
Thallium	10	2.69	5.8	<10
Tin	50	2.2	0.20	<50
Vanadium	50	.717	0.62	<50
Zinc	20	.83	1.4	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0821M1.ASC Date Analyzed: 08/21/00 Methods: SW846 6010A
QC Limits: result < RL Run ID: MA1999 Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	37.3	<200	47.7	<200	49.2	<200B	31.1	<200
Antimony	5.0	2.39	4.2	<5.0	4.4	<5.0	3.7	<5.0B	2.5	<5.0
Arsenic	10	3.4	0.12	<10	0.24	<10	1.2	<10.0	-0.94	<10
Barium	200	.39	0.87	<200	1.0	<200	1.1	<200B	0.96	<200
Beryllium	5.0	.36	1.5	<5.0<	1.4	<5.0<	1.5	<5.0B	1.4	<5.0<
Cadmium	5.0	.33	1.0	<5.0	1.2	<5.0<	1.1	<5.0B	1.2	<5.0<
Calcium	1000	19.5	30.3	<1000	43.2	<1000	28.2	<1000B	32.8	<1000
Chromium	10	.637	1.0	<10	1.1	<10	1.3	<10.0B	0.82	<10
Cobalt	50	.797	0.69	<50	0.78	<50	0.80	<50.0B	0.77	<50
Copper	25	.747	-0.26	<25	0.29	<25	0.20	<25.0	0.16	<25
Iron	300	32	19.8	<300	19.9	<300	21.6	<300	10.2	<300
Lead	5.0	1.59	1.2	<5.0	1.7	<5.0	1.3	<5.0	1.2	<5.0
Magnesium	5000	17.6	15.8	<5000	27.4	<5000	27.6	<5000B	19.6	<5000
Manganese	15	.16	0.99	<15	1.2	<15	1.3	<15.0B	1.1	<15
Molybdenum	50	.68	7.9	<50<	7.2	<50<	7.3	<50.0B	6.0	<50<
Nickel	40	1	1.1	<40	1.1	<40	0.90	<40.0	0.63	<40
Potassium	5000	28.2	148	<5000	164	<5000	112	<5000B	159	<5000
Selenium	10	2	1.8	<10	2.8	<10	3.5	<10.0B	2.1	<10
Silver	10	.96	1.6	<10	1.7	<10	1.7	<10.0B	1.1	<10
Sodium	5000	153	-340	<5000	-230	<5000	-145	<5000	-360	<5000
Thallium	10	2.69	5.8	<10	5.6	<10	6.4	<10.0B	6.2	<10
Tin	50	2.2	4.8	<50	5.1	<50	4.2	<50.0B	0.62	<50
Vanadium	50	.717	0.54	<50	0.86	<50	0.80	<50.0B	0.85	<50
Zinc	20	.83	1.6	<20	1.8	<20	1.9	<20.0B	1.4	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0821M1.ASC
QC Limits: result < RL

Date Analyzed: 08/21/00
Run ID: MA1999

Methods: SW846 6010A
Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	29.2	<200			29.7	<200	37.4	<200
Antimony	5.0	2.39	3.8	<5.0			3.8	<5.0	5.4	<6.0<
Arsenic	10	3.4	-0.11	<10			0.23	<10	1.5	<10
Barium	200	.39	0.87	<200			0.81	<200	1.1	<200
Beryllium	5.0	.36	1.7	<5.0<			1.3	<5.0<	1.2	<5.0<
Cadmium	5.0	.33	0.94	<5.0			0.97	<5.0	0.89	<5.0
Calcium	1000	19.5	22.8	<1000			17.8	<1000	18.0	<1000
Chromium	10	.637	0.70	<10			0.97	<10	0.87	<10
Cobalt	50	.797	0.51	<50			0.74	<50	0.44	<50
Copper	25	.747	-0.34	<25			0.20	<25	-0.070	<25
Iron	300	32	18.1	<300			11.4	<300	15.1	<300
Lead	5.0	1.59	1.2	<5.0			0.21	<5.0	1.0	<5.0
Magnesium	5000	17.6	15.3	<5000			15.1	<5000	15.5	<5000
Manganese	15	.16	1.0	<15			1.0	<15	0.97	<15
Molybdenum	50	.68	8.1	<50<			6.5	<50<	8.3	<50<
Nickel	40	1	0.81	<40			0.47	<40	0.79	<40
Potassium	5000	28.2	140	<5000			175	<5000	157	<5000
Selenium	10	2	3.2	<10			0.56	<10	3.1	<10
Silver	10	.96	1.3	<10			1.2	<10	0.90	<10
Sodium	5000	153	-360	<5000			-280	<5000	-210	<5000
Thallium	10	2.69	7.0	<10			5.6	<10	9.6	<10<
Tin	50	2.2	3.6	<50			3.9	<50	5.1	<50
Vanadium	50	.717	0.66	<50			0.91	<50	0.66	<50
Zinc	20	.83	1.0	<20			1.5	<20	1.6	<20

(*) Outside of QC limits
(anr) Analyte not requested

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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F7243
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0821M1.ASC Date Analyzed: 08/21/00 Methods: SW846 6010A
QC Limits: result < RL Run ID: MA1999 Units: ug/l

Metal	RL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	5.9	<200	13.5	<200	32.9	<200	24.7	<200
Antimony	5.0	2.39	4.9	<5.0	4.0	<5.0	1.8	<5.0	3.2	<5.0
Arsenic	10	3.4	1.6	<10	0.31	<10	0.060	<10	-1.6	<10
Barium	200	.39	-0.010	<200	0.49	<200	0.65	<200	0.63	<200
Beryllium	5.0	.36	0.15	<5.0	0.88	<5.0	1.1	<5.0<	1.3	<5.0<
Cadmium	5.0	.33	0.020	<5.0	0.60	<5.0	0.87	<5.0	0.74	<5.0
Calcium	1000	19.5	-2.2	<1000	10.0	<1000	16.2	<1000	13.4	<1000
Chromium	10	.637	0.55	<10	2.4	<10<	1.3	<10	0.86	<10
Cobalt	50	.797	-0.22	<50	0.47	<50	0.69	<50	0.37	<50
Copper	25	.747	-0.010	<25	0.18	<25	0.16	<25	-0.29	<25
Iron	300	32	13.0	<300	20.8	<300	18.3	<300	8.9	<300
Lead	5.0	1.59	0.85	<5.0	1.4	<5.0	1.3	<5.0	1.4	<5.0
Magnesium	5000	17.6	-2.4	<5000	7.7	<5000	17.0	<5000	13.3	<5000
Manganese	15	.16	0.28	<15	1.1	<15	1.0	<15	0.85	<15
Molybdenum	50	.68	3.8	<50	7.4	<50<	6.2	<50<	7.7	<50<
Nickel	40	1	0.74	<40	3.1	<40	1.4	<40	0.98	<40
Potassium	5000	28.2	179	<5000	181	<5000	169	<5000	177	<5000
Selenium	10	2	0.90	<10	-0.51	<10	2.1	<10	0.37	<10
Silver	10	.96	0.14	<10	0.25	<10	1.2	<10	1.2	<10
Sodium	5000	153	-250	<5000	-270	<5000	-230	<5000	-310	<5000
Thallium	10	2.69	1.8	<10	2.2	<10	2.6	<10	5.6	<10
Tin	50	2.2	6.2	<50	4.5	<50	6.4	<50	2.7	<50
Vanadium	50	.717	-0.21	<50	0.45	<50	0.45	<50	0.45	<50
Zinc	20	.83	0.37	<20	0.94	<20	1.1	<20	0.84	<20

(*) Outside of QC limits
(anr) Analyte not requested

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GN6106

SAMPLE NUMBER	MESH (100g) 4	10	18	40	60	120	240	pan
1. F7081-30	0	2.25	10.11	21.60	10.20	4.92	0.93	0.35
2. F7081-33	1.72	7.45	16.33	17.10	4.30	2.84	0.74	0.22
3. -36	5.87	12.65	13.56	9.55	4.52	2.89	0.42	0.08
4. -39	1.34	7.23	9.65	12.55	10.72	8.18	0.90	0.21
5. -42	0.0	0.0	0.08	3.48	16.87	26.42	3.16	0.41
6. F7099-15	0.0	0.16	0.04	0.07	0.72	33.85	~~9.39~~ 13.40	1.55
7. F7243-4	0.0	0.0	0.0	8.43	34.50	7.23	0.18	0.54
8. F7254-3	0.0	0.0	0.0	11.26	32.92	5.31	0.25	0.19
9. F7099-31	0.0	1.53	10.57	27.65	6.54	2.96	0.73	0.35
10. F7168-1	0.99	0.0	0.0	~~0.~~ 1.35	6.55	31.66	5.70	3.00
11. F7099-16	0.42	0.0	0.72	9.66	18.49	16.87	3.01	0.86
12. F7099-34	0.25	0.45	5.90	19.09	16.97	7.87	1.17	0.30
13. F7099-35	0.0	6.10	19.83	12.88	6.11	4.48	0.50	0.15
14. F7099-37	7.77	9.06	7.62	8.38	5.65	8.33	2.68	1.07
15. F7099-36	0.0	0.98	12.12	18.60	8.68	8.12	1.44	0.56
16. F799-33	0.48	2.32	7.66	16.58	11.04	9.22	2.64	1.33
17. F7145-10	4.25	0.89	0.67	1.79	10.30	27.67	4.39	0.88
18. F7099-38	3.37	4.30	10.57	14.92	7.62	5.59	1.95	1.47
19. F7081-6	1.32	7.00	8.99	11.08	11.37	12.00	1.68	0.40
20. F7143-3	0.28	0.09	0.96	4.42	16.88	23.34	4.27	0.92
21. F7099-32	0.45	2.56	8.82	23.39	10.11	3.83	0.62	0.36

ACCUTEST.

Test: Total Organic Carbon RDL = 1000 mg/kg or 100 mg/kg GNBatch ID: 32807

Product: TOC Date: 8/17/00

Method: Corp. Eng. 81M or EPA Region 2 Lloyd Kahn (circle one)

Digestion Batch QC Summary Units = mg/kg

Method Blank ID: GP10504-MB3 GP10523-MB2 Date: 8/17/00 Result: <1000 RDL: 1000 <RDL: yes

Spike Blank ID: GP10504-MB3 GP10523-B2 Date: ↓ Result: 19680 Spike: 20000 %Rec.: 98.4%

Duplicate ID: _____ Samp. Result: _____ Dup. Result: _____ %RPD: _____

MS ID: _____ Samp. Result: _____ MS Result: _____ Spike: _____ %Rec: _____

Analysis Batch QC Summary Units = %

ICV: 8/17/00 Result: 1.941 TV: 2.000 %Rec.: 97.1%

CCV: ↓ Result: 2.437 TV: 2.500 %Rec.: 97.5%

CCV: ↓ Result: 2.543 TV: 2.500 %Rec.: 101.7%

CCV: _____ Result: _____ TV: _____ %Rec.: _____

CCV: _____ Result: _____ TV: _____ %Rec.: _____

CCV: _____ Result: _____ TV: _____ %Rec.: _____

CCV: _____ Result: _____ TV: _____ %Rec.: _____

ICB: _____ Result: _____ RDL: _____ <RDL: _____

CCB: _____ Result: _____ RDL: _____ <RDL: _____

CCB: _____ Result: _____ RDL: _____ <RDL: _____

CCB: _____ Result: _____ RDL: _____ <RDL: _____

CCB: _____ Result: _____ RDL: _____ <RDL: _____

CCB: _____ Result: _____ RDL: _____ <RDL: _____

CCB: _____ Result: _____ RDL: _____ <RDL: _____

Reagent Reference Numbers:

See attached sheet.

Initial Calibration Source:

Continuing Calibration Source:

Analyst: _____ Date: _____

Comments: _____

Form: GN-059

ACCUTEST

Reagent Information Log - TOC - Soil

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Sucrose Stock Solution, 200,000 mg/L	11/25/00	GN-04-290-TOC
Sucrose Standard Solutions 50.0000 mg/L	11/25/00	GN-04-291-TOC
Glucose Stock Solution, ~~200,000 ug/L~~ 50,000 mg/L	11/1/00	GN-04-214-TOC
Glucose Check Solution, 25.000 ~~ug/L~~ mg/L	11/1/00	GN-04-215-TOC
Nitric Acid, Reagent Grade	N/A	JT Baker N52033
Hydrochloric Acid	N/A	JT Baker lot# T09024

All standards and stocks were made as described in the SOP for this method (circle one): Y or N
If no (N), see attached page for standards prep.

Form: GN-087 1-66
Rev. Date: 2/17/99

GN6106

SAMPLE NUMBER	MESH (100g) 4	10	18	40	60	120	240	pan
1. F7081-30	0	2.25	10.11	21.60	10.20	4.92	0.93	0.35
2. F7081-33	1.72	7.45	16.33	17.10	4.30	2.84	0.74	0.22
3. -36	5.87	12.65	13.56	9.55	4.52	2.89	0.42	0.08
4. -39	1.34	7.23	9.65	12.55	10.72	8.18	0.90	0.21
5. -42	0.0	0.0	0.08	3.48	16.87	26.42	3.16	0.41
6. F7099-15	0.0	0.16	0.04	0.07	0.72	33.85	13.40	1.55
7. F7243-4	0.0	0.0	0.0	8.43	34.50	7.23	0.18	0.54
8. F7254-3	0.0	0.0	0.0	11.26	32.92	5.31	0.25	0.19
9. F7077-31	0.0	1.53	10.57	27.65	6.54	2.96	0.73	0.35
F7168-1	0.99	0.0	0.0	1.35	6.55	31.66	5.70	3.00
11. F7097-16	0.42	0.0	0.72	9.66	18.49	16.87	3.01	0.86
12. F7097-34	0.25	0.45	5.90	19.09	16.97	7.87	1.17	0.30
13. F7099-35	0.0	6.10	19.83	12.80	6.11	4.40	0.50	0.15
14. F7099-37	7.77	9.06	7.62	8.38	5.65	8.33	2.68	1.07
15. F7099-36	0.0	0.98	12.12	18.60	8.68	8.12	1.44	0.56
16. F799-33	0.48	2.32	7.66	16.58	11.04	9.22	2.64	1.33
17. F7145-10	4.25	0.89	0.67	1.79	10.30	27.67	4.39	0.88
18. F7099-38	3.37	4.30	10.57	14.92	7.62	5.59	1.95	1.47
19. F7081-6	1.32	7.00	8.99	11.08	11.37	12.00	1.68	0.40
20. F7143-3	0.28	0.09	0.96	4.42	16.88	23.34	4.27	0.92
F7099-32	0.45	2.56	8.82	23.39	10.11	3.83	0.62	0.36

Donaldson, Garrett & Associates, Inc.

MACON • CHARLOTTE

SURVEY REPORT

for

SPECIFIC PURPOSE SURVEY

GROUNDWATER MONITORING WELLS

SHERMAN FIELD FUEL FARM
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

NAVAL FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION

Prime Contract No. N62467-94-D-0888
TTNus Master Service Agreement No. N0433-MSA0400-016
Work Release No. N0516-01/CTO No. 0132
DG&A Project No. 2775-046-D1

Prepared for:

TETRA TECH NUS, INC.

James W. Newberry, Jr. CERTIFICATE No. 5788 STATE OF FLORIDA Registered Surveyor & Mapper

12/14/00

Submitted by:

DONALDSON, GARRETT & ASSOCIATES, INC.

DECEMBER 12, 2000

4875 Riverside Drive, Suite 102, Macon, Georgia 31210-1117
Post Office Box 7306, Macon, Georgia 31209-7306
Phone (478) 474-5350 Fax (478) 477-2534

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I. Project Summary

II. Field Notes

III. Coordinate & Elevation Tables

IV. Survey Maps

I.

PROJECT SUMMARY

PROJECT SUMMARY

Horizontal and Vertical Surveys were performed to determine the location and elevation of groundwater monitoring wells located at Sherman Field Fuel Tank Farm at Naval Air Station Pensacola, Florida.

Horizontal locations were referenced to the Florida State Plane Coordinate System, East Zone, North American Datum of 1983, 1990 Adjustment (NAD 83/90), by differential GPS surveys, and conventional traverse between existing NAS Pensacola Survey Control Stations.

Elevations were referenced to Mean Sea Level, North American Vertical Datum of 1988 (NAVD 88) by ties to existing NAS Pensacola Benchmarks. Elevations were determined by closed loop differential leveling. Error of closure was determined for each level loop and adjustments applied.

Survey data was presented on a Survey Map with a coordinate grid overlay, for incorporation into existing base maps by Tetra Tech NUS, Inc. Coordinate and Elevation data was also provided in tabular format as part of the Survey Report. The Survey Map was provided in AutoCAD r.14 Format. The Coordinate and Elevation Tables were provided in Microsoft Excel Format.

The Field Surveys was completed between November 7 and 9, 2000.

II.

FIELD NOTES

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
F196 12/13/00 15:16:35 Factor: 1.0000000

1: Job: F196 Temperature:
Operator: BD/WC Pressure:
Date: 11/08/00

Line:	Inst.	H.I.	B.S.	Rod-Ht	H.Angle	H.Dist.	V.Dist	F.S.	Code Desc.
2:	2	5.180	1	4.820	359.59590	237.669	0.786	11/08/ 00	10:26:11
3:				4.820	179.59570	237.659	0.772	1	DELTA*1
4:				4.820	356.27390	238.698	0.961	100	MW4-S
5:				4.820	350.52520	163.769	1.934	101	MW3-S
6:				4.820	64.12390	53.299	0.251	102	MW2-S
7:				4.820	311.53010	127.856	1.072	103	MW13-D
8:				4.820	161.45470	85.856	-3.797	104	MW1-S
9:				4.820	138.00350	203.766	-13.457	105	W6-S
10:				20.290	134.00510	295.745	2.965	106	MW8-S
11:				20.290	110.06100	310.303	2.106	107	MW15-S
12:				0.300	95.44080	346.688	-19.390	108	MW21-S
13:				20.290	63.28420	377.988	1.096	109	MW22-S
14:				4.820	204.43130	194.985	-8.493	3	DELTA*3
15:				4.820	24.43100	195.014	-8.514	3	DELTA*3
16:				5.970	168.06230	175.551	-9.723	110	FE COR
17:				5.970	204.53290	95.631	-11.832	111	FE COR
18:				5.970	229.36020	175.696	-10.345	112	FE COR
19:				20.290	286.09540	190.879	2.088	113	FE COR
20:				10.620	93.27310	209.422	-8.869	114	FE COR
21:				15.450	77.10000	198.209	0.557	115	FE COR
22:				20.290	75.45140	320.440	-0.037	116	E COR

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
196 12/13/00 15:16:35 Factor: 1.0000000

e Desc.								
23:				25.120	57.49320	312.679	4.387	117
FE COR								
24:				5.970	110.36220	255.396	-11.160	118
CL RD								
25:				5.970	95.09560	307.143	-12.075	119
CL RD								
26:				5.970	76.29530	359.051	-12.552	120
CL RD								
27:				10.620	110.07580	119.500	-7.887	121
FE COR								
28:				5.970	146.40400	182.664	-11.409	122
FE COR								
29:				5.970	156.05240	176.606	-7.616	123
FE POST								
30:				5.970	162.24180	175.140	-8.167	124
FE POST								
31:	3	5.430	2	4.910	0.00000	194.970	7.650	11/08/ 00
11:30:24								
32:				4.910	180.00010	194.983	7.579	2
DELTA*2								
33:				5.970	177.32370	97.102	1.256	125
MW19-S								
34:				5.970	191.36020	191.306	1.291	126
MW20-S								
35:				5.970	152.19180	171.419	-2.670	127
MW18-S								
36:				5.970	103.31010	91.009	-1.408	128
MW12-S								
37:				5.970	252.21020	10.065	1.524	129
MW13-S								
38:				5.970	277.20450	180.742	-3.204	130
MW14-S								
39:				5.970	275.17250	181.863	-2.510	131
MW14-I								
40:				5.970	275.18330	302.007	-5.666	132
MW7-S								
41:				5.970	260.49180	399.148	-3.090	133
MW5-I								
42:				5.970	260.44020	404.558	-3.130	134
MW5-S								
43:				5.970	253.42500	468.396	-3.615	135
CHF COR								
44:				5.970	253.43190	446.894	-2.258	136
BCC/CHF								
45:				10.620	259.45230	449.078	1.304	137

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
'196 12/13/00 15:16:35 Factor: 1.0000000

e Desc.					
BCC COR 46:	5.970	261.13590	354.139	-2.793	138
BCC 47:	5.970	264.25010	242.633	-1.867	139
BCC COR 48:	5.970	258.28270	239.578	-1.042	140
BCC COR 49:	5.970	253.21300	212.888	-0.830	141
CHF 50:	5.970	263.37510	296.312	-3.286	142
LT PL 51:	5.970	261.12440	385.962	-3.756	143
LT PL 52:	5.970	261.05410	229.274	-1.600	144
DN GUY 53:	5.970	261.10480	226.201	-2.019	145
DN GUY 54:	5.970	261.10480	226.181	-2.018	146
DN GUY 55:	5.970	261.14580	223.691	-1.992	147
DN GUY 56:	5.970	261.13280	221.731	-1.974	148
N GUY 57:	5.970	261.40180	211.412	-1.810	149
PP*UGP 58:	5.970	261.50560	139.800	0.135	150
BCC COR 59:	5.970	252.11300	80.332	1.102	151
CHF 60:	5.970	280.04140	66.300	-0.109	152
PP 61:	5.970	287.26090	34.627	1.265	153
BOC BGN 62:	5.970	284.52420	33.279	1.184	154
EP 63:	5.970	243.33140	12.519	0.882	155
EP/CHF 64:	5.970	261.13520	11.960	0.842	156
EP COR 65:	5.970	54.43130	52.470	-0.104	157
EP 66:	5.970	71.46020	48.378	-0.391	158
EP 67:	5.970	77.19340	48.358	-0.390	159
CHF COR 68:	10.620	82.57370	53.524	3.954	160
FE COR					

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
196 12/13/00 15:16:35 Factor: 1.0000000

e Desc.

69:	10.620	92.46590	56.111	3.654	161
GP					
70:	10.620	94.30110	57.236	3.611	162
EP					
71:	10.620	108.29100	66.832	3.437	163
EP					
72:	10.620	109.11550	66.322	3.411	164
GP					
73:	5.970	132.07320	106.671	-2.039	165
CHF					
74:	5.970	87.24070	123.055	-2.503	166
CL ENTRNC					
75:	5.970	69.30550	116.480	-1.495	167
CL*2					
76:	5.970	70.07010	151.655	-1.268	168
PI					
77:	5.970	83.56130	166.910	-3.190	169
PI					
78:	5.970	99.04460	196.089	-4.884	170
PI					
79:	5.970	96.38260	177.970	-4.999	171
EP/PC					
80:	5.970	90.54140	150.551	-3.855	172
POC					
81:	5.970	90.45110	130.348	-2.909	173
PT					
82:	5.970	82.37010	130.544	-2.629	174
PC					
83:	5.970	78.26080	147.865	-2.701	175
POC					
84:	5.970	73.07440	120.097	-1.733	176
PT					
85:	5.970	63.27090	241.888	-3.232	177
CL RD					
86:	5.970	77.04390	207.164	-3.269	178
CL RD					
87:	20.290	76.40360	274.170	10.984	179
MW16-S					
88:	20.500	111.02410	310.225	14.203	180
MW17-S					

89: 2 4.960 1 4.820 0.00000 237.668 1.015 11/09/ 00
17:35:11

90:	1.500	152.05020	393.397	-13.257	181
G					

91: Next rec Dist/Off, F/B: 0.000 R/L: -26.000 U/D: 0.000

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
7196 12/13/00 15:16:35 Factor: 1.0000000

e Desc.								
92:				1.500	148.18100	394.255	-13.257	182
MW22-S								
93:				4.000	155.03170	312.648	-12.293	183
30I(IRP)								
94:	1	5.460	2	4.820	0.00000	237.674	-1.704	11/09/ 00
17:57:46								
95:				20.290	87.21170	246.324	-1.666	184
MW11-S								
96:				20.290	89.37510	236.893	-1.881	185
CHF COR								
97:				5.970	222.13360	143.605	-14.844	186
MW9-S								
98:				10.620	130.45220	93.584	-9.653	187
MW10-R								
99:				10.620	125.18340	85.185	-9.004	188
CHF								
100:				10.620	226.22420	145.518	-10.827	189
CHF COR								
101:				20.290	301.17080	192.968	-0.799	190
CHF COR								
102:				10.620	281.51320	308.099	-9.307	191
CL RD								
103:				10.620	265.52030	220.162	-9.349	192
CL RD								
104:				10.620	249.38240	184.419	-9.240	193
CL RD								
105:				10.620	218.07420	175.672	-9.333	194
CL RD								
106:	3	5.540	2	4.820	0.00000	194.997	7.457	11/09/ 00
18:19:49								
107:				4.820	58.01400	96.832	-3.365	195
PP								
108:				8.400	48.03430	98.613	-1.212	196
DN GUY								
109:				4.820	49.37340	98.097	-4.913	197
DN GUY								
110:				4.820	50.27070	98.077	-4.911	198
DN GUY								
111:				4.820	59.55350	107.496	-3.996	199
DN GUY								
112:				4.820	60.04580	109.108	-3.976	200
DN GUY								
113:				4.820	60.20520	112.467	-4.039	201

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
196 12/13/00 15:16:35 Factor: 1.0000000

e	Desc.					
	DN GUY 114:	4.820	118.54540	229.729	-7.745	202
	DN GUY 115:	4.820	119.36570	227.732	-8.222	203
	DN GUY 116:	4.820	119.52110	226.606	-8.614	204
	DN GUY 117:	4.820	122.29460	218.033	-10.795	205
	PP					

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
ferential-Leveling 12/13/00 15:24:47 Factor: 1.0000000

1: Job: F196 Single Wire Loop
Date: 11/30/00

Line:	Station	+	H.I.	-	Elevation	Adj.Elev	Code	Desc.
2:	BM	5.600	15.150		9.550	9.550		K161-195
3:	TBM	5.190	15.010	5.330	9.820	9.825		399-20-1
4:	BM			5.470	9.540	9.550		POB

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
Differential-Leveling 12/14/00 10:40:55 Factor: 1.0000000

1: Job: F196B Single Wire Loop
Date: 12/14/00

Line:	Station	+	H.I.	-	Elevation	Adj.Elev	Code	Desc.
2:	BM	6.890	16.710		9.820	9.820		399-20-1
3:	TP	6.090	19.440	3.360	13.350	13.350		
4:	TP	12.140	27.950	3.630	15.810	15.810		
5:	TP	10.250	38.110	0.090	27.860	27.860		FH
6:	MW-17S			3.570	34.540	34.540		G
7:	MW-17S	3.500	37.780	3.830	34.280	34.280		TOC
8:	MW-22S			4.690	33.090	33.090		G
9:	MW-22S			4.770	33.010	33.010		TOC
10:	MW-16S			6.210	31.570	31.570		G
11:	MW-16S			6.160	31.620	31.620		TOC
12:	TP	3.250	37.120	3.910	33.870	33.870		REBAR
13:	MW-6S			6.870	30.250	30.250		G
14:	MW-6S			6.470	30.650	30.650		TOC
15:	MW-21S			8.210	28.910	28.910		G
16:	MW-21S	6.390	35.220	8.290	28.830	28.830		TOC
17:	MW-23S			5.620	29.600	29.600		G
18:	MW-23S			5.630	29.590	29.590		TOC
19:	MW-21S	8.210	37.040	6.390	28.830	28.830		TOC
20:	TP	7.570	41.440	3.170	33.870	33.870		REBAF
21:	MW-12S			8.190	33.250	33.250		G
22:	MW-12S			7.970	33.470	33.470		TOC
23:	MW-19S			5.470	35.970	35.970		G
24:	MW-19S			5.570	35.870	35.870		TOC
25:	MW-20S			5.280	36.160	36.160		G
26:	MW-20S			5.310	36.130	36.130		TOC
27:	MW-18S			9.190	32.250	32.250		G
28:	MW-18S			9.150	32.290	32.290		TOC
29:	MW-13S			5.350	36.090	36.090		G
30:	MW-13S			5.200	36.240	36.240		TOC
31:	MW-14I			9.200	32.240	32.240		G
32:	MW-14I	7.890	40.160	9.170	32.270	32.270		TOC
33:	MW-14S			8.640	31.520	31.520		G
34:	MW-14S			8.690	31.470	31.470		TOC
35:	MW-5I			8.480	31.680	31.680		G
36:	MW-5I			8.510	31.650	31.650		TOC
37:	MW-5S			8.570	31.590	31.590		G
38:	MW-5S			8.300	31.860	31.860		TOC
39:	MW-7S			11.070	29.090	29.090		G
40:	MW-7S			11.330	28.830	28.830		TOC
41:	D3	7.990	43.740	4.410	35.750	35.750		60dNAIL
42:	MW-1S			3.650	40.090	40.090		G
43:	MW-1S	10.970	50.980	3.730	40.010	40.010		TOC
44:	MW-2S			6.790	44.190	44.190		G
45:	MW-2S			7.030	43.950	43.950		TOC
46:	MW-13D			6.140	44.840	44.840		G

Prepared by: Donaldson, Garrett & Associates, Inc. #CGDS08162
Differential-Leveling 12/14/00 10:40:55 Factor: 1.0000000

Line:	Station	+	H.I.	-	Elevation	Adj.Elev	Code	Desc.
47:	MW-13D			5.970	45.010	45.010		TOC
48:	MW-3S			5.360	45.620	45.620		G
49:	MW-3S			5.330	45.650	45.650		TOC
50:	MW-4S			6.070	44.910	44.910		G
51:	MW-4S			6.100	44.880	44.880		TOC
52:	D1	4.010	49.060	5.930	45.050	45.050		PKNAIL
53:	MW-9S			19.990	29.070	29.070		G
54:	MW-9S			19.820	29.240	29.240		TOC
55:	MW-11S			21.050	28.010	28.010		G
56:	MW-11S			21.070	27.990	27.990		TOC
57:	MW-10S			19.270	29.790	29.790		G
58:	MW-10S			19.210	29.850	29.850		TOC
59:	D2	1.570	45.500	5.130	43.930	43.930		1/2"REBA
60:	MW-6S	5.230	35.900	14.830	30.670	30.670		TOC
61:	MW-8S			4.610	31.290	31.290		G
62:	MW-8S			4.430	31.470	31.470		TOC
63:	MW-15S			5.390	30.510	30.510		G
64:	MW-15S			5.280	30.620	30.620		TOC
65:	MW-6S	3.570	34.240	5.230	30.670	30.670		TOC
66:	TP	0.310	28.180	6.370	27.870	27.870		TOPFH
67:	TP	3.650	19.480	12.350	15.830	15.830		TOPMW(RO
68:	TP	3.690	17.040	6.130	13.350	13.350		TOPMW(RO
69:	BM			7.220	9.820	9.820		399-20-1

III.

COORDINATE AND ELEVATION TABLES

SHERMAN FIELD FUEL FARM
MONITOR WELL LOCATION SURVEY
CTO 0132
November 9, 2000

DESIGNATION	NORTHING	EASTING	GROUND ELEVATION	TOC ELEVATION
MW1-S	498,693.89	1,075,395.97	40.09	40.01
MW2-S	498,799.80	1,075,409.98	44.19	43.95
MW3-S	498,933.01	1,075,326.86	45.62	45.65
MW4-S	499,010.14	1,075,332.90	44.91	44.88
MW5-I	498,671.99	1,074,903.36	31.68	31.65
MW5-S	498,672.48	1,074,897.94	31.59	31.86
MW6-S	498,631.52	1,075,509.89	30.25	30.65
MW7-S	498,724.38	1,075,023.19	29.09	28.83
MW8-S	498,582.75	1,075,589.73	31.29	31.47
MW9-S	499,123.12	1,075,436.76	29.07	29.24
MW10-R	499,066.69	1,075,272.79	29.79	29.85
MW11-S	498,982.58	1,075,102.90	28.01	27.99
MW12-S	498,539.84	1,075,369.37	33.25	33.47
MW13-D	498,852.18	1,075,262.93	44.84	45.01
MW13-S	498,591.78	1,075,284.20	36.09	36.24
MW14-I	498,671.35	1,075,130.99	32.24	32.27
MW14-S	498,676.62	1,075,134.96	31.52	31.47
MW15-S	498,686.67	1,075,661.59	30.51	30.62
MW16-S	498,555.28	1,075,566.06	31.57	31.62
MW17-S	498,384.04	1,075,525.16	34.54	34.28
MW18-S	498,421.01	1,075,314.62	32.25	32.29
MW19-S	498,499.08	1,075,263.60	35.97	35.87
MW20-S	498,429.79	1,075,191.59	36.16	36.13
MW21-S	498,762.12	1,075,710.17	28.91	28.83
MW22-S	498,452.72	1,075,592.97	34.14	33.01
MW23-S	498,964.64	1,075,689.72	29.60	29.59

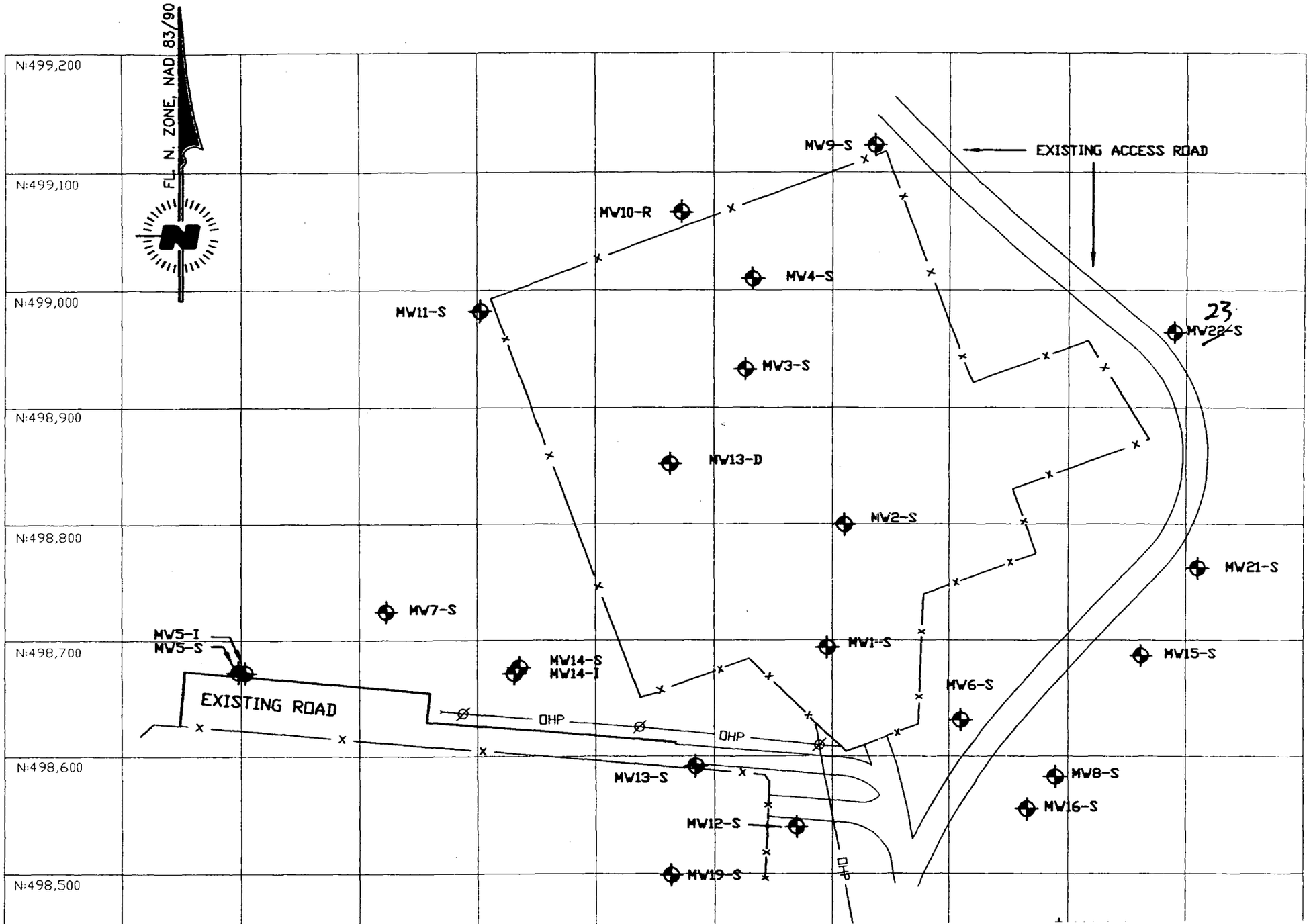
NOTES

COORDINATES ARE FLORIDA STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NORTH AMERICAN DATUM OF 1983, 1990 ADJUSTMENT (NAD 83/90)

ELEVATIONS ARE FEET ABOVE MEAN SEA, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

IV.

SURVEY MAP



LEGE

EXISTING MONITOR

POWER POLE

CHAINLINK FENCE

OVERHEAD POWER

N

1. THE PURPOSE OF
HORIZONTAL AND
MONITORING WELLS
SHOWN FOR REFER
2. THIS SURVEY MAP
REPORT. THIS DOC
UNLESS ACCOMPAN
3. THIS DOCUMENT IS
THE RAISED SEAL
PROFESSIONAL SU
IN THE STATE OF

IV.

SURVEY MAP

APPENDIX D

SPECIFIC CAPACITY TEST AND TIDAL DATA

2.6000	-12.513
2.8000	-12.499
3.0000	-12.480
3.2000	-12.471
3.4000	-12.471
3.6000	-12.423
3.8000	-12.433
4.0000	-12.423
4.2000	-12.390
4.4000	-12.400
4.6000	-12.367
4.8000	-12.386
5.0000	-12.381
5.2000	-12.367
5.4000	-12.367
5.6000	-12.352
5.8000	-12.357
6.0000	-12.334
6.2000	-12.324
6.4000	-12.334
6.6000	-12.329
6.8000	-12.324
7.0000	-12.319
7.2000	-12.300
7.4000	-12.272
7.6000	-12.286
7.8000	-12.286
8.0000	-12.282
8.2000	-12.267
8.4000	-12.253
8.6000	-12.248
8.8000	-12.267
9.0000	-12.244
9.2000	-12.267
9.4000	-12.244
9.6000	-12.244
9.8000	-12.258
10.0000	-12.253
12.0000	-12.362
14.0000	-12.362
16.0000	-12.348
18.0000	-12.343
20.0000	-12.324
22.0000	-12.315
24.0000	-12.305
26.0000	-12.282
28.0000	-12.272
30.0000	-12.263
32.0000	-12.248
34.0000	-12.263
36.0000	-12.239
38.0000	-12.244
40.0000	-12.230
42.0000	-12.215
44.0000	-12.201

0.2583	0.086
0.2666	0.086
0.2750	0.086
0.2833	0.086
0.2916	0.079
0.3000	0.086
0.3083	0.086
0.3166	0.086
0.3250	0.086
0.3333	0.086
0.3500	0.086
0.3666	0.086
0.3833	0.079
0.4000	0.086
0.4166	0.079
0.4333	0.079
0.4500	0.086
0.4666	0.079
0.4833	0.086
0.5000	0.079
0.5166	0.086
0.5333	0.079
0.5500	0.086
0.5666	0.079
0.5833	0.086
0.6000	0.086
0.6166	0.086
0.6333	0.086
0.6500	0.079
0.6666	0.086
0.6833	0.086
0.7000	0.079
0.7166	0.086
0.7333	0.086
0.7500	0.079
0.7666	0.086
0.7833	0.086
0.8000	0.079
0.8166	0.086
0.8333	0.092
0.8500	0.086
0.8666	0.086
0.8833	0.086
0.9000	0.086
0.9166	0.086
0.9333	0.086
0.9500	0.086
0.9666	0.086
0.9833	0.086
1.0000	0.079
1.2000	0.086
1.4000	0.079
1.6000	0.086
1.8000	0.086
2.0000	0.079
2.2000	0.086
2.4000	0.086

Tetra Tech NUS, Inc.

PUMPING TEST DATA SHEET

PROJECT NAME: Sherman FLD TNK
PROJECT NUMBER:
PUMPING WELL NUMBER: 55
MEASURED WELL NUMBER: 55

[ ] PUMPING TEST SC
[ ] STEP DRAW DOWN TEST

DATE(s): 12-4/00
MONITORING POINT:
MEASUREMENT METHOD:
DEPTH CORRECTION (ft):
TEST NUMBER: 1
PUMP SETTING (Ft. below monitoring point): 17 1/2'
STATIC WATER LEVEL (ft): 11.49
DISTANCE FROM PUMPING WELL (ft):
PERSONNEL:
REMARKS: TD 18.65' 10' Screen XD @ 18'

Install XD @ 13:30

Install Pump @ 13:50

MILITARY TIME	ELAPSED TIME SINCE PUMP START OR STOP (Min.)	WATER LEVEL (Ft)	CORRECTION (Ft.)	DRAW DOWN OR RECOVERY (Ft.)	FLOW METER READING (Gals.)	PUMPING RATE (GPM)	REMARKS
14:00	init	11.48					
14:01	1	11.58		0.1	~~0.1~~	1.25	
14:02	2	11.59		0.11	~~0.11~~	1.25	
14:05	5	11.59		0.11	~~0.11~~	1.25	
14:10	10	11.59		0.11	~~0.11~~	1.25	
14:15	15	11.59		0.11	~~0.11~~	1.25	
14:20	20	11.59		0.11	~~0.11~~	1.25	
14:25	25	11.59		0.11		1.25	
14:30	30	11.59		0.11		1.25	
14:35	35	11.59		0.11		1.25	
14:40	40	11.59		0.11		1.2	

NOTE: All measurements to nearest 0.01 foot measured from top of well riser pipe unless otherwise noted.

Tide State	Date and Time	Tidal Data (Feet MLLW)	Barometric Pressure (Inches of Hg) NAS	Barometric Pressure (Inches of Hg) Airport	Groundwater Elevations (Feet MSL) 14S	11S	9S
	12/4/00 13:00		30.28	30.39			
LOW	12/4/00 13:25	0.14					
	12/4/00 14:00			30.36			
	12/4/00 15:00		30.34	30.34			
	12/4/00 15:30				19.95	20.87	20.93
	12/4/00 16:00		30.34	30.34	19.96	20.83	20.93
	12/4/00 17:00			30.34	19.96	20.76	20.93
	12/4/00 18:00			30.33	19.97	20.73	20.92
	12/4/00 19:00		30.36	30.36	19.97	20.67	20.93
	12/4/00 20:00		30.35	30.36	19.97	20.63	20.93
	12/4/00 21:00			30.37	19.97	20.59	20.93
	12/4/00 22:00			30.39	19.97	20.54	20.92
	12/4/00 23:00			30.4	19.97	20.51	20.92
	12/5/00 0:00		30.39	30.39	19.98	20.49	20.92
	12/5/00 1:00		30.36	30.37	19.98	20.46	20.93
HIGH	12/5/00 2:00	0.72	30.36	30.36	19.98	20.45	20.93
	12/5/00 3:00		30.36	30.36	19.98	20.43	20.92
	12/5/00 4:00			30.37	19.98	20.40	20.92
	12/5/00 5:00		30.35	30.35	19.98	20.39	20.92
	12/5/00 6:00				19.98	20.38	20.92
	12/5/00 7:00		30.36	30.36	19.98	20.34	20.92
	12/5/00 8:00			30.36	19.98	20.32	20.92
	12/5/00 9:00		30.37	30.37	19.97	20.29	20.92
	12/5/00 10:00				19.96	20.27	20.91
	12/5/00 11:00				19.94	20.27	20.92
	12/5/00 12:00				19.94	20.24	20.92
LOW	12/5/00 13:00	0.26			19.95	20.20	20.92
	12/5/00 14:00				19.96	20.17	20.92
	12/5/00 15:00		30.27		19.96	20.14	20.93
	12/5/00 16:00		30.26		19.96	20.11	20.92
	12/5/00 17:00		30.25	30.25	19.96	20.09	20.93
	12/5/00 18:00		30.26	30.26	19.97	20.06	20.93
	12/5/00 19:00			30.26	19.97	20.06	20.92
	12/5/00 20:00			30.27	19.97	20.04	20.92
	12/5/00 21:00		30.26	30.26	19.97	20.00	20.92
HIGH	12/5/00 22:00	0.66		30.26	19.97	19.95	20.92
	12/5/00 23:00			30.26	19.97	19.93	20.92
	12/6/00 0:00			30.26	19.97	19.90	20.92
	12/6/00 1:00		30.24	30.24	19.97	19.87	20.92
	12/6/00 2:00		30.24	30.22	19.98	19.87	20.92
	12/6/00 3:00		30.22	30.23	19.97	19.91	20.92
	12/6/00 4:00		30.21	30.22	19.97	19.87	20.92
	12/6/00 5:00			30.21	19.97	19.80	20.92
	12/6/00 6:00			30.21	19.97	19.78	20.91
	12/6/00 7:00		30.21	30.21	19.97	19.77	20.92
	12/6/00 8:00		30.23	30.25	19.96	19.76	20.91
	12/6/00 9:00		30.22	30.24	19.95	19.73	20.91
	12/6/00 10:00			30.24	19.94	19.71	20.91
	12/6/00 11:00		30.22	30.23	19.94	19.79	20.91
LOW	12/6/00 12:00	0.34	30.18	30.2	19.94	19.77	20.91
	12/6/00 13:00		30.18	30.17	19.95	19.71	20.92
	12/6/00 14:00		30.13	30.14	19.94	19.73	20.91
	12/6/00 15:00			30.1	19.95	19.76	20.92
	12/6/00 16:00			30.11	19.94	19.75	20.91
	12/6/00 17:00			30.1	19.96	19.70	20.92

		Tidal Data	Barometric Pressure		Groundwater Elevations		
Tide		(Feet MLLW)	(Inches of Hg)		(Feet MSL)		
State	Date and Time		NAS	Airport	14S	11S	9S
	12/6/00 13:00		30.18	30.17	19.95	19.71	20.92
	12/6/00 14:00		30.13	30.14	19.94	19.73	20.91
	12/6/00 15:00			30.1	19.95	19.76	20.92
	12/6/00 16:00			30.11	19.94	19.75	20.91
	12/6/00 17:00			30.1	19.96	19.70	20.92

APPENDIX E

ESTIMATED MASS OF CONTAMANT CALCULATIONS

ESTIMATED MASS OF CONTAMINANTS IN VADOSE ZONE SOIL MATRIX

SITE INFORMATION:

Site:	SHERMAN FIELD FUEL FARM
Location:	NAS PENSACOLA
Client:	SOUTHDIV

ASSUMPTIONS:

INPUT:

Estimated Impacted Area	sq ft	88,316
Estimated Average Impacted Thickness	ft	4
Estimated Impacted Volume	cu ft	353,264
Average Total VOA Concentration	mg/kg	410

CALCULATIONS:

Estimated mass of hydrocarbons in soil

$$42{,}224\ \text{ft}^3 \times \frac{1\ \text{yd}^3}{27\ \text{ft}^3} \times \frac{1.4\ \text{tons}}{1\ \text{yd}^3} \times 1016\ \frac{\text{kg}}{\text{ton}} \times 1{,}449\ \frac{\text{mg}}{\text{kg}}\ \text{TRPH} \times \left(1.0 \times 10^{-6}\right)\frac{\text{kg}}{\text{mg}} \times 2.204623\ \frac{\text{lb}}{\text{kg}}$$

lbs 16823

PREPARED BY: _____ CHECKED BY: _____

Date

ESTIMATED MASS OF CONTAMINANTS IN VADOSE ZONE SOIL MATRIX

SITE INFORMATION:

Site:	SHERMAN FIELD FUEL FARM
Location:	NAS PENSACOLA
Client:	SOUTHDIV

ASSUMPTIONS:

INPUT:

Estimated Impacted Area	sq ft	19,625
Estimated Average Impacted Thickness	ft	14
Estimated Impacted Volume	cu ft	274,750
Average Total VOA Concentration	mg/kg	1,270

CALCULATIONS:

Estimated mass of hydrocarbons in soil

$$42{,}224\ \text{ft}^3 \times \frac{1\ \text{yd}^3}{27\ \text{ft}^3} \times \frac{1.4\ \text{tons}}{1\ \text{yd}^3} \times 1016\ \frac{\text{kg}}{\text{ton}} \times 1{,}449\ \frac{\text{mg}}{\text{kg}}\ \text{TRPH} \times \left(1.0 \times 10^{-6}\right)\frac{\text{kg}}{\text{mg}} \times 2.204623\ \frac{\text{lb}}{\text{kg}}$$

lbs 40529

PREPARED BY: _____ CHECKED BY: _____

Date

ESTIMATED MASS OF CONTAMINANTS IN VADOSE ZONE SOIL MATRIX

SITE INFORMATION:

Site:	SHERMAN FIELD FUEL FARM
Location:	NAS PENSACOLA
Client:	SOUTHDIV

ASSUMPTIONS:

INPUT:

Estimated Impacted Area	sq ft	88,312
Estimated Average Impacted Thickness	ft	4
Estimated Impacted Volume	cu ft	353,248
Average Total VOA Concentration	mg/kg	410

CALCULATIONS:

Estimated mass of hydrocarbons in soil

$$42{,}224\ \text{ft}^3 \times \frac{1\ \text{yd}^3}{27\ \text{ft}^3} \times \frac{1.4\ \text{tons}}{1\ \text{yd}^3} \times 1016\ \frac{\text{kg}}{\text{ton}} \times 1{,}449\ \frac{\text{mg}}{\text{kg}}\ \text{TRPH} \times \left(1.0 \times 10^{-6}\right)\frac{\text{kg}}{\text{mg}} \times 2.204623\ \frac{\text{lb}}{\text{kg}}$$

lbs 16823

PREPARED BY: _____ CHECKED BY: _____

Date