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Site Characterization Report (Site 43)

Naval Air Station Pensacola

Pensacola, Florida

Southern Division
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888
Contract Task Order 0096

January 2004

SITE CHARACTERIZATION REPORT
(SITE 43)

NAVAL AIR STATION
PENSACOLA
PENSACOLA, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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Naval Facilities Engineering Command
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FOREWORD

To meet its mission objectives, the U.S. Navy performs a variety of operations, some requiring the use, handling, storage, or disposal of hazardous materials. Through accidental spills and leaks and conventional methods of past disposal, hazardous materials may have entered the environment. With growing knowledge of the long-term effects of hazardous materials on the environment, the U. S. Department of Defense initiated various programs to investigate and remediate conditions related to suspected past releases of hazardous materials at its facilities.

One of these programs is the Installation Restoration (IR) program. This program complies with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA), the Resource Conservation and Recovery Act, and the Hazardous and Solid Waste Amendments of 1984. These acts establish the means to assess and clean up hazardous waste sites for both private-sector and federal facilities. The CERCLA and SARA acts form the basis for what is commonly known as the Superfund program.

Originally, the Navy's part of this program was called the Naval Assessment and Control of Installation Pollutants (NACIP) program. Early reports reflect the NACIP process and terminology. The Navy eventually adopted the program structure and terminology of the standard IR program.

The IR program consists of Preliminary Assessment (PA) and Site Inspections (SIs), Remedial Investigation (RI) and Feasibility Study (FS), and Remedial Design (RD) and Remedial Action (RA) at sites where chemicals were allegedly spilled or disposed of. The PA and SI identify the presence of pollutants. The nature and extent of contamination as well as the selected remedial solutions are determined during the RI/FS. The RD and RA are performed to complete implementation of the solution.

The Southern Division, Naval Facilities Engineering Command manages and the U.S. Environmental Protection Agency and the Florida Department of Environmental Protection (formerly the Florida Department of Environmental Regulation) oversee the Navy environmental program at Naval Air Station (NAS) Pensacola. All aspects of the program are conducted in compliance with state and federal regulations, as ensured by the participation of these regulatory agencies.

Questions regarding the CERCLA program at NAS Pensacola should be addressed to Mr. William Hill, Code 1851, at (843) 820-7324.

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ACRONYMS

BLS	below land surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COMPQAP	Comprehensive Quality Assurance Plan
DEL	Direct Exposure Limit
DOT	Department of Transportation
DPT	Direct Push Technology
E/A&H	EnSafe/Allen and Hoshall
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame Ionization Detector
GPS	Global Positioning System
ID	Inner Diameter
IR	Installation Restoration
MSL	Mean Sea Level
NAD	North American Datum
NAS	Naval Air Station
NAVD	North American Vertical Datum
NTU	Nephelometric Turbidity Unit
PCB	Polychlorinated Biphenyls
OVA	Organic Vapor Analysis
SARA	Superfund Amendments and Reauthorization Act
SCM	Site Conceptual Model
SCR	Site Characterization Report
SOP	Standard Operating Procedure
SOUTHNAVFACENGCOM	Southern Division Naval Facilities Engineering Command
SOW	Scope of Work
SVOC	Semivolatile Organics
TAL	Target Analyte List
TCL	Target Compound List
TtNUS	Tetra Tech NUS
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

Tetra Tech NUS, Inc., (TtNUS) under contract to the Department of Navy, Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) is submitting this Site Characterization Report (SCR) for Site 43 at Naval Air Station (NAS) Pensacola located in Pensacola, Florida. The SCR was prepared on behalf of the Navy at Naval Air Station (NAS) Pensacola under contract No. N62467-94-D-0888. The SCR was developed based on the results of a field investigation conducted according to the Sampling and Analysis Plan for Preliminary Site Characterization Study for Site 43 (TtNUS, 1999).

1.1 PURPOSE OF REPORT

The purpose of this SCR is to document field investigation activities associated with the Site Characterization Investigation for Site 43, and to report the results from the soil, groundwater, and drum characterization. The report also presents recommendations for further action at the site based on these findings.

1.2 PHYSICAL DESCRIPTION OF THE SITE

1.2.1 Facility Background

NAS Pensacola (Figure 1-1) is located in Escambia County, in Florida's northwest coastal area, approximately 5 miles west of the Pensacola City limits. The approximately 5,000-acre installation was constructed in the 1800's. Prior to construction, the facility was undeveloped and sparsely vegetated. Land use at NAS Pensacola consists of various military housing, training, and support facilities as well as large industrial complexes for major repairs and refurbishment of aircraft engines and frames. The subject site is located at the southwest corner of Murray and Taylor Roads. The historical usage of the site was to dispose of metallic wastes resembling drums of unknown contents. Details on the NAS Pensacola facility may be found in the facility administrative record.

1.2.2 Site Description

Site 43 (Figure 1-2) is located at the southwest corner of Murray and Taylor Roads, and currently consists of an area approximately 200 feet by 200 feet in size. The site is planted with grass and contains a tennis court, an old building foundation, and access roads to the officers' quarters. In December 1992, a child playing with a metal detector discovered two partially buried drums exposed at the surface just east of the tennis court. One drum was reported to be in a vertical position; its end punctured revealing standing water in the interior. The second drum was observed to be intact in a vertical position. A third iron object resembling a drum rim was observed between the fenced area and the tennis court. Smaller, rusted metal

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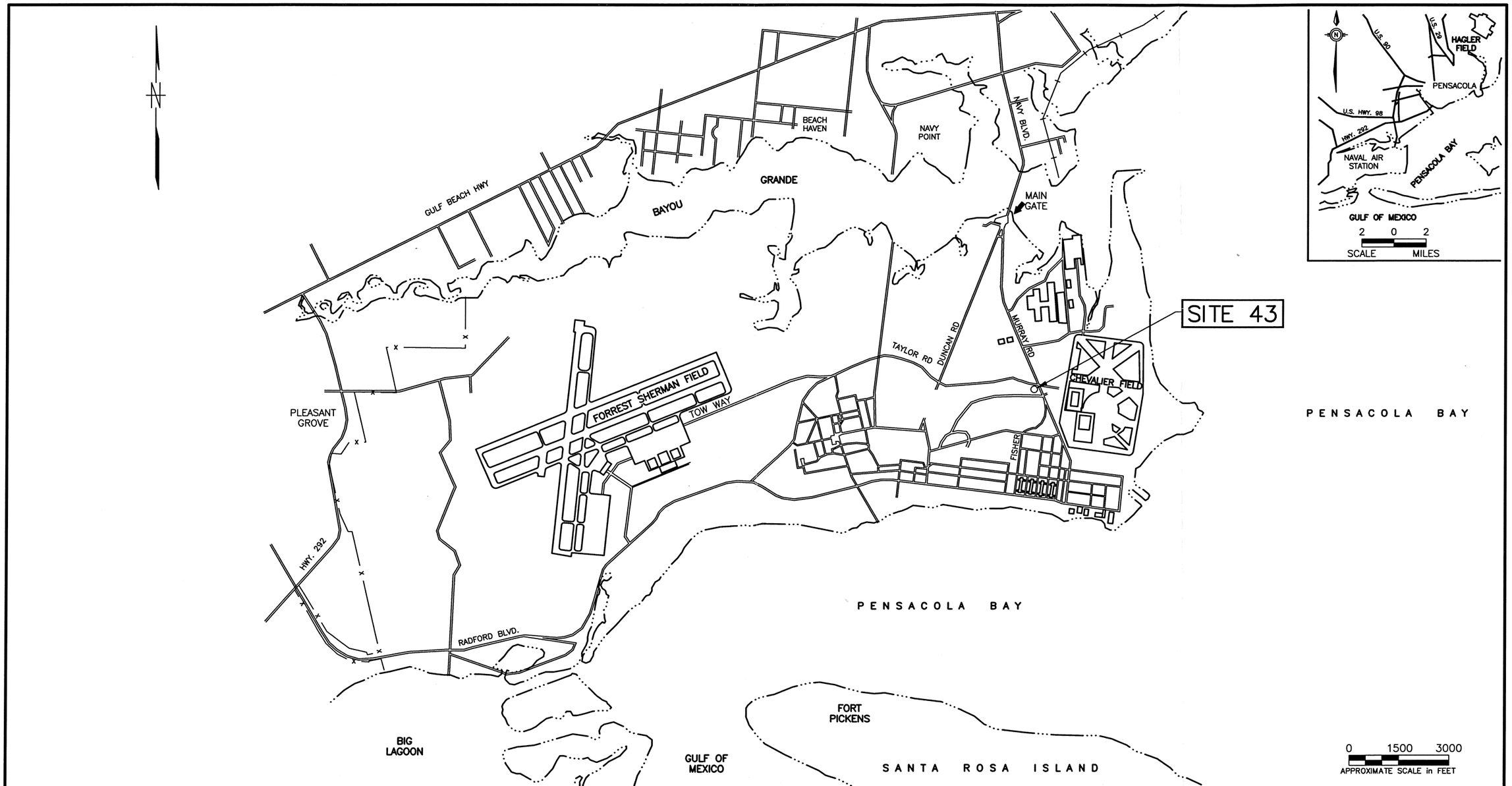

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SITE VICINITY MAP
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

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SOURCE: Geophysical Investigation of Buried Drum Area Site 10 (West), Naval Air Station Pensacola. ENSAFE/ALLEN & HOSHALL, 1994.

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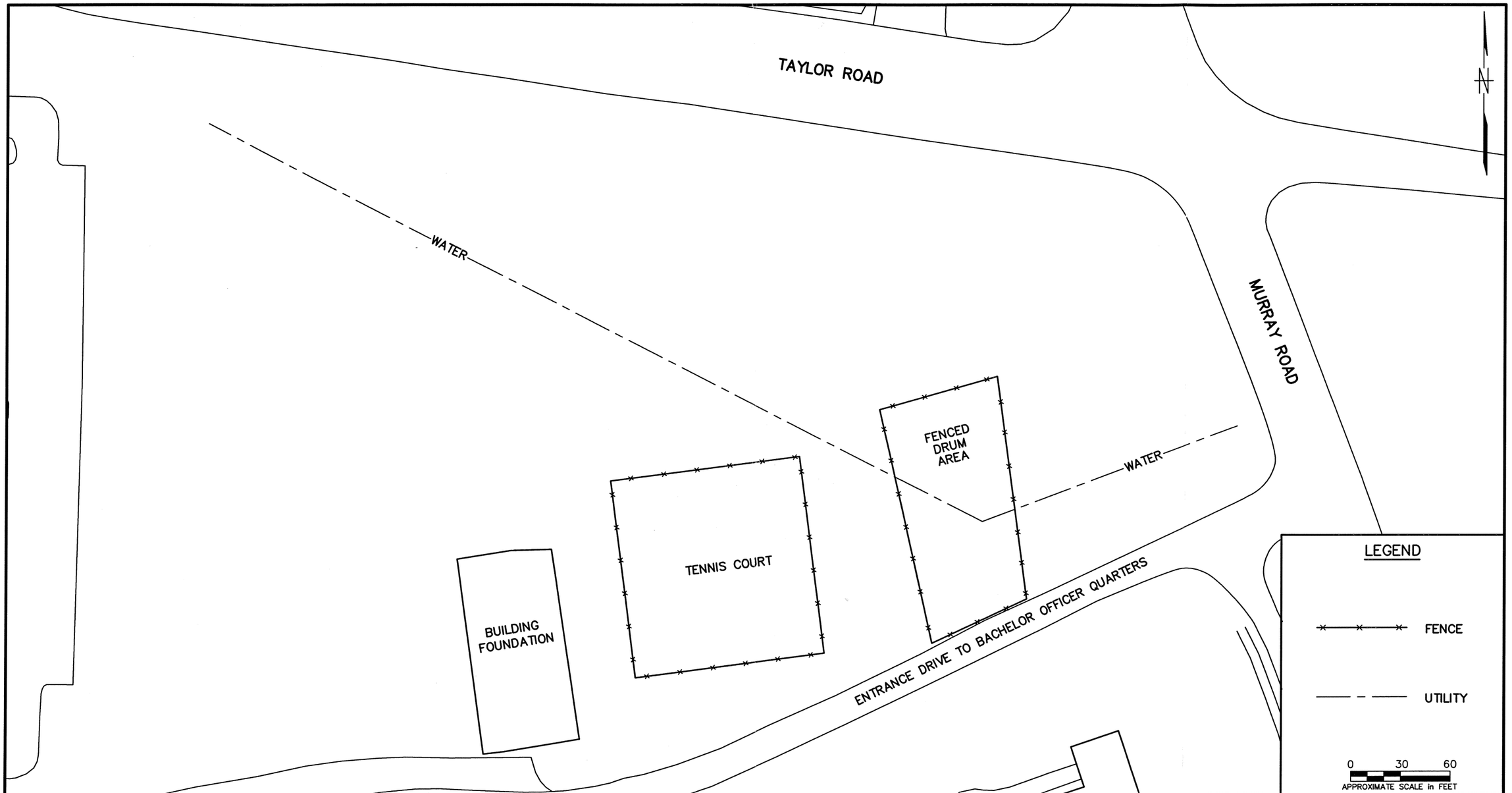

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SITE LOCATION MAP
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

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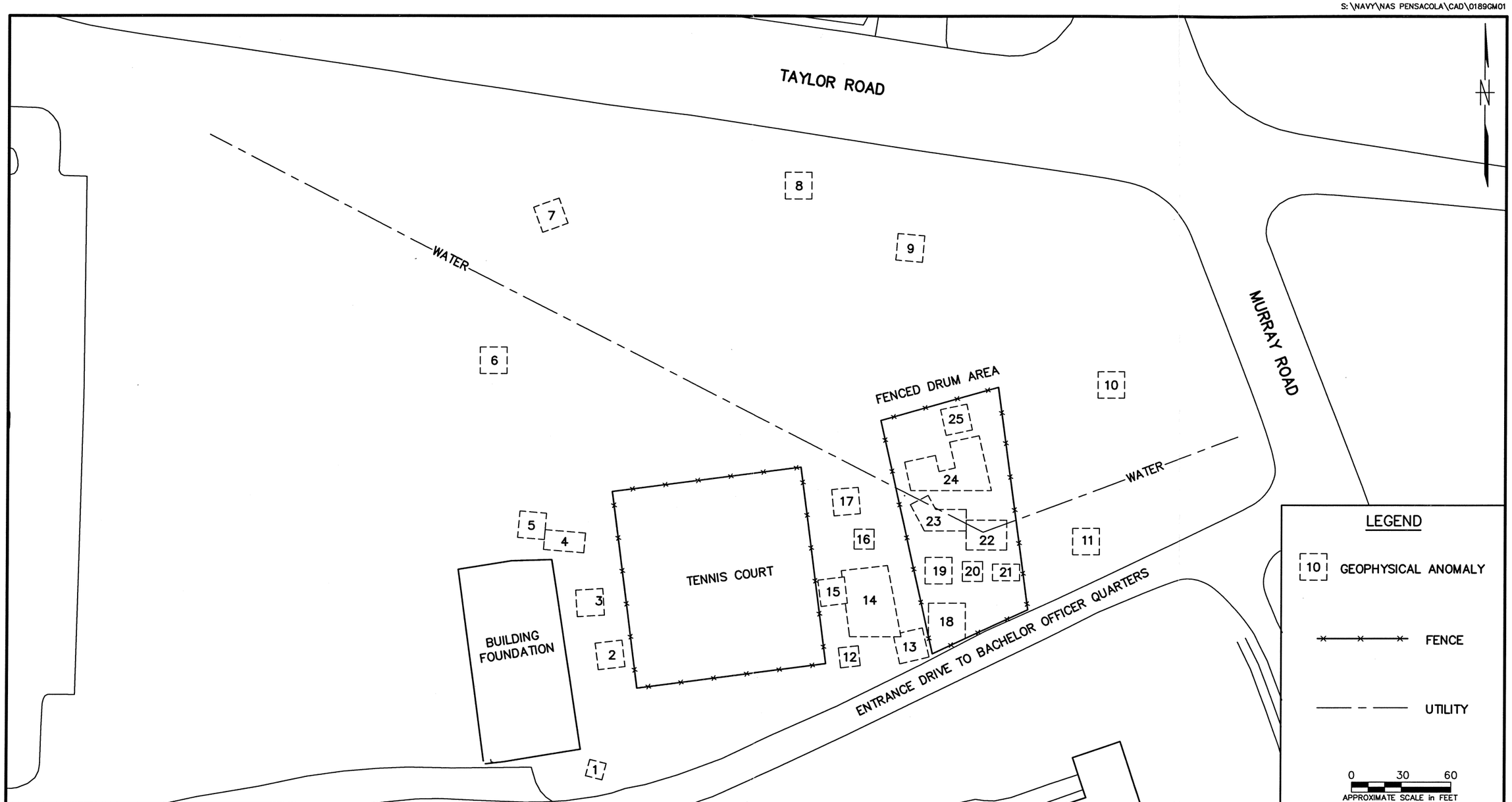

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GEOPHYSICAL ANOMALY LOCATIONS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0189
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debris was observed at the surface indicating the presence of a possible landfill. No odors, visible soil stains, or other indications of contaminant release were observed at the time the drums were discovered. The area was fenced to prevent general access until further investigations could be conducted.

1.2.3 Previous Investigations

EnSafe/Allen & Hoshall conducted a geophysical investigation in March 1994 using gradient and total magnetic surveys (E/A & H, 1994) to provide the locations of potential buried metal objects, including drums, relatively quickly. The objectives of the investigation were to determine the areal extent of the drum disposal area and to evaluate if it was extensive or limited in area. The geophysical survey was performed using a gradient magnetic geophysical survey, which responds exclusively to ferrous metals. The total magnetic field and vertical magnetic gradient were measured during the survey.

Results of the geophysical investigation identified metal anomalies consistent with metal drums in an area approximately 100-feet by 120-feet as a possible drum disposal area. A large section of land in the north half of the surveyed area was interpreted as free of drums. Although cultural clutter (buried utilities, metal fences, poles, buildings, etc.) precluded a definitive interpretation. Figure 1-3 shows the locations of anomalies identified during this geophysical investigation.

The magnetic anomaly data indicated the disposal area did not contain systematic disposal areas, rather the anomalies were limited in number and randomly dispersed. The actual number of drums disposed in the area could not be determined. The report recommended that the drum disposal area, as well as several anomalies discovered outside the disposal area, should be further explored by trenching to a depth of 5 feet. Other anomalies less likely to be drums should be investigated with hand-tools.

1.3 REGULATORY SETTING

The Naval Installation Restoration (IR) program was designed to identify and abate or control contaminant migration resulting from past operations at naval installations, with the goal of expediting and improving environmental response actions while protecting human health and the environment. The IR program is conducted in accordance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and Executive Order 12580. CERCLA requires that federal facilities comply with the act, both procedurally and substantively. Site 43 was investigated as part of CERCLA requirements.

1.4 REPORT ORGANIZATION

The SCR is organized into seven chapters (Chapters 1.0 to 7.0). Chapter 1.0 presents the purpose, site description, and regulatory setting for the Site Characterization at NAS Pensacola. Chapter 2.0 summarizes site conditions. Chapter 3.0 presents the investigative methodologies that were used to conduct the assessment. Chapter 4.0 discusses the nature of contamination. Chapter 5.0 presents the conclusions and recommendations. Chapter 6.0 includes the Professional Review Certification. Chapter 7.0 includes the references used in preparing this report. Supporting data are provided in the Appendices.

2.0 SITE CONDITIONS

2.1 PHYSIOGRAPHY

Site 43 lies at the southwest corner of the intersections of Murray and Taylor Roads. The area covers approximately 40,000 square feet and the site elevation is approximately 20 feet above mean sea level (msl). The site lies in a low area between these two roads and across the street from the entrance to the Officers' Quarters. The land situated within the fenced portion of the site is grassy and overgrown with vegetation. The land outside the fenced area is grassy with mature trees and is maintained by the Navy Public Works Center. The site also contains a fenced in tennis court area and an unfenced old building foundation.

2.2 HYDROGEOLOGY

2.2.1 Regional

Naval Air Station (NAS) Pensacola is located in the extreme southeastern portion of Escambia County, Florida, which lies within the Coastal Plain Provence of the United States. As described in the *Initial Assessment of NAS Pensacola* (Naval Energy and Environmental Support Activity [NEESA], 1983), NAS Pensacola lies within the coastal lowland that is characterized by a series of broad, nearly level marine terraced that extend several miles from the coast and merge with the narrow terraces along the Escambia and Perdido Rivers. NAS Pensacola is bordered on the south by Big Lagoon, on the east by Pensacola Bay, and on the north by Bayou Grande. Swampy areas exist on or near the western portion of NAS, and man-made drainage ways and storm drains feed into the short intermittent streams emptying in to the bay and bayou. No perennial streams enter or exit the NAS, but the marshy areas and three small lakes retain water throughout the year. The general elevation of NAS Pensacola is approximately 40 above msl.

The surficial geology of the area consists of Pleistocene marine deposits made up of light brown to tan fine quartz sand with associated stringers of and lenses of gravel and clay. Underlying these deposits, increasing with age, are the Citronelle Formation, the Miocene Coarse Clastics, the Pensacola Clay, the Tampa Formation, the Chickasawhay Limestone, the Bucatunna Clay member of the Byram Formation, the Ocala Group, the Lisbon equivalent, the Tallahatta Formation, and the Hatchetigbee Formation. The Pleistocene deposits and Citronelle formation are often impossible to differentiate, and together range in thickness from approximately 30 feet to 800 feet across the county (NEESA, 1983).

The groundwater is under artesian conditions where layers of clay, sandy clay, or hardpan are present, and under non-artesian conditions where such clays and hardpans are absent. Water levels in the shallow aquifer range from zero to approximately 30 feet bls across in the NAS Pensacola area. The groundwater flow has

historically been found toward the Gulf of Mexico and the Escambia and Perdido rivers although groundwater flow can vary locally due to the effect of topography or surface water bodies. The aquifer recharge is most dominantly from local precipitation. The Floridan aquifer is separated from the sand and gravel aquifer by a thick section of clay and is subdivided into two parts, upper and lower, by an extensive clay bed.

2.2.2 Site Specific

Lithologic descriptions of soil samples collected from borings advance during the Site Characterization Investigation were used to evaluate the site specific geology. Since the deepest borings were advanced to approximately 20 feet below land surface (bls) to facilitate monitoring well installation, discussion of soil characteristics is limited to the top 20 feet of soils.

Based on lithologic descriptions from the soil samples, the subsurface soil generally consists of light to dark brown fine to medium sand with interspersed white fine sand. The water table was encountered at approximately 15 to 16 feet below land surface (bls). No cross section was constructed for this site due to the continuous lithology. Soil sample log sheets are provided in Appendix A. Boring logs are provided in Appendix B.

3.0 METHODOLOGIES AND EQUIPMENT

3.1 FIELD INVESTIGATION METHODS

The 1994 geophysical survey conducted by E/A&H indicated that an additional investigation was needed to confirm the presence or absence of additional buried drums and other metallic debris within the study area. The Site Characterization Investigation at Site 43 therefore focused primarily on the investigation of geophysical anomalies identified during this 1994 survey and to determine the associated impacts (if any) to soil and groundwater.

A variety of field investigation activities were conducted at NAS Pensacola to meet the objectives of the preliminary site characterization scope of work (SOW). The data collection activities followed the Standard Operating Procedures (SOPs) issued by the USEPA in *Environmental Investigations Standard Operating Procedures Quality Assurance Manual* (1996b). All such activities also complied with TtNUS's FDEP Comprehensive Quality Assurance Plan (COMPQAP) #980038 (1998), which was approved by FDEP on August 24, 1998. In some instances, the planned investigation activities (e.g., well construction) were not specifically addressed in the (COMPQAP); in other cases a methodology presented in the COMPQAP, or a specific step thereof, may have been deemed inconsistent with site-specific conditions or previous investigation methods used at NAS Pensacola. In these cases the United States Environmental Protection Agency (USEPA) Region 4 Environmental Investigations SOPs (USEPA 1996b), Navy technical guidance, or project-specific SOPs adopted by or prepared by TtNUS were invoked.

3.2 FIELD INVESTIGATION ACTIVITIES

The following activities were performed during this preliminary site characterization:

- Completion of test pits to investigate anomalies identified during the E/A&H survey;
- Collection of surface soil samples from each anomaly location;
- Collection of subsurface soil samples from each excavation containing a drum;
- Organic Vapor Analysis (OVA) headspace Analysis;
- Installation of soil borings and collection of subsurface soil samples using direct-push (DPT) techniques;
- Installation of direct push technology (DPT) groundwater monitoring wells in the shallow zone of the alluvial aquifer;
- Monitoring well development and collection of groundwater samples;
- Measurement of groundwater potentiometric surface;
- Location survey.

The following sections address each of these field investigation activities specifically.

3.2.1 Surface Soil Sampling

TtNUS personnel collected seventeen surface soil samples (PEN-43SS001 through PEN-43SS017) at Site 43 during the week of October 4, 1999. The samples were collected with a stainless steel spoon at each suspected anomaly location from 0-6 inches below land surface (bls). Encore® samplers were used to collect soil for volatile organic compound (VOC) analysis. Each sample was screened for organic vapor analysis as described in Section 3.2.2, and sent to the laboratory for analysis of contract laboratory program (CLP)- target compound list (TCL) VOCs (USEPA method 8260), semivolatile organics (SVOCs) (USEPA method 8270), pesticides and polychlorinated biphenyls (PCBs) (USEPA method 8081), target analyte list (TAL) metals and cyanide (USEPA methods SW 6010, SW7470, SW7471, SW9010, and SW9065). Quality control samples (duplicates, trip blanks, matrix spike/matrix spike duplicates, and equipment blanks) were collected where applicable. Surface soil sample locations are shown on Figure 3-1. Soil sample log sheets are found in Appendix A.

3.2.2 OVA Headspace Sampling

Soil vapor headspace analyses were performed on soil samples according to the method prescribed in FDEP Rule 62-770.200(8) of the Florida Administrative Code (FAC). All surface and subsurface soil samples were analyzed with a calibrated organic vapor analyzer (OVA) of the flame ionization detector (FID) type. The samples were collected and split into two clean, 16-ounce glass jars. The jars were then covered with aluminum foil and left to equilibrate for approximately five minutes. At that point the FID-OVA was pierced through the aluminum foil covering and the highest sustained reading was recorded. If the FID-OVA readings detected in the first jar were above background, the second sample jar was measured using an in-line charcoal filter to determine the portion of the total reading attributable to methane gas. All of the samples analyzed for headspace were sent to the laboratory for analysis.

3.2.3 Test Pitting

Test pitting was performed in order to investigate the geophysical anomalies identified during the 1994 E/A&H geophysical survey. Test pitting was performed at each of the seventeen magnetic anomaly locations. The pits were advanced to a depth of 5 feet bls using a tracked excavator or shovels. The open pits were visually inspected for the presence of drums or other metal debris. Drums were encountered in only two of the seventeen excavations, anomalies 15 and 20. The majority of excavations contained metal debris and trash that most likely resulted in the geophysical anomalies that did not contain drums.

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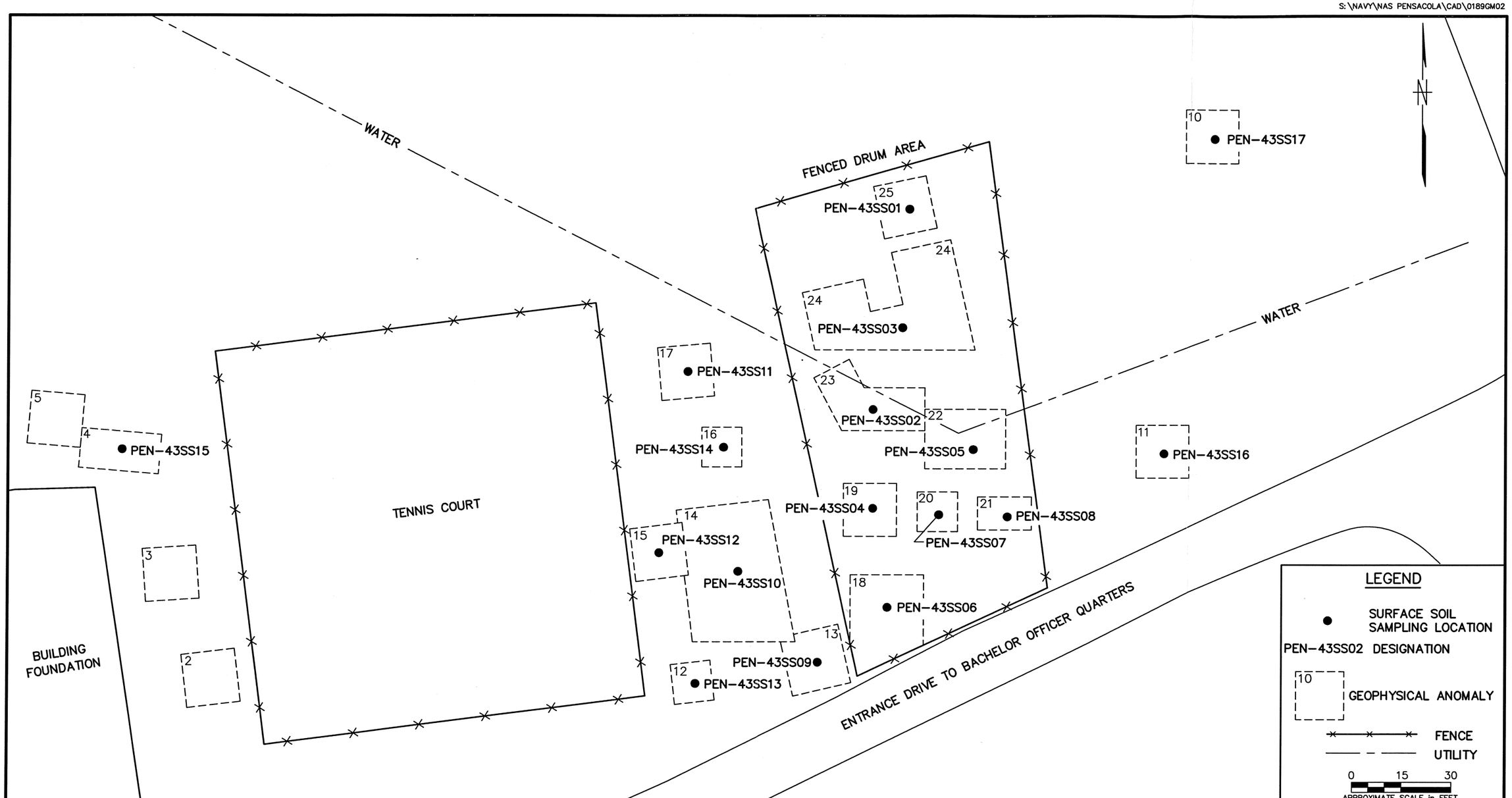

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SURFACE SOIL SAMPLING LOCATIONS
SITE 43
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CONTRACT NO. 0189
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If no drums were encountered, the test pit was subsequently backfilled with native soil. If drums were encountered, the drums were removed and placed into DOT-approved overpack; subsurface soil samples were collected from below each drum location (see section 3.2.4), and the pits were backfilled with the native soil.

3.2.4 Drum Characterization

Fourteen drums were excavated from two different locations, one from anomaly 15 and thirteen from anomaly 20. Each drum was examined onsite to characterize its contents. The drums were examined for type, size, head configuration, identifiable markings, estimated volume of contents, general condition, and drum contents. The drums were then screened for radioactivity and organic vapors. Each excavated drum was subsequently placed in a DOT-approved overpack container and secured onsite.

3.2.5 Test Pit Subsurface Soil Sampling

TtNUS personnel collected seven subsurface soil samples (PEN-43SV01 through PEN-43SV07) during the week of October 4, 1999 from the two anomaly excavations containing drums. Each sample was collected with a stainless steel spoon from directly under where the drums were located. Encore® samplers were used to collect soils for VOC analysis. One sample was collected from underneath the drum at anomaly 15. Six subsurface samples were collected below the drums in anomaly 20. The samples were collected in each of the four quadrants of the test pit, and in places where there was evidence of drum contents possibly leaking onto the soil. Each soil sample was screened with an OVA (Section 3.2.2) and sent to the laboratory for analysis of CLP-TCL VOCs (USEPA method 8260), SVOCS (USEPA method 8270), pesticides and PCBs (USEPA method 8081), and TAL metals and cyanide (USEPA methods SW 6010, SW7470, SW7471, SW9010, and SW9065). Quality control samples were collected where applicable. Subsurface soil sample locations are shown in Figure 3-2. Soil sample sheets are found in Appendix A

3.2.6 Direct Push Borings and Monitoring Well Installation

Five soil borings (PEN-43SB01 through PEN-43SB05) were advanced at Site 43 using a DPT rig on October 15, 1999. Each boring was advanced to a depth of 20 feet bls, with the exception of PEN-43SB04 which was advanced to 15 ft. bls due to the shallower water table. Five subsurface soils samples (PEN-43SB01415 through PEN-43SB051415) were collected from soils just above the water table in each boring and sent for fixed base laboratory analysis for CLP-TCL VOCs (USEPA method 8260), SVOCs (USEAP method 8270), pesticides and PCBs (USEPA method 8081), and TAL metals and cyanide

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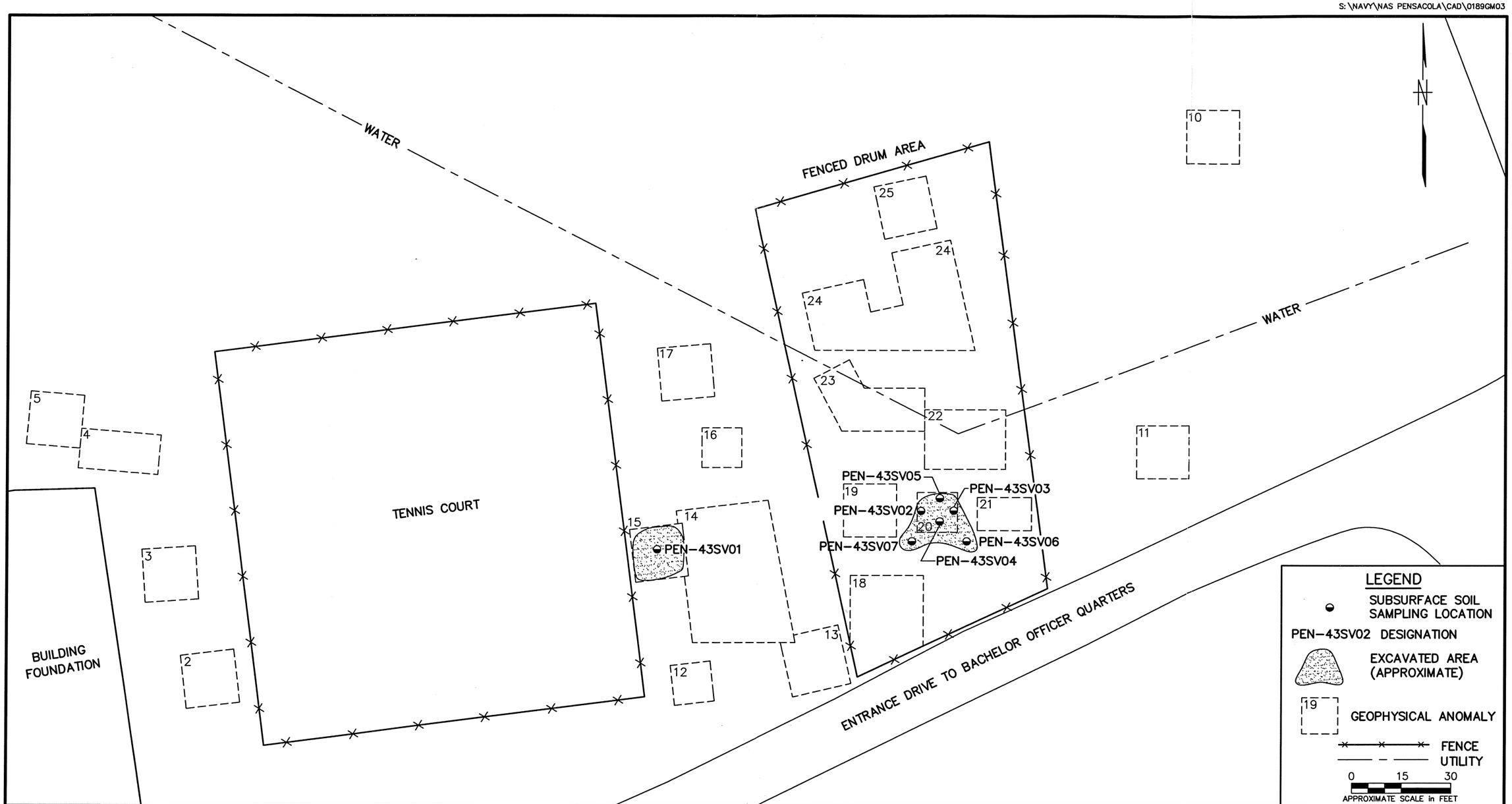

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SUBSURFACE SOIL SAMPLE AND EXCAVATION LOCATIONS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0189
APPROVED BY DATE
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(USEPA methods SW6010, SW7471, SW7470, SW9010, and SW9065). Quality control samples were collected where applicable. Subsurface soil sampling logs are found in Appendix A.

Each soil boring was then converted into a permanent monitoring well (PEN-43-01S through PEN-43-05S). The monitoring wells were installed to approximately 20 feet bls, except for monitoring well PEN-43-04S, which was installed to a depth of 15 feet bls. One-inch inner diameter (ID) pre-packed Schedule 40 PVC monitoring wells with 10 foot of 0.010-slot screen were introduced into each boring. A 20/30 sand pack was installed to at least 0.5 ft. above the top of the screen. A bentonite seal was then completed to the surface, with a quickrete pad and stainless steel manhole cover. Soil boring and monitoring well locations are provided in Figure 3-3. Boring logs are provided in Appendix B. Monitoring well construction sheets are found in Appendix C.

3.2.7 Monitoring Well Development

Each monitoring well was developed no sooner than 24 hours after installation. The wells were developed using the surge and pump method with a peristaltic pump. The wells were developed until all the following criteria were achieved:

- Turbidity remained within a 10 nephelometric turbidity unit (NTU) range for 2 consecutive readings;
- Stabilization of the following parameters occurred:
  - -temperature - plus or minus 1° C
  - -pH - plus or minus 1 unit, and
  - -specific conductivity - plus or minus 5 percent of scale; and
- Accumulated sediment was removed from the well.

Monitoring well development sheets are located in Appendix D.

3.2.8 Groundwater Sampling

Subsequent to monitoring well installation and no sooner than 24 hours after development, groundwater samples were collected from each well using low-flow quiescent purge techniques. The samples were collected and sent to a fixed base laboratory analysis of CLP-TCL VOCs (USEPA method 8260), SVOCs (USEPA method 8270), pesticides and PCBs (USEPA methods 8081), and TAL metals and cyanide (USEPA methods SW6010, SW7471, SW7470, SW9010, and SW9065). Groundwater sample sheets are presented in Appendix E.

Three of the groundwater samples were analyzed in the field for the following natural attenuation parameters: dissolved oxygen, alkalinity, carbon dioxide, sulfide, ferrous iron, nitrite, manganese, and

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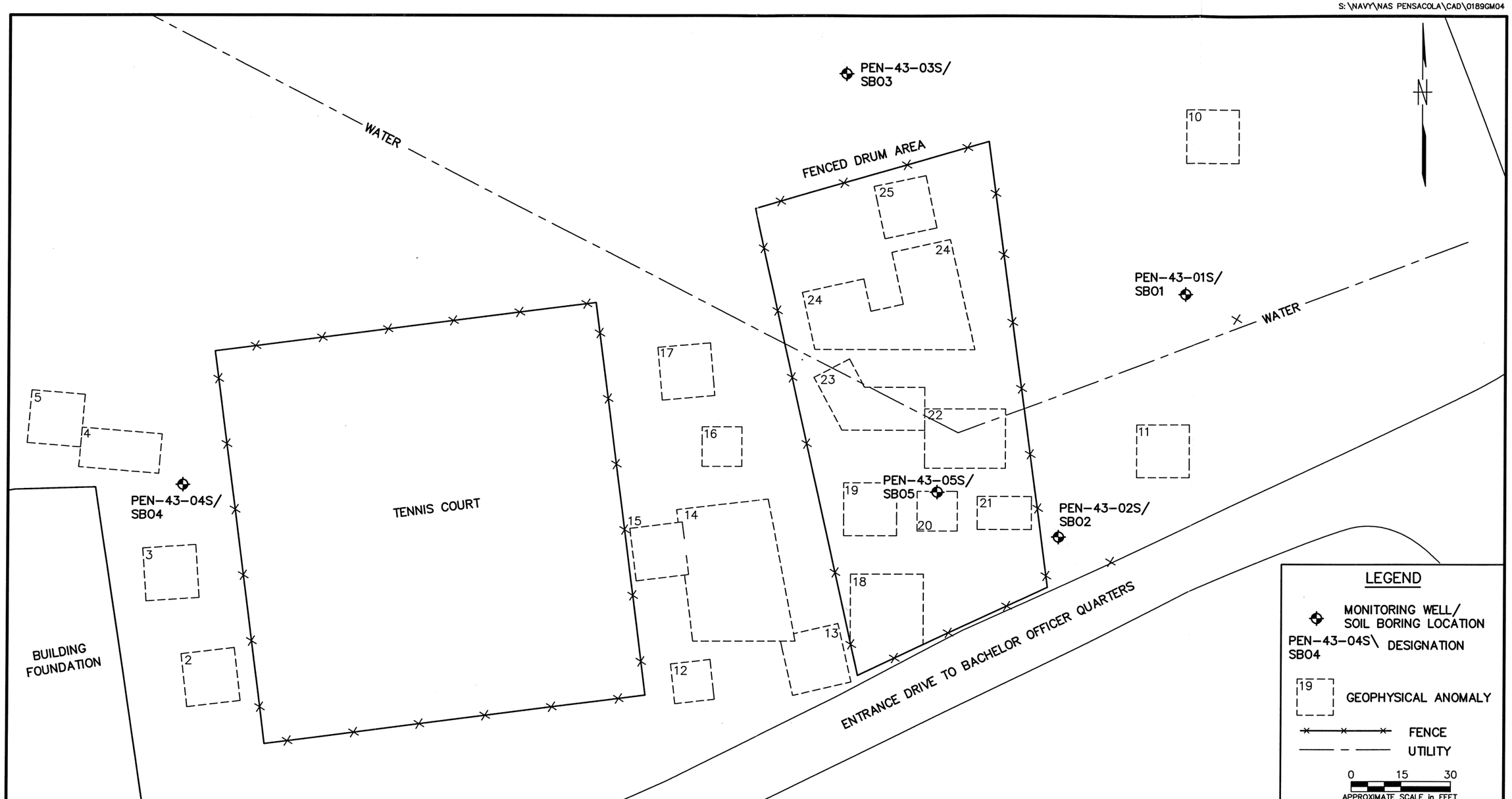

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MONITORING WELL\SOIL BORING
LOCATION MAP
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0189
APPROVED BY DATE
APPROVED BY DATE
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FORM CADD NO. SDIV_BH.DWG – REV 0 – 1/20/98

hydrogen sulfide. These analyses were performed to provide data in the event that natural attenuation parameters would be evaluated. Natural attenuation field sheets are included in Appendix E.

3.2.9 Water Table Elevation Measurements

One complete round of water level measurements was obtained from the five shallow monitoring wells on October 27, 1999. The measurements were collected within a 48-hour period of consistent weather conditions to minimize atmospheric/precipitation effects on groundwater conditions. Each measurement was taken to a permanent reference point on the top of each well casing. Water level measurements were recorded in the field logbook to the nearest 0.01 foot.

3.2.10 Location Survey

The location survey was completed on December 2, 1999. During this survey, the newly installed monitoring wells and site landmarks were surveyed in for ground elevation and top of casing elevation where applicable. The horizontal and vertical surveys were performed by a Florida registered surveyor and mapper to determine the locations and elevations of groundwater monitoring wells. The horizontal locations were referenced to the Florida State Plane Coordinate System, North Zone, North American Datum (NAD) of 1983, 1990 Adjustment (NAD 83,90), by ties to the existing published monuments in the vicinity. Elevations were referenced to Mean Sea Level, North American Vertical Datum, 1988 Adjustment (NAVD 88) by ties to existing survey benchmarks in the vicinity. Control points were established at each existing monument and benchmark by Global Positioning Systems (GPS) Surveys. Conventional surveys were performed to locate other site features.

4.0 NATURE OF CONTAMINATION

This chapter presents analytical data from surface soil, subsurface soil, and groundwater samples collected during the Site Characterization Investigations at Site 43. The laboratory analytical reports are provided in Appendix F. At the end of this chapter, a conceptual site model (CSM) is developed that incorporates the data collected during this effort to summarize the types of contaminants known or potential routes of migration, and to identify potential environmental or human receptors.

4.1 SOIL AND VADOSE ZONE

4.1.1 Soil Vapor Assessment

No soil vapor concentrations were detected from the surface soil samples. Two out of seven of the subsurface soil samples collected from the excavations contained organic vapor concentrations ranging from non-detect to 7.9 parts per million (ppm) total organic vapors. No soil vapor concentrations were detected from the subsurface soil samples collected from DPT borings. Table 4-1 summarizes the screening results.

4.1.2 Surface Soil

Seventeen surface soil samples (PEN-43SS01 through PEN-43SS17) were collected at Site 43 from selected magnetic anomaly locations. VOCs, pesticides, and PCBs were reported below laboratory method detection limits in the surface soil samples. Benzo (a) pyrene was the only SVOC detected in surface soils. Seven of the seventeen samples contained concentrations of benzo(a)pyrene above the FDEP residential Direct Exposure Limit (DEL) of 0.1 mg/kg, but below the industrial DEL of 0.5 mg/kg (Chapter 62-777, FAC).

Eight metals were detected in concentrations above their residential DELs: antimony, arsenic, barium, copper, lead, iron, nickel, and vanadium. Barium concentrations exceeded the residential DEL (110 mg/kg) in eleven samples, ranging from 136 mg/kg to 1,130 mg/kg. Copper concentrations exceeded the residential DEL (110 mg/kg) in thirteen of the seventeen samples, ranging from 160 mg/kg to 20,000 mg/kg. Iron concentrations exceeded the residential DEL (23,000 mg/kg) in four samples, ranging from 25,700 mg/kg to 73,700 mg/kg. Nickel concentrations exceeded the residential DEL (110 mg/kg) in one sample, PEN-43SS07 (144 mg/kg). Vanadium concentrations exceeded the residential DEL (15 mg/kg) in seven samples, ranging from 19.2 mg/kg to 185 mg/kg.

The industrial DEL for antimony (240 mg/kg) was exceeded in two samples, PEN-43SS14 (48,600 mg/kg) and PEN-43SS15 (25,000 mg/kg). The FDEP leachability concentration based on groundwater criteria for

TABLE 4-1
SUMMARY OF ORGANIC VAPOR ANALYZER (OVA) SCREENING RESULTS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Sample Location	Sample ID	Sample Depth (feet bls)	Headspace Readings (ppm)		
			Total Organic Reading	Carbon Filtered Reading	Net Reading
Anomaly # 25	PEN-43SS01	0.5	ND	ND	ND
Anomaly # 23	PEN-43SS02	0.5	ND	ND	ND
Anomaly # 24	PEN-43SS03	0.5	ND	ND	ND
Anomaly # 19	PEN-43SS04	0.5	ND	ND	ND
Anomaly # 22	PEN-43SS05	0.5	ND	ND	ND
Anomaly # 18	PEN-43SS06	0.5	ND	ND	ND
Anomaly # 20	PEN-43SS07	0.5	ND	ND	ND
Anomaly # 21	PEN-43SS08	0.5	ND	ND	ND
Anomaly # 13	PEN-43SS09	0.5	ND	ND	ND
Anomaly # 14	PEN-43SS10	0.5	ND	ND	ND
Anomaly # 17	PEN-43SS11	0.5	ND	ND	ND
Anomaly # 15	PEN-43SS12	0.5	ND	ND	ND
Anomaly # 12	PEN-43SS13	0.5	ND	ND	ND
Anomaly # 16	PEN-43SS14	0.5	ND	ND	ND
Anomaly # 04	PEN-43SS15	0.5	ND	ND	ND
Anomaly # 11	PEN-43SS16	0.5	ND	ND	ND
Anomaly # 10	PEN-43SS17	0.5	ND	ND	ND
Anomaly # 15	PEN-43SV01	2	ND	ND	ND
Anomaly # 20	PEN-43SV02	3	ND	ND	ND
Anomaly # 20	PEN-43SV03	3	ND	ND	ND
Anomaly # 20	PEN-43SV04	3	ND	ND	ND
Anomaly # 20	PEN-43SV05	3	ND	ND	ND
Anomaly # 20	PEN-43SV06	3.5	5.2	NM	NA
Anomaly # 20	PEN-43SV07	3.5	7.9	NM	NA
PEN-43SB01	PEN-43SB011415	15	ND	ND	ND
PEN-43SB02	PEN-43SB021415	15	ND	ND	ND
PEN-43SB03	PEN-43SB031415	15	ND	ND	ND
PEN-43SB04	PEN-43SB040708	8	ND	ND	ND
PEN-43SB05	PEN-43SB051415	15	ND	ND	ND

Notes:
NM = sample collected with photoionization detector
NA = not applicable

antimony (5.0 mg/kg) was also exceeded in five of the seventeen samples. Arsenic was detected in concentrations above the residential DEL but below the industrial DEL in three samples, ranging from 1.0 mg/kg to 3.3 mg/kg. Arsenic was detected in concentrations exceeding the industrial DEL (3.7 mg/kg) in nine of the seventeen samples, ranging from 4.1 mg/kg to 9.8 mg/kg. Lead concentrations exceeded the industrial DEL (920 mg/kg) in ten of the seventeen samples, ranging from 1420 mg/kg to 10,800 mg/kg. Nickel concentrations exceeded the leachability concentration (130 mg/kg) in one sample, PEN-43SS07 (144 mg/kg).

Background reference concentrations for soil were previously determined for NAS Pensacola by EnSafe Inc. All of the background values for metals detected at Site 43 fall below residential DELs, except for arsenic which has a background value of 1.0 mg/kg and a residential DEL of 0.87 mg/kg. All of the metal exceedences in surface soil at Site 43 were therefore found to be above background concentrations. The analytical results are summarized in Table 4-2. Contaminant concentrations are depicted on Figure 4-1.

4.1.3 Subsurface Soil from Excavations

Seven subsurface soil samples (PEN-43SV01 through PEN-43SV07) were collected from the two excavations containing drums (anomalies 15 and 20). VOCs, pesticides, and PCBs were reported below the laboratory method detection limits in the subsurface soil samples. Benzo(a)pyrene was detected in six of the seven samples at concentrations ranging from 0.10 mg/kg to 0.57 mg/kg. Two of the six samples exceeded the benzo(a)pyrene industrial DEL of 0.5 mg/kg.

Dibenzo(a,h)anthracene was detected in five of the seven samples at concentrations ranging from 0.150 mg/kg to 0.44 mg/kg. These concentrations all exceed the residential DEL of 0.10 mg/kg but fall below the industrial DEL of 0.50 mg/kg.

Nine metals were detected in concentrations exceeding their residential DELs: antimony, arsenic, barium, copper, iron, zinc, lead, nickel, and vanadium. The industrial DEL for arsenic (3.7 mg/kg) was exceeded in all seven samples, ranging from 6.6 mg/kg to 57.3 mg/kg. The leachability value for arsenic was exceeded in one sample, PEN-43SV03 (57.3 mg/kg). The residential DEL for antimony (26 mg/kg) was exceeded in three of the seven samples, ranging from 26 mg/kg to 226 mg/kg. The industrial DEL for antimony was not exceeded in any sample, but the leachability value for antimony (5.0 mg/kg) was exceeded in all seven samples. The residential DEL for barium (110 mg/kg) was exceeded in all seven samples, ranging from 438

TABLE 4-2
SUMMARY OF ANALYTES DETECTED IN SURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

Sample No.		PEN-43SS01	PEN-43SS02	PEN-43SS03	PEN-43SS04	PEN-43SS05	PEN-43SS06	PEN-43SS07
Anomaly		25	23	24	19	22	18	20
Collect Date	DE1[1]/DE2[2]/LE[3]/BG[9] (mg/kg)	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999
Sample Depth (ft bls)		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Volatile[4] (mg/kg)								
None Detected								
Semi-Volatile[5] (mg/kg)								
Benzo (A) Pyrene	0.1/0.5/8.0		0.110[J]	--	--	0.140[J]	0.130[J]	--
Pesticides[6] (mg/kg)								
None Detected								
PCBs[7] (mg/kg)								
None Detected								
Metals[8] (mg/kg)								
Antimony	26 / 240 / 5.0 / 9.48			--	--	34.7[J]	--	59.9[J]
Arsenic	0.8 / 3.7 / 29 / 1.0	--	4.1	1.4	5.2	9.7	8.2	16.9
Barium	110** / 87000 / 1600 / 4.63	--	344	--	479	644	557	1,050
Copper	110** / 76000 / *** / 5.72	--	707	160	681	2860	1040	20,000
Iron	23000 / 480000 / *** / 2745			--	--	37,300	35,100	73,700
Lead	400 / 920 / *** / 7.35	--	3,860	550	2700	3130	3060	10,800
Nickel	110** / 28000 / 130 / 6.38			--	--	--	--	144
Vanadium	15** / 7400 / 980 / 5.83	--	26.6	--	--	52.5	--	185.0

See notes at end of table

TABLE 4-2
SUMMARY OF ANALYTES DETECTED IN SURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

Sample No.		PEN-43SS08	PEN-43SS09	PEN-43SS10	PEN-43SS11	PEN-43SS12	PEN-43SS13	PEN-43SS14
Anomaly		21	13	14	17	15	12	16
Collect Date	DE1[1]/DE2[2]/LE[3]/BG[9] (mg/kg)	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999
Sample Depth (ft bls)		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Volatile[4] (mg/kg)								
None Detected								
Semi-Volatile[5] (mg/kg)								
Benzo (A) Pyrene	0.1/0.5/8.0	0.110[J]	0.36	0.300[J]	--	--	0.120[J]	--
Pesticides[6] (mg/kg)								
None Detected								
PCBs[7] (mg/kg)								
None Detected								
Metals[8] (mg/kg)								
Antimony	26 / 240 / 5.0 / 9.48	--	--	53.5[J]	--	--	--	48600[J]
Arsenic	0.8 / 3.7 / 29 / 1.0	3.3	1.0	8.8	--	7.7	11.2	9.8
Barium	110** / 87000 / 1600 / 4.63	209.0	--	907.0	--	369.0	275.0	1130.0
Copper	110** / 76000 / *** / 5.72	305	--	1270	286	840	876	753
Iron	23000 / 480000 / *** / 2745	--	--	--	--	25700[J]	--	--
Lead	400 / 920 / *** / 7.35	1420	--	3,370	--	1,910	1820	4050
Nickel	110** / 28000 / 130 / 6.38	--	--	--	--	--	--	--
Vanadium	15** / 7400 / 980 / 5.83	--	--	80.1	--	99.1	19.2	30

See notes at end of table

TABLE 4-2
SUMMARY OF ANALYTES DETECTED IN SURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

Sample No.		PEN-43SS15	PEN-43SS16	PEN-43SS17	PEN-43SSDD01	PEN-43SSDD02	PEN-43TB100599
Anomaly		4	11	10	17	10	
Collect Date	DE1[1]/DE2[2]/LE[3]/BG[9] (mg/kg)	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	
Sample Depth (ft bls)		0.5	0.5	0.5	0.5	0.5	
Volatile[4] (mg/kg)							
None Detected							
Semi-Volatile[5] (mg/kg)							
Benzo (A) Pyrene	0.1/0.5/8.0	--	--	--			NA
Pesticides[6] (mg/kg)							
None Detected							NA
PCBs[7] (mg/kg)							
None Detected							NA
Metals[8] (mg/kg)							
Antimony	26 / 240 / 5.0 / 9.48	25000[J]	--	--			
Arsenic	0.8 / 3.7 / 29 / 1.0	1.1	2.6	--			
Barium	110** / 87000 / 1600 / 4.63	--	136	--			
Copper	110** / 76000 / *** / 5.72	--	195	--			
Iron	23000 / 480000 / *** / 2745	--	--	--			NA
Lead	400 / 920 / *** / 7.35	--	817	--			
Nickel	110** / 28000 / 130 / 6.38	--	--	--			
Vanadium	15** / 7400 / 980 / 5.83	--	--	--			

[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 8270C, [6] SW-846 8081A, [7] SW-846 8082, [8] SW-846 6010B
[9] BG = Background values for soils at NAS Pensacola, EnSafe, 1999
[J] Indicates the presence of a chemical at a concentration less than the reporting limit and greater than the method detection limit.
* Contaminant is not a health concern for this default exposure scenario.
** Direct exposure value based on acute toxicity considerations.
*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.
NA Not Analyzed

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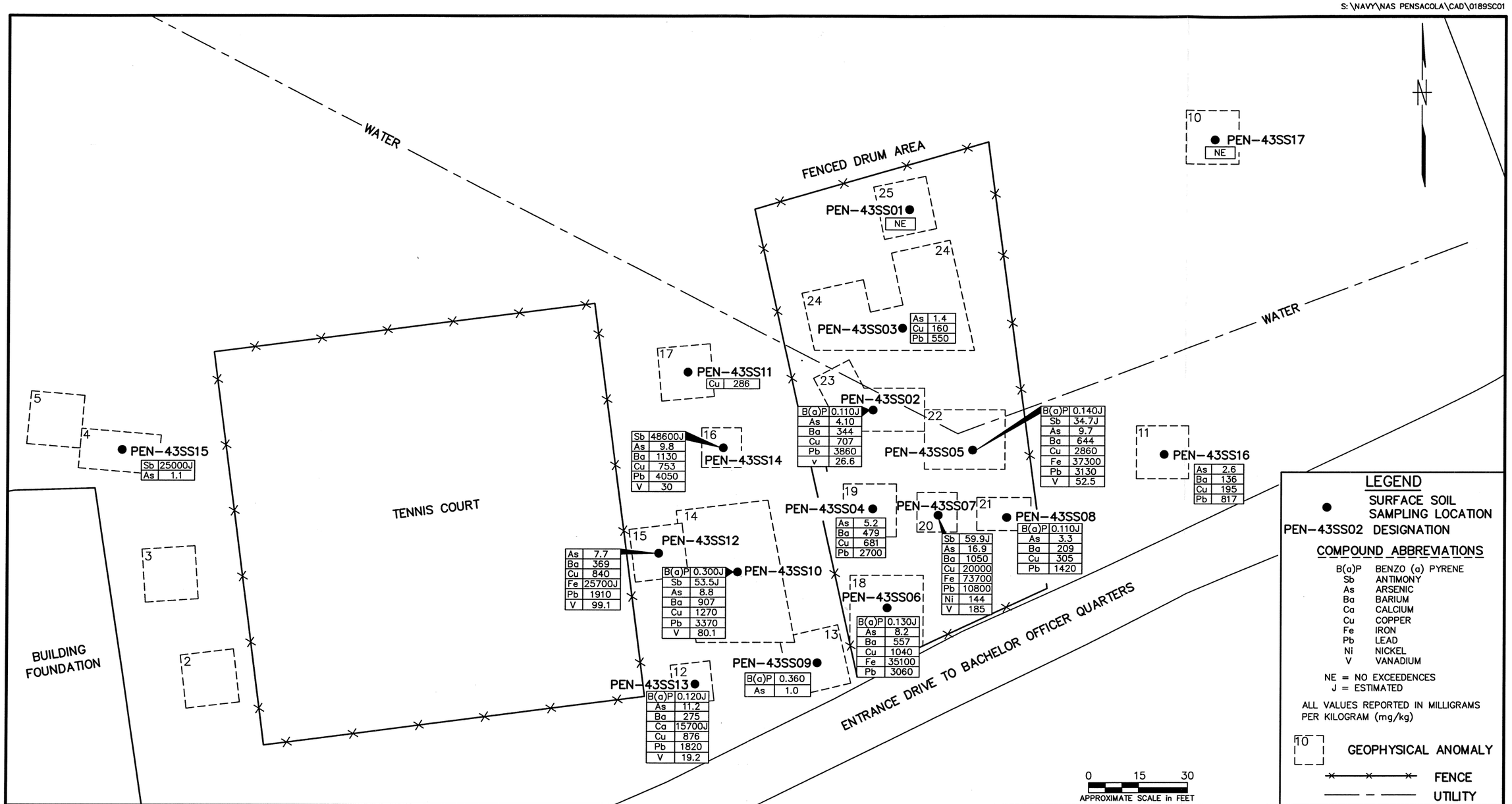

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SUMMARY OF SURFACE SOIL SAMPLES EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0189
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REV. 0

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mg/kg to 6820 mg/kg. The industrial DEL for barium was not exceeded in any sample, but the leachability value for barium (1600 mg/kg) was exceeded in one sample, PEN-43SV03 (6820 mg/kg).

Copper concentrations exceeded the residential DEL (110 mg/kg) in all seven samples, ranging from 529 mg/kg to 15,900 mg/kg. Iron concentrations also exceeded the residential DEL (23,000 mg/kg) in all seven samples, ranging from 23,800 mg/kg to 236,000 mg/kg. Lead concentrations exceeded the residential DEL (400 mg/kg) in all seven samples, ranging from 2080 mg/kg to 20,700 mg/kg. Vanadium concentrations exceeded the residential DEL (15 mg/kg) in all seven samples, ranging from 21.6 mg/kg to 596 mg/kg.

The residential DEL for zinc (23,000 mg/kg) was only exceeded in one sample, PEN-43SV03 (71,700 mg/kg). The industrial DEL for zinc was not exceeded in any sample, but the leachability value for zinc (6000 mg/kg) was exceeded in four samples, ranging from 6260 mg/kg to 71,700 mg/kg. The residential DEL concentration and leachability concentrations for nickel (110 mg/kg and 130 mg/kg respectively) were exceeded in two samples, PEN-43SV01 (149 mg/kg) and PEN-43SV05 (163 mg/kg). The industrial DEL for nickel was not exceeded in any sample.

All the metal exceedences in subsurface soil at Site 43 were also above background values. The analytical results are summarized in Table 4-3. Contaminant concentrations are depicted on Figure 4-2.

4.1.4 Soil Borings

Five soil samples were collected from five soil borings (PEN-43SB011415 through PEN-43SB021415). No VOCs, SVOCs, pesticides, PCBs, or metals were detected in these samples above residential DELs. The soil boring sampling results are summarized in Table 4-4.

4.2 CONTAMINANTS IN GROUNDWATER

Five groundwater samples were collected from five monitoring wells at Site 43 (PEN-43-1S-01 through PEN-43-5S-01). SVOCs, pesticides, and PCBs were reported below the laboratory method detection limits in these samples. Methylene chloride, a common laboratory contaminant, was detected in three of the five groundwater samples at concentrations exceeding the FDEP criterion of 5 µg/L (Chapter 62-777, F.A.C.).

Two metals were detected in groundwater at concentrations exceeding FDEP guidance criteria: aluminum, and iron. Aluminum concentrations exceeded the FDEP criterion of 200 µg /L in three of the five samples,

TABLE 4-3
SUMMARY OF ANALYTES DETECTED IN SUBSURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Sample No.		PEN-43SV01	PEN-43SV02	PEN-43SV03	PEN-43SV04	PEN-43SV05	PEN-43SV06	PEN-43SV07	PEN-43TB10699
Anomaly		15	20	20	20	20	20	20	
Collect Date	DE1[1]/DE2[2]/LE[3]/BG[9] (mg/kg)	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	
Sample Depth (ft bls)		2.0	3.0	3.0	3.0	3.0	3-3.5	3-3.5	
Volatile[4] (mg/kg)									
None Detected									
Semi-Volatile[5] (mg/kg)									
Benzo (A) Pyrene	0.1/0.5/8.0	0.190[J]	0.50	0.270[J]	0.57	0.49	0.100[J]	--	NA
Dibenzo (A,H) Anthracene	0.1/0.5/30	0.150[J]	0.34	0.170[J]	0.44	0.190[J]			NA
Pesticides[6] (mg/kg)									
None Detected									NA
PCBs[7] (mg/kg)									
None Detected									NA
Metals[8] (mg/kg)									
Antimony	26 / 240 / 5.0 / 9.48	40.4[J]	25.1[J]	226[J]	62.6[J]	26	13.8[J]	20.4[J]	
Arsenic	0.8 / 3.7 / 29 / 1.0	15	13.3	57.3	17.5	16	6.6	22.9	
Barium	110** / 87000 / 1600 / 4.63	1210	1570	6820	1530	1510	620	438	
Copper	110** / 76000 / *** / 5.72	4010	1400	3470	15900	1720[J]	1310[J]	529[J]	
Iron	23000 / 480000 / *** / 2745	60900	37900	36700	51400	75600	23800[J]	236000[J]	NA
Zinc	23000 / 560000 / 6000 / 16.86	--	6860	71700	10300	6260	--	--	
Lead	400 / 920 / *** / 7.35	4820	8160	16400	4880	20700	2560[J]	2080[J]	
Nickel	110** / 28000 / 130 / 6.38	149[J]	--	--	--	163	--	--	
Vanadium	15** / 7400 / 980 / 5.83	321	70.5	53.9	106	57.8	21.6	596	

Notes:
[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 8270C, [6] SW-846 8081A, [7] SW-846 8082, [8] SW-846 6010B
[9] BG = Background values for soils at NAS Pensacola, EnSafe, 1999
[J] Indicates the presence of a chemical at a concentration less than the reporting limit and greater than the method detection limit.
* Contaminant is not a health concern for this default exposure scenario.
** Direct exposure value based on acute toxicity considerations.
*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.
NA = not analyzed

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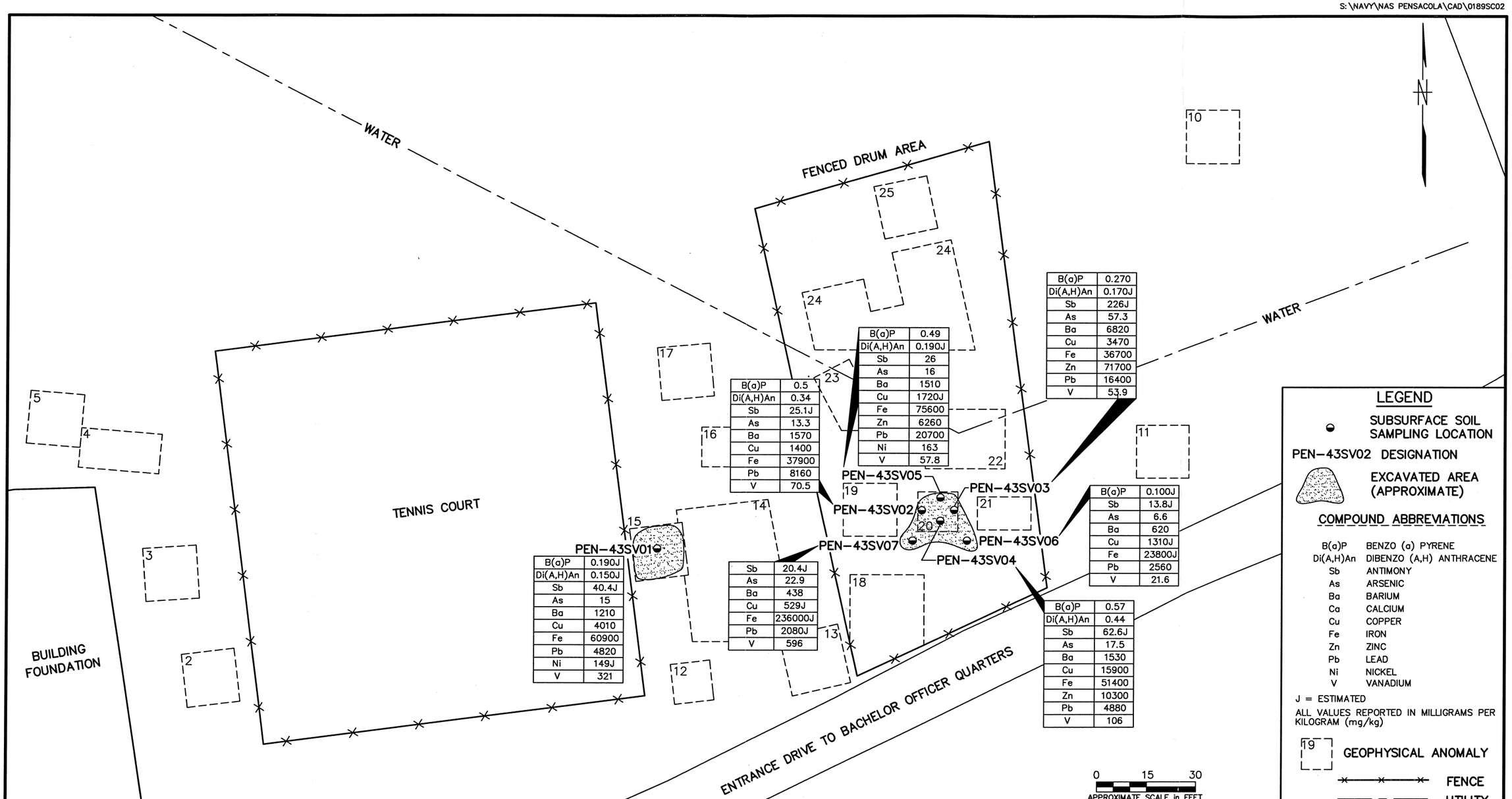

B(a)P	0.190J
Di(A,H)An	0.150J
Sb	40.4J
As	15
Ba	1210
Cu	4010
Fe	60900
Pb	4820
Ni	149J
V	321

B(a)P	0.5
Di(A,H)An	0.34
Sb	25.1J
As	13.3
Ba	1570
Cu	1400
Fe	37900
Pb	8160
V	70.5

Sb	20.4J
As	22.9
Ba	438
Cu	529J
Fe	236000J
Pb	2080J
V	596

B(a)P	0.49
Di(A,H)An	0.190J
Sb	26
As	16
Ba	1510
Cu	1720J
Fe	75600
Zn	6260
Pb	20700
Ni	163
V	57.8

B(a)P	0.270
Di(A,H)An	0.170J
Sb	226J
As	57.3
Ba	6820
Cu	3470
Fe	36700
Zn	71700
Pb	16400
V	53.9

B(a)P	0.100J
Sb	13.8J
As	6.6
Ba	620
Cu	1310J
Fe	23800J
Pb	2560
V	21.6

B(a)P	0.57
Di(A,H)An	0.44
Sb	62.6J
As	17.5
Ba	1530
Cu	15900
Fe	51400
Zn	10300
Pb	4880
V	106

LEGEND

SUBSURFACE SOIL SAMPLING LOCATION

PEN-43SV02 DESIGNATION

EXCAVATED AREA (APPROXIMATE)

COMPOUND ABBREVIATIONS

B(a)P	BENZO (a) PYRENE
Di(A,H)An	DIBENZO (A,H) ANTHRACENE
Sb	ANTIMONY
As	ARSENIC
Ba	BARIUM
Ca	CALCIUM
Cu	COPPER
Fe	IRON
Zn	ZINC
Pb	LEAD
Ni	NICKEL
V	VANADIUM

J = ESTIMATED

ALL VALUES REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg)

19 GEOPHYSICAL ANOMALY

FENCE

UTILITY

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK DATE 1/21/00

CHECKED BY DATE

COST/SCHED-AREA

SCALE AS NOTED

SUMMARY OF SUBSURFACE SOIL SAMPLES EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0189

APPROVED BY DATE

APPROVED BY DATE

DRAWING NO. FIGURE 4-2 REV. 0

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

TABLE 4-4
SUMMARY OF ANALYTES DETECTED IN SOIL BORINGS AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

Sample No.		PEN-43SB011415	PEN-43SB021415	PEN-43-SB031415	PEN-43SB040708	PEN-43SB051415	PEN-43SBDD03	TB101999-01
Sample Location		PEN-43SB01	PEN-43SB02	PEN-43SB03	PEN-43SB04	PEN-43SB05	PEN-43SB05	
Collect Date	DE1[1]/DE2[2]/LE[3]/BG[9] (mg/kg)	10/19/1999	10/19/1999	10/19/1999	10/19/1999	10/19/1999	10/19/1999	
Sample Depth (ft bls)		14-15	14-15	7/8/2000	7/8/2000	14-15	14-15	
Volatile[4] (mg/kg)								
None Detected								
Semi-Volatile[5] (mg/kg)								
Benzo (A) Pyrene	0.1/0.5/8.0	--	--	--	--	--	--	NA
Pesticides[6] (mg/kg)								
None Detected								NA
PCBs[7] (mg/kg)								
None Detected								NA
Metals[8] (mg/kg)								
Arsenic	0.8 / 3.7 / 29 / 1.0	--	--	--	--	--	--	
Barium	110** / 87000 / 1600 / 4.63	--	--	--	--	--	--	
Copper	110** / 76000 / *** / 5.72	--	--	--	--	--	--	
Iron	23000 / 480000 / *** / 2745	--	--	--				NA
Zinc	23000 / 560000 / 6000 / 16.86	--	--	--				
Lead	400 / 920 / *** / 7.35	--	--	--	--	--	--	
Nickel	110** / 28000 / 130 / 6.38	--	--	--				
Vanadium	15** / 7400 / 980 / 5.83	--	--	--	--	--	--	

Notes:
[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 8270C, [6] SW-846 8081A, [7] SW-846 8082, [8] SW-846 6010B
[9] BG = Background values for soils at NAS Pensacola, EnSafe, 1999
[J] Indicates the presence of a chemical at a concentration less than the reporting limit and greater than the method detection limit.
* Contaminant is not a health concern for this default exposure scenario.
** Direct exposure value based on acute toxicity considerations.
*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.

PEN-43-2S-01 (970 µg/L), PEN-43-4S-01 (310 µg/L), and PEN-43-5S-01 (316 µg/L). The NAS Pensacola background concentration for aluminum, 3882 µg/L, is above the FDEP groundwater standard of 200 µg/L. Aluminum concentrations in groundwater at Site 43 did not exceed the background concentration.

Iron was detected in all five samples at concentrations ranging from 364 µg/L to 2980 µg/L, exceeding the FDEP criterion of 300 µg/L. The reference background concentrations of 1707 µg/L was exceeded in three of the five samples. Groundwater analytical results are summarized in Table 4-5. Contaminant concentrations are shown on Figure 4-3.

Field data collected from three monitoring wells were analyzed for the following natural attenuation parameters: dissolved oxygen, alkalinity, carbon dioxide, sulfide, ferrous iron, nitrite, manganese, and hydrogen sulfide. These results are summarized in Table 4-6.

4.2.1 Groundwater Flow Direction

On October 27, 1999, groundwater elevations were measured in the five newly installed monitoring wells (PEN-43-0S through PEN-43-05S). Groundwater elevation ranged from 3.78 to 5.46 feet above msl. Groundwater flow at the site is generally toward the south-southwest. A summary of the water table elevations is provided in Table 4-7. A potentiometric surface map is shown in Figure 4-4.

4.3 DRUMS

Fourteen drums were removed from two excavations at Site 43. One drum was recovered from anomaly 15 and thirteen drums were removed from anomaly 20. None of the drums were opened, but they were characterized based on chemical and physical observations. Each drum was characterized based on type, volume, condition, contents, etc. Once characterized, the drums were placed in DOT approved overpack containers. A summary of the drum characteristics is given in Table 4-8. The drum characterization sheets are found in Appenidx G.

The drum removed from anomaly 15 was a 30-gallon capacity steel drum with a central bung and reinforced rings for structural support. The drum was crushed and filled with rocks, dirt, and several cockroaches. The OVA reading collected from the drum was 11.3 parts per million (ppm). Photographs of this excavation are found in Appendix H.

TABLE 4-5
SUMMARY OF ANALYTES DETECTED IN GROUNDWATER AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

Sample No. Sample Location Collect Date	FDEP GW Criteria (ug/L)* / BG[6]	PEN-43-1S-01 PEN-43-1S 10/27/99	PEN-43-2S-01 PEN-43-2S 10/27/99	PEN-43-3S-01 PEN-43-3S 10/27/99	PEN-43-4S-01 PEN-43-4S 10/27/99	PEN-43-5S-01 PEN-43-5S 10/27/99	PEN-43-DD-01 PEN-43-3S 10/27/99	TB102799-01
Volatile[1] (ug/L)								
Methylene Chloride	5	19	6	--	6	--	--	
Semi-Volatile[2] (ug/L)								
None Detected		--	--	--	--	--	--	NA
Pesticides[3] (ug/L)								
None Detected		--	--	--	--	--	--	NA
PCBs[4] (ug/L)								
None Detected		--	--	--	--	--	--	NA
Metals[5] (ug/L)								
Aluminum	200 / 3882	--	970	--	310	316	--	
Iron	300 / 1707	2980	1390	422	--	2430	364	NA

Notes:

[1] SW-846 8260B, [2] SW-846 8270C, [3] SW-846 8081A, [4] SW-846 8082, [5] SW-846 6010B

* As provided by Chapter 62-777, F.A.C.

[6] BG = Background values for groundwater at NAS Pensacola, EnSafe, 2000

NA = not analyzed

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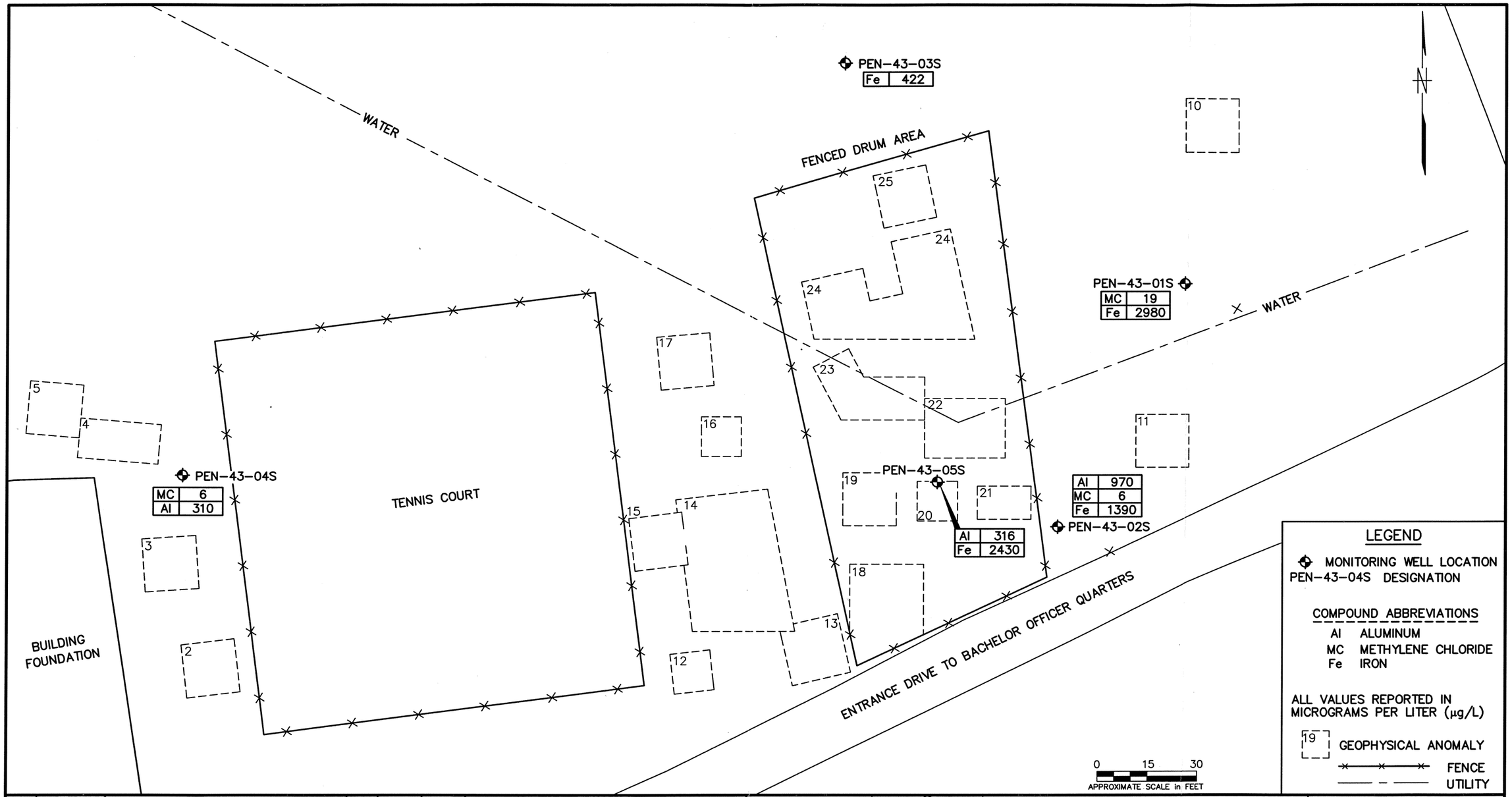

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK DATE 1/25/00
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SUMMARY OF GROUNDWATER SAMPLES
EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0189
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4-3 REV. 0

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

TABLE 4-6
GROUNDWATER NATURAL ATTENUATION FIELD MEASUREMENTS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Well I.D.	Date Sampled	Dissolved Oxygen (mg/L)	Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Sulfide (mg/L)	Ferrous Iron (mg/L)	Nitrite (mg/L)	Manganese (mg/L)	Hydrogen Sulfide (mg/L)
PEN-43-01S	10/27/1999	4.00	9.2	26	0.00	1.11	0.016	0.0	0.00
PEN-43-04S	10/27/1999	3.00	11.0	29	0.02	0.07	0.017	0.2	0.00
PEN-43-05S	10/27/1999	3.00	9.5	26	0.05	1.21	0.003	1.1	0.00

Notes:

mg/L = milligrams per liter
NA = not Analyzed

TABLE 4-7
WATER TABLE ELVATION AND MONITORING WELL CONSTRUCTION DATA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Well Number	Top of Casing Elevation (msl)	Screened Interval Depth (feet, bls)	October 27, 1999	
			Depth to Water Below Top of Casing (feet)	Water Elevation (msl)
PEN-43-01S	19.95	9.5-19.5	15.36	4.59
PEN-43-02S	21.07	9.4-19.4	16.33	4.74
PEN-43-03S	21.50	9.5-19.5	16.59	4.91
PEN-43-04S	14.46	5-15	9.00	5.46
PEN-43-05S	20.57	9-19	16.79	3.78

Notes:
NM = not measured
msl = mean sea level

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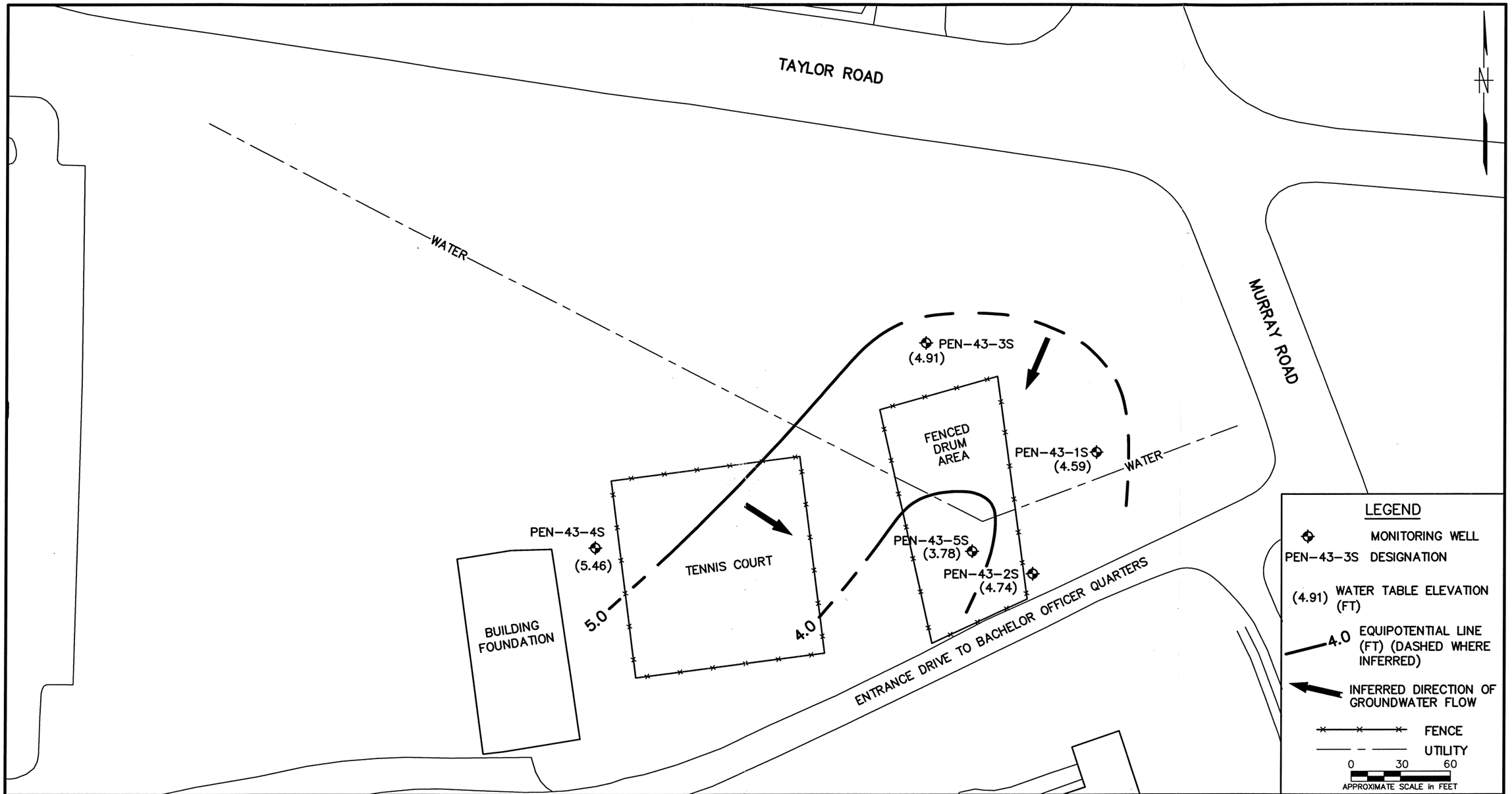


NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK DATE 1/20/00
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

POTENTIOMETRIC SURFACE
OCTOBER 27,1999
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 0189
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4-4
REV. 0

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

TABLE 4-8
SUMMARY OF DRUM CHARACTERISTICS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

Drum Number	Drum Type	Condition	Contents	Estimated Volume	Date	PID (ppm)	Comments
1	55 Gallon Steel	Fair	tar like liquid	<1 gallon	10/6/1999	0	reinforced rings
2	55 Gallon Steel	Fair	-	empty	10/6/1999	30	
3	55 Gallon Steel	Fair, rusted	liquid based on drum type	~18 gallons	10/6/1999	2	reinforced rings, labeled "use only for lubricating oil"
4	55 Gallon Steel	Fair, rusted	liquid based on drum type	~18 gallons	10/6/1999	0	reinforced rings, labeled "use only for lubricating oil"
5	55 Gallon Steel	Fair, rusted	liquid based on drum type	~18 gallons	10/6/1999	0	reinforced rings, labeled "use only for lubricating oil"
6	55 Gallon Steel	Fair, rusted	-	empty	10/6/1999	0	
7	55 Gallon Steel	Poor, 12-in. gash in top	rainwater	~27 gallons	10/7/1999	NM	reinforced rings, frogs living inside
8	55 Gallon Steel	Fair	-	empty	10/7/1999	NM	
9	55 Gallon Steel	Fair	black/brown liquid leaking at small opening.	~3 - 5 gallons	10/7/1999	NM	reinforced rings, residual oil leak,
10	55 Gallon Steel	Fair to Poor	liquid based on drum type, however no sloshing so possibly sediment	~13 - 18 gallons	10/7/1999	NM	label marked "use only for lubricating oil"
11	55 Gallon Steel	Fair, rusted	-	empty	10/7/1999	NM	
12	55 Gallon Steel	Fair, rusted	-	empty	10/7/1999	NM	reinforced rings
13	30 Gallon Steel	Poor, crushed	solids/soils	~30 gallons	10/7/1999	14.6	reinforced rings, cockroaches living inside
14	55 Gallon Steel	Fair, rusted	rusty water	<1 gallon	10/7/1999	NM	reinforced rings

All thirteen drums removed from the excavation at anomaly 20 were 55-gallon capacity steel drums. Of these, nine drums had reinforced rings around them. Four of the drums were labeled “use only for lubricating oil.” Twelve of the drums were found to be in fair but rusted condition, while two of the drums were found to be in poor structural condition (dents, holes, etc.).

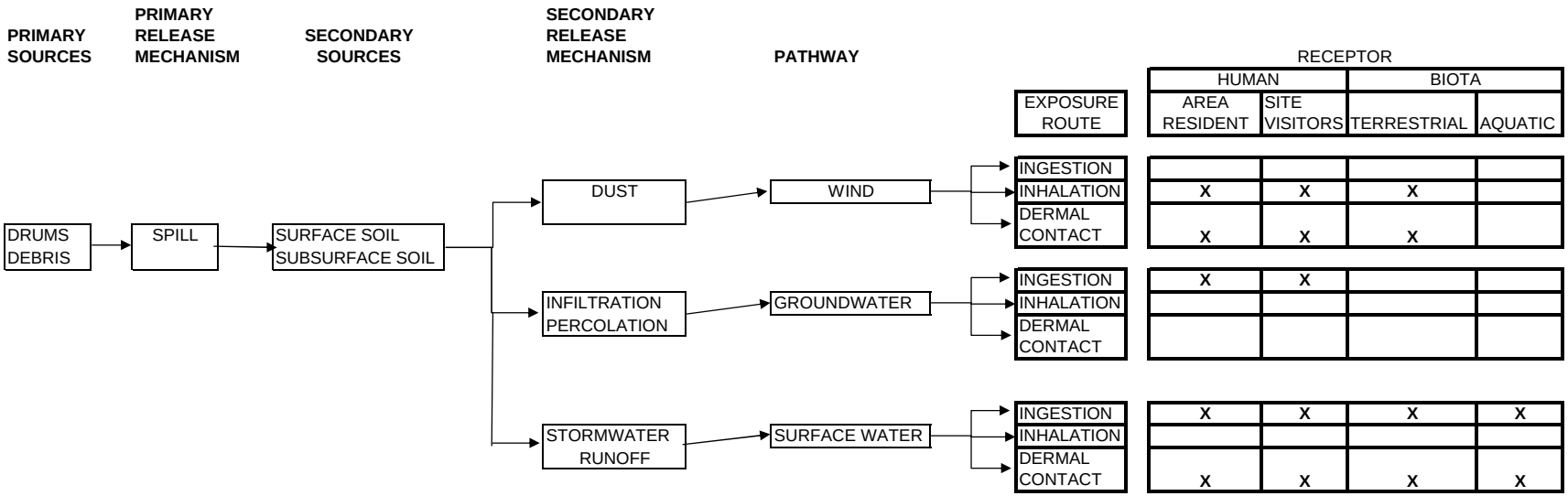
Five of the drums recovered from anomaly 20 were empty. The others ranged from approximately one third full to completely full. Two of the drums were observed to have a dark colored, tar like liquid leaking at the openings. The others were classified as liquid containers simply based on the drum type. OVA readings from the drums ranged from 0 ppm to 30 ppm. Photos of this excavation are found in Appendix H.

4.4 CONCEPTUAL SITE MODEL

The Conceptual Site Model plots sources, pathways and possible receptors on a flow diagram (Figure 4-5). The flow diagram provides a framework to assess the potential risks a remedial action associated with the site will need to take into consideration.

The primary sources at Site 43 are the buried drums discovered during the Site Characterization Investigation. The primary release mechanism from this source is leaking or spilling of the drums’ contents into the soil at the site. This primary release could result in the secondary release mechanisms of dust, infiltration/percolation, and stormwater runoff. A secondary release of dust would be transported from the site by wind resulting in humans and terrestrial biota becoming potential receptors via inhalation and dermal contact. A secondary release by infiltration/percolation of the material would affect the groundwater at the site resulting in humans becoming potential receptors via ingestion. A secondary release by stormwater runoff would affect the surface water in the surrounding area resulting in humans and both terrestrial and aquatic biota becoming potential receptors via ingestion and dermal contact.

FIGURE 4-5
CONCEPTUAL SITE MODEL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA



5.0 CONCLUSIONS, FOLLOW-UP WORK, AND RECOMMENDATIONS

The results of the Site Characterization Investigation reveal the following:

- Surface soil samples at the site contains benzo(a)pyrene and eight metals (antimony, arsenic, barium, copper, iron, zinc, lead, nickel, and vanadium) at concentrations exceeding the FDEP residential direct exposure limits (DELs) and NAS Pensacola background concentrations. Antimony and nickel concentrations exceeded their respective leachability concentrations.
- Subsurface soil samples collected from underneath drums in excavations contain concentrations of benzo(a)pyrene, dibenzo(a,h)anthracene, and nine metals (antimony, arsenic, barium, copper, iron, lead, nickel, zinc, and vanadium) at concentrations exceeding the FDEP residential DELs and NAS Pensacola background concentrations. Antimony, arsenic, barium, nickel and zinc concentrations exceeded their respective leachability concentrations.
- Subsurface soil samples collected from soil borings at the site were not impacted by VOCs, SVOCs, pesticides, PCBs, metals or cyanide.
- Groundwater at the site contains concentrations of methylene chloride, a common laboratory contaminant, and two metals (aluminum and iron) at concentrations exceeding FDEP groundwater criteria. Aluminum concentrations at the site did not exceed background values, while iron concentrations exceeded background values in three out of the five samples.
- Fourteen drums were removed from excavations at Site 43.

Results from the Site Characterization Investigation indicate that surface soil, subsurface soil to a depth of 3.5 feet, and groundwater at Site 43 have been impacted by the historical use of the site as a drum storage area. Four of the six metals detected in groundwater at concentrations above the FDEP criteria were also found in soils at concentrations exceeding residential DELs. While the inorganic concentrations may reflect turbidity of the water samples, it is likely that inorganic soil contamination has impacted groundwater at the site.

The Chapter 62-777, FAC groundwater criteria are based on a 10^{-6} human health risk, therefore the above exceedences pose a human health risk-based concern for residential land use at the site. The conceptual site model presented in Section 4.3 indicates that there are both human and ecological receptors at risk at Site 43. The primary exposure pathways at this site include inhalation and dermal contact of dust and ingestion of groundwater. The loose metal debris found in the surface soil at the site also presents a physical hazard to humans in the area.

Site Characterization Report Addendum – Site 43

During the completion of the Site Characterization Investigation, 14 buried drums were excavated onsite and placed in over pack containers for offsite disposal. The contents of the drums were not sampled for laboratory analysis during the investigation, therefore an additional drum characterization sampling event was completed and documented as a Site Characterization Report Addendum (TtNUS 2001). A copy of the Site Characterization Report Addendum is included as Appendix I.

The results of the Site Characterization Report Addendum indicated that 12 of the 14 drums contained insufficient volume/mass to be sample. The two remaining drums were sampled and contained metals and PAHs at concentrations exceeding Florida Soil Cleanup Target Levels. Following the assessment activities the drums were properly disposed as non-hazardous waste.

Interim Removal Action – Site 43

Following the completion of the Site Characterization Investigation and addendum, an Interim Removal Action was completed CH2MHILL Constructors, Inc. to removal the metal debris and contaminated surface and subsurface soils at the site. The interim removal action is summarized in the "Interim Removal Action Report Excavation of Contaminated Soil and Groundwater Monitoring at Site 43 Naval Air Station Pensacola, Pensacola, Florida". An electronic copy of the report is included in Appendix J.

The results of the Interim Remedial Action reveal the following:

Conclusions:

- *An IRA was completed to remove visible debris and the upper 2 feet of contaminated soil.*
- *Thirty-one truck loads with an accumulated total of 747.62 tons of soil and debris were transported to Michigan Disposal Waste Treatment Facility in Belleview, Michigan.*
- *Fourteen drums from the initial site investigation, 20 to 25 drums, and drum parts were loaded and disposed of in the Michigan landfill.*
- *Ornamental ordnance and munitions were found in the excavation area and were determined to be inert and disposed of in the Michigan landfill.*
- *Following the IRA, RGs were revisited and it was determined that the initial RGs were not appropriate for the site. Based upon this information, laboratory data were reevaluated to characterize the extent of contamination at the site.*
- *Due to the change in RGs following the IRA activities, several inorganics and two SVOCs remain in surface and subsurface soil at concentrations above their respective RG.*
- *Iron concentrations detected in groundwater during the IRA sampling activities were all below the background concentration for iron at NAS Pensacola.*

Recommendations:

- *An IR/FS should be completed to determine the horizontal and vertical extent of the contamination at this site and whether adverse risk to human health or the environment exist.*
- *Applicable or Relevant and Appropriate Requirements should be established for each COC at the site.*
- *As requested by FDEP and EPA, permanent monitoring wells should be installed at agreed upon locations and the temporary wells should be properly abandoned.*

Therefore, based on the site characterization investigation and Interim Removal Action, TtNUS recommends that a RI/FS investigation be completed for the site including the recommendations from the Interim Removal Action Report.

6.0 PROFESSIONAL CERTIFICATION

Site Characterization Report
Site 43
Pensacola NAS

This Site Characterization 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

Gerald A, Walker, P.G.
Florida License No. 1180

February 4, 2004

Date: February 4, 2004

REFERENCES

CH2MHILL Constructors, Inc. (CCI), 2003, Interim Removal Action Report, Excavation of Contaminated Soil and Groundwater Monitoring at Site 43 Naval Air Station Pensacola, Pensacola Florida, September 8, 2003

Ensafe/Allen & Hoshall, 1994, Geophysical Investigation of Buried Drum Area Site 10 (West), Naval Air Station Pensacola, September.

Florida Department of Environmental Protection (FDEP), 1998, Florida Administrative Code (FAC) Chapter 62-770, Petroleum Contamination Site Cleanup Criteria, September 23, 1998

FDEP, 1999, FAC Chapter 62-777, Contaminant Cleanup Target Levels, August 5, 1999

Naval Energy and Environmental Support Activity, 1983, Initial Assessment Study of Naval Air Station Pensacola, June.

Tetra Tech NUS, Inc.(TtNUS), 2001, Site Characterization Report Addendum Letter, March 9, 2001.

TtNUS, 1999, Florida Department of Environmental Protection Comprehensive Quality Assurance Plan #980038, Revision 1, August.

TtNUS, 1989, Sampling and Analysis Plan for Preliminary Site Characterization Study, Site 43, Naval Air Station Pensacola, August.

USEPA (United States Environmental Protection Agency) 1996b. Environmental Investigations Standard Operating Procedures Quality Assurance Manual (EISOPQAM), Environmental Compliance Branch, Region IV, Science and Ecosystems Support Division, Athens, Georgia.

APPENDIX A

SOIL SAMPLE SHEETS

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN-43SU01
Sample Location: Anomaly #13
Sampled By: E. Parker
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/99 Time: 0830 Method: SS Spoon Monitor Reading (ppm): 0.0 ppm	2'	Brown	Sand (medium grained)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	(4) 5g Encore 2oz G	yes	
Pest, PCB, Semivol	8 oz G		
CN, TAL Metal	4 oz G		

OBSERVATIONS / NOTES:

FID = 0.0ppm

MAP:

~~See Fieldbook, pg~~

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN-43SU02
Sample Location: Anomaly #20 (NW)
Sampled By: J. Elliott/A. Wilcox
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/99 Time: 1100 Method: SS Spoon Monitor Reading (ppm): <10 ppm	3'	Grey/ Brown	Medium Grained Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	(4) By Encore 2oz G	yes	
Pest, PCB, Semivol	8 oz G		
CN, TAL metal	4 oz G		

OBSERVATIONS / NOTES:

FID=0.0 ppm

MAP:

see logbook pg 15

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola Site 43
Project No.: CTO 96

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN-43SU03
Sample Location: Anomaly #20 (SE)
Sampled By: J. Elliott / A. Wilcox
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/99 Time: 1115 Method: SS Spoon Monitor Reading (ppm): 0.0 ppm	3'	Grey / Brown	Medium Grained Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	(4) 5g Encore 2oz G	yes	
Pest, PCB, Semivol	8 oz G		
CN, TAL Metal	4 oz G		

OBSERVATIONS / NOTES:

FID = 0.0 ppm

MAP:

See logbook pg 13

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN-43SU04
Sample Location: Anomaly #20 (Sh)
Sampled By: J. Elliott / A. Wilcox
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/6/99 Time: 1130 Method: SS spoon Monitor Reading (ppm): <10 ppm	3'	Grey Brown	Medium Grained Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	(4) 5g Encore 2oz G	yes	
Pest, PCB, Semivol	8 oz G	↓	
CN, TAL Metals	4 oz G	↓	

OBSERVATIONS / NOTES:

FID = 0 ppm

MAP:

see logbook pg 13

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS ~~Pensacola~~ Pensacola, Site 43
Project No.: CTO 960

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN-43SUD5
Sample Location: Anomaly #30 (NE)
Sampled By: J. Elliott / A. Wilcox
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/16/99 Time: 1140 Method: SS Spoon Monitor Reading (ppm): <10 ppm	3'	Grey/ Brown	Medium Grained Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	(4) 5g Encore 2oz G	yes	
Pest, PCB, Semivol	8 oz G		
CN, TAL Metals	8 oz G		

OBSERVATIONS / NOTES:

FID = 0.0 ppm

MAP:

See logbook p13

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola Site 43
Project No.: CTO 96

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN43SM06
Sample Location: Anomaly #20
Sampled By: J. Elliott / A. Wilcox
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-99	3' →	Grey/Brown	medium Grained Sand w/ debris (metal & concrete
Time: 1730	3.5' →	White	
Method: SS Spoon			
Monitor Reading (ppm): <10 ppm			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	(4) 5g Encore 2oz G	yes	
Pest, PCB, Semivol	8 oz G	↓	
CN, TAL Metal	4 oz G	↓	

OBSERVATIONS / NOTES:

~~FID = 0.0 ppm~~
PID = 5-2 ppm

MAP:

See Fieldbook pg

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN43SU07
Sample Location: Anomaly #20
Sampled By: J. Elliott / A. Wilcox
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-Co-97	3' →	Grey/Brown w/ White below	Medium Grained Sand w/ rusted debris
Time: 1718	3.5' →		
Method: SS Spoon			
Monitor Reading (ppm): <10ppm			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	(4) 5g Encore 2oz G	yes	
Pest, PCB, Semivol	8 oz G	↓	
CN, TAL Metal	4 oz G	↓	

OBSERVATIONS / NOTES:

PID = 7.9 ppm

MAP:

See fieldbook pg

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NASP site 43
Project No.: CTO 096

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: Pen 43SB04Ø708
Sample Location: 43 SBØ4
Sampled By: JA, RF
C.O.C. No.: 0462 0463

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10 ~~15~~ 13 Ø4	7-8'	lt. tan-white	Sand, moist
Time: 1540 ~~1600~~ ~~9A~~			
Method: DPT			
Monitor Reading (ppm): Ø			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4 encore 2oz G		
SVOC, Pest, CB	8 oz G		
TAL, metals	4oz G +		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASP - Site 43
Project No.: CTO 096

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: Pen1-43SBØ5141S
Sample Location: 43 SBØ5
Sampled By: JA, RF
C.O.C. No.: 0463

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10 ~~15~~ 99 Time: 1500 ~~1635~~ Method: DPT Monitor Reading (ppm): Ø	14-15'	White	Moist, Fine Sand

COMPOSITE SAMPLE DATA:

	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4 encores 2 oz g		
SVOC, Pest, PCB	4 oz		
TAL Metals, cyanide	8 oz		

OBSERVATIONS / NOTES:

duplicate taken
↓

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	Pen1-43SB DDØ3

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASP/ Site 43
Project No.: CTO 046

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: Pen1-43SB01 1415
Sample Location: Soil Boring 01
Sampled By: L. Franklin
C.O.C. No.: 0462
0463

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: ~~10/15/99~~ 10/19 Time: ~~1150~~ 1440 Method: DPT Monitor Reading (ppm):	14-15'	White	Moist Fine Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOA	4x5gEncore		
	2 oz G		
SVOC, Pest, PCB	8 oz G		
~~MTAL~~ Metals, Cn	4 oz G		

OBSERVATIONS / NOTES:

Downgradient

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASP/Site 43
Project No.: CTO 096

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: Penn-435B02141
Sample Location: Borehole #2
Sampled By: J. Franklin
C.O.C. No.: 0462 0463

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/18/99 Time: 1420 Method: DPT Monitor Reading (ppm): –	14-15'	White	Moist, Fine Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4x5g Encore	✓	
	2 oz G		
SVOC, Pest. PCB	4 oz G	✓	
TAL Metal, CN	4 oz G	✓	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NASP/Site 43
Project No.: CTO 96

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: Penn-435B0314 15
Sample Location: Borehole #3
Sampled By: R. Franklin
C.O.C. No.: 0462
0463

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/15/99	14-15'	White	Moist, Fine Sand
Time: ~~1450~~ 1520			
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TAL VOC	4x4 Encore	✓	
	2 oz G	✓	
SVOC, Pest, PCB	8 oz G	✓	
TAL Metals, CN	4 oz G	✓	

OBSERVATIONS / NOTES:

Side gradient

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: C40 96

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: PEN-435591
Sample Location: Anomoly # 25
Sampled By: R. Franklin
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 0905 Method: SS Spoon Monitor Reading (ppm): 0.00	0-6"	Brown	Sand

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4x5g Encore, 2 oz G	✓	
Pest, PCB, SemiVol	8 oz G	✓	
CN, TAL Metal	4 oz G	✓	

OBSERVATIONS / NOTES:

FID: 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

Sample ID No.: PEN-4355ØZ
Sample Location: Anomoly #23
Sampled By: M. Franklin
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99	0-6"	DK BRN	F SAND
Time: 0920			
Method: SS Spoon			
Monitor Reading (ppm): 0.00			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4x5g Encore, 1x2oz G	✓	
SVOC, Pest, PCB	8 oz G	✓	
TAL Metals, CN	4 oz G	✓	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

Sample ID No.: PEN-43SS03
Sample Location: Anomaly #24
Sampled By: M. Franklin
C.O.C. No.:

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [ ] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 0907 Method: SS Spoon Monitor Reading (ppm): 0.00	0-6"	DK BRN.	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4 x 454 Encore, 2 oz	—	
Pest, PCB, Sem. VOC	8 oz G	—	
TAL Metals, CN	4 oz G	—	

OBSERVATIONS / NOTES:

PID = 0.00ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
Project No.: CTO 96

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: PEN-435S04
Sample Location: Hangar # 19
Sampled By: L Franklin
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 0930 Method: SS Spoon Monitor Reading (ppm): 0.00	0-6"	DK BRN	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4x5 Encore, 2 oz	—	
Pest, PCB, Semi VOC	8 oz G	—	
TAL Metal, RN	4 oz G	—	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CT096

Sample ID No.: PEN-43SS05
Sample Location: Anomaly #22
Sampled By: Franklin
C.O.C. No.:

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [x] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99	0-6"	DK BRN	FSAND
Time: 0940			
Method: SS Spoon			
Monitor Reading (ppm): 0.00			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4x5g Encore, 2 oz G	✓	
Pest, PCB, Semi VOC	8 oz G	✓	
TAL Metals, CN	4 oz G	✓	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

Sample ID No.: PEN 435506
Sample Location: Anomaly #18
Sampled By: M Franklin
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 0950 Method: SS Spoon Monitor Reading (ppm): 0.00	0-6"	DK. BRN	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOC	4x5y Encore, 2 oz	—	
Pest, PCB, Semi VOC	8 oz G	—	
CN, TAL Metals	4 oz G	—	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola Site 43
Project No.: CTO 96

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN-4355 07
Sample Location: Anomaly # 20
Sampled By: E. Franklin
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 0945 Method: SS SPOON Monitor Reading (ppm): 0.00	0-6"	DkBrn	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4x5g. Encore, 1x2oz. G	✓	
SVOCs, Pest, PCB	8 oz G.	✓	
TAL Metals, CN	4 oz G.	✓	

OBSERVATIONS / NOTES:

FID=0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola #43
Project No.: CTO 96

Sample ID No.: PEN-43505Ø8
Sample Location: Anomaly #21
Sampled By: R. Franklin
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 1000 Method: SS SPOON Monitor Reading (ppm): 0.00	0-6"	DKBRN.	F.S AND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4 x 5g. Encore, 1 x 2 oz.	✓	
SVOC, Pest, PCB	1 x 8 oz.	✓	
TAL Metals, CN	1 x 4 oz.	✓	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Abby Bhllas

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 94

Sample ID No.: PEN-43SS09
Sample Location: Anomaly # 13
Sampled By: Anilane
C.O.C. No.:

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [x] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/95	0-6"	LT. BRN	FSAND
Time: ~~1400~~ 1400			
Method: SSSpoon			
Monitor Reading (ppm): 0.00 ppm			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4 x 5g. Encore, 1 x 2oz G	✓	
SVOC, Pest, PCB	1 x 8 oz G	✓	
TAL metals	1 x 4oz. G	✓	

OBSERVATIONS / NOTES:

FID: 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Abby Bulson

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

Sample ID No.: PEN-43SS10
Sample Location: Anomaly #14
Sampled By: R. Franklin
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: ~~1420~~ 1420 Method: SS Spoon Monitor Reading (ppm): ~~0.00~~	0-6"	DK BRN	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4 x 5g. Encore, 1 x 2 oz. G	✓	
SVOCs, Pest, PCB	1 x 8 oz G	✓	
TAL Metals, CN	1 x 4 oz G	✓	

OBSERVATIONS / NOTES:

FID = ~~0.00~~ ppm (ABV)
0.00

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Abby Blue

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

Sample ID No.: PEN-43SS11
Sample Location: Anomaly #17
Sampled By: Mulope
C.O.C. No.:

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [x] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 1445 Method: SS5P00A Monitor Reading (ppm): ~~0.00~~ RB	0-6"	LTBRN/ DKGREY	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
SVOC, Pest, PCB	1 x 8 oz. G	✓	
TAL Metals, CN	1 x 4 oz. G	✓	
TCL VOCs	4 x 5g. Encore, 1 x 2 oz. G	✓	

OBSERVATIONS / NOTES:

FID = ~~0.00~~ ppm
RBW
0.00 PPM

DUPLICATE COLLECTED

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.: PEN-43SSDD01

Signature(s): Abby Mulope

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, SI643
Project No.: CTO 96

Sample ID No.: PEN-43SS12
Sample Location: Anomaly # 15
Sampled By: Awilcox
C.O.C. No.:

[X] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99	0-6"	DK. GREY	F. SAND
Time: 1505			
Method: SSP00A			
Monitor Reading (ppm): 0.00			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
SVOC, Pest, PCB	4x5g Encore / 1x8oz. G	✓	
TAL Metals, CN	1x8oz. G	✓	
TCL VOCs	1x2oz. G, 4x5g Encore	✓	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Abby B Wilcox

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

Sample ID No.: PEN-43SS13
Sample Location: Anomaly #12
Sampled By:
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 1455 Method: SS Spoon Monitor Reading (ppm): 0.00	0-6"	DK BRN.	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
SVOC, Pest, PCB	1 x 8 oz. G	✓	
TAL Metals, CN	1 x 4 oz. G	✓	
TCL VOCs	4 x 5g. Encore, 1 x 2 oz. G	✓	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, site 43
Project No.: CTO 96

Sample ID No.: PEN-43SS14
Sample Location: Anomaly #16
Sampled By: AWI Corp
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 1530 Method: SS spoon Monitor Reading (ppm): 0.00	0-6"	DKBRN	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4 x 5g. Encore, 1 x 2 oz. G	✓	
SVOC, Pest, PCB	1 x 8 oz. G	✓	
TAL Metals, CN	1 x 4 oz. G	✓	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Abby B Mulaxo

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Site 43
Project No.: CTO 96

Sample ID No.: PEN43SS15
Sample Location: Anomaly #4
Sampled By: A. Wilcox
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 1545 Method: SSSP00A Monitor Reading (ppm): 0.0	0-6"	MED. BRN.	F. SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4 x 5g. Encore, 1 x 2 oz. G	✓	
SVOC, Pest, PCB	1 x 8 oz. G	✓	
TAL Metals	1 x 4 oz. G	✓	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Abby B Wilcox

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola Site 43
Project No.: CT096

Sample ID No.: PEN-435516
Sample Location: Anomaly #11
Sampled By: A. Wilcox
C.O.C. No.:

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [x] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 1640 Method: SSpoon Monitor Reading (ppm): 0.00	0-6"	DK BRN	FSAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4 x 5g. Encore, 1 x 2oz G	✓	
SVOC, Pest, PCB	1 x 8 oz G	✓	
TAL Metals Sn	1 x 4 oz G	✓	

OBSERVATIONS / NOTES:

MS/MSD COLLECTED - ~~DUPLICATE~~ DOUBLED VOLUME SUBMITTED
FID = 0.00

MAP:

Circle if Applicable:

MS/MSD
PEN-435516

Duplicate ID No.:

Signature(s): Abby Bulay

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola Site 43
Project No.: CTO 96

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: PEN-435517
Sample Location: Anomaly #10
Sampled By: A. Wilcox
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/5/99 Time: 1608 Method: Sssp.con Monitor Reading (ppm): 0.00	0-6"		

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	4x5g. Encore, 1x2oz G	✓	
SVOC, Pest, PCB	1x8oz G	✓	
TAL Metals	1x4oz G	✓	

OBSERVATIONS / NOTES:

DUPLICATE COLLECTED
FID= 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.: PEN-435SD002

Signature(s): Abby Bhulax

APPENDIX B

BORING LOGS

BORING LOG

PROJECT NAME: NASP/ Site 43
BORING NUMBER: 43 SB01
PROJECT NUMBER: CTO 96
DATE: 10/15/99
DRILLING COMPANY: TEG
GEOLOGIST:
DRILLING RIG: DPT
DRILLER: J. Stevenson

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**
	1					Brn	Fine Sand		Dry				
	2												
	3												
	4		4/4										
	5					Tan			Damp				
	6												
	7												
	8		4/4										
	9												
	10												
	11												
	12		4/4										
	13						—						
	14					White							
	15												
	16		3/4						Saturated				
	17												
	18												
	19												
	20		4/4										

* 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: V-FID Screening Depth

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

BORING LOG

PROJECT NAME: NASP / Site 43
PROJECT NUMBER: CTO ~~#84~~ 96
DRILLING COMPANY: TEG
DRILLING RIG: DPT

BORING NUMBER: 43SB02
DATE: 10/15/99
GEOLOGIST:
DRILLER: J. Stevenson

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**
	1					Brown	Fine Sand		Dry				
	2												
	3												
	4		4/4										
	5						–						
	6					Tan			Damp				
	7												
	8		3/4										
	9												
	10												
	11						–						
	12		2/4				–						
	13												
	14					White							
	15												
	16		3/4						Saturated				
	17												
	18												
	19												
	20		4/4										

* 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. #: _____

BORING LOG

PROJECT NAME: NASP/ Site 43
PROJECT NUMBER: CTO 96
DRILLING COMPANY: TEC
DRILLING RIG: DPT

BORING NUMBER: 43SB03
DATE: 10/15/94
GEOLOGIST:
DRILLER: J. Stevenson

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**
	1					Brown	Fine Sand		Dry				
	2												
	3												
	4		4/4										
	5						—						
	6												
	7					Tan			Moist				
	8		3/4										
	9						—						
	10												
	11												
	12		3/4										
	13						—						
	14					White	—						
	15												
	16		2/4				Sand		Saturated				
	17						—						
	18						—						
	19												
	20		2/4										

* 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. #:

BORING LOG

PROJECT NAME: NASIP/ Site 43
PROJECT NUMBER: CTO 96
DRILLING COMPANY: TEG
DRILLING RIG: DPT

BORING NUMBER: 43 SB04
DATE: 10/15/99
GEOLOGIST:
DRILLER: J. Stevenson

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**
	1					Brown	Fine Sand		Dry				
	2												
	3					Tan							
	4		4/4										
	5												
	6								Moist				
	7												
	8		4/4										
	9					White	—		Saturated				
	10						—						
	11												
	12		2/4										
	13						—						
	14						—						
	15		1/3										

* 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. #: ____

BORING LOG

PROJECT NAME: NASP/Site 43
PROJECT NUMBER: CTO 96
DRILLING COMPANY: TEG
DRILLING RIG: DPT

BORING NUMBER: 43SB05
DATE: 10/15/99
GEOLOGIST:
DRILLER: J. Stuenen

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**
	1					Brn	Fine Sand		Dry				
	2												
	3												
	4		4/4										
	5					Tan							
	6												
	7												
	8		4/4										
	9						—						
	10												
	11												
	12		3/4			White			Moist				
	13						—						
	14						—						
	15												
	16		2/4						Saturated				
	17						—						
	18												
	19												
	20		3/4										

* 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. #: ____

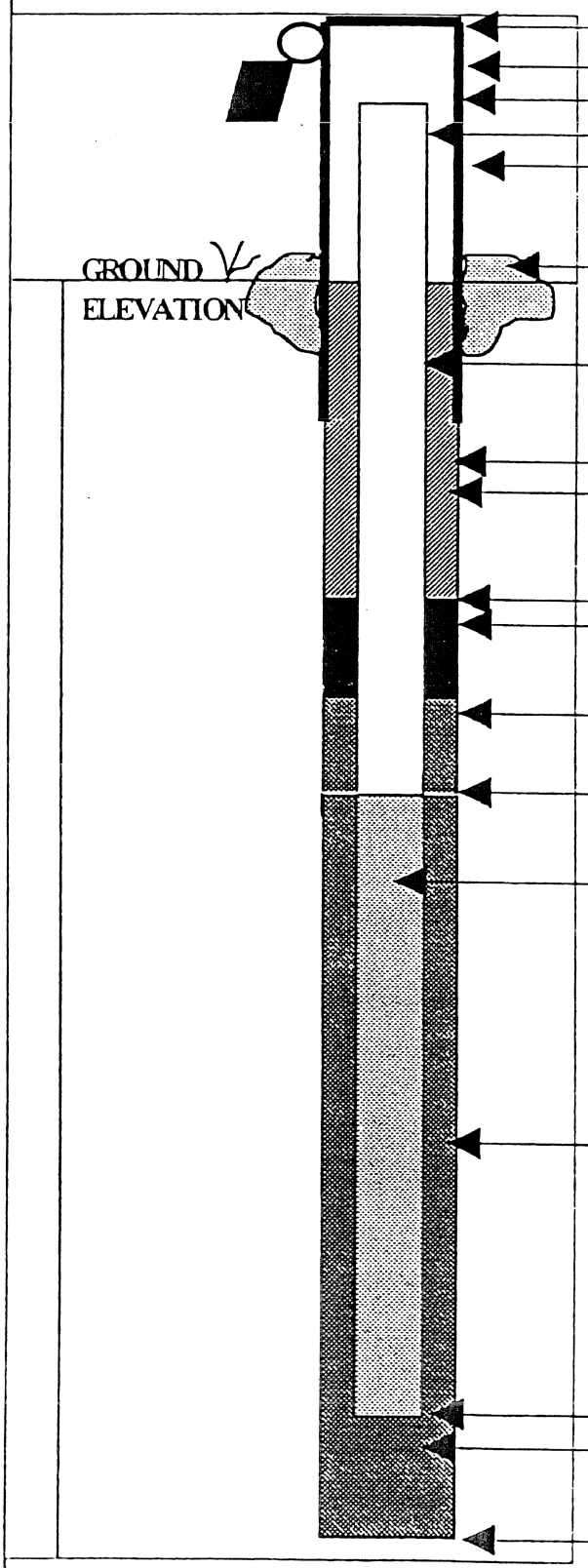
APPENDIX C

MONITORING WELL CONSTRUCTION SHEETS

BORING NO.: 43-15

OVERBURDEN MONITORING WELL SHEET

PROJECT: IR Site 43	LOCATION: NASP	DRILLER: D. Anthony
PROJECT NO.: CTO 96	BORING: NAS-43-15	METHOD: DPT
ELEVATION:	DATE: 10/17/94	DRILLING:
FIELD GEOLOGIST:		DEVELOPMENT: NA



ELEVATION OF TOP OF SURFACE CASING:

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING:

STICK-UP RISER PIPE:

I.D. OF SURFACE CASING:

TYPE OF SURFACE CASING:

TYPE OF SURFACE SEAL: Concrete

RISER PIPE I.D.: 1"

TYPE OF RISER PIPE: 40 PVC

BOREHOLE DIAMETER: 3"

TYPE OF SEAL: Bentonite 0-0.5'

ELEVATION / DEPTH OF SEAL: /

TYPE OS SEAL:

DEPTH TOP OF SAND PACK: 0.5'

ELEVATION / DEPTH TOP OF SCREEN: 19.5'

TYPE OF SCREEN: 40 PVC

SLOT SIZE X LENGTH: 0.01" x 10'

I.D. OF SCREEN: 1"

TYPE OF SAND PACK: Medium (PurePack)

ELEVATION / DEPTHBOTTOM OF SCREEN: 19.5'

ELEVATION / DEPTH BOTTOM OF SAND PACK: /

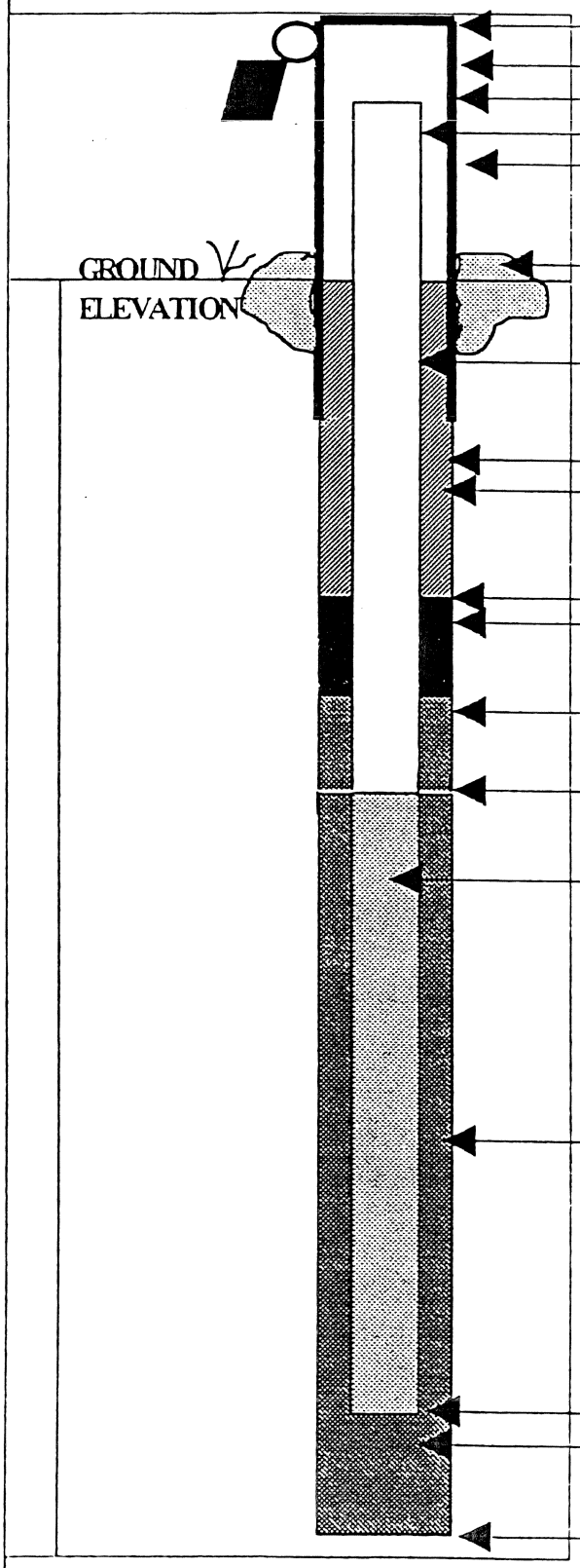
TYPE OF BACKFILL BELOW OBSERVATION WELL:

ELEVATION / DEPTH OF HOLE: /

BORING NO.: 43-2S

OVERBURDEN MONITORING WELL SHEET

PROJECT: IR Site 43	LOCATION: NASP	DRILLER: D. Anthony
PROJECT NO.: CTO 96	BORING: NAS-43-2S	METHOD: DPT
ELEVATION:	DATE: 10/17/99	DRILLING:
FIELD GEOLOGIST:		DEVELOPMENT: NA



ELEVATION OF TOP OF SURFACE CASING:

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING:

STICK-UP RISER PIPE:

I.D. OF SURFACE CASING:

TYPE OF SURFACE CASING:

TYPE OF SURFACE SEAL: Concrete

RISER PIPE I.D.: 1"

TYPE OF RISER PIPE: 40 PVC

BOREHOLE DIAMETER: 3"

TYPE OF SEAL: Bentonite 0-0.5'

ELEVATION / DEPTH OF SEAL: /

TYPE OS SEAL:

DEPTH TOP OF SAND PACK: 0.5'

ELEVATION / DEPTH TOP OF SCREEN: 19.4'

TYPE OF SCREEN: 40 PVC

SLOT SIZE X LENGTH: 0.01" X 10'

I.D. OF SCREEN: 1"

TYPE OF SAND PACK: Medium (Pre Pack)

ELEVATION / DEPTHBOTTOM OF SCREEN: 19.4'

ELEVATION / DEPTH BOTTOM OF SAND PACK: /

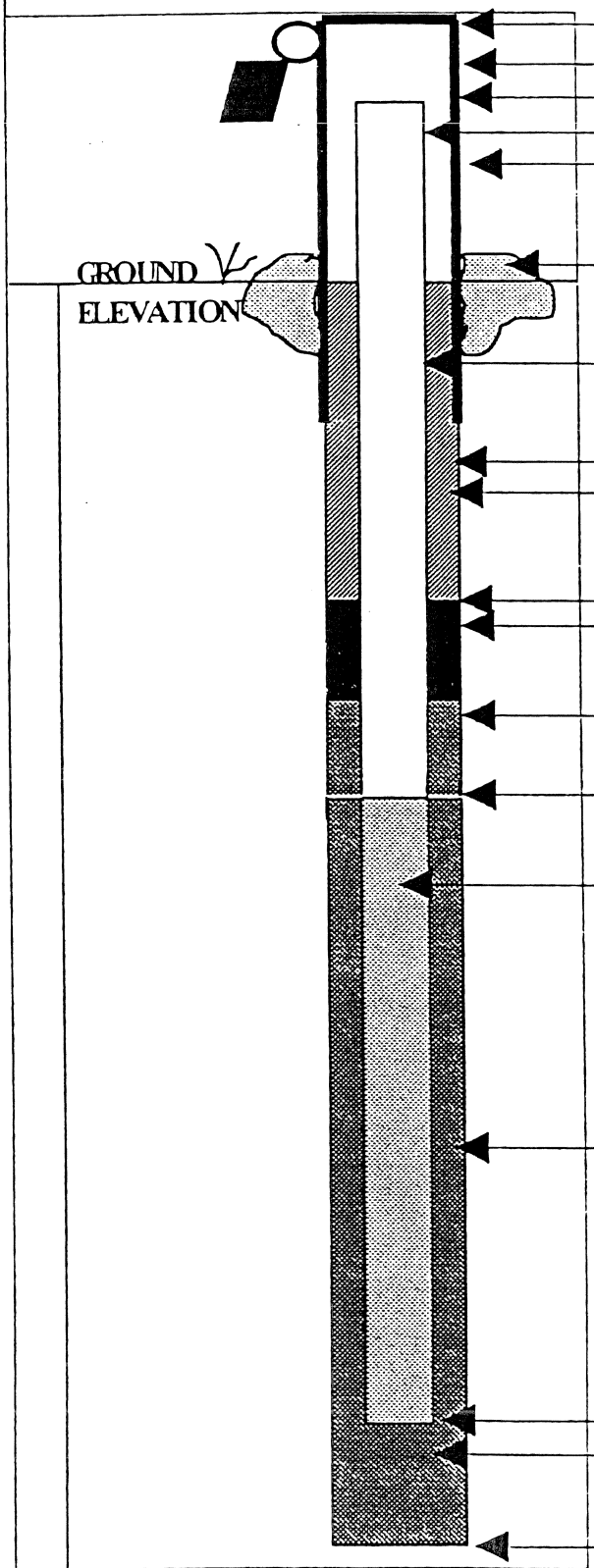
TYPE OF BACKFILL BELOW OBSERVATION WELL:

ELEVATION / DEPTH OF HOLE: /

BORING NO.: NAS-43 - 3S

OVERBURDEN MONITORING WELL SHEET

PROJECT IR Site 43	LOCATION: NASP	DRILLER D. Authony
PROJECT NO. CTO 96	BORING NAS-43-3S	METHOD: DPT
ELEVATION	DATE 10/17/99	DRILLING
FIELD GEOLOGIST		DEVELOPMENT: NA



ELEVATION OF TOP OF SURFACE CASING:

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING:

STICK-UP RISER PIPE:

I.D. OF SURFACE CASING:

TYPE OF SURFACE CASING:

TYPE OF SURFACE SEAL: Concrete

RISER PIPE I.D.: 1"

TYPE OF RISER PIPE: 40 PVC

BOREHOLE DIAMETER: 3"

TYPE OF SEAL: Bentonite 0-05'

ELEVATION / DEPTH OF SEAL: 105'

TYPE OS SEAL: Medium Sand

DEPTH TOP OF SAND PACK:

ELEVATION / DEPTH TOP OF SCREEN: 19.5

TYPE OF SCREEN: 40 PVC

SLOT SIZE X LENGTH: 0.01" X10'

I.D. OF SCREEN: 1"

TYPE OF SAND PACK: Medium (Pure Pack)

ELEVATION / DEPTHBOTTOM OF SCREEN: 119.5'

ELEVATION / DEPTH BOTTOM OF SAND PACK: 1

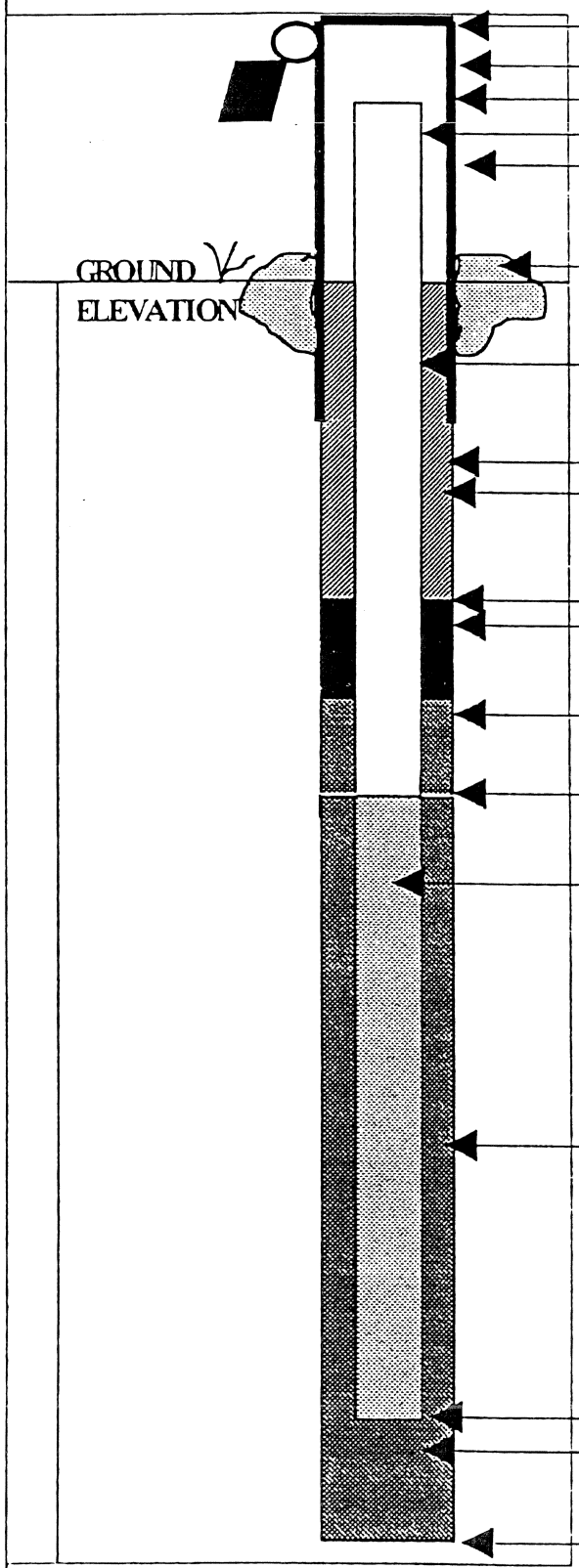
TYPE OF BACKFILL BELOW OBSERVATION WELL:

ELEVATION / DEPTH OF HOLE: 1

BORING NO.: NAS-43 45

OVERBURDEN MONITORING WELL SHEET

PROJECT IR Site 43	LOCATION: NASP	DRILLER D Anthony
PROJECT NO. CTO 46	BORING NAS-43 45	METHOD: DPT
ELEVATION	DATE 10/17/99	DRILLING
FIELD GEOLOGIST		DEVELOPMENT: NA



ELEVATION OF TOP OF SURFACE CASING:

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING:

STICK-UP RISER PIPE:

I.D. OF SURFACE CASING:

TYPE OF SURFACE CASING:

TYPE OF SURFACE SEAL: Concrete

RISER PIPE I.D.: 1"

TYPE OF RISER PIPE: 40 PVC

BOREHOLE DIAMETER: 6"

TYPE OF SEAL: Bentonite 0-0.5'

ELEVATION / DEPTH OF SEAL: 10.5'

TYPE OS SEAL: Fine Sand

DEPTH TOP OF SAND PACK: 14.5'

ELEVATION / DEPTH TOP OF SCREEN: 15'

TYPE OF SCREEN: 40 PVC

SLOT SIZE X LENGTH: 0.01" X 10'

I.D. OF SCREEN: 1"

TYPE OF SAND PACK: Medium (Pre Pack)

ELEVATION / DEPTHBOTTOM OF SCREEN: 15'

ELEVATION / DEPTH BOTTOM OF SAND PACK: /

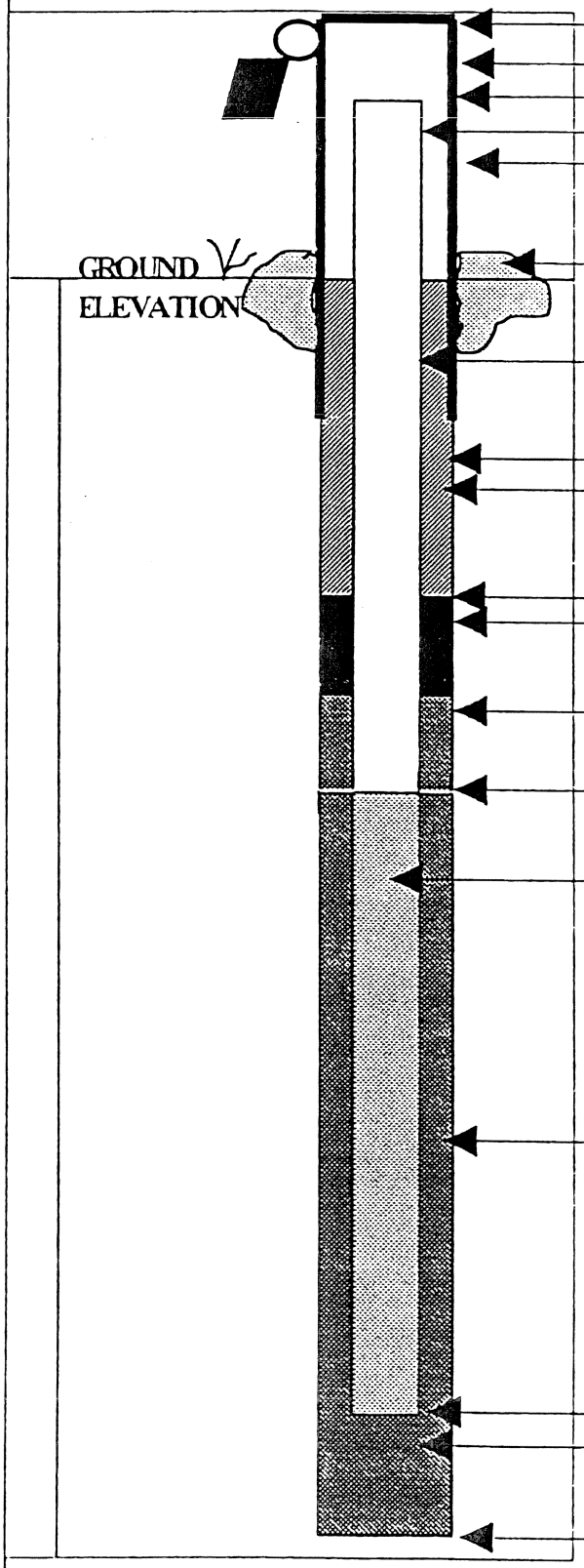
TYPE OF BACKFILL BELOW OBSERVATION WELL:

ELEVATION / DEPTH OF HOLE: /

BORING NO.: 43-5S

OVERBURDEN MONITORING WELL SHEET

PROJECT: IR Site 43	LOCATION: NASP	DRILLER: D. Anthony
PROJECT NO.: CT046	BORING: NAS-43-5s	METHOD: DPT
ELEVATION:	DATE: 10/17/99	DRILLING:
FIELD GEOLOGIST:		DEVELOPMENT: NA



ELEVATION OF TOP OF SURFACE CASING:

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING:

STICK-UP RISER PIPE:

I.D. OF SURFACE CASING:

TYPE OF SURFACE CASING: NA

TYPE OF SURFACE SEAL:

RISER PIPE I.D.: ~~40 PVC~~ 1"

TYPE OF RISER PIPE: 40 PVC

BOREHOLE DIAMETER: 3"

TYPE OF SEAL:

ELEVATION / DEPTH OF SEAL: 10-0.5'

TYPE OS SEAL: Bentonite

DEPTH TOP OF SAND PACK: 0.5'

ELEVATION / DEPTH TOP OF SCREEN: 19'

TYPE OF SCREEN: 40 PVC

SLOT SIZE X LENGTH: 0.01" X 10'

I.D. OF SCREEN: 1"

TYPE OF SAND PACK: Medium (Pure Pack)

ELEVATION / DEPTHBOTTOM OF SCREEN: 119'

ELEVATION / DEPTH BOTTOM OF SAND PACK: 1

TYPE OF BACKFILL BELOW OBSERVATION WELL:

ELEVATION / DEPTH OF HOLE: 1

APPENDIX D

MONITORING WELL DEVELOPMENT SHEETS

MONITORING WELL DEVELOPMENT RECORD

ell: 43-15
te: 43
ate Installed: 10 17 99
ate Developed: 10 18 99
ev. Method: surge & pump
ump Type: peristaltic

Depth to Bottom (ft.): 19.47 TOC
Static Water Level Before (ft.): 15.60
Static Water Level After (ft.):
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 1"

Responsible Personnel: Jeff Alexander
Drilling Co.: TEG
Project Name:
Project Number: 00189

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units ____)	Turbidity (NTU)	Remarks (odor, color, etc.) DO
1110		.5		23.5	6.28	.111	999	0.28
1117		1		23.5	6.20	.102	999	0.30
1125		2		23.5	6.17	.100	197	0.27
1130		2.5		23.5	6.16	.098	492	0.36
1135		3.5		23.5	6.14	.098	445	0.31
1144		4		23.5	6.13	.098	142	0.57
1149		5		23.6	6.12	.098	102	2.69

MONITORING WELL DEVELOPMENT RECORD

Page ___ of ___

'ell: 43 - 25
te: 43
ate Installed: 10.17.98
ate Developed: 10.18.99
ev. Method: surge & pump
ump Type: peristaltic

Depth to Bottom (ft.): 19.35 bls
Static Water Level Before (ft.): 16.85 bls
Static Water Level After (ft.): ___
Screen Length (ft.): 10'
Specific Capacity: ___
Casing ID (in.): 1"

Responsible Personnel: Jeff Alexander
Drilling Co.: Teg
Project Name: ___
Project Number: N0189

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units ____)	Turbidity (NTU)	Remarks (odor, color, etc.) DO
1200		.5		24.1	6.22	.115	830	0.30
1208		1		24.2	6.21	.107	359	0.30
1215		1.5		24.3	6.20	.105	109	0.30
1220		2		24.3	6.18	.102	37	0.37

MONITORING WELL DEVELOPMENT RECORD

'ell: 43 - 3s
te: NASP - 43
ate Installed: 10 17 95
ate Developed: 10 18 95
ev. Method: surge + pump
ump Type: peristaltic

Depth to Bottom (ft.): 19.61 bls
Static Water Level Before (ft.): 16.64 bls
Static Water Level After (ft.):
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 1"

Responsible Personnel: Jeff Alexander
Drilling Co.: TEG
Project Name:
Project Number:

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units ____)	Turbidity (NTU)	Remarks (odor, color, etc.) DO
1555		.5		25.5	6.11	.232	779	1.00
1600		1		25.4	6.06	.223	9	1.32
1605		1.5		25.5	6.09	.220	82	1.67
1610		2.5		25.6	6.08	.219	Ø	1.64

APPENDIX E

GROUNDWATER SAMPLE SHEETS

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
Project No.: CTO 96

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

Sample ID No.: Pen-43-15-01
Sample Location: 43-15
Sampled By: R. Franklin
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity %	Other NA
Date: 10/27/99								
Time: 1025								
Method: PERISTALTIC								

PURGE DATA:

	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other WL
Date: 10/27/99								
Method: PERISTALTIC	0851	6.01	0.074	22.8	328	1.86	0.0	15.36
Monitor Reading (ppm):	0859	6.15	0.072	22.7	73	2.66	0.0	15.36
Well Casing Diameter & Material	0909	6.17	0.072	22.3	60	2.39	0.0	15.38
Type: 2" PVC		SEE LOW FLOW PURGE DATA SHEET						
Total Well Depth (TD): 19.5'	0920	6.16	0.072	22.7	40	2.19	0.0	15.38
Static Water Level (WL): 15.36'	0941	6.11	0.073	22.8	24	2.07	0.0	15.36
One Casing Volume (gal/L): 0.169 ~~0.128~~	1007	6.16	0.072	22.8	25	2.06	0.0	15.36
Start Purge (hrs): 0844	1019	6.14	0.073	23.2	~~2~~ 25	1.89	0.0	15.36
End Purge (hrs): 1023								
Total Purge Time (min): 99								
Total Vol. Purged (gal/L): 5.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs		2 x 40 ml	
SVOC		2 x 1 ltr amb	
pest		"	
PCB		"	
metals		1 ltr poly	
Cyanide		1 .5 ltr poly	
anions		1 500 ml poly	
Sulfide		1 500 ml poly	
TOC		1 250 ml poly	
methane		2 x 40 ml	

OBSERVATIONS / NOTES:

19.5
15.36
~~3.19~~
4.14

4
~~3.14~~ x 0.048 = ~~0.128~~ 0.169 gal

Tubing set @ 18.0'

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
Project No.: FLORN0189

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

Sample ID No.: Pen-43-2s-01
Sample Location: 2s
Sampled By: JA
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 10 27 99	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Time: 0935								
Method: PERISTALTIC	—	6.28	.078	23.6	24	1.71		

PURGE DATA:

	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	~~Other~~ wl
Date: 10 27 99								
Method: PERISTALTIC	0847	5.60	.091	22.6	499	1.90	—	—
Monitor Reading (ppm): Ø	0854	6.33	.078	23.1	121	3.44	—	16.35'
Well Casing Diameter & Material	0911	6.30	.078	23.4	48	2.09	—	—
Type: 2" PVC	SEE LOW FLOW PURGE DATA SHEET							
Total Well Depth (TD): 18.75	0914	6.30	.078	23.4	29	3.00	—	—
Static Water Level (WL): 16.33	0929	6.28	.078	23.6	24	1.71	—	—
One Casing Volume(gal/L): 0.1								
Start Purge (hrs): 0840								
End Purge (hrs): 0930								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SVOC	—	2 x 1 L g	yes
pesticides	—	2 x 1 L g	yes
PCB's	—	2 x 1 L g	yes
VOC's	HCl	2 x 40 ml g	yes
methane	—	2 x 40 ml g	
TOC	H_2SO_4	1 x 250 ml g	
Anions	—	1 x 500 ml poly.	
Sulfide	Zn + NaOH	1 x 250 ml poly.	
cyanide	NaOH	1 x 1 L poly	
metals	HNO_3	1 x 500 ml poly	

OBSERVATIONS / NOTES:

18.75 .041
16.33
.099

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NAS Pensacola
Project No.: N0189

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

Sample ID No.: Pen-43-3s-01
Sample Location: NAS-43-3s
Sampled By: JA, HE
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10 27 99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1530	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTALTIC	clear	6.19	.205	25.0	3	1.61	0.0	—

PURGE DATA:

Date: 10 27 99	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: PERISTALTIC 1530	1453	6.30	.206	25.0	678	2.11	0.0	16.59
Monitor Reading (ppm): ϕ	1500	6.21	.206	25.0	58	1.56	0.0	16.59
Well Casing Diameter & Material	1509	6.22	.204	25.0	74	1.99	0.0	—
Type: 2" PVC		SEE LOW FLOW PURGE DATA SHEET						
Total Well Depth (TD): 19.30	1515	6.17	.205	24.9	17	1.58	0.0	—
Static Water Level (WL): 16.59	1519	6.17	.205	25.0	8	1.40	0.0	—
One Casing Volume(gal/L): .11	1525	6.19	.205	25.0	3	1.61	0.0	
Start Purge (hrs): 1450								
End Purge (hrs): 1525								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 2								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA	HCl	2 x 40ml g	
SVOC	—	2 x 1L amber	
Pesticides	—	2 x 1L amber	
PCB	—	2 x 1L amber	
Metals	HNO_3	1 x 1L poly	
cyanide	NaOH	1 x 500ml poly	
Anions	—	1 x 500ml poly	
TOC	H_2SO_4	1 x 250ml amber	
methane	—	2 x 40ml g	
Sulfide	Zn + NaOH	1 x 250ml	

OBSERVATIONS / NOTES:

ms/msD - Pen - 43 - 3s - 01ms

Circle if Applicable:

MS/MSD

Duplicate ID No.: Pen-43-DD-01

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
Project No.: ~~0098~~ 0096 (15)

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

Sample ID No.: PEN-43-45-01
Sample Location: Site 43
Sampled By: JE
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-27-99	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0930	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTALTIC	clear	5.53	0.119	25.3	8	1.54	~~9~~ JE	—

PURGE DATA:

Date: 10-27-99	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Water Level ~~Salinity~~ JE	Flow Rate ~~Other~~ JE
Method: PERISTALTIC	0900	5.19	0.180	24.1	113	2.17	9.00	~400mL/min
Monitor Reading (ppm): —	0907	5.45	0.119	25.0	37	0.33	9.00	~400mL/min
Well Casing Diameter & Material	0914	5.63	0.120	24.9	20	0.26	9.01	~350mL/min
Type: 2" ~~PVC~~ 1" PVC	SEE LOW FLOW PURGE DATA SHEET							
Total Well Depth (TD): 15.05	0917	5.50	0.120	25.1	18	2.48	9.01	~350mL/min
Static Water Level (WL): 9.00	0922	5.47	0.119	25.1	10	1.50	9.00	~375mL/min
One Casing Volume(gal/L): 0.25 gal	—							
Start Purge (hrs): 0900	0926	5.53	0.119	25.3	8	1.54	9.00	~375mL/min
End Purge (hrs): 0926								
Total Purge Time (min): 26 min								
Total Vol. Purged (gal/L): 2.3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SVOC	—	(2) 1L glass	
Pesticides	—	(2) 1L glass	
PCB's	—	(2) 1L glass	
VOC's	HCl	(2) 40mL JE vials	
Methane	—	(2) 40mL vials	
TOC	H_2SO_4	(1) 250mL glass	
Anions	—	(1) 500mL poly	
Sulfide	Zn+NaOH	(1) 250mL poly	
Cyanide	NaOH	(1) 1L poly	
Metals	HNO_3	(1) 500mL poly	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
Project No.: ~~0098~~ 0096 (RE)

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

Sample ID No.:
Sample Location: PEN-43-SS-01
Sampled By: H.E.
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-27-99	Color	pH	S.C.	Temp.	Turbidity	DO	~~Salinity~~	~~Other~~
Time: 1030	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTALTIC		6.09	0.096	24.7	36	1.56	15.82	300 ml/min

PURGE DATA:

Date: 10-27-99	Time	pH	S.C.	Temp. (C)	Turbidity	DO	~~Salinity~~	~~Other~~
Method: PERISTALTIC	0852	6.24	0.092	23.4	~~999~~ 10	2.13	16.79	150 ml/min
Monitor Reading (ppm): —	0910	6.10	0.094	23.9	116	1.59	15.82	300 ml/min
Well Casing Diameter & Material	0933	6.10	0.095	24.1	63	1.61	15.82	"
Type: ~~2" PVC~~ 1" PVC		SEE LOW FLOW PURGE DATA SHEET						
Total Well Depth (TD): 19.57	0947	6.06	0.095	24.0	59	1.57	15.82	"
Static Water Level (WL): 16.79	0954	6.06	0.095	24.3	40	1.90	"	"
One Casing Volume(gal/L): .11	1022	6.04	0.096	24.5	32	1.49	"	"
Start Purge (hrs): 0850	1030	6.09	0.096	24.7	36	1.56	"	"
End Purge (hrs): 1030								
Total Purge Time (min): 100								
Total Vol. Purged (gal/L): 8 9								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	HCL / 4°C	(2) 40mL Vials	Yes
PCBs	4°C	(2) 1L Amber	
Pesticides	4°C	(2) 1L Amber	
TOC	H_2SO_4 / 4°C	(1) 250mL	
METALS	HNO_3 / 4°C	(1) 500mL Poly	
Cyanide	NaOH / 4°C	(1) 1L Poly	
Methane	4°C	(2) 40mL Vials	
Sollide	Zinc Acetate / 4°C	(1) 500mL Poly	
Anions	4°C	(1) 500mL Poly	
SVOC	4°C	(2) 1L Ambers	

OBSERVATIONS / NOTES:

.041

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

APPENDIX F

LABORATORY ANALYTICAL DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.01

Sample wt/vol: 3.8 (g/mL) G Lab File ID: R35045.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 10 Date Analyzed: 10/20/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	13	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.01

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 09102608.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 10 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl)ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	bis(2-Chloroisopropyl)ether	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	31	JB
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	920	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	920	U
131-11-3	Dimethylphthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	920	U
83-32-9	Acenaphthene	370	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.01

Sample wt/vol: 30.3 (g/mL) G Lab File ID: O9102608.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 10 dec. Date Extracted:10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	370	U
51-28-5	2,4-Dinitrophenol	920	U
100-02-7	4-Nitrophenol	920	U
132-64-9	Dibenzofuran	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	920	U
534-52-1	4,6-Dinitro-2-methylphenol	920	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenylphenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	920	U
86-74-8	Carbazole	370	U
85-01-8	Phenanthrene	55	J
120-12-7	Anthracene	370	U
84-74-2	Di-n-butylphthalate	31	JB
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	180	J
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)anthracene	100	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	100	JB
117-84-0	Di-n-octylphthalate	370	U
205-99-2	Benzo(b)fluoranthene	250	J
207-08-9	Benzo(k)fluoranthene	140	J
50-32-8	Benzo(a)pyrene	190	J
193-39-5	Indeno(1,2,3-cd)pyrene	220	J
53-70-3	Dibenz(a,h)anthracene	150	J
191-24-2	Benzo(g,h,i)perylene	320	J

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/19/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.7	P
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	2.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	2.7	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	91	U
	Surrogate amount spiked	7.31	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U
Surrogate amount spiked		7.41	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SV01

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40600 SAS No.: SDG No.: 40600
Matrix (soil/water): SOIL Lab Sample ID: 40600.01
Level (low/med): LOW Date Received: 10/07/99
% Solids: 90.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5220			P
7440-36-0	Antimony	40.4		N	P
7440-38-2	Arsenic	15.0			P
7440-39-3	Barium	1210			P
7440-41-7	Beryllium	0.18	B		P
7440-43-9	Cadmium	7.5			P
7440-70-2	Calcium	2520		N	P
7440-47-3	Chromium	24.0		N*	P
7440-48-4	Cobalt	5.7			P
7440-50-8	Copper	4010		E*	P
7439-89-6	Iron	60900		*	P
7439-92-1	Lead	4820		*	P
7439-95-4	Magnesium	663		N*	P
7439-96-5	Manganese	506		*	P
7439-97-6	Mercury	0.06			AV
7440-02-0	Nickel	149		N*	P
7440-09-7	Potassium	167	B		P
7782-49-2	Selenium	2.3			P
7440-22-4	Silver	5.9			P
7440-23-5	Sodium	246	B		P
7440-28-0	Thallium	1.5			P
7440-62-2	Vanadium	321			P
7440-66-6	Zinc	4760			P
	Cyanide	0.22	B		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.02

Sample wt/vol: 3.6 (g/mL) G Lab File ID: R35046.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 Date Analyzed: 10/20/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	14	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.02

Sample wt/vol: 33.4 (g/mL) G Lab File ID: 09102227.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U
111-44-4	bis(2-Chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	bis(2-Chloroisopropyl)ether	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	bis(2-Chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	31	JB
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	320	U
208-96-8	Acenaphthylene	320	U
606-20-2	2,6-Dinitrotoluene	320	U
99-09-2	3-Nitroaniline	800	U
83-32-9	Acenaphthene	320	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.02

Sample wt/vol: 33.4 (g/mL) G Lab File ID: 09102227.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	320	U
51-28-5	2,4-Dinitrophenol	800	U
100-02-7	4-Nitrophenol	800	U
132-64-9	Dibenzofuran	320	U
84-66-2	Diethylphthalate	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
86-73-7	Fluorene	320	U
100-01-6	4-Nitroaniline	800	U
534-52-1	4,6-Dinitro-2-methylphenol	800	U
86-30-6	N-Nitrosodiphenylamine (1)	320	U
101-55-3	4-Bromophenylphenylether	320	U
118-74-1	Hexachlorobenzene	320	U
87-86-5	Pentachlorophenol	800	U
86-74-8	Carbazole	320	U
85-01-8	Phenanthrene	55	J
120-12-7	Anthracene	320	U
84-74-2	Di-n-butylphthalate	20	JB
206-44-0	Fluoranthene	140	J
129-00-0	Pyrene	190	J
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	170	J
218-01-9	Chrysene	230	J
117-81-7	bis(2-Ethylhexyl)phthalate	96	JB
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	420	
207-08-9	Benzo(k)fluoranthene	250	J
50-32-8	Benzo(a)pyrene	500	
193-39-5	Indeno(1,2,3-cd)pyrene	510	
53-70-3	Dibenz(a,h)anthracene	340	
191-24-2	Benzo(g,h,i)perylene	980	

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID:_____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/19/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	3.5	P
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	2.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	4.2	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	89	U
	Surrogate amount spiked	7.17	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.02

Sample wt/vol: 32.0 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	33	U
11104-28-2------	Aroclor-1221	33	U
11141-16-5------	Aroclor-1232	33	U
53469-21-9------	Aroclor-1242	33	U
12672-29-6------	Aroclor-1248	33	U
11097-69-1------	Aroclor-1254	33	U
11096-82-5------	Aroclor-1260	33	U
Surrogate amount spiked		6.72	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SV02

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40600 SAS No.: SDG No.: 40600
Matrix (soil/water): SOIL Lab Sample ID: 40600.02
Level (low/med): LOW Date Received: 10/07/99
% Solids: 92.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5080			P
7440-36-0	Antimony	25.1		N	P
7440-38-2	Arsenic	13.3			P
7440-39-3	Barium	1570			P
7440-41-7	Beryllium	0.17	B		P
7440-43-9	Cadmium	22.5			P
7440-70-2	Calcium	9610		N	P
7440-47-3	Chromium	31.6		N*	P
7440-48-4	Cobalt	4.0			P
7440-50-8	Copper	1400		E*	P
7439-89-6	Iron	37900		*	P
7439-92-1	Lead	8160		*	P
7439-95-4	Magnesium	1240		N*	P
7439-96-5	Manganese	382		*	P
7439-97-6	Mercury	1.3			AV
7440-02-0	Nickel	48.5		N*	P
7440-09-7	Potassium	213	B		P
7782-49-2	Selenium	1.5			P
7440-22-4	Silver	3.4			P
7440-23-5	Sodium	429			P
7440-28-0	Thallium	1.1			P
7440-62-2	Vanadium	70.5			P
7440-66-6	Zinc	6860			P
	Cyanide	0.66			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03

Sample wt/vol: 4.5 (g/mL) G Lab File ID: N36894.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 24 Date Analyzed: 10/19/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	7	U
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	5	J
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV03RE

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03RA

Sample wt/vol: 4.5 (g/mL) G Lab File ID: R35047.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 24 Date Analyzed: 10/20/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	22	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 09102228.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 24 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	bis(2-Chloroisopropyl)ether	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	42	JB
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	440	U
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	440	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03

Sample wt/vol: 30.2 (g/mL) G Lab File ID: O9102228.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 24 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	440	U
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	440	U
84-66-2	Diethylphthalate	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
86-73-7	Fluorene	440	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenylphenylether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	1100	U
86-74-8	Carbazole	440	U
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	29	J
84-74-2	Di-n-butylphthalate	32	JB
206-44-0	Fluoranthene	280	J
129-00-0	Pyrene	260	J
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	440	U
56-55-3	Benzo(a)anthracene	160	J
218-01-9	Chrysene	200	J
117-81-7	bis(2-Ethylhexyl)phthalate	160	JB
117-84-0	Di-n-octylphthalate	440	U
205-99-2	Benzo(b)fluoranthene	240	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	270	J
193-39-5	Indeno(1,2,3-cd)pyrene	220	J
53-70-3	Dibenz(a,h)anthracene	170	J
191-24-2	Benzo(g,h,i)perylene	420	J

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV03

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03

Sample wt/vol: 31.5 (g/mL) G Lab File ID:_____

% Moisture: 24 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.6	U
319-85-7	beta-BHC	1.6	U
319-86-8	delta-BHC	1.6	U
58-89-9	gamma-BHC (Lindane)	1.6	U
76-44-8	Heptachlor	1.6	U
309-00-2	Aldrin	1.6	U
1024-57-3	Heptachlor epoxide	1.6	U
959-98-8	Endosulfan I	1.6	U
60-57-1	Dieldrin	3.1	U
72-55-9	4,4'-DDE	3.1	U
72-20-8	Endrin	3.1	U
33213-65-9	Endosulfan II	3.1	U
72-54-8	4,4'-DDD	3.1	U
1031-07-8	Endosulfan sulfate	3.1	U
50-29-3	4,4'-DDT	5.3	P
72-43-5	Methoxychlor	16	U
53494-70-5	Endrin ketone	3.1	U
7421-93-4	Endrin aldehyde	3.1	U
5103-71-9	alpha-Chlordane	1.6	U
5103-74-2	gamma-Chlordane	1.6	U
8001-35-2	Toxaphene	100	U
	Surrogate amount spiked	8.35	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV03

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03

Sample wt/vol: 32.8 (g/mL) G Lab File ID:_____

% Moisture: 24 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	40	U
11104-28-2------	Aroclor-1221	40	U
11141-16-5------	Aroclor-1232	40	U
53469-21-9------	Aroclor-1242	40	U
12672-29-6------	Aroclor-1248	40	U
11097-69-1------	Aroclor-1254	40	U
11096-82-5------	Aroclor-1260	40	U
Surrogate amount spiked		8.02	

FORM I PEST

1
INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SV03

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40600 SAS No.: SDG No.: 40600
Matrix (soil/water): SOIL Lab Sample ID: 40600.03
Level (low/med): LOW Date Received: 10/07/99
% Solids: 76.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7330			P
7440-36-0	Antimony	226		N	P
7440-38-2	Arsenic	57.3			P
7440-39-3	Barium	6820			P
7440-41-7	Beryllium	0.26	B		P
7440-43-9	Cadmium	22.6			P
7440-70-2	Calcium	10600		N	P
7440-47-3	Chromium	63.5		N*	P
7440-48-4	Cobalt	5.6			P
7440-50-8	Copper	3470		E*	P
7439-89-6	Iron	36700		*	P
7439-92-1	Lead	16400		*	P
7439-95-4	Magnesium	2780		N*	P
7439-96-5	Manganese	504		*	P
7439-97-6	Mercury	0.37			AV
7440-02-0	Nickel	99.4		N*	P
7440-09-7	Potassium	482			P
7782-49-2	Selenium	0.43	U		P
7440-22-4	Silver	4.7			P
7440-23-5	Sodium	366	B		P
7440-28-0	Thallium	1.2	B		P
7440-62-2	Vanadium	53.9			P
7440-66-6	Zinc	71700			P
	Cyanide	0.51			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV04

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.04

Sample wt/vol: 3.9 (g/mL) G Lab File ID: R35048.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 8 Date Analyzed: 10/20/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	27	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV04

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.04

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 09102229.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 8 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	37	JB
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	360	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV04

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.04

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 09102229.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 8 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	360	U
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenylphenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
86-74-8	Carbazole	360	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	26	J
84-74-2	Di-n-butylphthalate	25	JB
206-44-0	Fluoranthene	350	J
129-00-0	Pyrene	460	
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	330	J
218-01-9	Chrysene	450	
117-81-7	bis(2-Ethylhexyl)phthalate	120	JB
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	570	
207-08-9	Benzo(k)fluoranthene	310	J
50-32-8	Benzo(a)pyrene	570	
193-39-5	Indeno(1,2,3-cd)pyrene	500	
53-70-3	Dibenz(a,h)anthracene	440	
191-24-2	Benzo(g,h,i)perylene	850	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV04

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.04

Sample wt/vol: 34.1 (g/mL) G Lab File ID:_____

% Moisture: 8 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/19/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.2	U
319-85-7	beta-BHC	1.2	U
319-86-8	delta-BHC	1.2	U
58-89-9	gamma-BHC (Lindane)	1.2	U
76-44-8	Heptachlor	2.9	P
309-00-2	Aldrin	1.2	U
1024-57-3	Heptachlor epoxide	1.2	U
959-98-8	Endosulfan I	1.2	U
60-57-1	Dieldrin	2.4	U
72-55-9	4,4'-DDE	2.4	U
72-20-8	Endrin	2.4	U
33213-65-9	Endosulfan II	2.4	U
72-54-8	4,4'-DDD	2.4	U
1031-07-8	Endosulfan sulfate	2.4	U
50-29-3	4,4'-DDT	5.5	P
72-43-5	Methoxychlor	12	U
53494-70-5	Endrin ketone	2.4	U
7421-93-4	Endrin aldehyde	2.4	U
5103-71-9	alpha-Chlordane	1.2	U
5103-74-2	gamma-Chlordane	1.2	U
8001-35-2	Toxaphene	79	U
Surrogate amount spiked		6.38	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV04

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.04

Sample wt/vol: 31.4 (g/mL) G Lab File ID:_____

% Moisture: 8 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	34	U
11104-28-2------	Aroclor-1221	34	U
11141-16-5------	Aroclor-1232	34	U
53469-21-9------	Aroclor-1242	34	U
12672-29-6------	Aroclor-1248	34	U
11097-69-1------	Aroclor-1254	34	U
11096-82-5------	Aroclor-1260	34	U
Surrogate amount spiked		6.92	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SV04

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40600 SAS No.: SDG No.: 40600
Matrix (soil/water): SOIL Lab Sample ID: 40600.04
Level (low/med): LOW Date Received: 10/07/99
% Solids: 92.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6410			P
7440-36-0	Antimony	62.6		N	P
7440-38-2	Arsenic	17.5			P
7440-39-3	Barium	1530			P
7440-41-7	Beryllium	0.17	B		P
7440-43-9	Cadmium	11.8			P
7440-70-2	Calcium	4660		N	P
7440-47-3	Chromium	31.7		N*	P
7440-48-4	Cobalt	5.9			P
7440-50-8	Copper	15900		E*	P
7439-89-6	Iron	51400		*	P
7439-92-1	Lead	4880		*	P
7439-95-4	Magnesium	1120		N*	P
7439-96-5	Manganese	559		*	P
7439-97-6	Mercury	1.1			AV
7440-02-0	Nickel	71.8		N*	P
7440-09-7	Potassium	244	B		P
7782-49-2	Selenium	2.1			P
7440-22-4	Silver	5.0			P
7440-23-5	Sodium	276	B		P
7440-28-0	Thallium	1.7			P
7440-62-2	Vanadium	106			P
7440-66-6	Zinc	10300			P
	Cyanide	0.41			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.05

Sample wt/vol: 4.5 (g/mL) G Lab File ID: R35049.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 Date Analyzed: 10/20/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	10	B
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.05

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 09102230.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	29	JB
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	870	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	870	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	35	J
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	870	U
83-32-9	Acenaphthene	22	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.05

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 09102230.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	350	U
51-28-5	2,4-Dinitrophenol	870	U
100-02-7	4-Nitrophenol	870	U
132-64-9	Dibenzofuran	24	J
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	23	J
100-01-6	4-Nitroaniline	870	U
534-52-1	4,6-Dinitro-2-methylphenol	870	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenylphenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	870	U
85-01-8	Phenanthrene	590	
86-74-8	Carbazole	58	J
120-12-7	Anthracene	130	J
84-74-2	Di-n-butylphthalate	22	JB
206-44-0	Fluoranthene	750	
129-00-0	Pyrene	860	
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	430	
218-01-9	Chrysene	480	
117-81-7	bis(2-Ethylhexyl)phthalate	130	JB
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	420	
207-08-9	Benzo(k)fluoranthene	390	
50-32-8	Benzo(a)pyrene	490	
193-39-5	Indeno(1,2,3-cd)pyrene	350	
53-70-3	Dibenz(a,h)anthracene	190	J
191-24-2	Benzo(g,h,i)perylene	560	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV05

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.05

Sample wt/vol: 33.1 (g/mL) G Lab File ID:_____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/19/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.4	U
72-55-9	4,4'-DDE	2.4	U
72-20-8	Endrin	2.4	U
33213-65-9	Endosulfan II	2.4	U
72-54-8	4,4'-DDD	2.4	U
1031-07-8	Endosulfan sulfate	2.4	U
50-29-3	4,4'-DDT	7.3	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.4	U
7421-93-4	Endrin aldehyde	2.4	U
5103-71-9	alpha-Chlordane	1.6	P
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	81	U
	Surrogate amount spiked	6.50	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV05

ıb Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.05

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	35	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U
Surrogate amount spiked		7.12	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SV05

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40600 SAS No.: SDG No.: 40600
Matrix (soil/water): SOIL Lab Sample ID: 40600.05
Level (low/med): LOW Date Received: 10/07/99
% Solids: 93.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3920			P
7440-36-0	Antimony	26.0		N	P
7440-38-2	Arsenic	16.0			P
7440-39-3	Barium	1510			P
7440-41-7	Beryllium	0.20	B		P
7440-43-9	Cadmium	9.3			P
7440-70-2	Calcium	3380		N	P
7440-47-3	Chromium	93.7		N*	P
7440-48-4	Cobalt	5.9			P
7440-50-8	Copper	1720		E*	P
7439-89-6	Iron	75600		*	P
7439-92-1	Lead	20700		*	P
7439-95-4	Magnesium	954		N*	P
7439-96-5	Manganese	440		*	P
7439-97-6	Mercury	0.58			AV
7440-02-0	Nickel	163		N*	P
7440-09-7	Potassium	154	B		P
7782-49-2	Selenium	2.8			P
7440-22-4	Silver	2.9			P
7440-23-5	Sodium	256	B		P
7440-28-0	Thallium	1.9			P
7440-62-2	Vanadium	57.8			P
7440-66-6	Zinc	6260			P
	Cyanide	0.33			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV06

ab Name: SWL-TULSA Contract: PENSACOLA

ab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: R35050.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 Date Analyzed: 10/20/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	10	B
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV06

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.06

Sample wt/vol: 31.2 (g/mL) G Lab File ID: O9102609.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	31	JB
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	340	U

FORM I SV-1

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV06

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.06

Sample wt/vol: 31.2 (g/mL) G Lab File ID: 09102609.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 7 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	340	U
51-28-5	2,4-Dinitrophenol	860	U
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenylphenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	860	U
86-74-8	Carbazole	340	U
85-01-8	Phenanthrene	47	J
120-12-7	Anthracene	340	U
84-74-2	Di-n-butylphthalate	20	JB
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	120	J
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	84	J
218-01-9	Chrysene	100	J
117-81-7	bis(2-Ethylhexyl)phthalate	92	JB
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	100	J
50-32-8	Benzo(a)pyrene	100	J
193-39-5	Indeno(1,2,3-cd)pyrene	86	J
53-70-3	Dibenz(a,h)anthracene	33	J
191-24-2	Benzo(g,h,i)perylene	110	J

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV06

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.06

Sample wt/vol: 31.6 (g/mL) G Lab File ID:_____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/20/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	2.6	U
72-20-8	Endrin	2.6	U
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	2.6	U
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	4.2	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.5	P
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	85	U
	Surrogate amount spiked	6.81	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV06

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.06

Sample wt/vol: 30.7 (g/mL) G Lab File ID:_____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	35	U
11104-28-2------	Aroclor-1221	35	U
11141-16-5------	Aroclor-1232	35	U
53469-21-9------	Aroclor-1242	35	U
12672-29-6------	Aroclor-1248	35	U
11097-69-1------	Aroclor-1254	35	U
11096-82-5------	Aroclor-1260	35	U
Surrogate amount spiked		7.01	

FORM I PEST

1

CLIENT SAMPLE ID

INORGANIC ANALYSES DATA SHEET

PEN-43SV06

Lab Name: SOUTHWEST_LAB_OF_OK Contract:TETPITT
Lab Code: SWOK Case No.: 40600 SAS No.: SDG No.: 40600
Matrix (soil/water): SOIL Lab Sample ID: 40600.06
Level (low/med): LOW Date Received: 10/07/99
% Solids: 92.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4060			P
7440-36-0	Antimony	13.8		N	P
7440-38-2	Arsenic	6.6			P
7440-39-3	Barium	620			P
7440-41-7	Beryllium	0.10	B		P
7440-43-9	Cadmium	3.4	B		P
7440-70-2	Calcium	1340		N	P
7440-47-3	Chromium	13.2		N*	P
7440-48-4	Cobalt	2.2	B		P
7440-50-8	Copper	1310		E*	P
7439-89-6	Iron	23800		*	P
7439-92-1	Lead	2560		*	P
7439-95-4	Magnesium	422		N*	P
7439-96-5	Manganese	610		*	P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	25.9		N*	P
7440-09-7	Potassium	123	B		P
7782-49-2	Selenium	1.1			P
7440-22-4	Silver	2.0			P
7440-23-5	Sodium	194	B		P
7440-28-0	Thallium	1.2			P
7440-62-2	Vanadium	21.6			P
7440-66-6	Zinc	2610			P
	Cyanide	0.35			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.07

Sample wt/vol: 4.2 (g/mL) G Lab File ID: R35051.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 10 Date Analyzed: 10/20/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	8	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.07

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 09102232.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 10 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	360	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.07

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 09102232.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 10 dec. Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	360	U
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenylphenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
86-74-8	Carbazole	360	U
85-01-8	Phenanthrene	30	J
120-12-7	Anthracene	360	U
84-74-2	Di-n-butylphthalate	23	JB
206-44-0	Fluoranthene	44	J
129-00-0	Pyrene	59	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	48	J
218-01-9	Chrysene	97	J
117-81-7	bis(2-Ethylhexyl)phthalate	79	JB
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	65	J
207-08-9	Benzo(k)fluoranthene	47	J
50-32-8	Benzo(a)pyrene	67	J
193-39-5	Indeno(1,2,3-cd)pyrene	61	J
53-70-3	Dibenz(a,h)anthracene	43	J
191-24-2	Benzo(g,h,i)perylene	110	J

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV07

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.07

Sample wt/vol: 32.1 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/20/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	2.6	U
72-20-8	Endrin	2.6	U
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	2.6	U
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	2.6	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	86	U
	Surrogate amount spiked	6.92	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV07

D Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.07

Sample wt/vol: 31.2 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/08/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	35	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U
Surrogate amount spiked		7.12	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SV07

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40600 SAS No.: SDG No.: 40600
Matrix (soil/water): SOIL Lab Sample ID: 40600.07
Level (low/med): LOW Date Received: 10/07/99
% Solids: 90.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7970			P
7440-36-0	Antimony	20.4		N	P
7440-38-2	Arsenic	22.9			P
7440-39-3	Barium	438			P
7440-41-7	Beryllium	0.09	U		P
7440-43-9	Cadmium	9.6			P
7440-70-2	Calcium	3470		N	P
7440-47-3	Chromium	19.2		N*	P
7440-48-4	Cobalt	12.0			P
7440-50-8	Copper	529		E*	P
7439-89-6	Iron	236000		*	P
7439-92-1	Lead	2080		*	P
7439-95-4	Magnesium	392		N*	P
7439-96-5	Manganese	1170		*	P
7439-97-6	Mercury	1.2			AV
7440-02-0	Nickel	77.6		N*	P
7440-09-7	Potassium	115	B		P
7782-49-2	Selenium	9.1			P
7440-22-4	Silver	0.66	B		P
7440-23-5	Sodium	218	B		P
7440-28-0	Thallium	6.9			P
7440-62-2	Vanadium	596			P
7440-66-6	Zinc	3130			P
	Cyanide	0.47			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43TB10699

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40600

Matrix: (soil/water) WATER Lab Sample ID: 40600.08

Sample wt/vol: 5 (g/mL) ML Lab File ID: K29710.D

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. _____ Date Analyzed: 10/15/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: ____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	8	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 4.9 (g/mL) G Lab File ID: R34909.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 5 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	2	JB
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101819.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	350	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101819.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	U
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	860	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	68	J
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS01

ıb Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 5 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	3.6	P
72-20-8	Endrin	2.6	U
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	2.6	U
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	2.6	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	86	U
	Surrogate amount spiked	6.88	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 5 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/11/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	34	U
11104-28-2------	Aroclor-1221	34	U
11141-16-5------	Aroclor-1232	34	U
53469-21-9------	Aroclor-1242	34	U
12672-29-6------	Aroclor-1248	34	U
11097-69-1------	Aroclor-1254	34	U
11096-82-5------	Aroclor-1260	34	U
Surrogate amount spiked		6.90	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS01

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.01
Level (low/med): LOW Date Received: 10/06/99
% Solids: 95.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1000			P
7440-36-0	Antimony	0.28	U	N	P
7440-38-2	Arsenic	0.47	B		P
7440-39-3	Barium	9.3			P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.16	B		P
7440-70-2	Calcium	352	B	N	P
7440-47-3	Chromium	1.2			P
7440-48-4	Cobalt	0.11	B		P
7440-50-8	Copper	1.7	B		P
7439-89-6	Iron	1120		*	P
7439-92-1	Lead	16.6			P
7439-95-4	Magnesium	61.7			P
7439-96-5	Manganese	13.2		N	P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.57	B		P
7440-09-7	Potassium	31.6	B		P
7782-49-2	Selenium	0.35	U		P
7440-22-4	Silver	0.13	U		P
7440-23-5	Sodium	221	B		P
7440-28-0	Thallium	0.36	U		P
7440-62-2	Vanadium	2.0	B		P
7440-66-6	Zinc	17.1			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: R34911.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 8 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	4	JB
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.03

Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101821.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	350	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS02

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.03

Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101821.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	U
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	860	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	80	J
218-01-9	Chrysene	96	J
117-81-7	bis(2-Ethylhexyl)phthalate	48	J
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	110	J
193-39-5	Indeno(1,2,3-cd)pyrene	88	J
53-70-3	Dibenz(a,h)anthracene	45	J
191-24-2	Benzo(g,h,i)perylene	140	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS02

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.03

Sample wt/vol: 30.1 (g/mL) G Lab File ID:_____

% Moisture: 8 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	2.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	2.7	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	90	U
	Surrogate amount spiked	7.22	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.03

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 8 decanted: (Y/N) Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/11/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U
Surrogate amount spiked		7.17	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SSDD02

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.21
Level (low/med): LOW Date Received: 10/06/99
% Solids: 96.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	632			P
7440-36-0	Antimony	0.28	U	N	P
7440-38-2	Arsenic	0.24	B		P
7440-39-3	Barium	2.6			P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.09	B		P
7440-70-2	Calcium	156	B	N	P
7440-47-3	Chromium	1.5			P
7440-48-4	Cobalt	0.09	B		P
7440-50-8	Copper	2.1	B		P
7439-89-6	Iron	604		*	P
7439-92-1	Lead	24.4			P
7439-95-4	Magnesium	41.8			P
7439-96-5	Manganese	10.1		N	P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.46	B		P
7440-09-7	Potassium	32.9	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	196	B		P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	1.5	B		P
7440-66-6	Zinc	8.5			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS02

Lab Name: SOUTHWEST_LAB_OF_OK Contract:TETPITT

Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581

Matrix (soil/water): SOIL Lab Sample ID: 40581.03

Level (low/med): LOW Date Received: 10/06/99

% Solids: 91.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1920			P
7440-36-0	Antimony	16.5		N	P
7440-38-2	Arsenic	4.1	B		P
7440-39-3	Barium	344			P
7440-41-7	Beryllium	0.13	B		P
7440-43-9	Cadmium	2.2	B		P
7440-70-2	Calcium	1120		N	P
7440-47-3	Chromium	10.3			P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	707			P
7439-89-6	Iron	16300		*	P
7439-92-1	Lead	3860			P
7439-95-4	Magnesium	357			P
7439-96-5	Manganese	256		N	P
7439-97-6	Mercury	0.33			AV
7440-02-0	Nickel	52.6			P
7440-09-7	Potassium	107	B		P
7782-49-2	Selenium	0.36	U		P
7440-22-4	Silver	3.1			P
7440-23-5	Sodium	245			P
7440-28-0	Thallium	0.77	B		P
7440-62-2	Vanadium	26.6			P
7440-66-6	Zinc	1290			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS03

b Name: SWL-TULSA Contract: PENSACOLA

o Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: R34910.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 15 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	4	JB
67-64-1	ACETONE	59	
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 30.6 (g/mL) G Lab File ID: V9101820.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 15 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	bis(2-Chloroisopropyl)ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	960	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	960	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	960	U
83-32-9	Acenaphthene	380	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 30.6 (g/mL) G Lab File ID: V9101820.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 15 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	960	U
100-02-7	4-Nitrophenol	960	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	960	U
534-52-1	4,6-Dinitro-2-methylphenol	960	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	960	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	76	J
129-00-0	Pyrene	75	J
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	45	J
218-01-9	Chrysene	59	J
117-81-7	bis(2-Ethylhexyl)phthalate	81	J
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	100	J
207-08-9	Benzo(k)fluoranthene	380	U
50-32-8	Benzo(a)pyrene	60	J
193-39-5	Indeno(1,2,3-cd)pyrene	52	J
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	60	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS03

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 31.5 (g/mL) G Lab File ID:_____

% Moisture: 15 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.8	U
72-55-9	4,4'-DDE	4.6	
72-20-8	Endrin	2.8	U
33213-65-9	Endosulfan II	2.8	U
72-54-8	4,4'-DDD	2.8	U
1031-07-8	Endosulfan sulfate	2.8	U
50-29-3	4,4'-DDT	7.2	
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.8	U
7421-93-4	Endrin aldehyde	2.8	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	93	U
Surrogate amount spiked		7.47	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS03

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/11/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U
Surrogate amount spiked		7.74	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS03

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract:TETPITT___

Lab Code: SWOK__ Case No.: 40581 SAS No.: _____ SDG No.: 40581_

Matrix (soil/water): SOIL_ Lab Sample ID: 40581.02

Level (low/med): LOW__ Date Received: 10/06/99

% Solids: _84.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	1530			P
7440-36-0	Antimony_	2.1	B	N	P
7440-38-2	Arsenic__	1.4	B		P
7440-39-3	Barium___	87.0			P
7440-41-7	Beryllium	0.09	B		P
7440-43-9	Cadmium__	0.80	B		P
7440-70-2	Calcium__	383		N	P
7440-47-3	Chromium_	6.9			P
7440-48-4	Cobalt___	0.41	B		P
7440-50-8	Copper___	160			P
7439-89-6	Iron____	3170		*	P
7439-92-1	Lead____	550			P
7439-95-4	Magnesium	81.2			P
7439-96-5	Manganese	75.0		N	P
7439-97-6	Mercury__	0.24			AV
7440-02-0	Nickel___	5.1			P
7440-09-7	Potassium	50.7	B		P
7782-49-2	Selenium_	0.39	U		P
7440-22-4	Silver___	0.38	B		P
7440-23-5	Sodium___	230			P
7440-28-0	Thallium_	0.40	U		P
7440-62-2	Vanadium_	8.4			P
7440-66-6	Zinc____	427			P

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS04

b Name: SWL-TULSA Contract: PENSACOLA

ab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: R34912.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 8 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	3	JB
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS04

ab Name: SWL-TULSA Contract: PENSACOLA

ab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.04

Sample wt/vol: 30.6 (g/mL) G Lab File ID: V9101822.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	890	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	890	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	890	U
83-32-9	Acenaphthene	360	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS04

Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.04

Sample wt/vol: 30.6 (g/mL) G Lab File ID: V9101822.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	890	U
100-02-7	4-Nitrophenol	890	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	890	U
534-52-1	4,6-Dinitro-2-methylphenol	890	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	890	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	75	J
129-00-0	Pyrene	80	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	53	J
218-01-9	Chrysene	69	J
117-81-7	bis(2-Ethylhexyl)phthalate	54	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	76	J
193-39-5	Indeno(1,2,3-cd)pyrene	70	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	70	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS04

ab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.04

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 8 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	2.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	2.7	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	88	U
	Surrogate amount spiked	7.10	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS04

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.04

Sample wt/vol: 31.7 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	34	U
11104-28-2------	Aroclor-1221	34	U
11141-16-5------	Aroclor-1232	34	U
53469-21-9------	Aroclor-1242	34	U
12672-29-6------	Aroclor-1248	34	U
11097-69-1------	Aroclor-1254	34	U
11096-82-5------	Aroclor-1260	34	U
Surrogate amount spiked		6.86	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS04

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract:TETPITT___
Lab Code: SWOK__ Case No.: 40581 SAS No.: _____ SDG No.: 40581_
Matrix (soil/water): SOIL_ Lab Sample ID: 40581.04
Level (low/med): LOW__ Date Received: 10/06/99
% Solids: _92.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	2150			P
7440-36-0	Antimony_	8.3		N	P
7440-38-2	Arsenic__	5.2	B		P
7440-39-3	Barium___	479			P
7440-41-7	Beryllium	0.14	B		P
7440-43-9	Cadmium__	2.9			P
7440-70-2	Calcium__	1470		N	P
7440-47-3	Chromium_	10			P
7440-48-4	Cobalt___	1.8	B		P
7440-50-8	Copper___	681			P
7439-89-6	Iron_____	17200		*	P
7439-92-1	Lead_____	2700			P
7439-95-4	Magnesium	287			P
7439-96-5	Manganese	345		N	P
7439-97-6	Mercury__	0.52			AV
7440-02-0	Nickel___	26.7			P
7440-09-7	Potassium	63.2	B		P
7782-49-2	Selenium_	0.43	B		P
7440-22-4	Silver___	1.3			P
7440-23-5	Sodium___	238			P
7440-28-0	Thallium_	0.79	B		P
7440-62-2	Vanadium_	14.5			P
7440-66-6	Zinc_____	2090			P

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLOUDY Artifacts: _____

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: R34913.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 9 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	3	JB
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	2	J
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	19	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101823.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	35	J
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101823.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	89	J
120-12-7	Anthracene	39	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	220	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	140	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	46	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	250	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	110	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS05

ab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID:_____

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	4.7	
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	4.9	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	90	U
	Surrogate amount spiked	7.23	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS05

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/12/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/13/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	36	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U
Surrogate amount spiked		7.30	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS05

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.05
Level (low/med): LOW Date Received: 10/06/99
% Solids: 90.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2500			P
7440-36-0	Antimony	34.7		N	P
7440-38-2	Arsenic	9.7	B		P
7440-39-3	Barium	644			P
7440-41-7	Beryllium	0.22	B		P
7440-43-9	Cadmium	3.5			P
7440-70-2	Calcium	1490		N	P
7440-47-3	Chromium	15.4			P
7440-48-4	Cobalt	2.8			P
7440-50-8	Copper	2860			P
7439-89-6	Iron	37300		*	P
7439-92-1	Lead	3130			P
7439-95-4	Magnesium	476			P
7439-96-5	Manganese	379		N	P
7439-97-6	Mercury	0.65			AV
7440-02-0	Nickel	33.8			P
7440-09-7	Potassium	109	B		P
7782-49-2	Selenium	1.0	B		P
7440-22-4	Silver	3.3			P
7440-23-5	Sodium	247			P
7440-28-0	Thallium	2.2	B		P
7440-62-2	Vanadium	52.5			P
7440-66-6	Zinc	2780			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS06

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 5.1 (g/mL) G Lab File ID: R34934.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 10 Date Analyzed: 10/14/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	7	B
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	3	J
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS06

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 30.8 (g/mL) G Lab File ID: V9101825.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	360	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS06

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 30.8 (g/mL) G Lab File ID: V9101825.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	38	J
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	150	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	92	J
218-01-9	Chrysene	130	J
117-81-7	bis(2-Ethylhexyl)phthalate	65	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	240	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	130	J
193-39-5	Indeno(1,2,3-cd)pyrene	130	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	130	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS06

ıb Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 31.3 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	13	P
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	7.2	
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	88	U
	Surrogate amount spiked	7.10	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS06

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U
Surrogate amount spiked		7.33	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS06

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.07
Level (low/med): LOW Date Received: 10/06/99
% Solids: 90.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2650			P
7440-36-0	Antimony	15.8		N	P
7440-38-2	Arsenic	8.2	B		P
7440-39-3	Barium	557			P
7440-41-7	Beryllium	0.15	B		P
7440-43-9	Cadmium	2.9			P
7440-70-2	Calcium	962		N	P
7440-47-3	Chromium	13.8			P
7440-48-4	Cobalt	3.2			P
7440-50-8	Copper	1040			P
7439-89-6	Iron	35100		*	P
7439-92-1	Lead	3060			P
7439-95-4	Magnesium	387			P
7439-96-5	Manganese	312		N	P
7439-97-6	Mercury	0.50			AV
7440-02-0	Nickel	54.5			P
7440-09-7	Potassium	82.9	B		P
7782-49-2	Selenium	0.66	B		P
7440-22-4	Silver	1.8			P
7440-23-5	Sodium	211			P
7440-28-0	Thallium	1.5	B		P
7440-62-2	Vanadium	11.9			P
7440-66-6	Zinc	2500			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 3.9 (g/mL) G Lab File ID: R34914.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 17 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	8	U
74-83-9	BROMOMETHANE	8	U
75-01-4	VINYL CHLORIDE	8	U
75-00-3	CHLOROETHANE	8	U
75-09-2	METHYLENE CHLORIDE	4	JB
67-64-1	ACETONE	8	U
75-15-0	CARBON DISULFIDE	8	U
75-35-4	1 1-DICHLOROETHENE	8	U
75-34-3	1 1-DICHLOROETHANE	8	U
540-59-0	1,2-Dichloroethene (total)	8	U
67-66-3	CHLOROFORM	8	U
107-06-2	1 2-DICHLOROETHANE	8	U
78-93-3	2-BUTANONE	8	U
71-55-6	1 1 1-TRICHLOROETHANE	8	U
56-23-5	CARBON TETRACHLORIDE	8	U
75-27-4	BROMODICHLOROMETHANE	8	U
78-87-5	1 2-DICHLOROPROPANE	8	U
10061-01-5	cis-1,3-Dichloropropene	8	U
79-01-6	TRICHLOROETHENE	8	U
124-48-1	DIBROMOCHLOROMETHANE	8	U
79-00-5	1 1 2-TRICHLOROETHANE	8	U
71-43-2	BENZENE	8	U
10061-02-6	trans-1,3-Dichloropropene	8	U
75-25-2	BROMOFORM	8	U
108-10-1	4-METHYL-2-PENTANONE	8	U
591-78-6	2-HEXANONE	8	U
127-18-4	TETRACHLOROETHENE	8	U
108-88-3	TOLUENE	8	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	8	U
108-90-7	CHLOROBENZENE	8	U
100-41-4	ETHYL BENZENE	8	U
100-42-5	STYRENE	8	U
1330-20-7	Xylene (Total)	8	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101824.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	bis(2-Chloroisopropyl)ether	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	400	U

FORM I SV

CT 10-29-99
7.4 765

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101824.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	130	J
129-00-0	Pyrene	120	J
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	74	J
218-01-9	Chrysene	97	J
117-81-7	bis(2-Ethylhexyl)phthalate	44	J
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	88	J
193-39-5	Indeno(1,2,3-cd)pyrene	90	J
53-70-3	Dibenz(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	110	J

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS07

› Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 30.3 (g/mL) G Lab File ID:_____

% Moisture: 17 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.6	U
319-85-7	beta-BHC	1.6	U
319-86-8	delta-BHC	1.6	U
58-89-9	gamma-BHC (Lindane)	1.6	U
76-44-8	Heptachlor	1.6	U
309-00-2	Aldrin	1.6	U
1024-57-3	Heptachlor epoxide	1.6	U
959-98-8	Endosulfan I	1.6	U
60-57-1	Dieldrin	3.0	U
72-55-9	4,4'-DDE	4.4	
72-20-8	Endrin	3.0	U
33213-65-9	Endosulfan II	3.0	U
72-54-8	4,4'-DDD	3.0	U
1031-07-8	Endosulfan sulfate	3.0	U
50-29-3	4,4'-DDT	3.0	U
72-43-5	Methoxychlor	16	U
53494-70-5	Endrin ketone	3.0	U
7421-93-4	Endrin aldehyde	3.0	U
5103-71-9	alpha-Chlordane	1.6	U
5103-74-2	gamma-Chlordane	1.6	U
8001-35-2	Toxaphene	99	U
	Surrogate amount spiked	7.95	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS07

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 30.5 (g/mL) G Lab File ID:_____

% Moisture: 17 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	39	U
11104-28-2------	Aroclor-1221	39	U
11141-16-5------	Aroclor-1232	39	U
53469-21-9------	Aroclor-1242	39	U
12672-29-6------	Aroclor-1248	39	U
11097-69-1------	Aroclor-1254	39	U
11096-82-5------	Aroclor-1260	39	U
Surrogate amount spiked		7.90	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS07

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.06
Level (low/med): LOW Date Received: 10/06/99
% Solids: 83.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6740			P
7440-36-0	Antimony	59.9		N	P
7440-38-2	Arsenic	16.9	B		P
7440-39-3	Barium	1050			P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	10.4			P
7440-70-2	Calcium	1780		N	P
7440-47-3	Chromium	59.2			P
7440-48-4	Cobalt	6.1			P
7440-50-8	Copper	20000			P
7439-89-6	Iron	73700		*	P
7439-92-1	Lead	10800			P
7439-95-4	Magnesium	1270			P
7439-96-5	Manganese	840		N	P
7439-97-6	Mercury	0.71			AV
7440-02-0	Nickel	144			P
7440-09-7	Potassium	162	B		P
7782-49-2	Selenium	1.2	B		P
7440-22-4	Silver	6.7			P
7440-23-5	Sodium	1530			P
7440-28-0	Thallium	2.9	B		P
7440-62-2	Vanadium	185			P
7440-66-6	Zinc	8520			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS08

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.08

Sample wt/vol: 3.9 (g/mL) G Lab File ID: R34916.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 14 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	3	JB
67-64-1	ACETONE	220	
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS08

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.08

Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101837.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 14 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	bis(2-Chloroisopropyl)ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	950	U
83-32-9	Acenaphthene	380	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS08

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.08

Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101837.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 14 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	950	U
100-02-7	4-Nitrophenol	950	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	46	J
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	150	J
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	94	J
218-01-9	Chrysene	120	J
117-81-7	bis(2-Ethylhexyl)phthalate	130	J
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	210	J
207-08-9	Benzo(k)fluoranthene	380	U
50-32-8	Benzo(a)pyrene	110	J
193-39-5	Indeno(1,2,3-cd)pyrene	94	J
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	96	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS08

ab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.08

Sample wt/vol: 30.4 (g/mL) G Lab File ID:_____

% Moisture: 14 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.5	U
319-85-7	beta-BHC	1.5	U
319-86-8	delta-BHC	1.5	U
58-89-9	gamma-BHC (Lindane)	1.5	U
76-44-8	Heptachlor	1.5	U
309-00-2	Aldrin	1.5	U
1024-57-3	Heptachlor epoxide	1.5	U
959-98-8	Endosulfan I	1.5	U
60-57-1	Dieldrin	4.8	
72-55-9	4,4'-DDE	27	P
72-20-8	Endrin	2.9	U
33213-65-9	Endosulfan II	2.9	U
72-54-8	4,4'-DDD	2.9	U
1031-07-8	Endosulfan sulfate	2.9	U
50-29-3	4,4'-DDT	30	
72-43-5	Methoxychlor	15	U
53494-70-5	Endrin ketone	2.9	U
7421-93-4	Endrin aldehyde	2.9	U
5103-71-9	alpha-Chlordane	1.5	U
5103-74-2	gamma-Chlordane	1.5	U
8001-35-2	Toxaphene	95	U
	Surrogate amount spiked	7.65	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS08

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.08

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 14 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U
Surrogate amount spiked		7.60	

FORM I PEST

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS08

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.08
Level (low/med): LOW Date Received: 10/06/99
% Solids: 86.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4100			P
7440-36-0	Antimony	4.6	B	N	P
7440-38-2	Arsenic	3.3	B		P
7440-39-3	Barium	209			P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	1.7	B		P
7440-70-2	Calcium	4660		N	P
7440-47-3	Chromium	9.4			P
7440-48-4	Cobalt	1.2	B		P
7440-50-8	Copper	305			P
7439-89-6	Iron	12500		*	P
7439-92-1	Lead	1420			P
7439-95-4	Magnesium	1130			P
7439-96-5	Manganese	232		N	P
7439-97-6	Mercury	0.20			AV
7440-02-0	Nickel	9.5			P
7440-09-7	Potassium	110	B		P
7782-49-2	Selenium	0.41	B		P
7440-22-4	Silver	0.98	B		P
7440-23-5	Sodium	273			P
7440-28-0	Thallium	0.40	B		P
7440-62-2	Vanadium	11.8			P
7440-66-6	Zinc	850			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS09

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 4.0 (g/mL) G Lab File ID: R34917.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 3 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	2	JB
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS09

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 31.7 (g/mL) G Lab File ID: V9101826.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U
111-44-4	bis(2-Chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	bis(2-Chloroisopropyl)ether	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	bis(2-Chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	810	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	810	U
131-11-3	Dimethylphthalate	320	U
208-96-8	Acenaphthylene	90	J
606-20-2	2,6-Dinitrotoluene	320	U
99-09-2	3-Nitroaniline	810	U
83-32-9	Acenaphthene	320	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS09

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 31.7 (g/mL) G Lab File ID: V9101826.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	810	U
100-02-7	4-Nitrophenol	810	U
132-64-9	Dibenzofuran	320	U
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
86-73-7	Fluorene	320	U
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	U
86-30-6	N-Nitrosodiphenylamine (1)	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
87-86-5	Pentachlorophenol	810	U
85-01-8	Phenanthrene	62	J
120-12-7	Anthracene	90	J
86-74-8	Carbazole	320	U
84-74-2	Di-n-butylphthalate	320	U
206-44-0	Fluoranthene	380	
129-00-0	Pyrene	380	
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	320	
218-01-9	Chrysene	360	
117-81-7	bis(2-Ethylhexyl)phthalate	78	J
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	650	
207-08-9	Benzo(k)fluoranthene	320	U
50-32-8	Benzo(a)pyrene	360	
193-39-5	Indeno(1,2,3-cd)pyrene	270	J
53-70-3	Dibenz(a,h)anthracene	49	J
191-24-2	Benzo(g,h,i)perylene	250	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS09

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 30.9 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	84	PE
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	62	PE
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
Surrogate amount spiked		6.67	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS09DL

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09DL

Sample wt/vol: 30.9 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	13	U
319-85-7	beta-BHC	13	U
319-86-8	delta-BHC	13	U
58-89-9	gamma-BHC (Lindane)	13	U
76-44-8	Heptachlor	13	U
309-00-2	Aldrin	13	U
1024-57-3	Heptachlor epoxide	13	U
959-98-8	Endosulfan I	13	U
60-57-1	Dieldrin	25	U
72-55-9	4,4'-DDE	93	D
72-20-8	Endrin	25	U
33213-65-9	Endosulfan II	25	U
72-54-8	4,4'-DDD	25	U
1031-07-8	Endosulfan sulfate	25	U
50-29-3	4,4'-DDT	71	DP
72-43-5	Methoxychlor	130	U
53494-70-5	Endrin ketone	25	U
7421-93-4	Endrin aldehyde	25	U
5103-71-9	alpha-Chlordane	13	U
5103-74-2	gamma-Chlordane	13	U
8001-35-2	Toxaphene	830	U
	Surrogate amount spiked	6.67	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS09

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 35.0 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/12/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/13/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	29	U
11104-28-2------	Aroclor-1221	29	U
11141-16-5------	Aroclor-1232	29	U
53469-21-9------	Aroclor-1242	29	U
12672-29-6------	Aroclor-1248	29	U
11097-69-1------	Aroclor-1254	29	U
11096-82-5------	Aroclor-1260	29	U
Surrogate amount spiked		5.89	

FORM I PEST

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS09

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.09
Level (low/med): LOW Date Received: 10/06/99
% Solids: 96.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1330			P
7440-36-0	Antimony	0.64	B	N	P
7440-38-2	Arsenic	1.0	B		P
7440-39-3	Barium	20.8			P
7440-41-7	Beryllium	0.08	B		P
7440-43-9	Cadmium	0.23	B		P
7440-70-2	Calcium	469		N	P
7440-47-3	Chromium	3.0			P
7440-48-4	Cobalt	0.26	B		P
7440-50-8	Copper	39.8			P
7439-89-6	Iron	2720		*	P
7439-92-1	Lead	226			P
7439-95-4	Magnesium	64.9			P
7439-96-5	Manganese	35.8		N	P
7439-97-6	Mercury	0.04			AV
7440-02-0	Nickel	2.1	B		P
7440-09-7	Potassium	42.5	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.28	B		P
7440-23-5	Sodium	202			P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	4.8			P
7440-66-6	Zinc	145			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS10

ab Name: SWL-TULSA Contract: PENSACOLA

ab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 3.8 (g/mL) G Lab File ID: R34935.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 9 Date Analyzed: 10/14/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	17	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS10

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 30.3 (g/mL) G Lab File ID: V9101827.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS10

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 30.3 (g/mL) G Lab File ID: V9101827.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	290	J
120-12-7	Anthracene	66	J
86-74-8	Carbazole	42	J
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	550	
129-00-0	Pyrene	620	
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	270	J
218-01-9	Chrysene	320	J
117-81-7	bis(2-Ethylhexyl)phthalate	60	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	530	
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	300	J
193-39-5	Indeno(1,2,3-cd)pyrene	260	J
53-70-3	Dibenz(a,h)anthracene	80	J
191-24-2	Benzo(g,h,i)perylene	260	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS10

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	7.5	
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	5.4	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	89	U
	Surrogate amount spiked	7.18	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS10

b Name: SWL-TULSA

b Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 30.5 (g/mL) G Lab File ID:_____

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	36	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U
Surrogate amount spiked		7.21	

FORM I PEST

1

CLIENT SAMPLE ID

INORGANIC ANALYSES DATA SHEET

PEN-43SS10

ab Name: SOUTHWEST_LAB_OF_OK_____ Contract:TETPITT___
ab Code: SWOK__ Case No.: 40581 SAS No.: _____ SDG No.: 40581_
latrix (soil/water): SOIL_ Lab Sample ID: 40581.10
evel (low/med): LOW__ Date Received: 10/06/99
Solids: _91.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	4950	_		P_
7440-36-0	Antimony_	53.5	_	N	P_
7440-38-2	Arsenic__	8.8	B		P_
7440-39-3	Barium___	907	_		P_
7440-41-7	Beryllium	0.69	_		P_
7440-43-9	Cadmium__	4.7	_		P_
7440-70-2	Calcium__	10900	_	N	P_
7440-47-3	Chromium_	16.9	_		P_
7440-48-4	Cobalt___	2.4	B		P_
7440-50-8	Copper___	1270	_		P_
7439-89-6	Iron____	20100	_	*	P_
7439-92-1	Lead____	3370	_		P_
7439-95-4	Magnesium	3670	_		P_
7439-96-5	Manganese	1570	_	N	P_
7439-97-6	Mercury__	2.2	_		AV
7440-02-0	Nickel___	37.7	_		P_
7440-09-7	Potassium	170	B		P_
7782-49-2	Selenium_	0.71	B		P_
7440-22-4	Silver___	9.9	_		P_
7440-23-5	Sodium___	294	_		P_
7440-28-0	Thallium_	0.37	B		P_
7440-62-2	Vanadium_	80.1	_		P_
7440-66-6	Zinc____	3770	_		P_

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLOUDY Artifacts: _____

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS11

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.11

Sample wt/vol: 4.3 (g/mL) G Lab File ID: R34936.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 2 Date Analyzed: 10/14/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	7	B
67-64-1	ACETONE	170	
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	27	
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS11

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.11

Sample wt/vol: 31.2 (g/mL) G Lab File ID: V9101836.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	820	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	330	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS11

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.11

Sample wt/vol: 31.2 (g/mL) G Lab File ID: V9101836.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	820	U
100-02-7	4-Nitrophenol	820	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	820	U
534-52-1	4,6-Dinitro-2-methylphenol	820	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	820	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	53	J
129-00-0	Pyrene	60	J
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	89	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	70	J
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS11

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.11

Sample wt/vol: 30.5 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	6.5	
72-20-8	Endrin	5.2	P
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	12	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
Surrogate amount spiked		6.69	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS11

› Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.11

Sample wt/vol: 31.9 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/12/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/19/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	32	U
11104-28-2------	Aroclor-1221	32	U
11141-16-5------	Aroclor-1232	32	U
53469-21-9------	Aroclor-1242	32	U
12672-29-6------	Aroclor-1248	32	U
11097-69-1------	Aroclor-1254	32	U
11096-82-5------	Aroclor-1260	32	U
Surrogate amount spiked		6.40	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS11

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT

Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581

Matrix (soil/water): SOIL Lab Sample ID: 40581.11

Level (low/med): LOW Date Received: 10/06/99

% Solids: 98.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2280			P
7440-36-0	Antimony	0.43	U	N	P
7440-38-2	Arsenic	0.70	B		P
7440-39-3	Barium	31.9			P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	0.23	B		P
7440-70-2	Calcium	9870		N	P
7440-47-3	Chromium	2.8			P
7440-48-4	Cobalt	0.24	B		P
7440-50-8	Copper	286			P
7439-89-6	Iron	3110		*	P
7439-92-1	Lead	96.8			P
7439-95-4	Magnesium	1580			P
7439-96-5	Manganese	67.9		N	P
7439-97-6	Mercury	0.02	B		AV
7440-02-0	Nickel	1.4	B		P
7440-09-7	Potassium	118	B		P
7782-49-2	Selenium	0.33	U		P
7440-22-4	Silver	0.48	B		P
7440-23-5	Sodium	247			P
7440-28-0	Thallium	0.34	U		P
7440-62-2	Vanadium	3.7			P
7440-66-6	Zinc	84.7			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS12

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 5.5 (g/mL) G Lab File ID: R34920.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 9 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	14	B
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS12

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101828.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS12

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101828.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	70	J
129-00-0	Pyrene	88	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	58	J
218-01-9	Chrysene	70	J
117-81-7	bis(2-Ethylhexyl)phthalate	78	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	62	J
207-08-9	Benzo(k)fluoranthene	74	J
50-32-8	Benzo(a)pyrene	75	J
193-39-5	Indeno(1,2,3-cd)pyrene	65	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	78	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS12

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.8 (g/mL) G Lab File ID:_____

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	6.4	
72-20-8	Endrin	12	
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	11	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	89	U
	Surrogate amount spiked	7.14	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS12

ab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.6 (g/mL) G Lab File ID:

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	36	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U
Surrogate amount spiked		7.18	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS12

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT

Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581

Matrix (soil/water): SOIL Lab Sample ID: 40581.12

Level (low/med): LOW Date Received: 10/06/99

% Solids: 90.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2760			P
7440-36-0	Antimony	17.8		N	P
7440-38-2	Arsenic	7.7	B		P
7440-39-3	Barium	369			P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	1.9	B		P
7440-70-2	Calcium	2010		N	P
7440-47-3	Chromium	10.4			P
7440-48-4	Cobalt	2.5	B		P
7440-50-8	Copper	840			P
7439-89-6	Iron	25700		*	P
7439-92-1	Lead	1910			P
7439-95-4	Magnesium	525			P
7439-96-5	Manganese	297		N	P
7439-97-6	Mercury	0.39			AV
7440-02-0	Nickel	40.0			P
7440-09-7	Potassium	82.3	B		P
7782-49-2	Selenium	0.61	B		P
7440-22-4	Silver	3.9			P
7440-23-5	Sodium	230			P
7440-28-0	Thallium	1.2	B		P
7440-62-2	Vanadium	99.1			P
7440-66-6	Zinc	1710			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS13

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.13

Sample wt/vol: 4.7 (g/mL) G Lab File ID: R34921.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 10 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	6	U
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

FORM I VOA 8260

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS13

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.13

Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101829.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS13

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.13

Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101829.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	41	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	280	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	140	J
117-81-7	bis(2-Ethylhexyl)phthalate	120	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	180	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	88	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	79	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS13

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.13

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	3.0	P
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	6.1	
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	90	U
	Surrogate amount spiked	7.26	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS13

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.13

Sample wt/vol: 30.8 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	36	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U
Surrogate amount spiked		7.22	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS13

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT

Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581

Matrix (soil/water): SOIL Lab Sample ID: 40581.13

Level (low/med): LOW Date Received: 10/06/99

% Solids: 89.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6400			P
7440-36-0	Antimony	7.5		N	P
7440-38-2	Arsenic	11.2	B		P
7440-39-3	Barium	275			P
7440-41-7	Beryllium	0.88			P
7440-43-9	Cadmium	1.6	B		P
7440-70-2	Calcium	15700		N	P
7440-47-3	Chromium	10.6			P
7440-48-4	Cobalt	3.7			P
7440-50-8	Copper	876			P
7439-89-6	Iron	48600		*	P
7439-92-1	Lead	1820			P
7439-95-4	Magnesium	5150			P
7439-96-5	Manganese	540		N	P
7439-97-6	Mercury	0.20			AV
7440-02-0	Nickel	15.5			P
7440-09-7	Potassium	316			P
7782-49-2	Selenium	1.0	B		P
7440-22-4	Silver	4.2			P
7440-23-5	Sodium	353			P
7440-28-0	Thallium	1.3	B		P
7440-62-2	Vanadium	19.2			P
7440-66-6	Zinc	1600			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS14

ıb Name: SWL-TULSA Contract: PENSACOLA

. b Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.14

Sample wt/vol: 2.9 (g/mL) G Lab File ID: R34937.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 10 Date Analyzed: 10/14/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	10	U
74-83-9	BROMOMETHANE	10	U
75-01-4	VINYL CHLORIDE	10	U
75-00-3	CHLOROETHANE	10	U
75-09-2	METHYLENE CHLORIDE	7	JB
67-64-1	ACETONE	10	U
75-15-0	CARBON DISULFIDE	10	U
75-35-4	1 1-DICHLOROETHENE	10	U
75-34-3	1 1-DICHLOROETHANE	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	CHLOROFORM	10	U
107-06-2	1 2-DICHLOROETHANE	10	U
78-93-3	2-BUTANONE	10	U
71-55-6	1 1 1-TRICHLOROETHANE	10	U
56-23-5	CARBON TETRACHLORIDE	10	U
75-27-4	BROMODICHLOROMETHANE	10	U
78-87-5	1 2-DICHLOROPROPANE	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	TRICHLOROETHENE	2	J
124-48-1	DIBROMOCHLOROMETHANE	10	U
79-00-5	1 1 2-TRICHLOROETHANE	10	U
71-43-2	BENZENE	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	BROMOFORM	10	U
108-10-1	4-METHYL-2-PENTANONE	10	U
591-78-6	2-HEXANONE	10	U
127-18-4	TETRACHLOROETHENE	10	U
108-88-3	TOLUENE	10	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	10	U
108-90-7	CHLOROBENZENE	10	U
100-41-4	ETHYL BENZENE	10	U
100-42-5	STYRENE	10	U
1330-20-7	Xylene (Total)	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS14

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.14

Sample wt/vol: 30.7 (g/mL) G Lab File ID: V9101830.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	360	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS14

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.14

Sample wt/vol: 30.7 (g/mL) G Lab File ID: V9101830.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	37	J
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	160	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	82	J
218-01-9	Chrysene	90	J
117-81-7	bis(2-Ethylhexyl)phthalate	110	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	92	J
193-39-5	Indeno(1,2,3-cd)pyrene	78	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	89	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS14

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.14

Sample wt/vol: 30.9 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	3.6	P
72-20-8	Endrin	6.0	
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	8.8	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	90	U
Surrogate amount spiked		7.19	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS14

) Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.14

Sample wt/vol: 30.3 (g/mL) G Lab File ID:_____

% Moisture: 10 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/12/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/19/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	36	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U
Surrogate amount spiked		7.33	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS14

Lab Name: SOUTHWEST_LAB_OF_OK Contract:TETPITT

Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581

Matrix (soil/water): SOIL Lab Sample ID: 40581.14

Level (low/med): LOW Date Received: 10/06/99

% Solids: 89.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3540			P
7440-36-0	Antimony	10.7		N	P
7440-38-2	Arsenic	9.8	B		P
7440-39-3	Barium	1130			P
7440-41-7	Beryllium	0.33	B		P
7440-43-9	Cadmium	3.1			P
7440-70-2	Calcium	5230		N	P
7440-47-3	Chromium	12.6			P
7440-48-4	Cobalt	2.3	B		P
7440-50-8	Copper	753			P
7439-89-6	Iron	25000		*	P
7439-92-1	Lead	4050			P
7439-95-4	Magnesium	1210			P
7439-96-5	Manganese	692		N	P
7439-97-6	Mercury	0.39			AV
7440-02-0	Nickel	25.9			P
7440-09-7	Potassium	102	B		P
7782-49-2	Selenium	0.56	B		P
7440-22-4	Silver	8.3			P
7440-23-5	Sodium	299			P
7440-28-0	Thallium	0.89	B		P
7440-62-2	Vanadium	30.0			P
7440-66-6	Zinc	3590			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS15

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 5.3 (g/mL) G Lab File ID: R34923.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 9 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	4	JB
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS15

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101831.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS15

b Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101831.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	140	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	360	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	360	U

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS15

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	2.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	2.7	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	89	U
Surrogate amount spiked		7.18	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS15

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 30.1 (g/mL) G Lab File ID:_____

% Moisture: 9 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	36	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U
Surrogate amount spiked		7.30	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS15

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract:TETPITT___
Lab Code: SWOK__ Case No.: 40581 SAS No.: _____ SDG No.: 40581_
Matrix (soil/water): SOIL_ Lab Sample ID: 40581.15
Level (low/med): LOW__ Date Received: 10/06/99
% Solids: _90.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	1790			P
7440-36-0	Antimony_	0.29	U	N	P
7440-38-2	Arsenic__	1.1			P
7440-39-3	Barium___	5.3			P
7440-41-7	Beryllium	0.09	U		P
7440-43-9	Cadmium__	0.07	B		P
7440-70-2	Calcium__	253	B	N	P
7440-47-3	Chromium_	3.8			P
7440-48-4	Cobalt___	0.16	B		P
7440-50-8	Copper___	3.0	B		P
7439-89-6	Iron_____	3210		*	P
7439-92-1	Lead_____	18.9			P
7439-95-4	Magnesium	39.5			P
7439-96-5	Manganese	25.6		N	P
7439-97-6	Mercury__	0.02	U		AV
7440-02-0	Nickel___	0.59	B		P
7440-09-7	Potassium	27.9	B		P
7782-49-2	Selenium_	0.36	U		P
7440-22-4	Silver___	0.13	U		P
7440-23-5	Sodium___	190	B		P
7440-28-0	Thallium_	0.37	U		P
7440-62-2	Vanadium_	8.2			P
7440-66-6	Zinc_____	17.8			P

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLOUDY Artifacts: _____

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SS16

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17

Sample wt/vol: 4.0 (g/mL) G Lab File ID: R34925.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 7 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	10	B
67-64-1	ACETONE	23	
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS16

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17

Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101833.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	340	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS16

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17

Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101833.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	U
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	860	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	78	J
218-01-9	Chrysene	90	J
117-81-7	bis(2-Ethylhexyl)phthalate	80	J
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	82	J
193-39-5	Indeno(1,2,3-cd)pyrene	69	J
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	68	J

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS16

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17

Sample wt/vol: 30.8 (g/mL) G Lab File ID:_____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	110	E
72-20-8	Endrin	11	
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	23	
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	86	E
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	87	U
	Surrogate amount spiked	6.98	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS16DL

.o Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17DL

Sample wt/vol: 30.8 (g/mL) G Lab File ID:_____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	14	U
319-85-7	beta-BHC	14	U
319-86-8	delta-BHC	14	U
58-89-9	gamma-BHC (Lindane)	14	U
76-44-8	Heptachlor	14	U
309-00-2	Aldrin	14	U
1024-57-3	Heptachlor epoxide	14	U
959-98-8	Endosulfan I	14	U
60-57-1	Dieldrin	26	U
72-55-9	4,4'-DDE	73	D
72-20-8	Endrin	26	U
33213-65-9	Endosulfan II	26	U
72-54-8	4,4'-DDD	26	U
1031-07-8	Endosulfan sulfate	26	U
50-29-3	4,4'-DDT	65	D
72-43-5	Methoxychlor	140	U
53494-70-5	Endrin ketone	26	U
7421-93-4	Endrin aldehyde	26	U
5103-71-9	alpha-Chlordane	14	U
5103-74-2	gamma-Chlordane	14	U
8001-35-2	Toxaphene	870	U
Surrogate amount spiked		6.98	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS16

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17

Sample wt/vol: 31.1 (g/mL) G Lab File ID:_____

% Moisture: 7 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	34	U
11104-28-2------	Aroclor-1221	34	U
11141-16-5------	Aroclor-1232	34	U
53469-21-9------	Aroclor-1242	34	U
12672-29-6------	Aroclor-1248	34	U
11097-69-1------	Aroclor-1254	34	U
11096-82-5------	Aroclor-1260	34	U
Surrogate amount spiked		6.91	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS16

ab Name: SOUTHWEST_LAB_OF_OK_____ Contract:TETPITT___
ab Code: SWOK__ Case No.: 40581 SAS No.: _____ SDG No.: 40581_
atrix (soil/water): SOIL_ Lab Sample ID: 40581.17
evel (low/med): LOW__ Date Received: 10/06/99
Solids: _93.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	5170			P
7440-36-0	Antimony_	2.3	B	N	P
7440-38-2	Arsenic__	2.5	B		P
7440-39-3	Barium___	136			P
7440-41-7	Beryllium	0.12	B		P
7440-43-9	Cadmium__	1.0	B		P
7440-70-2	Calcium__	1150		N	P
7440-47-3	Chromium_	8.9			P
7440-48-4	Cobalt___	0.95	B		P
7440-50-8	Copper___	195			P
7439-89-6	Iron_____	6960		*	P
7439-92-1	Lead_____	817			P
7439-95-4	Magnesium	181			P
7439-96-5	Manganese	146		N	P
7439-97-6	Mercury__	0.22			AV
7440-02-0	Nickel___	7.4			P
7440-09-7	Potassium	90.5	B		P
7782-49-2	Selenium_	0.35	U		P
7440-22-4	Silver___	0.95	B		P
7440-23-5	Sodium___	248			P
7440-28-0	Thallium_	0.36	U		P
7440-62-2	Vanadium_	10.9			P
7440-66-6	Zinc_____	526			P

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW___ Clarity After: CLOUDY Artifacts: _____

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS17

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.16

Sample wt/vol: 4.2 (g/mL) G Lab File ID: R34938.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 4 Date Analyzed: 10/14/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	4	JB
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS17

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.16

Sample wt/vol: 31.1 (g/mL) G Lab File ID: V9101832.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 4 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	330	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS17

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.16

Sample wt/vol: 31.1 (g/mL) G Lab File ID: V9101832.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 4 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	67	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS17

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.16

Sample wt/vol: 30.9 (g/mL) G Lab File ID:_____

% Moisture: 4 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	5.2	
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	6.9	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	84	U
	Surrogate amount spiked	6.74	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS17

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.16

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 4 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	34	U
11104-28-2------	Aroclor-1221	34	U
11141-16-5------	Aroclor-1232	34	U
53469-21-9------	Aroclor-1242	34	U
12672-29-6------	Aroclor-1248	34	U
11097-69-1------	Aroclor-1254	34	U
11096-82-5------	Aroclor-1260	34	U
Surrogate amount spiked		6.81	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SS17

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT

Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581

Matrix (soil/water): SOIL Lab Sample ID: 40581.16

Level (low/med): LOW Date Received: 10/06/99

% Solids: 96.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	692			P
7440-36-0	Antimony	0.27	U	N	P
7440-38-2	Arsenic	0.29	U		P
7440-39-3	Barium	3.0			P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.13	B		P
7440-70-2	Calcium	129	B	N	P
7440-47-3	Chromium	1.5			P
7440-48-4	Cobalt	0.11	U		P
7440-50-8	Copper	2.0	B		P
7439-89-6	Iron	761		*	P
7439-92-1	Lead	30.4			P
7439-95-4	Magnesium	36.1			P
7439-96-5	Manganese	14.3		N	P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.44	B		P
7440-09-7	Potassium	32.9	U		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	176			P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	1.7	B		P
7440-66-6	Zinc	10.8			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43TB100599

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40581

Matrix: (soil/water) WATER Lab Sample ID: 40581.22

Sample wt/vol: 5 (g/mL) ML Lab File ID: K29487.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. _____ Date Analyzed: 10/10/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

CT 10-20-99

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43TB100599RE

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40581

Matrix: (soil/water) WATER Lab Sample ID: 40581.22RA

Sample wt/vol: 5 (g/mL) ML Lab File ID: I53765.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. _____ Date Analyzed: 10/28/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: ____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SSDD01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.20

Sample wt/vol: 4.5 (g/mL) G Lab File ID: R34926.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 3 Date Analyzed: 10/13/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	7	B
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SSDD01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.20

Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101931.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/20/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	340	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SSDD01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.20

Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101931.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/20/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	340	U
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.20

Sample wt/vol: 30.9 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	6.8	P
72-20-8	Endrin	4.6	
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	11	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
	Surrogate amount spiked	6.67	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.20

Sample wt/vol: 30.7 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U
Surrogate amount spiked		6.72	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SSDD01

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.20
Level (low/med): LOW Date Received: 10/06/99
% Solids: 97.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1600			P
7440-36-0	Antimony	0.46	U	N	P
7440-38-2	Arsenic	0.72	B		P
7440-39-3	Barium	28.1			P
7440-41-7	Beryllium	0.08	B		P
7440-43-9	Cadmium	0.17	B		P
7440-70-2	Calcium	4550		N	P
7440-47-3	Chromium	2.0			P
7440-48-4	Cobalt	0.18	B		P
7440-50-8	Copper	21.2			P
7439-89-6	Iron	2190		*	P
7439-92-1	Lead	67.2			P
7439-95-4	Magnesium	291			P
7439-96-5	Manganese	29.3		N	P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	1.7	B		P
7440-09-7	Potassium	44.7	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.14	U		P
7440-23-5	Sodium	241			P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	3.7			P
7440-66-6	Zinc	64.7			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SSDD02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.21

Sample wt/vol: 4.4 (g/mL) G Lab File ID: R34939.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: not dec. 4 Date Analyzed: 10/14/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	6	JB
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	9	
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SSDD02

b Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.21

Sample wt/vol: 30.9 (g/mL) G Lab File ID: V9101932.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 4 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/20/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	340	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SSDD02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.21

Sample wt/vol: 30.9 (g/mL) G Lab File ID: V9101932.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 4 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/20/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	150	J
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be seperated from Diphenylamine

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD02

ab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.21

Sample wt/vol: 31.2 (g/mL) G Lab File ID:_____

% Moisture: 4 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/28/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	11	
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	10	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
	Surrogate amount spiked	6.68	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.21

Sample wt/vol: 31.3 (g/mL) G Lab File ID:_____

% Moisture: 4 decanted: (Y/N) __ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/07/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/12/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	33	U
11104-28-2------	Aroclor-1221	33	U
11141-16-5------	Aroclor-1232	33	U
53469-21-9------	Aroclor-1242	33	U
12672-29-6------	Aroclor-1248	33	U
11097-69-1------	Aroclor-1254	33	U
11096-82-5------	Aroclor-1260	33	U
Surrogate amount spiked		6.66	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN-43SSDD02

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40581 SAS No.: SDG No.: 40581
Matrix (soil/water): SOIL Lab Sample ID: 40581.21
Level (low/med): LOW Date Received: 10/06/99
% Solids: 96.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	632			P
7440-36-0	Antimony	0.28	U	N	P
7440-38-2	Arsenic	0.24	B		P
7440-39-3	Barium	2.6			P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.09	B		P
7440-70-2	Calcium	156	B	N	P
7440-47-3	Chromium	1.5			P
7440-48-4	Cobalt	0.09	B		P
7440-50-8	Copper	2.1	B		P
7439-89-6	Iron	604		*	P
7439-92-1	Lead	24.4			P
7439-95-4	Magnesium	41.8			P
7439-96-5	Manganese	10.1		N	P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.46	B		P
7440-09-7	Potassium	32.9	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	196	B		P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	1.5	B		P
7440-66-6	Zinc	8.5			P

Color Before: BROWN
Color After: COLORLESS

Clarity Before:
Clarity After: CLOUDY

Texture: MEDIUM
Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-1S-01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40903A

Matrix: (soil/water) WATER Lab Sample ID: 40903.01

Sample wt/vol: 5 (g/mL) ML Lab File ID: K30089.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. _____ Date Analyzed: 11/05/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: ____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	19	B
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN431S01

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111312.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	0.80	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN431S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: O9111312.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenylphenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
86-74-8	Carbazole	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	0.90	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	2	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN43-1S-01

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40903 SAS No.: SDG No.: 40903
Matrix (soil/water): WATER Lab Sample ID: 40903.01
Level (low/med): LOW Date Received: 10/28/99
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	49.4	B		P
7440-36-0	Antimony	5.0	U		P
7440-38-2	Arsenic	3.3	U		P
7440-39-3	Barium	6.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.30	U		P
7440-70-2	Calcium	3590			P
7440-47-3	Chromium	1.7	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	1.0	U		P
7439-89-6	Iron	2980			P
7439-92-1	Lead	2.1	U		P
7439-95-4	Magnesium	687			P
7439-96-5	Manganese	18.3			P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	2.1	B		P
7440-09-7	Potassium	806	B		P
7782-49-2	Selenium	2.9	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	6180			P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	0.90	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	1.0	U		AS

Color Before: COLORLESS Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=_PEN-43-1S-01

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

REPORT DATE: 11/30/99

SAMPLE ID: PEN-43-1S-01
SWOK ID: 40903.01
DATE RECEIVED:
DATE ANALYZED: 11/09/99
BLANK ID: VBLK

SAMPLE MATRIX: WATER
METHOD REF. : RSK-175
PROJECT:
DILUTION: 1

RESULTS REPORTED IN UG/L OR PARTS PER BILLION (PPB)

PARAMETER	QUANTITATION LIMIT	RESULTS	Q
Methane	1	1	JB

Quantitation Report

Data File : J:\1\DATA\D991109A\D11860.D Vial: 15
Acq On : 9 Nov 1999 16:20 Operator:
Sample : PEN-43-1S-01 Inst : HPD
Misc : 40903.01*10ML*GC195 Multiplr: 1.0000
IntFile : EVENTS.E
Quant Time: Nov 10 11:11 1999 Quant Results File: C1C2HS-1.RES

Method : J:\1\DATA\D991109A\C1C2HS-1.M
Title-Path : iCAL - C:\HPCHEM\1\DATA\D990415A\
Last Update : Tue Nov 09 13:47:30 1999
Response via : Initial Calibration

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	ug/L	Curve
Target Compounds:				
1) Methane	0.82	12919	0.9721 m	L

Curve Types : A=Average L=Linear P=Power Q=Quadratic/
(f)=RT Delta > 1/2 Window (E)= > High cal. std. (m)=manual int.

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.01

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.01
SAMPLE #: PEN-43-1S-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U	mg/l	11/02/99	11/02/99	EPA 376.1
INORGANIC CHLORIDE	9.2		mg/l		10/28/99	EPA 300.0
NITRATE	0.22		mg/l		10/28/99	EPA 300.0
SULFATE	6.9		mg/l		10/28/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-2S-01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40903A

Matrix: (soil/water) WATER Lab Sample ID: 40903.02

Sample wt/vol: 5 (g/mL) ML Lab File ID: K30113.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. _____ Date Analyzed: 11/08/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: ____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	6	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN432S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: O9111313.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN432S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: O9111313.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenylphenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
86-74-8	Carbazole	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	0.80	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	4	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN43-2S-01

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40903 SAS No.: SDG No.: 40903
Matrix (soil/water): WATER Lab Sample ID: 40903.02
Level (low/med): LOW Date Received: 10/28/99
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	970			P
7440-36-0	Antimony	5.0	U		P
7440-38-2	Arsenic	3.3	U		P
7440-39-3	Barium	18.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.30	U		P
7440-70-2	Calcium	7790			P
7440-47-3	Chromium	1.6	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	1390			P
7439-92-1	Lead	2.7	B		P
7439-95-4	Magnesium	495			P
7439-96-5	Manganese	8.4	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	2.0	B		P
7440-09-7	Potassium	1020	B		P
7782-49-2	Selenium	2.9	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	5470			P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	1.8	B		P
7440-66-6	Zinc	5.6	B		P
	Cyanide	1.0	U		AS

Color Before: COLORLESS Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=_PEN-43-2S-01

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

REPORT DATE: 11/30/99

SAMPLE ID: PEN-43-2S-01
SWOK ID: 40903.02
DATE RECEIVED:
DATE ANALYZED: 11/09/99
BLANK ID: VBLK

SAMPLE MATRIX: WATER
METHOD REF. : RSK-175
PROJECT:
DILUTION: 1

RESULTS REPORTED IN UG/L OR PARTS PER BILLION (PPB)

PARAMETER	QUANTITATION LIMIT	RESULTS	Q
Methane	1	1	JB

Quantitation Report

Data File : J:\1\DATA\D991109A\D11861.D Vial: 16
Acq On : 9 Nov 1999 16:52 Operator:
Sample : PEN-43-2S-01 Inst : HPD
Misc : 40903.02*10ML*GC195 Multiplr: 1.0000
IntFile : EVENTS.E
Quant Time: Nov 10 11:12 1999 Quant Results File: C1C2HS-1.RES

Method : J:\1\DATA\D991109A\C1C2HS-1.M
Title-Path : iCAL - C:\HPCHEM\1\DATA\D990415A\
Last Update : Tue Nov 09 13:47:30 1999
Response via : Initial Calibration

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	ug/L	Curve
Target Compounds:				
1) Methane	0.80	12842	0.9662 m	L

Curve Types : A=Average L=Linear P=Power Q=Quadratic/
(f)=RT Delta > 1/2 Window (E)= > High cal. std. (m)=manual int.

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.02

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.02
SAMPLE #: PEN-43-2S-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U	mg/l	11/02/99	11/02/99	EPA 376.1
NORGANIC CHLORIDE	6.1		mg/l		10/28/99	EPA 300.0
ITRATE	1.1		mg/l		10/28/99	EPA 300.0
ULFATE	6.3		mg/l		10/28/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-3S-01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40903A

Matrix: (soil/water) WATER Lab Sample ID: 40903.03

Sample wt/vol: 5 (g/mL) ML Lab File ID: K30084.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. _____ Date Analyzed: 11/05/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: ____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	18	B
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN433S01

lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111314.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	1	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

FORM I SV-1

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN433S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111314.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenylphenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
86-74-8	Carbazole	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	0.60	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	3	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN43-3S-01

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40903 SAS No.: SDG No.: 40903
Matrix (soil/water): WATER Lab Sample ID: 40903.03
Level (low/med): LOW Date Received: 10/28/99
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32.1	U		P
7440-36-0	Antimony	5.0	U		P
7440-38-2	Arsenic	3.3	U		P
7440-39-3	Barium	17.3	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.45	B		P
7440-70-2	Calcium	19300			P
7440-47-3	Chromium	0.52	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	1.4	B		P
7439-89-6	Iron	422			P
7439-92-1	Lead	3.7			P
7439-95-4	Magnesium	2640			P
7439-96-5	Manganese	6.3	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	1.2	B		P
7440-09-7	Potassium	1770	B		P
7782-49-2	Selenium	2.9	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	12000			P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	0.90	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	1.0	U		AS

Color Before: COLORLESS Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=_PEN-43-3S-01

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

REPORT DATE: 11/30/99

SAMPLE ID: PEN-43-3S-01
SWOK ID: 40903.03
DATE RECEIVED:
DATE ANALYZED: 11/09/99
BLANK ID: VBLK

SAMPLE MATRIX: WATER
METHOD REF. : RSK-175
PROJECT:
DILUTION: 1

RESULTS REPORTED IN UG/L OR PARTS PER BILLION (PPB)

PARAMETER	QUANTITATION LIMIT	RESULTS	Q
Methane	1	0.9	JB

11

Quantitation Report

Data File : J:\1\DATA\D991109A\D11862.D Vial: 17
Acq On : 9 Nov 1999 17:24 Operator:
Sample : PEN-43-3S-01 Inst : HPD
Misc : 40903.03*10ML*GC195 Multiplr: 1.0000
IntFile : EVENTS.E
Quant Time: Nov 10 11:12 1999 Quant Results File: C1C2HS-1.RES

Method : J:\1\DATA\D991109A\C1C2HS-1.M
Title-Path : iCAL - C:\HPCHEM\1\DATA\D990415A\
Last Update : Tue Nov 09 13:47:30 1999
Response via : Initial Calibration

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	ug/L	Curve
Target Compounds:				
1) Methane	0.82	12306	0.9259 m	L

Curve Types : A=Average L=Linear P=Power Q=Quadratic/
(f)=RT Delta > 1/2 Window (E)= > High cal. std. (m)=manual int.

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

REPORT DATE: 11/30/99

CLIENT SAMPLE ID: PEN-43-3S-01
MS FILE ID: D11863.D
SAMPLE MATRIX: WATER
DATE ANALYZED: 11/09/99

LAB SAMPLE ID: 40903.03
MSD FILE ID: D11864.D
METHOD REFERENCE: RSK-175
PROJECT:

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

PARAMETER	SPIKE ADDED UG/L	SAMPLE CONC. UG/L	MS % REC.	MSD % REC.	RPD	QC LIMITS RPD	QC LIMITS RECOVERY
Methane	3	1	64	66	2	25	50-150

* = VALUE OUTSIDE OF QC LIMITS

14A

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.03

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.03
SAMPLE #: PEN-43-3S-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	4.4		mg/l	11/02/99	11/02/99	EPA 376.1
ITRATE	1.8		mg/l		10/28/99	EPA 300.0
LFATE	17.7		mg/l		10/28/99	EPA 300.0
ORGANIC CHLORIDE	22.1		mg/l		11/15/99	EPA 300.0

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.04

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.04 MS1
SAMPLE #: PEN-43-3S-01 MS1
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	25.5	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	119.4	mg/l	11/02/99	11/02/99	EPA 376.1
NITRATE	11.5	mg/l		10/28/99	EPA 300.0
INORGANIC CHLORIDE	31.8	mg/l		11/15/99	EPA 300.0
SULFATE	25.1	mg/l		11/15/99	EPA 300.0

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.05

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.05 SD1
SAMPLE #: PEN-43-3S-01 SD1
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	25.5	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	121.1	mg/l	11/02/99	11/02/99	EPA 376.1
NITRATE	12.0	mg/l		10/28/99	EPA 300.0
INORGANIC CHLORIDE	31.7	mg/l		11/15/99	EPA 300.0
SULFATE	23.7	mg/l		11/15/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-4S-01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40903A

Matrix: (soil/water) WATER Lab Sample ID: 40903.06

Sample wt/vol: 5 (g/mL) ML Lab File ID: K30139.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. _____ Date Analyzed: 11/09/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	6	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN434S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: O9111317.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN434S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111317.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenylphenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
86-74-8	Carbazole	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	0.70	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	2	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN43-4S-01

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40903 SAS No.: SDG No.: 40903
Matrix (soil/water): WATER Lab Sample ID: 40903.06
Level (low/med): LOW Date Received: 10/28/99
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	310			P
7440-36-0	Antimony	5.0	U		P
7440-38-2	Arsenic	3.3	U		P
7440-39-3	Barium	16.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.43	B		P
7440-70-2	Calcium	8120			P
7440-47-3	Chromium	1.0	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	5.1	B		P
7439-89-6	Iron	152			P
7439-92-1	Lead	2.5	B		P
7439-95-4	Magnesium	1220			P
7439-96-5	Manganese	4.7	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.5	B		P
7440-09-7	Potassium	1140	B		P
7782-49-2	Selenium	2.9	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	9910			P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	0.90	U		P
7440-66-6	Zinc	73.5			P
	Cyanide	1.0	U		AS

Color Before: COLORLESS Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=_PEN-43-4S-01

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.06

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.06
SAMPLE #: PEN-43-4S-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	4.1		mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U	mg/l	11/02/99	11/02/99	EPA 376.1
INORGANIC CHLORIDE	16.2		mg/l		10/28/99	EPA 300.0
NITRATE	1.3		mg/l		10/28/99	EPA 300.0
SULFATE	7.8		mg/l		10/28/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-5S-01

.b Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40903A

Matrix: (soil/water) WATER Lab Sample ID: 40903.07

Sample wt/vol: 5 (g/mL) ML Lab File ID: K30092.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. _____ Date Analyzed: 11/05/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	17	B
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN435S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111318.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN435S01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111318.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenylphenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
86-74-8	Carbazole	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	0.70	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	3	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

CLIENT SAMPLE ID

PEN43-5S-01

INORGANIC ANALYSES DATA SHEET

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40903 SAS No.: SDG No.: 40903
Matrix (soil/water): WATER Lab Sample ID: 40903.07
Level (low/med): LOW Date Received: 10/28/99
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	316			P
7440-36-0	Antimony	5.0	U		P
7440-38-2	Arsenic	3.3	U		P
7440-39-3	Barium	18.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.31	B		P
7440-70-2	Calcium	6340			P
7440-47-3	Chromium	2.0	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	5.2	B		P
7439-89-6	Iron	2430			P
7439-92-1	Lead	7.5			P
7439-95-4	Magnesium	821			P
7439-96-5	Manganese	15.6			P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	2.6	B		P
7440-09-7	Potassium	1090	B		P
7782-49-2	Selenium	2.9	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	7510			P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	0.90	U		P
7440-66-6	Zinc	44.0			P
	Cyanide	4.0	B		AS

Color Before: COLORLESS Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=_PEN-43-5S-01

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.07

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.07
SAMPLE #: PEN-43-5S-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	2.6		mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U	mg/l	11/02/99	11/02/99	EPA 376.1
INORGANIC CHLORIDE	16.1		mg/l		10/28/99	EPA 300.0
NITRATE	0.98		mg/l		10/28/99	EPA 300.0
SULFATE	3.9		mg/l		10/28/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-DD-01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40903A

Matrix: (soil/water) WATER Lab Sample ID: 40903.08

Sample wt/vol: 5 (g/mL) ML Lab File ID: K30093.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. _____ Date Analyzed: 11/05/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: ____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	19	B
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43DD01

ıb Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111319.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	0.60	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

FORM I SV-1

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43DD01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40903

Matrix: (soil/water) WATER Lab Sample ID: 40903.08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 09111319.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 0 dec. Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenylphenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
86-74-8	Carbazole	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	3	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PEN43-DD-01

Lab Name: SOUTHWEST_LAB_OF_OK
Lab Code: SWOK
Case No.: 40903
Contract: TETPITT
SAS No.:
SDG No.: 40903
Matrix (soil/water): WATER
Level (low/med): LOW
% Solids: 0.0
Lab Sample ID: 40903.08
Date Received: 10/28/99

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	37.4	B		P
7440-36-0	Antimony	5.0	U		P
7440-38-2	Arsenic	3.3	U		P
7440-39-3	Barium	17.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.30	U		P
7440-70-2	Calcium	19200			P
7440-47-3	Chromium	0.54	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	1.1	B		P
7439-89-6	Iron	364			P
7439-92-1	Lead	2.1	U		P
7439-95-4	Magnesium	2640			P
7439-96-5	Manganese	6.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	1.2	B		P
7440-09-7	Potassium	1850	B		P
7782-49-2	Selenium	2.9	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	12200			P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	0.90	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	6.0			AS

Color Before: COLORLESS
Color After: COLORLESS
Clarity Before: CLOUDY
Clarity After: CLOUDY
Texture:
Artifacts:

Comments:
CLIENT_ID=_PEN-43-DD-01

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.08

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.08
SAMPLE #: PEN-43-DD-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U	mg/l		11/14/99	EPA 415.1
NITRATE	1.8		mg/l		10/28/99	EPA 300.0
SULFATE	17.7		mg/l		10/28/99	EPA 300.0
INORGANIC CHLORIDE	22.1		mg/l		11/15/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TB102799-01

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPI SAS No.: SDG No.: 40903A

Matrix: (soil/water) WATER Lab Sample ID: 40903.09

Sample wt/vol: 5 (g/mL) ML Lab File ID: K30094.D

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. _____ Date Analyzed: 11/05/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	18	B
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SB011415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 4.0 (g/mL) G Lab File ID: R35097.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. 3 Date Analyzed: 10/22/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	2	J
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 30.2 (g/mL) G Lab File ID: F9110510.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	24	JB
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	850	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	850	U
88-74-4	2-Nitroaniline	340	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	850	U
99-09-2	3-Nitroaniline	340	U
83-32-9	Acenaphthene		

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 30.2 (g/mL) G Lab File ID: F9110510.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	850	U
100-02-7	4-Nitrophenol	850	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	850	U
534-52-1	4,6-Dinitro-2-methylphenol	850	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	850	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	56	JB
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	2.5	U
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	2.5	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	84	U
Surrogate amount spiked		6.78	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 32.0 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/26/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	32	U
11104-28-2------	Aroclor-1221	32	U
11141-16-5------	Aroclor-1232	32	U
53469-21-9------	Aroclor-1242	32	U
12672-29-6------	Aroclor-1248	32	U
11097-69-1------	Aroclor-1254	32	U
11096-82-5------	Aroclor-1260	32	U
Surrogate amount spiked		6.44	

FORM I PEST

1
INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

43SB011415

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40790 SAS No.: SDG No.: 40790
Matrix (soil/water): SOIL Lab Sample ID: 40790.01
Level (low/med): LOW Date Received: 10/20/99
% Solids: 97.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	104			P
7440-36-0	Antimony	0.28	U		P
7440-38-2	Arsenic	0.20	U		P
7440-39-3	Barium	0.38	B		P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.10	B		P
7440-70-2	Calcium	128	B		P
7440-47-3	Chromium	1.2			P
7440-48-4	Cobalt	0.09	B		P
7440-50-8	Copper	1.1	B		P
7439-89-6	Iron	160			P
7439-92-1	Lead	0.23	U		P
7439-95-4	Magnesium	10.6	B		P
7439-96-5	Manganese	1.1			P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.37	U		P
7440-09-7	Potassium	17.6	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	160	B		P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	0.17	B		P
7440-66-6	Zinc	12.8			P
	Cyanide	0.15	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=PEN-43SB011415

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SB021415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.02

Sample wt/vol: 4.4 (g/mL) G Lab File ID: R35098.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. 2 Date Analyzed: 10/22/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	3	J
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	2	JB
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.02

Sample wt/vol: 30.7 (g/mL) G Lab File ID: F9110511.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	830	U
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	67	JB
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.02

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	2.5	U
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	2.5	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
Surrogate amount spiked		6.67	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.02

Sample wt/vol: 30.3 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	33	U
11104-28-2------	Aroclor-1221	33	U
11141-16-5------	Aroclor-1232	33	U
53469-21-9------	Aroclor-1242	33	U
12672-29-6------	Aroclor-1248	33	U
11097-69-1------	Aroclor-1254	33	U
11096-82-5------	Aroclor-1260	33	U
Surrogate amount spiked		6.74	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

43SB021415

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40790 SAS No.: SDG No.: 40790
Matrix (soil/water): SOIL Lab Sample ID: 40790.02
Level (low/med): LOW Date Received: 10/20/99
% Solids: 98.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	223			P
7440-36-0	Antimony	0.27	U		P
7440-38-2	Arsenic	0.21	B		P
7440-39-3	Barium	0.46	B		P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.27	B		P
7440-70-2	Calcium	113	B		P
7440-47-3	Chromium	0.87	B		P
7440-48-4	Cobalt	0.08	U		P
7440-50-8	Copper	1.3	B		P
7439-89-6	Iron	226			P
7439-92-1	Lead	0.51			P
7439-95-4	Magnesium	11.2	B		P
7439-96-5	Manganese	2.3			P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.37	U		P
7440-09-7	Potassium	15.9	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	145	B		P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	0.24	B		P
7440-66-6	Zinc	2.9			P
	Cyanide	0.15	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=PEN-43SB021415

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SB031415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.03

Sample wt/vol: 4.0 (g/mL) G Lab File ID: R35099.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. 2 Date Analyzed: 10/22/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	2	J
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	2	JB
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB031415

Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.03

Sample wt/vol: 30.9 (g/mL) G Lab File ID: F9110512.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	23	JB
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	820	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB031415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.03

Sample wt/vol: 30.9 (g/mL) G Lab File ID: F9110512.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	820	U
100-02-7	4-Nitrophenol	820	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	820	U
534-52-1	4,6-Dinitro-2-methylphenol	820	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	820	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	B
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB031415

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	2.6	U
72-20-8	Endrin	2.6	U
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	2.6	U
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	2.6	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	85	U
Surrogate amount spiked		6.80	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB031415

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.03

Sample wt/vol: 32.1 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	31	U
11141-16-5	Aroclor-1232	31	U
53469-21-9	Aroclor-1242	31	U
12672-29-6	Aroclor-1248	31	U
11097-69-1	Aroclor-1254	31	U
11096-82-5	Aroclor-1260	31	U
Surrogate amount spiked		6.36	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

43SB031415

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40790 SAS No.: SDG No.: 40790
Matrix (soil/water): SOIL Lab Sample ID: 40790.03
Level (low/med): LOW Date Received: 10/20/99
% Solids: 97.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	111			P
7440-36-0	Antimony	0.28	U		P
7440-38-2	Arsenic	0.19	U		P
7440-39-3	Barium	0.25	B		P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.03	U		P
7440-70-2	Calcium	103	B		P
7440-47-3	Chromium	0.29	B		P
7440-48-4	Cobalt	0.08	U		P
7440-50-8	Copper	1.0	B		P
7439-89-6	Iron	68.5			P
7439-92-1	Lead	0.29	B		P
7439-95-4	Magnesium	9.4	U		P
7439-96-5	Manganese	0.39	B		P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.37	U		P
7440-09-7	Potassium	15.6	U		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	161	B		P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	0.07	U		P
7440-66-6	Zinc	8.4			P
	Cyanide	0.15	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=PEN-43SB031415

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SB040708

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.04

Sample wt/vol: 4.1 (g/mL) G Lab File ID: R35100.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. 2 Date Analyzed: 10/22/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	5	J
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	2	JB
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB040708

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.04

Sample wt/vol: 30.3 (g/mL) G Lab File ID: F9110513.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	25	JB
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	340	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB040708

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.04

Sample wt/vol: 30.3 (g/mL) G Lab File ID: F9110513.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	430	B
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be seperated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.02

Sample wt/vol: 30.7 (g/mL) G Lab File ID: F9110511.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	22	JB
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB040708

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.04

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	2.5	U
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	2.5	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
	Surrogate amount spiked	6.67	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB040708

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.04

Sample wt/vol: 30.8 (g/mL) G Lab File ID:_____

% Moisture: 2 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	33	U
11104-28-2------	Aroclor-1221	33	U
11141-16-5------	Aroclor-1232	33	U
53469-21-9------	Aroclor-1242	33	U
12672-29-6------	Aroclor-1248	33	U
11097-69-1------	Aroclor-1254	33	U
11096-82-5------	Aroclor-1260	33	U
Surrogate amount spiked		6.63	

FORM I PEST

1
INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

43SB040708

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40790 SAS No.: SDG No.: 40790
Matrix (soil/water): SOIL Lab Sample ID: 40790.04
Level (low/med): LOW Date Received: 10/20/99
% Solids: 97.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	296			P
7440-36-0	Antimony	0.28	U		P
7440-38-2	Arsenic	0.19	U		P
7440-39-3	Barium	1.0	B		P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.75	B		P
7440-70-2	Calcium	95.0	B		P
7440-47-3	Chromium	0.60	B		P
7440-48-4	Cobalt	0.08	U		P
7440-50-8	Copper	0.95	B		P
7439-89-6	Iron	195			P
7439-92-1	Lead	0.47			P
7439-95-4	Magnesium	20.4	B		P
7439-96-5	Manganese	0.87	B		P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.37	U		P
7440-09-7	Potassium	27.8	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	159	B		P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	0.38	B		P
7440-66-6	Zinc	2.8			P
	Cyanide	0.15	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=PEN-43SB040708

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SB051415

b Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.05

Sample wt/vol: 4.8 (g/mL) G Lab File ID: R35101.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. 5 Date Analyzed: 10/22/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	3	J
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	2	JB
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB051415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID: F9110514.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	27	JB
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	350	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB051415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID: F9110514.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	U
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	860	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	68	JB
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB051415

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID:_____

% Moisture: 5 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	2.6	U
72-20-8	Endrin	2.6	U
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	2.6	U
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	2.6	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	87	U
Surrogate amount spiked		7.02	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB051415

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.05

Sample wt/vol: 30.6 (g/mL) G Lab File ID:_____

% Moisture: 5 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	34	U
11104-28-2------	Aroclor-1221	34	U
11141-16-5------	Aroclor-1232	34	U
53469-21-9------	Aroclor-1242	34	U
12672-29-6------	Aroclor-1248	34	U
11097-69-1------	Aroclor-1254	34	U
11096-82-5------	Aroclor-1260	34	U
Surrogate amount spiked		6.88	

FORM I PEST

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

43SB051415

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40790 SAS No.: SDG No.: 40790
Matrix (soil/water): SOIL Lab Sample ID: 40790.05
Level (low/med): LOW Date Received: 10/20/99
% Solids: 94.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	266			P
7440-36-0	Antimony	0.29	U		P
7440-38-2	Arsenic	0.29	B		P
7440-39-3	Barium	3.0			P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.28	B		P
7440-70-2	Calcium	117	B		P
7440-47-3	Chromium	0.89	B		P
7440-48-4	Cobalt	0.82	B		P
7440-50-8	Copper	3.7	B		P
7439-89-6	Iron	352			P
7439-92-1	Lead	8.8			P
7439-95-4	Magnesium	19.5	B		P
7439-96-5	Manganese	3.1			P
7439-97-6	Mercury	0.02	U		AV
7440-02-0	Nickel	0.81	B		P
7440-09-7	Potassium	18.8	B		P
7782-49-2	Selenium	0.35	U		P
7440-22-4	Silver	0.13	U		P
7440-23-5	Sodium	129	B		P
7440-28-0	Thallium	0.36	U		P
7440-62-2	Vanadium	0.69	B		P
7440-66-6	Zinc	14.3			P
	Cyanide	0.16	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=PEN-43SB051415

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SBDD03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.06

Sample wt/vol: 4.2 (g/mL) G Lab File ID: R35102.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. 3 Date Analyzed: 10/22/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	2	J
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	1	JB
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.06

Sample wt/vol: 30.7 (g/mL) G Lab File ID: F9110515.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	23	JB
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	840	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	840	U
88-74-4	2-Nitroaniline	340	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	840	U
99-09-2	3-Nitroaniline	340	U
83-32-9	Acenaphthene		

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.06

Sample wt/vol: 30.7 (g/mL) G Lab File ID: F9110515.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	61	JB
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.06

Sample wt/vol: 30.9 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 11/03/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	2.5	U
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	2.5	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
	Surrogate amount spiked	6.67	

FORM I PEST

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.06

Sample wt/vol: 30.5 (g/mL) G Lab File ID:_____

% Moisture: 3 decanted: (Y/N) __ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/21/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 10/27/99

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	33	U
11104-28-2------	Aroclor-1221	33	U
11141-16-5------	Aroclor-1232	33	U
53469-21-9------	Aroclor-1242	33	U
12672-29-6------	Aroclor-1248	33	U
11097-69-1------	Aroclor-1254	33	U
11096-82-5------	Aroclor-1260	33	U
Surrogate amount spiked		6.76	

FORM I PEST

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TB101999-01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) WATER Lab Sample ID: 40790.07

Sample wt/vol: 5 (g/mL) ML Lab File ID: K29953.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. _____ Date Analyzed: 10/28/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 30.2 (g/mL) G Lab File ID: F9110510.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	24	JB
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	850	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	850	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	850	U
83-32-9	Acenaphthene	340	U

FORM I SV

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 30.2 (g/mL) G Lab File ID: F9110510.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/05/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	850	U
100-02-7	4-Nitrophenol	850	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	850	U
534-52-1	4,6-Dinitro-2-methylphenol	850	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	850	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	56	JB
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be seperated from Diphenylamine

FORM I SV

1
INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

43SBDD03

Lab Name: SOUTHWEST_LAB_OF_OK Contract: TETPITT
Lab Code: SWOK Case No.: 40790 SAS No.: SDG No.: 40790
Matrix (soil/water): SOIL Lab Sample ID: 40790.06
Level (low/med): LOW Date Received: 10/20/99
% Solids: 96.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

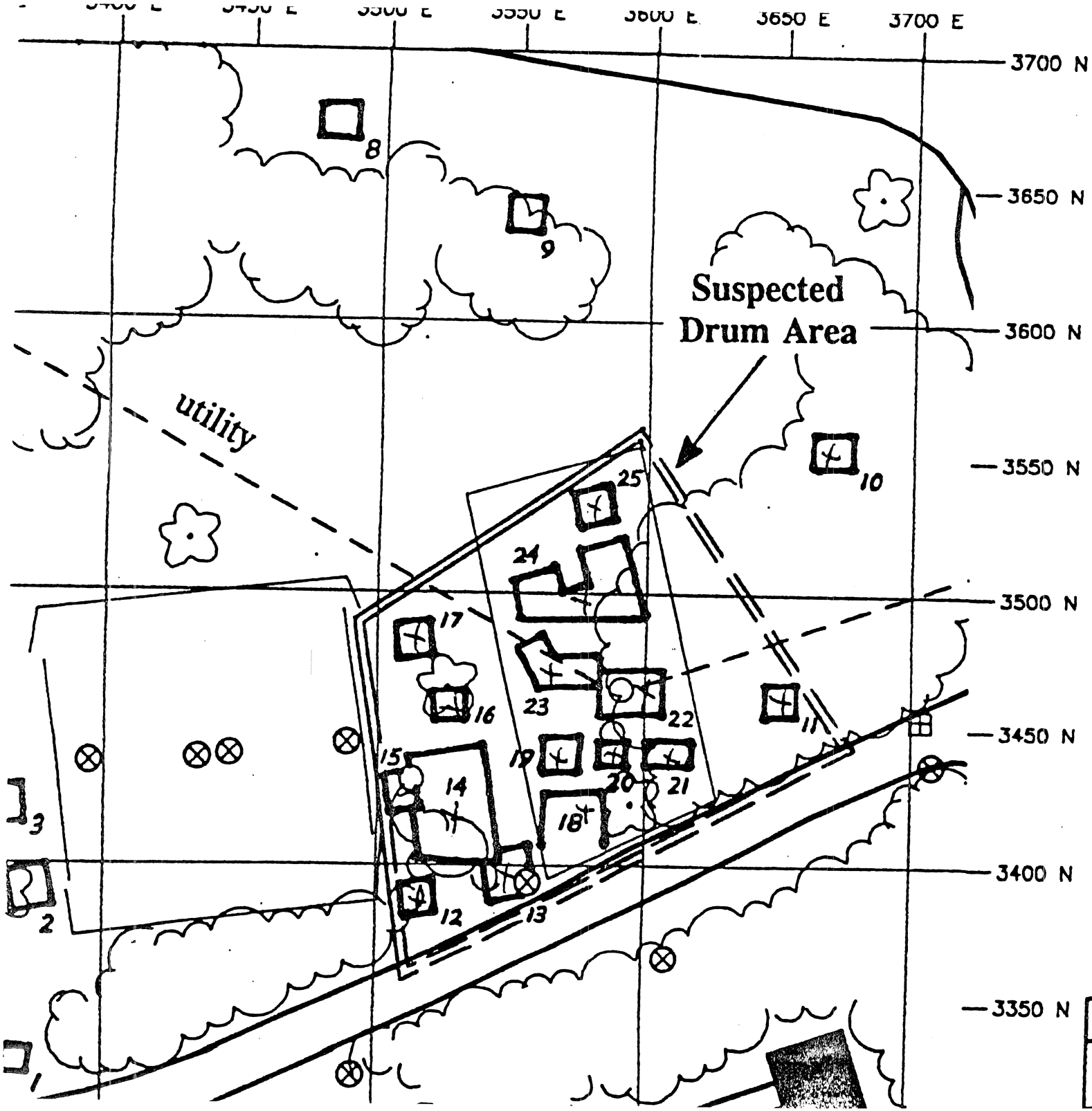
CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	221			P
7440-36-0	Antimony	0.28	U		P
7440-38-2	Arsenic	0.22	B		P
7440-39-3	Barium	5.7			P
7440-41-7	Beryllium	0.08	U		P
7440-43-9	Cadmium	0.33	B		P
7440-70-2	Calcium	145	B		P
7440-47-3	Chromium	1.2			P
7440-48-4	Cobalt	0.10	B		P
7440-50-8	Copper	7.3			P
7439-89-6	Iron	366			P
7439-92-1	Lead	19.4			P
7439-95-4	Magnesium	19.8	B		P
7439-96-5	Manganese	3.7			P
7439-97-6	Mercury	0.05			AV
7440-02-0	Nickel	0.65	B		P
7440-09-7	Potassium	18.9	B		P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.12	U		P
7440-23-5	Sodium	140	B		P
7440-28-0	Thallium	0.35	U		P
7440-62-2	Vanadium	0.69	B		P
7440-66-6	Zinc	32.9			P
	Cyanide	0.15	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:
CLIENT_ID=PEN-43SBDD03

APPENDIX G

DRUM CHARACTERIZATION SHEETS



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Scale 1
23 0 25 50
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INTERPRE
Site 10 West, N

Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name: [illegible]	**Date:** [illegible]	**Project #:** [illegible]
Project Description: BURIED ANOMALY INVESTIGATION ANOMALY 20	**Drum #** 1	**Field Crew/Role:** [illegible] UBELDIS

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel ✓	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify) OPEN HOLE [illegible]

Identifiable markings: NONE

Sketch drum/container position

Estimated Volume: <1 gal

General condition of the drum/container: INTACT

Can it be handled/moved and re-staged or over-packed? YES — OVERPACKED

Screening Data

Radioactivity 0 mR Background	_____ mR
PID 0 eV Lamp 0 ppm (background)	_____ ppm
FID ____ ppm (background)	_____ ppm
Combustibility	_____ %LEL _____ %O2
Draeger Multi-test	_____
Air Reactive	_____ Δ Temp
Water Reactive	_____ Δ Temp
Water solubility	_____ Yes _____ No _____ % Partial
Flammable	_____ Yes _____ No
pH	_____
Cyanide	_____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)

Solids Classification	Liquids Viscosity
Trash	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black LIKE
Orange	Brown
Green	Other
Greenish Blue	<1 gal

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

_____ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

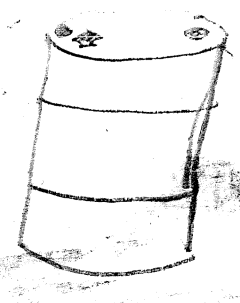
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:	**Date:**	**Project #:** N0189
Project Description: BURIED ANOMALY INVESTIGATION ANOMALY 20	**Drum #** 2	**Field Crew/Role:** DE KUBELDIS

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel ✓	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings: NONE

Sketch drum/container position



Estimated Volume:

General condition of the drum/container: INTACT

Can it be handled/moved and re-staged or over-packed? YES - OVERPACKED

Screening Data

Radioactivity ___1___ mR Background	___<1___ mR
PID ___ eV Lamp ___0___ ppm (background)	___30___ ppm
FID ___ ppm (background)	___ ppm
Combustibility	___ %LEL ___ %O2
Draeger Multi-test	___
Air Reactive	___ Δ Temp
Water Reactive	___ Δ Temp
Water solubility	___ Yes ___ No ___ % Partial
Flammable	___ Yes ___ No
pH	___
Cyanide	___ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)

Solids	Liquids
Classification	Viscosity
Trash	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

___ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

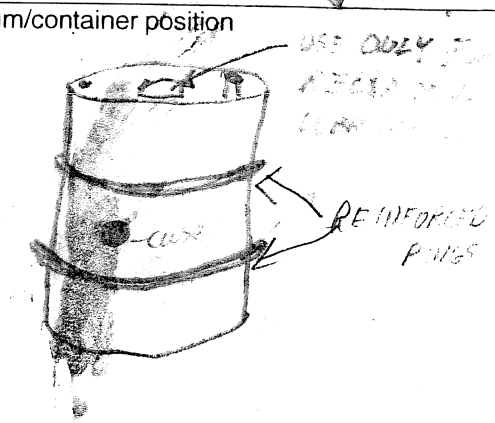
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name: [illegible]	**Date:** [illegible]	**Project #:** [illegible]
Project Description: BURIED ANOMALY INVESTIGATION ANOMALY 20	**Drum #** [illegible]	**Field Crew/Role:** DE RUBELLS

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel ✓	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings: [illegible]

Sketch drum/container position



Estimated Volume: 1/2 FULL

General condition of the drum/container: [illegible]

Can it be handled/moved and re-staged or over-packed? OVERPACKED

Screening Data	
Radioactivity _____mR Background	<1 _____mR
PID _____eV Lamp _____ ppm (background)	_____ppm
FID____ ppm (background)	_____ppm
Combustibility	_____%LEL_____%O2
Draeger Multi-test	_____
Air Reactive	_____Δ Temp
Water Reactive	_____Δ Temp
Water solubility	_____Yes _____ No _____ % Partial
Flammable	_____Yes _____No
pH	_____
Cyanide	_____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more tha one media)	
Solids Classification	Liquids ✓ Viscosity
Trash	Other

Drum Contents (Color)	
Unknown ✓	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments: [illegible]

_____**See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

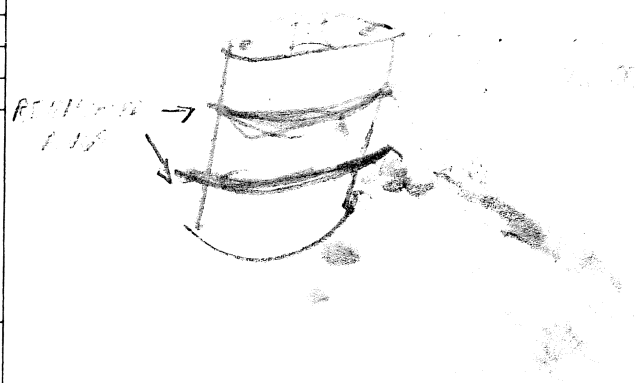
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:	**Date:**	**Project #:**
Project Description: BURIED ANOMALY INVESTIGATION ANOMALY 20	**Drum #**	**Field Crew/Role:** DF KUBELKA

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings:

Sketch drum/container position



Estimated Volume:

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? OVER PACKED

Screening Data

Radioactivity _____mR Background	_____mR
PID _____eV Lamp _____ ppm (background)	_____ppm
FID____ ppm (background)	_____ppm
Combustibility	_____%LEL_____%O2
Draeger Multi-test	_____
Air Reactive	_____Δ Temp
Water Reactive	_____Δ Temp
Water solubility	_____Yes _____ No _____% Partial
Flammable	_____Yes _____No
pH	_____
Cyanide	_____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)

Solids Classification	Liquids Viscosity
Trash	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

_____**See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

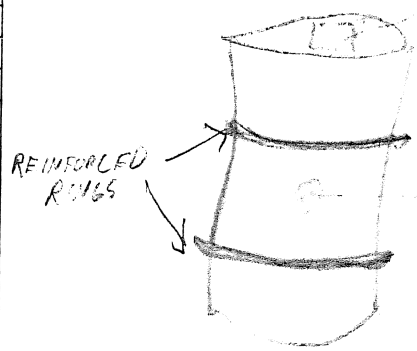
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:	**Date:**	**Project #:**
Project Description: BURIED ANOMALY INVESTIGATION ANOMALY 20	**Drum #** 5	**Field Crew/Role:** DE KUBENS

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings:

Sketch drum/container position



Estimated Volume:

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? OVERPACKED

Screening Data

Radioactivity ✓ mR Background	mR
PID eV Lamp ✓ ppm (background)	ppm
FID ppm (background)	ppm
Combustibility	%LEL %O2
Draeger Multi-test	
Air Reactive	Δ Temp
Water Reactive	Δ Temp
Water solubility	Yes No % Partial
Flammable	Yes No
pH	
Cyanide	ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)

Solids Classification	Liquids ✓ BASED ON Viscosity DRUM TYPE
Trash	Other

Drum Contents (Color)

Unknown ✓	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

_____ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:	**Date:**	**Project #:**
Project Description: DURIED ANOMALY INVESTIGATION ANOMALY 30	**Drum #**	**Field Crew/Role:** DE KUBELUS

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings:

Sketch drum/container position

Estimated Volume:

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? OVER PACKED

Screening Data	
Radioactivity 4 mR Background	<1 mR
PID ___ eV Lamp 0 ppm (background)	0 ppm
FID ___ ppm (background)	___ ppm
Combustibility	___ %LEL ___ %O2
Draeger Multi-test	___
Air Reactive	___ Δ Temp
Water Reactive	___ Δ Temp
Water solubility	___ Yes ___ No ___ % Partial
Flammable	___ Yes ___ No
pH	___
Cyanide	___ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)	
Solids Classification	Liquids Viscosity
Trash	Other

Drum Contents (Color)	
Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

___ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

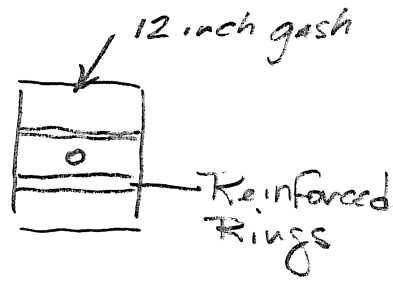
Site Name: Site 43 | **Date:** 10/07/99 | **Project #:** N0189

Project Description: Buried Anomaly Investigation - Anomaly 20 | **Drum #** 7 | **Field Crew/Role:** T. Dickson / D. Kubeldis

Drum Size	Drum Type	Head Configuration
Unknown	Steel ✓	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify) Center Bung

Identifiable markings: None

Sketch drum/container position



Estimated Volume: 50% Rainwater

Filled w/ Rainwater

General condition of the drum/container: POOR

Can it be handled/moved and re-staged or over-packed? Yes was Overpacked

Screening Data

Radioactivity 1 mR mR Background	NT mR
PID ____ eV Lamp ____ ppm (background)	NT ppm
FID ____ ppm (background)	____ ppm
Combustibility NT	____ %LEL ____ %O2
Draeger Multi-test NT	____
Air Reactive NT	____ Δ Temp
Water Reactive NT	____ Δ Temp
Water solubility N/A	____ Yes ____ No ____ % Partial
Flammable NT	____ Yes ____ No
pH NT	____
Cyanide NT	____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)

Solids Classification	Liquids Viscosity Rainwater
Trash	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear ✓	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways): Slightly stressed - Landfill - Limited top cover over Metal debris

Comments: Frogs were living in the drum

✓ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

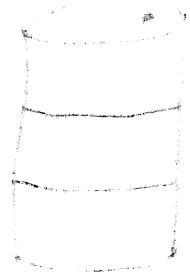
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:	**Date:**	**Project #:**
Project Description: BURIED ANOMALY INVESTIGATION ANOMALY 30	**Drum #**	**Field Crew/Role:** DB, [illegible]

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings:

Sketch drum/container position



Estimated Volume:

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? YES – OVER PACKED

Screening Data	
Radioactivity ___ mR Background	___ mR
PID ___ eV Lamp ___ ppm (background)	___ ppm
FID ___ ppm (background)	___ ppm
Combustibility	___ %LEL ___ %O2
Draeger Multi-test	___
Air Reactive	___ Δ Temp
Water Reactive	___ Δ Temp
Water solubility	___ Yes ___ No ___ % Partial
Flammable	___ Yes ___ No
pH	___
Cyanide	___ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)	
Solids Classification	Liquids Viscosity
Trash	Other

Drum Contents (Color)	
Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

✓ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

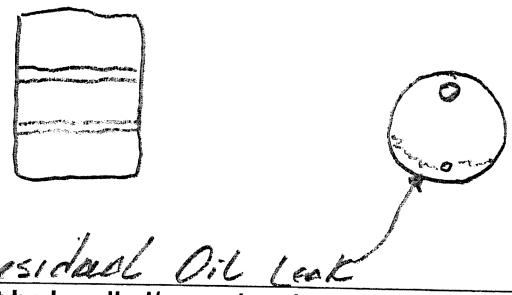
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name: Site 43	**Date:** 10/07/99	**Project #:** N 0189
Project Description: Buried anomaly Investigation - Anomaly 20	**Drum #** 9	**Field Crew/Role:** T. Dickson / D Kubaldis

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel ✓	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top ✓ 1&1 Type
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings: NONE

Sketch drum/container position



Estimated Volume: 3-5 Gallons

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? Drum Over packed pending sampling & analysis ✓

Screening Data

Radioactivity <1 mR Background	NT mR
PID ____ eV Lamp ____ ppm (background)	NT ppm
FID ____ ppm (background)	____ ppm
Combustibility	____ %LEL ____ %O2
Draeger Multi-test	____
Air Reactive	____ Δ Temp
Water Reactive	____ Δ Temp
Water solubility	____ Yes ____ No ____ % Partial
Flammable	____ Yes ____ No
pH	____
Cyanide	____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media) Drum Not opened - Evaluation based on residual

Solids Classification	Liquids Viscosity ✓
Trash	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other: Blackish brown liquid leaking at small bung opening
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments: Other drums found in the area were labeled Reclaimation lubrication oil

____ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

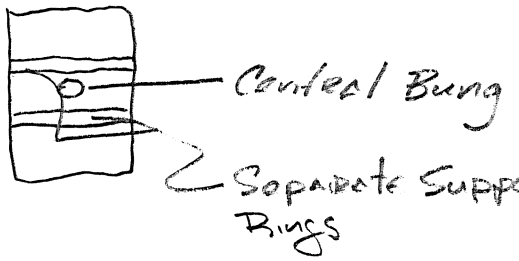
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name: Site 43; CTO 0096	**Date:** 10/07/99	**Project #:** N0189
Project Description: Buried Anomaly Investigation - Anomaly 20	**Drum #** 10	**Field Crew/Role:** T. Dickson / D. Kubeldis Drum Characterization

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel ✓	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify) Central Bung

Identifiable markings: Tag - Use only for Reclaiming Lubricating Oil

Sketch drum/container position



Estimated Volume: Potentially 1/4 to 1/3 Full - Based on weight

General condition of the drum/container: Fair to poor

Can it be handled/moved and re-staged or over-packed? Yes - Overpacked pending Sampling & Analysis

Screening Data

Radioactivity <1 mR Background	NT mR	
PID ____ eV Lamp ____ ppm (background)	NT ppm	
FID ____ ppm (background)	____ ppm	
Combustibility NT	____ %LEL ____ %O2	
Draeger Multi-test NT	____	
Air Reactive NT	____ Δ Temp	
Water Reactive NT	____ Δ Temp	
Water solubility NT	____ Yes ____ No ____ % Partial	
Flammable NT	____ Yes ____ No	
pH NT	____	
Cyanide NT	____ ppm (Draeger Tube over Water Bath)	

Drum Contents (Indicate % if mixture of more than one media)

Solids Classification	Liquids ✓ Based on Viscosity drum type
Trash	Other However no Sloshing detected - possible Sediments

Drum Contents (Color)	
Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways): Areas surrounding drum burial area was also the site of extensive metallic debris burial activity, possibly accounting for reduced grow

Comments:

✓ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

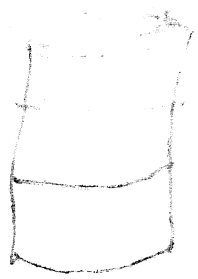
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:	**Date:**	**Project #:**
Project Description: BURIED MAGNETIC INVESTIGATION ANOMALY 20	**Drum #**	**Field Crew/Role:** PE [illegible]

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings:

Sketch drum/container position



Estimated Volume:

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? [illegible] -OVERPACKED

Screening Data	
Radioactivity ___mR Background	___mR
PID ___eV Lamp ___ ppm (background)	___ppm
FID___ ppm (background)	___ppm
Combustibility	___%LEL___%O2
Draeger Multi-test	___
Air Reactive	___Δ Temp
Water Reactive	___Δ Temp
Water solubility	___Yes ___ No ___ % Partial
Flammable	___Yes ___No
pH	___
Cyanide	___ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)	
Solids Classification	Liquids Viscosity
Trash	Other
Drum Contents (Color)	
Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

___**See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

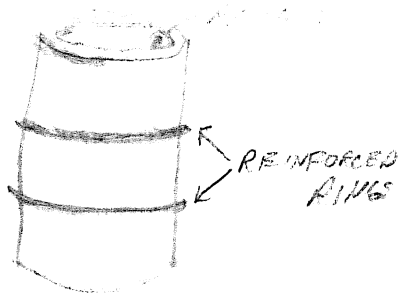
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:	**Date:**	**Project #:**
Project Description: BURIED ANOMALY INVESTIGATION ANOMALY 20	**Drum #** 12	**Field Crew/Role:** DE KUBELIS

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings: NONE

Sketch drum/container position



Estimated Volume:

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? YES - OVERPACKED

Screening Data

Radioactivity NT mR Background	NT mR
PID NT eV Lamp NT ppm (background)	NT ppm
FID____ ppm (background)	____ppm
Combustibility	____%LEL____%O2
Draeger Multi-test	____
Air Reactive	____Δ Temp
Water Reactive	____Δ Temp
Water solubility	____Yes ____ No ____% Partial
Flammable	____Yes ____No
pH	____
Cyanide	____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)

Solids Classification	Liquids Viscosity
Trash	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

✓ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
See Attached Drum/Container Inventory

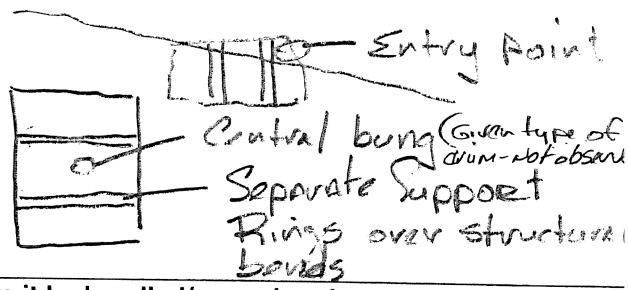
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name: Site 43; CTO 0096	**Date:** 10/07/99	**Project #:** N 0187
Project Description: Buried Anomaly Investigation - Anomaly 15	**Drum #** 13	**Field Crew/Role:** T. Dickson / D. Kubeldis

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel ✓	Ring top (no bungs)
30 gallon ✓	Aluminum	Ring top (bungs)
55 gallon	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify) Approximate 30-35gal.	Metal/Other (Specify Type)	Other (Specify)

Identifiable markings:

Sketch drum/container position



Estimated Volume: Crushed - Full of diet & Cock Roaches

General condition of the drum/container: POOR - Crushed, Several points of Entry

Can it be handled/moved and re-staged or over-packed? Overpacked - Pending Sampling & Analysis

Screening Data

Radioactivity <1 mR Background	<1 mR	
PID 10.6 eV Lamp 3.3 ppm (background)	14.6 ppm	
FID ___ ppm (background) NT	___ ppm	
Combustibility NT	___ %LEL ___ %O2	
Draeger Multi-test NT	___	
Air Reactive NT	___ Δ Temp	
Water Reactive NT	___ Δ Temp	
Water solubility NT	___ Yes ___ No ___ % Partial	
Flammable NT	___ Yes ___ No	
pH NT	___	
Cyanide NT	___ ppm (Draeger Tube over Water Bath)	

Drum Contents (Indicate % if mixture of more than one media)

Solids	Liquids
Classification Soils/Sediment	Viscosity
Trash Brown humic material	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways): Grassy Area - Area well maintained - No stressed appearance

Comments: Heavy cock roach population

✓ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
✓ **See Attached Drum/Container Inventory**

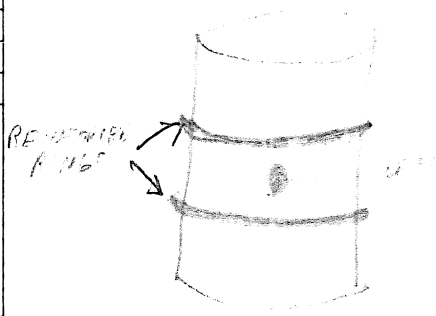
Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET

Site Name:_____	**Date:**_____	**Project #:**_____
Project Description: BORE[illegible] INVESTIGATION ANOMALY 20	**Drum #**	**Field Crew/Role:** DE KUBELUS

Drum Size	**Drum Type**	**Head Configuration**
Unknown	Steel	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify) _____	Metal/Other (Specify Type) _____	Other (Specify) _____

Identifiable markings:

Sketch drum/container position



Estimated Volume:

General condition of the drum/container: FAIR

Can it be handled/moved and re-staged or over-packed? OVERPACKED

Screening Data	
Radioactivity _____mR Background	_____mR
PID_____eV Lamp ____ ppm (background)	_____ppm
FID____ ppm (background)	_____ppm
Combustibility	_____%LEL_____%O2
Draeger Multi-test	_____
Air Reactive	_____Δ Temp
Water Reactive	_____Δ Temp
Water solubility	_____Yes _____ No _____ % Partial
Flammable	_____Yes _____No
pH	_____
Cyanide	_____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)	
Solids Classification	Liquids Viscosity
Trash	Other
Drum Contents (Color)	
Unknown	Red
Cream	Yellow
Clear	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways):

Comments:

✓ **See Attached Safe Work Permit for Protective/Hazard Control Measures**
_____ **See Attached Drum/Container Inventory**

Figure 2
DRUM INVENTORY LOG

Drum Number #	Drum/Container Type	Media (Contents)	Estimated Volume	Date - Contents Characterized Sampled	Recommended Sample Analyses	Comments
1	55 GAL	<1G TAR LIKE LIQUID	<1 GAL	10/6/99		
2		—	EMPTY	10/6/99		
3		LIQUID BASED ON DRUM TYPE.	1/3 FULL (18 GAL)	10/6/99		
4		LIQUID BASED ON DRUM TYPE	1/3 FULL (18 GAL)	10/6/99		
5		LIQUID BASED ON DRUM TYPE	1/3 FULL (18 GAL)	10/6/99		
6		—	EMPTY (?)	10/6/99		
7		RAINWATER	1/2 FULL	10/7/99		
8		—	EMPTY (?)	10/7/99		
9		LIQUID BLACK BROWN LEAKING AT SMALL OPENING	3-5 GAL	10/7/99		
10		liquid based on drum type, however no sloshing detected. also possib. sed	<1/4 - 1/3 FULL	10/7/99		
11			EMPTY (?)	10/7/99		
12			EMPTY (?)	10/7/99		
13	30 GAL	SOLIDS/SOIL	FULL	10/7/99		
14		rusty water	<1	10/7/99		
5 DRUMS IN DETERIORATED & EMPTY CONDITION WERE CRUSHED & OVERPACKED						

APPENDIX H

EXCAVATION PHOTOGRAPHS

APPENDIX I

SITE CHARACTERIZATION REPORT ADDENDUM

TETRA TECH NUS, INC.
1401 Oven Park Drive • Suite 102 • Tallahassee, FL 32312
(850) 385-9899 • FAX (850) 385-9860 • www.tetratech.com

TtNUS/TAL-01-022/0189-4.3

March 9, 2001

Project No. N0189

Joe Fugitt, P.G.
Remedial Project Manager
Technical Review/Federal Facilities
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 096

Subject: Site Characterization Report Addendum
Site 43
U.S. Naval Air Station Pensacola
Pensacola, Florida

Mr. Fugitt:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Site Characterization Report (SCR) Addendum for Site 43 located at Naval Air Station (NAS) Pensacola, Pensacola, Florida. This Letter Report has been prepared for the U.S. Navy Southern Division Naval Facilities Engineering Command under Contract Tank Order 096, for the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D-0888.

The purpose of the investigation was to determine the contents of drums excavated from Site 43 during the site characterization (SCR, TtNUS, April 2000). The analytical results for the drum contents were compared to the Soil Clean-up Target Levels (SCTLs) in Chapter 62-777, F.A.C.

PREVIOUS INVESTIGATIONS

A Site Characterization was conducted in October 1999 (TtNUS). The purpose of the investigation was to excavate buried drums and evaluate the impact of the drums and their contents on the soil and groundwater. The site characterization activities and findings are presented in the SCR (TtNUS, April 2000). Steel drums were excavated, placed in fourteen (14) steel DOT-approved overpack containers, and staged at a secure area at NAS Pensacola. The contents of the drums were not sampled for laboratory analysis during the site characterization.

DRUM CHARACTERIZATION SAMPLING

In January 2001, TtNUS personnel evaluated each of the overpacked containers. The overpacked containers were opened and checked for organic vapors with a Flame Ionization Detector (FID), prior to sampling the contents of the steel drums with a Coliwassa Tube. Twelve (12) overpacked containers held steel drums with insufficient content volume/mass to sample. The remaining two (2) overpacked containers held one (1) steel drum each (Drum Nos. 9 and 15) with sufficient content volume/mass. The contents of the two (2) steel drums were sampled and submitted to a fixed-base laboratory to be analyzed for the following parameters:

- Total Residual Petroleum Hydrocarbon (TRPH);
- Gasoline Range Organics (GRO);
- Diesel Range Organics (DRO);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Selected metals.

The parameters selected were based on the surface and subsurface soil results from the site characterization (Appendix F, SCR) and the drum characterization findings (Appendix G, SCR). The results from the drum sampling activities and subsequent recommendations are discussed in the following sections.

ANALYTICAL RESULTS

The two steel drum samples (43DR00901 and 43DR01501) were submitted to a fixed-base laboratory. The samples were analyzed for the previously listed parameters by the following analytical methods:

- TRPH – FDEP FL-PRO
- GRO – SW-846 8015mod

- DRO – SW-846 8015mod
- PAHs – Sw-846 8310
- Metals – SW-846 6010

The drum sample analytical results are included in Table 1, Attachment A. TRPH was detected at 29.9 (43DR00901) and 51.3 (43DR01501) mg/kg. DRO was detected at 10.9 mg/kg in sample 43DR01501. Seven PAHs [benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluoranthene, indeno(1,2,3-cd)pyrene, and pyrene] were detected in sample 43DR01501. Benzo(a)pyrene (0.14J mg/kg) was detected above the residential direct exposure (DE1) FDEP SCTL (0.1 mg/kg). Eleven metals (antimony, arsenic, barium, calcium, copper, iron, lead, nickel, potassium, vanadium, and zinc) were detected in both drum samples. Arsenic (1.2 mg/kg) and barium (188 mg/kg) were detected above the DE1 FDEP SCTL (0.8 and 110 mg/kg, respectively) in sample 43DR00901. In sample 43DR01501, antimony (40.1 mg/kg), barium (683 mg/kg), copper (682 mg/kg), iron (75,500 mg/kg), and vanadium (52.3 mg/kg) were detected above the DE1 FDEP SCTL. Arsenic (6.7 mg/kg) and lead (2,120 mg/kg) were detected above the DE1 and industrial direct exposure (DE2) FDEP SCTL in sample 43DR01501.

It should be noted that the PAH analyses were conducted outside of the hold-time prescribed in the analytical method (Data Validation Report, Attachment B). Because the PAHs were analyzed outside of the hold-time, the PAH results maybe biased low. However, with the exception of benzo (a) pyrene, the PAH reported concentrations are much lower than the FDEP SCTLs and would not likely exceed the FDEP SCTLs even if the PAHs had been analyzed within the required hold-time.

CONCLUSION AND RECOMMENDATION

The two (2) steel drums sampled, had metals and PAHs at concentrations exceeding DE1 FDEP SCTLs. The contents of the drums will be properly disposed as non-hazardous waste.

Sincerely,

Terry Hansen, P.G.
Florida Professional Geologist No. 234
Tetra Tech NUS, Inc.

CC: R. Joyner (NAS Pensacola)
B. Hill (SOUTHNAVFACENGCOM)
G. Townsend (USEPA)
G. Wilfley (CH2M HILL)
B. Caldwell (EnSafe, Inc.)
A. Harris (EnSafe, Inc.)
T. Hansen (2 copies)

PROFESSIONAL REVIEW CERTIFICATION

Site Characterization Report Addendum

Site 43

Naval Air Station, Pensacola, Florida

This Site Characterization Report Addendum 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.

Terry Hansen, P.G.
Florida License No. 234

09MAR01
Date

ATTACHMENT A

Analytical Data Table

TABLE 1

ANALYTICAL SUMMARY FOR ORGANIC COMPOUNDS and INORGANIC ANALYTES DETECTED IN SOIL SAMPLES
SITE 43 - DRUM SAMPLING
NAVAL AIR STATION PENSACOLA, PENSACOLA, FLORIDA

Sample No.		43DR00901	43DR01501
Sample Location		Drum 9	Drum 15
Collect Date		12/15/2000	12/15/2000
	DE1[1]/DE2[2]/LE[3] (mg/kg)		
Total Petroleum Hydrocarbons [4] (mg/kg)	340/2500/340	29.9	51.3
Diesel Range Organics [5] (mg/kg)	NA	--	10.9[J]
Gasoline Range Organics [6] (mg/kg)	NA	--	--
Polycyclic Aromatic Hydrocarbons [7] (mg/kg)			
Benzo(a)Pyrene	**0.1**/0.5/8.0	--	**0.14[J]**
Benzo(b)Fluoranthene	1.4/4.8/10	--	0.135[J]
Benzo(g,h,I)Perylene	2300/41000/32000	--	0.126[J]
Benzo(k)Fluoranthene	15/52/25	--	0.0942[J]
Fluoranthene	2900/48000/1200	--	0.243[J]
Indeno(1,2,3-cd)Pyrene	1.5/5.3/28	--	0.16[J]
Pyrene	2200/37000/880	--	0.214[J]
Metals [8] (mg/kg)			
Antimony	**26**/240/5.0	--	**40.10**
Arsenic	**0.8/3.7**/29	**1.20**	**6.70**
Barium	**110****/87000/1600	**188**	**483**
Calcium	NA	6,580	8,610
Copper	**110****/76000/***	108	**682**
Iron	**23000**/480000/***	17,700	**75,500**
Lead	**400/920**/***	251	**2,120**
Nickel	110**/28000/130	29.70	36.60
Potassium	NA	2,530	242
Vanadium	**15****/7400/980	60.10	**52.30**
Zinc	23000/560000/6000	1,060	6,380

[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] FDEP FL-PRO, [5] SW-846 8015, [6] SW-846 8015, [7] SW-846 8310, [8] SW-846 6010
[J] Indicates the presence of a chemical at an estimated concentration.
Bold indicates exceedance of regulatory limits.
-- Not Detected

ATTACHMENT B

Laboratory Analytical Report

Data Validation Report

Tetra Tech NUS, Inc.

Internal Correspondence

TO:	Mr. Terry Hansen	DATE:	January 18, 2001
FROM:	Suzanne I. Smith	CC:	File
SUBJECT:	Organic Data Validation – TPH, DRO, and GRO CTO096 – NAS Pensacola SDG F8427		
SAMPLES:	2/Soils 43DR00901 43DR01501		

OVERVIEW

The sample set for CTO096, SDG F8427; Naval Air Station Pensacola, Pensacola, Florida consists of two (2) soil environmental samples. The environmental samples were analyzed for Total Petroleum Hydrocarbons (TPHs), Diesel Range Organics (DROs), and Gasoline Range Organics (GROs).

The samples were collected by Tetra Tech NUS on December 15, 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 FDEP FL-PRO (TPHs) and SW-846 8015 mod. (DROs and GROs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- Data Completeness *
- Holding Times *
- Initial/Continuing Calibration Standards *
- Laboratory Method/Field Quality Control Blanks *
- 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.

Total Petroleum Hydrocarbon Fraction

The matrix spike and matrix spike duplicate recoveries were outside acceptable recovery limits. No action was taken, however, due to the fact that the spiked sample had a high analyte concentration and the laboratory control spike was in range.

All other quality control criteria for this fraction were met.

Diesel Range Organics Fraction

DRO detect for sample 43DR01501 was flagged as estimated "J" due to imprecision below the reporting limit.

All quality control criteria for this fraction were met.

Gasoline Range Organics Fraction

All quality control criteria for this fraction were met.

Executive Summary

Laboratory performance: No actions were taken based on laboratory performance.

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.

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

CTO096-NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F8427

SAMPLE NUMBER:	43DR00901	43DR01501	/ /	/ /
SAMPLE DATE:	12/15/00	12/15/00		
LABORATORY ID:	F8427-1	F8427-2		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.2 %	0.2 %	100.0 %	100.0 %
UNITS:	MG/KG	MG/KG		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL.	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
~~DRO~~/GRO	13	U		6.5	U							
TPH (C8-C40)	29.9			51.3								
TOTAL PETROLEUM HYDROCARBONS												
DRO ~~TPH~~ C10-C28	20	U		10.9	J	P						

F8427

HOLDING TIME
01/04/01

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/KG	43DR00901	F8427-1	NORMAL	F8427	GRO	12/15/00	/ /	12/22/00	0	0	7
MG/KG	43DR01501	F8427-2	NORMAL	F8427	GRO	12/15/00	/ /	12/22/00	0	0	7
MG/KG	43DR00901	F8427-1	NORMAL	F8427	TPH	12/15/00	12/20/00	12/21/00	5	1	6
MG/KG	43DR01501	F8427-2	NORMAL	F8427	TPH	12/15/00	12/19/00	12/22/00	4	3	7

APPENDIX B

Results as Reported by the Laboratory

Report of Analysis

Client Sample ID:	43DR00901		
Lab Sample ID:	F8427-1	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	41.9
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00622.D	1	12/21/00	SKW	12/19/00	OP2458	GZF28
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	ND	20	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	83%		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:	43DR00901		
Lab Sample ID:	F8427-1	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	41.9
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP12515.D	1	12/21/00	SKW	12/20/00	OP2464	GOP498
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	29.9	20	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		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:	43DR00901		
Lab Sample ID:	F8427-1	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	SW846 8015	**Percent Solids:**	41.9
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	UV002091.D	50	12/22/00	RA	n/a	n/a	GUV79
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH-GRO (C6-C10)	ND	13	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		50-125%
98-08-8	aaa-Trifluorotoluene	91%		50-125%

(a) Sample introduction performed using method 5030A.

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:	43DR01501		
Lab Sample ID:	F8427-2	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	68.2
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00630.D	1	12/22/00	SKW	12/19/00	OP2458	GZF29
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	10.9	12	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		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:	43DR01501		
Lab Sample ID:	F8427-2	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	68.2
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP12523.D	1	12/22/00	SKW	12/20/00	OP2464	GOP498
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	51.3	12	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		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:	43DR01501		
Lab Sample ID:	F8427-2	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	SW846 8015	**Percent Solids:**	68.2
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	UV002094.D	50	12/22/00	RA	n/a	n/a	GUV79
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH-GRO (C6-C10)	ND	6.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		50-125%
98-08-8	aaa-Trifluorotoluene	90%		50-125%

(a) Sample introduction performed using method 5030A.

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

CHAIN OF CUSTODY

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Tetra Tech NUS
ADDRESS: 1401 Oren Park Dr.
CITY: Tallahassee STATE: FL ZIP: 32312
SEND REPORT TO: Howard Eagler
PHONE #: 850-385-9899

FACILITY INFORMATION

PROJECT NAME: Site 43
LOCATION: NAS Pensacola OU1 Drum Sampling
PROJECT NO.: N0189
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	TPH DRO GRO	LAB USE ONLY
F8427-1	43DR00901	12-15-00	1100	LWS	SO	2					X	2	
2	43DR01501	12-15-00	1115	LWS	SO	2					X	2	

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

- [x] STANDARD
- [ ] COMMERCIAL "B"
- [x] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

Soil = sample 1501
Cat Litter = (Fullers earth?) = sample 0901

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. [signature]	12-15-00 15:30	1. [signature] 12/15/00	2.		2.
3.		3.	4.		4.
5.		5.			

SEAL #

PRESERVE WHERE APPLICABLE ☐ ON ICE ☐ TEMPERATURE 2.7 C

Sequence Name: C:\HPCHEM\2\SEQUENCE\122200.S
Comment:
Operator: RachidA
Data Path: C:\HPCHEM\2\DATA\122200\
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	DailyCal	17	UV002087	GROSOIL	GRO defining mix
2	DailyCal	18	UV002088	GROSOIL	400ppb CCV
3	Spike	19	UV002089	GROSOIL	BS
4	Blank	20	UV002090	GROSOIL	MB
5	Sample	21	UV002091	GROSOIL	F8427-1,4.42gr/5ml-100ul
6	Spike	22	UV002092	GROSOIL	F8427-1MS,4.42gr/5ml-100ul
7	Duplicate	23	UV002093	GROSOIL	F8427-1MSD,4.42gr/5ml-100ul
8	Sample	24	UV002094	GROSOIL	F8427-2,5.63gr/5ml-100ul
9	Sample	25	UV002095	GROSOIL	F8460-1,5.57gr/5ml-100ul
10	Spike	26	UV002096	GROSOIL	BS
11	DailyCal	27	UV002097	GROSOIL	CCV

GC Analysis Log

Date: 122200

Analyst Signature: [signature]

Analysis Method 8015

Column: RTX 502.2

Run Batch: 79

Method File: GROSOIL

Detector: FID/ PID

Instrument ID: UV

Calibration Date: 102800

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
UV2087	GROWin								
88	CCV				17				✓ V1892
89	BS				18				✓ V1913
90	MB		S		19	50	8015		✓ V1914
91	F8427-1	4.42			20				✓ V1891
92	-1MS				21			12472	ND 5030A GC1145
93	-1MSD				22			12472	✓
94	-2	5.63			23			12472	✓
95	F8460-1	5.57			24			12472	ND
96	QC	5.4			25	200		12461	ARQ 2000
97	CCV				26			–	✓
					27			–	✓

Notes:

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid and TOL

Sequence Name: C:\HPCHEM\2\OLDSEQ~1\102800.S
Comment:
Operator: RachidA
Data Path: C:\HPCHEM\2\DATA\102800\
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	DailyCal	17	UV001890	GROSOIL	GRO defining mix
2	Calibration	18	UV001891	GROSOIL	100ppb CCV
3	Calibration	19	UV001892	GROSOIL	200ppb CCV
4	Calibration	20	UV001893	GROSOIL	400ppb CCV
5	Calibration	21	UV001894	GROSOIL	700ppb CCV
6	Calibration	22	UV001895	GROSOIL	1000ppb CCV
7	Spike	23	UV001896	GROSOIL	BS,5gr
8	Blank	24	UV001897	GROSOIL	MB,5gr
9	Sample	25	UV001898	GROSOIL	F7928-1,4.71gr/5ml-100ul
10	Spike	26	UV001899	GROSOIL	F7928-1MS,4.71gr/5ml-100ul
11	Duplicate	27	UV001900	GROSOIL	F7928-1MSD,4.71gr/5ml-100ul
12	Spike	28	UV001901	GROSOIL	QC
13	DailyCal	29	UV001902	GROSOIL	CCV

0055

GC Analysis Log

Date: 102800 Analyst Signature: [illegible] Run Batch: UV66

Analysis Method 8015B Column: RTX502.2 Detector: FID/ PID

Method File: GROSOIL Instrument ID: UV Calibration Date: 092600

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
UV00189 90	GROWIN	5ml	W	7	17	1	8015	-	V1803
91	100 ppb	↓	↓		18		↓	-	V1827
92	200				19			-	
93	400				20			-	
94	700				21			-	
95	1000	↓	↓		22			-	
96	BS	5gr	S		23	50		~~11276~~	V1786 ✓
97	MB	↓			24	↓		+	V1828 ✓
98	F7928-1	4.71gr	↓		25			11276	ND
99	-1MS	↓			26			↓	✓
900	-1MSD				27	↓			NO SPIKE?
01	QC	5ml			28	1			HIGH
UV0019 02	CCV	↓	↓		29	1	↓		FAILED HIGH.

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\2\SEQUENCE\1222PRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\2\DATA\1222pro\
Pre-Seq Cmd:
Post-Seq Cmd:

9op498

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	OP12518	FL_PRO	1020ppm TPHS ccv s975
2	Sample	2	OP12519	FL_PRO	340ppm TPHS s977
3	Sample	3	OP12520	FL_PRO	solvent blank
4	Sample	4	OP12521	FL_PRO	op2464-mb
5	Sample	5	OP12522	FL_PRO	F8412-3,40x
6	Sample	6	OP12523	FL_PRO	F8427-2
7	Sample	7	OP12524	FL_PRO	1020ppm ccv

0120

GC ANALYSIS LOG

DATE: 12-22-00
COLUMN TYPE: DRTX-MS
INSTRUMENT: FID2

METHODS: FLPRO
METHOD FILE: FLPRO
CALIB. DATE: 9-13-00

ANALYST: SW
RUN BATCH: 900498
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP12518	1	1020 ppm TPHS ccv	FLPRO		S975			✓	passed
12519	2	340 ppm TPHS			S977			✓	passed
12520	3	Solvent blank						✓	BDL
SW 12/22/00 12521	4	OP2464-mb		30g / 1ml	S	OP2464	1x	✓	BDL
12522	5	F8412-3,					40x	✓	TPH=(40)(29.5)
12523	6	F8427-2					1x	✓	TPH=35.0
12524	7	1020 ppm ccv						✓	passed

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\0913PRO.S
Comment:
Operator: nareshj
Data Path: C:\HPCHEM\2\DATA\0913PRO\
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	OP10745	FL_PRO	340ppm tphs s924
2	Sample	2	OP10746	FL_PRO	680ppm tphs s923
3	Sample	3	OP10747	FL_PRO	1020ppm tphs s922
4	Sample	4	OP10748	FL_PRO	1360ppm tphs s921
5	Sample	5	OP10749	FL_PRO	1700ppm tphs s920
6	Sample	6	OP10750	FL_PRO	850ppm QC tphs s925
7	Sample	7	OP10751	FL_PRO	Sol Blk

0122

GC ANALYSIS LOG

0123

DATE: 9-13-00
COLUMN TYPE: RTX-5MS
INSTRUMENT:

METHODS: Fr. Pro
METHOD FILE: Fr. Pro
CALIB. DATE: 9-13-00

ANALYST: NJ
RUN BATCH: 601 441
AMOUNT INJECTED: 1 ul.

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP10745	1	340 ppm TPHs 5924	Fr. Pro	— NA	— NA	— NA	1x	✓	✓
-46	2	680 ppm TPHs 5923						✓	✓
-47	3	1020 ppm TPHs 5922						✓	✓
-48	4	1360 ppm TPHs 5921						✓	✓
-49	5	1700 ppm TPHs 5920						✓	✓
-50	6	850 ppm QC 5925						✓	✓
-51	7	Soil Blk.						✓	Blk

NJ 9-13-00

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: Naresh Kiam

Sequence Name: C:\HPCHEM\2\SEQUENCE\1221PRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\2\DATA\1221pro\
Pre-Seq Cmd:
Post-Seq Cmd:

gop498

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	OP12494	FL_PRO	1020ppm TPHS ccv s975
2	Sample	2	OP12495	FL_PRO	340ppm TPHS s977
3	Sample	3	OP12496	FL_PRO	solvent blank
4	Sample	4	OP12497	FL_PRO	op2464-mb
5	Sample	5	OP12498	FL_PRO	op2464-bs
6	Sample	6	OP12499	FL_PRO	F8387-3
7	Sample	7	OP12500	FL_PRO	F8414-1
8	Sample	8	OP12501	FL_PRO	F8412-1
9	Sample	9	OP12502	FL_PRO	F8412-2
10	Sample	10	OP12503	FL_PRO	F8412-3,10x
11	Sample	11	OP12504	FL_PRO	F8412-4,10x
12	Sample	12	OP12505	FL_PRO	F8412-5,10x
13	Sample	13	OP12506	FL_PRO	F8433-1
14	Sample	14	OP12507	FL_PRO	1020ppm ccv
15	Sample	15	OP12508	FL_PRO	F8414-1,4x
16	Sample	16	OP12509	FL_PRO	F8412-1,80x
17	Sample	17	OP12510	FL_PRO	F8412-2,5x
18	Sample	18	OP12511	FL_PRO	F8412-3,4x
19	Sample	19	OP12512	FL_PRO	F8412-4,2x
20	Sample	20	OP12513	FL_PRO	op2464-ms,2x
21	Sample	21	OP12514	FL_PRO	op2464-msd,2x
22	Sample	22	OP12515	FL_PRO	F8427-1
23	Sample	23	OP12516	FL_PRO	F8427-2,10x
24	Sample	24	OP12517	FL_PRO	1020ppm ccv

GC ANALYSIS LOG

DATE: 12-21-00
COLUMN TYPE: RTX-5MS
INSTRUMENT: FID 2

METHODS: FL PRO
METHOD FILE: FL PRO
CALIB. DATE: 9-13-00

ANALYST: SW
RUN BATCH: 90P498
AMOUNT INJECTED: 1 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
OP12494	1	1020ppmTPHSccv	FL PRO		S975			✓	passed
12495	2	340ppm TPHS			S977			✓	passed
12496	3	solvent blank						✓	BDL
12497	4	op2464-mb		30g / 1ml	S	op2464	1x	✓	BDL
12498	5	-bs						✓	✓
12499	6	F8387-3						✓	TPH=32.2
12500	7	F8414-1						✓	RR 4x
12501	8	F8412-1						✓	RR 80x
12502	9	-2						✓	RR 5x
12503	10	-3					10x	✓	RR 4x
12504	11	-4						✓	RR 2x
12505	12	-5						✓	TPH=(10)(18)
12506	13	F8433-1					1x	✓	BDL
12507	14	1020ppm CCV						✓	passed
12508	15	F8414-1		30g / 1ml	S	op2464	4x	✓	TPH=(4)(31.7)
12509	16	F8412-1					80x	✓	TPH=(80)(29.8)
12510	17	-2					5x	✓	TPH=(5)(33.6)
12511	18	-3					4x	✓	RR 40x
12512	19	-4					2x	✓	TPH=(2)(37.1)
12513	20	op2464-ms						✓	✓
12514	21	-msd						✓	✓
12515	22	F8427-1					1x	✓	TPH=12.5
12516	23	-2					10x	✓	RR 1x
12517	24	1020ppm CCV						✓	passed

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

Date: 12/20/00 Method*: FL Pro Batch#: OP 2464

Batch Started On: 12/20/00 Prior Number Of Samples in Batch : 8 Analyst: DP

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 2464 MB	X	30.0ml -	0.5ml		1.0ml	
OP 2464 BS	X			0.5ml		
F8387-3	7					
F8414-1	6					
F8412-1	5					
-2	5					
-3	5					
-4	5					MS, MSD
-5	5					
F8433-1	1					
F8427-1	2					
-2	2					
OP 2464 MS	5	30.0	0.5ml	0.5ml	1.0ml	F8412-4
OP 2464 MSD	↓	↓	↓	↓	↓	F8412-4
OP DUP						

RL 12/21/00

Surrogate ID: E769A Conc: 100ppm Exp. Date: 5/27/01 Bath Temp.: 72°C

Spike ID: E778 Conc: 100ppm Exp. Date: 6/18/01 Bath Temp2.: ——

CH2CL2 Lot# CA118 Hexane Lot# Na2SO4 Lot# T44269

Silica Gel Reagent #: 995185 Reagent #: Reagent #:

Comments:

Relinquished By: Roopa Date: 12/21/00

Accepted By: Date: 12-21-00

*Prep method for SW846 methods is 3550B for soils and 3580A for oils.

0126

Sequence Name: C:\HPCHEM\1\SEQUENCE\1120DRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\1\DATA\1120dro\
Pre-Seq Cmd:
Post-Seq Cmd:

g2f 16

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	ZF00356	F_DRO	R.T. C10-C28
2	Sample	2	ZF00357	F_DRO	250ppm ccv s978
3	Sample	3	ZF00358	F_DRO	500ppm ccv s978
4	Sample	4	ZF00359	F_DRO	1000ppm ccv s978
5	Sample	5	ZF00360	F_DRO	1500ppm ccv s978
6	Sample	6	ZF00361	F_DRO	2000ppm ccv s978
7	Sample	7	ZF00362	F_DRO	solvent blank
8	Sample	8	ZF00363	F_DRO	op2325-mb
9	Sample	9	ZF00364	F_DRO	op2325-bs
10	Sample	10	ZF00365	F_DRO	F8107-1
11	Sample	11	ZF00366	F_DRO	F8107-2
12	Sample	12	ZF00367	F_DRO	F8107-3
13	Sample	13	ZF00368	F_DRO	F8107-4
14	Sample	14	ZF00369	F_DRO	op2325-ms
15	Sample	15	ZF00370	F_DRO	op2325-msd
16	Sample	16	ZF00371	F_DRO	1000ppm ccv
17	Sample	17	ZF00372	F_DRO	F8109-1,40x
18	Sample	18	ZF00373	F_DRO	F8109-2
19	Sample	19	ZF00374	F_DRO	F8109-3
20	Sample	20	ZF00375	F_DRO	F8109-4
21	Sample	21	ZF00376	F_DRO	1000ppm ccv
22	Sample	22	ZF00377	F_DRO	op2335-mb
23	Sample	23	ZF00378	F_DRO	op2335-bs
24	Sample	24	ZF00379	F_DRO	F8163-1
25	Sample	25	ZF00380	F_DRO	F8163-2
26	Sample	26	ZF00381	F_DRO	F8163-3
27	Sample	27	ZF00382	F_DRO	F8163-4
28	Sample	28	ZF00383	F_DRO	F8163-5
29	Sample	29	ZF00384	F_DRO	F8163-6
30	Sample	30	ZF00385	F_DRO	F8163-7
31	Sample	31	ZF00386	F_DRO	F8163-8
32	Sample	32	ZF00387	F_DRO	1000ppm ccv
33	Sample	33	ZF00388	F_DRO	F8163-9
34	Sample	34	ZF00389	F_DRO	op2335-ms
35	Sample	35	ZF00390	F_DRO	op2335-msd
36	Sample	36	ZF00391	F_DRO	F8163-10
37	Sample	37	ZF00392	F_DRO	F8163-11
38	Sample	38	ZF00393	F_DRO	F8163-12
39	Sample	39	ZF00394	F_DRO	F8163-13
40	Sample	40	ZF00395	F_DRO	F8163-14
41	Sample	41	ZF00396	F_DRO	F8163-15
42	Sample	42	ZF00397	F_DRO	1000ppm ccv

0190

GC ANALYSIS LOG

DATE: 11-20-00
COLUMN TYPE: DB-5
INSTRUMENT: FID 3

METHODS: DRO (8015M)
METHOD FILE: DRO-F
CALIB. DATE: 11-20-00

ANALYST: SW
RUN BATCH: 9ZF16
AMOUNT INJECTED: 2 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
ZF00356	1	RT C10-C28	8015					✓	
357	2	250 ppm DRO			S978		50:400	✓	
358	3	500 ppm DRO					100:400	✓	
359	4	1000 ppm DRO					200:400	✓	
360	5	1500 ppm DRO					300:400	✓	
361	6	2000 ppm DRO					400:400	✓	passed, RSD<20%
362	7	solvent blank						✓	BDL
363	8	Op2325-mb		30g/10ml (SW 11/21/00)	S	Op2325	1x	✓	BDL
364	9	-bs						✓	✓
365	10	F8107-1						✓	BDL
366	11	-2						✓	BDL
367	12	-3						✓	BDL
368	13	-4						✓	BDL
369	14	Op2325-ms						✓	✓
370	15	-msd						✓	✓
371	16	1000 ppm CCV						✓	passed
372	17	F8109-1		30g/1ml	S	Op2325	40x	✓	DRO = (40)(16.9)
373	18	-2					1x	✓	BDL
374	19	-3						✓	BDL
375	20	-4						✓	BDL
376	21	1000 ppm CCV						✓	passed
377	22	Op2335-mb		30g/1ml	S	Op2335	1x	✓	BDL
378	23	-bs						✓	✓
379	24	F8163-1						✓	DRO = 40.7

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:

GC ANALYSIS LOG

DATE: 11-20-00
COLUMN TYPE: DB-5
INSTRUMENT: FID 3

METHODS: DRO 8015M
METHOD FILE: DRO-F
CALIB. DATE: 11-20-00

ANALYST: SW
RUN BATCH: qzf16
AMOUNT INJECTED: 2 µl

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
ZF00380	25	F8163-2	8015	30g / 1ml	S	Op2335	1x	✓	DRO= 30.6
381	26	-3						✓	DRO= 12.9 J
382	27	-4						✓	BDL
383	28	-5						✓	BDL
384	29	-6						✓	BDL
385	30	-7						✓	BDL
386	31	-8						✓	BDL
387	32	1000ppm CCV						✓	passed
388	33	F8163-9		30g / 1ml	S	Op2335	1x	✓	BDL
389	34	Op2335-MS						✓	✓
390	35	-MSD						✓	✓
391	36	F8163-10						✓	BDL
392	37	-11						✓	BDL
393	38	-12						✓	BDL
394	39	-13						✓	BDL
395	40	-14						✓	BDL
396	41	-15						✓	BDL
397	42	1000ppm CCV						✓	passed

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\1\SEQUENCE\1222DRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\1\DATA\1222dro\
Pre-Seq Cmd:
Post-Seq Cmd:

92f29

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	ZF00625	F_DRO	R.T. C10-C28
2	Sample	2	ZF00626	F_DRO	1000ppm ccv s978
3	Sample	3	ZF00627	F_DRO	solvent blank
4	Sample	4	ZF00628	F_DRO	op2458-mb
5	Sample	5	ZF00629	F_DRO	F8396-6,100x
6	Sample	6	ZF00630	F_DRO	F8427-2
7	Sample	7	ZF00631	F_DRO	1000ppm ccv

0193

GC ANALYSIS LOG

DATE: 12-22-00
COLUMN TYPE: DB-5
INSTRUMENT: FID3

METHODS: 8015M DRO
METHOD FILE: DRO
CALIB. DATE: 11-20-00

ANALYST: [illegible]
RUN BATCH: 92F29
AMOUNT INJECTED: 2 ml

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
2F00625	1	R.T. C10-C28	DRO					✓	
626	2	1000 ppm CCV	↓		S978		200:400	✓	passed
627	3	Solvent blank	↓					✓	BDL
628	4	OP2458-mb	↓	30g/1ml	S	OP2458	1x	✓	BDL
629	5	F8396-6	↓	↓	↓	↓	100x	✓	DRO=(100)(18.9)
630	6	F8427-2	↓	↓	↓	↓	1x	✓	DRO=7.43J
631	7	1000 ppm CCV	↓					✓	passed

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]

Sequence Name: C:\HPCHEM\1\SEQUENCE\1221DRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\1\DATA\1221dro\
Pre-Seq Cmd:
Post-Seq Cmd:

92f28

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	ZF00600	F_DRO	R.T. C10-C28
2	Sample	2	ZF00601	F_DRO	1000ppm ccv s978
3	Sample	3	ZF00602	F_DRO	solvent blank
4	Sample	4	ZF00603	F_DRO	op2463-mb
5	Sample	5	ZF00604	F_DRO	op2463-bs
6	Sample	6	ZF00605	F_DRO	F8413-3
7	Sample	7	ZF00606	F_DRO	F8413-4
8	Sample	8	ZF00607	F_DRO	F8429-1
9	Sample	9	ZF00608	F_DRO	op2463-ms,4x
10	Sample	10	ZF00609	F_DRO	op2463-msd,4x
11	Sample	11	ZF00610	F_DRO	F8429-1,5x
12	Sample	12	ZF00611	F_DRO	1000ppm ccv
13	Sample	13	ZF00612	F_DRO	op2458-mb
14	Sample	14	ZF00613	F_DRO	op2458-bs
15	Sample	15	ZF00614	F_DRO	F8396-1
16	Sample	16	ZF00615	F_DRO	op2458-ms
17	Sample	17	ZF00616	F_DRO	op2458-msd
18	Sample	18	ZF00617	F_DRO	F8396-2
19	Sample	19	ZF00618	F_DRO	1000ppm ccv
20	Sample	20	ZF00619	F_DRO	F8396-3
21	Sample	21	ZF00620	F_DRO	F8396-4
22	Sample	22	ZF00621	F_DRO	F8396-6
23	Sample	23	ZF00622	F_DRO	F8427-1
24	Sample	24	ZF00623	F_DRO	F8427-2,20x
25	Sample	25	ZF00624	F_DRO	1000ppm ccv

0195

GC ANALYSIS LOG

DATE: 12-21-00
COLUMN TYPE: DB-5
INSTRUMENT: FID 3

METHODS: 8015M DRO
METHOD FILE: DRO
CALIB. DATE: 11-20-00

ANALYST: SW
RUN BATCH: 92F28
AMOUNT INJECTED: 2 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
2F00600	1	R.T. C10-C28	DRO		SW 12-21-00			✓	✓
601	2	1000 ppm CCV			S978		200:400	✓	passed
602	3	solvent blank						✓	BDL
603	4	Op2463-mb		1000ml/1ml	W	Op2463	1x	✓	BDL
604	5	-bs		↓ ↓	↓	↓	↓	✓	✓
605	6	F8413-3		980ml/1ml				✓	DRO=0.259
606	7	-4		↓ ↓				✓	BDL
607	8	F8429-1		↓ ↓			↓	✓	RR5x
608	9	Op2463-ms		480ml/1ml			4x	✓	✓
609	10	-msd		↓ ↓			4x	✓	✓
610	11	F8429-1		980ml/1ml	↓	↓	5x	✓	DRO=(5)(1.1)
611	12	1000 ppm CCV						✓	passed
612	13	Op2458-mb		30g/1ml	S	Op2458	1x	✓	BDL
613	14	-bs		↓	↓	↓	↓	✓	✓
614	15	F8396-1						✓	DRO=19.4
615	16	Op2458-ms						✓	✓
616	17	-msd						✓	✓
617	18	F8396-2		↓	↓	↓	↓	✓	DRO=27.7
618	19	1000 ppm CCV						✓	passed
619	20	F8396-3		30g/1ml	S	Op2458	1x	✓	DRO=27.1
620	21	-4		↓	↓	↓	↓	✓	DRO=24.4
621	22	-6						✓	RR 100x
622	23	F8327-1						✓	BDL
623	24	-2		↓	↓	↓	↓	✓	RR 1x

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:

SOLID SAMPLE PREP REPORT

Date: 12/19/00 Method*: ORO 8015 Batch#: OP 2458

Batch Started On: 12/19/00 Prior Number Of Samples in Batch : 0 Analyst:

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 2458 MB	X	30.0g	0.5ml		1.0ml	
OP 2458 BS	X			0.5ml		
F8396-1	3					MS/MSD
-2	3					
-3	3					
-4	3					
-6	3					
F8427-1	2					
-2	2					
			12/19/00	OP		
OP 2458 MS	3	30.0	0.5ml	0.5ml		F 8396-1
OP 2458 MSD	3					
OP DUP						

P Surrogate ID: F769A Conc: 100ppm Exp. Date: 5/27/01 Bath Temp.:

D P Spike ID: F775 Conc: 2000ppm Exp. Date: 6-7-01 Bath Temp2.:

CH2CL2 Lot# CA118 Hexane Lot# Na2SO4 Lot# 8024

Reagent #: silica gel 995185 Reagent #: Reagent #:

Comments:

Relinquished By: Darshna Patel Date: 12/19/00

Accepted By: Naresh Kim Date: 12-19-00

*Prep method for SW846 methods is 3550B for soils and 3580A for oils.

0197

Tetra Tech NUS, Inc. **Internal Correspondence**

TO:	**Mr. Terry Hansen**	**DATE:**	**February 12, 2001**
FROM:	**Suzanne I. Smith**	**CC:**	**File**
SUBJECT:	**Organic and Inorganic Data Validation – PAH and Metals CTO096 – NAS Pensacola SDG F8427R**		
SAMPLES:	**2/Soils**		
	43DR00901 43DR01501		

OVERVIEW

The sample set for CTO096, SDG F8427R; Naval Air Station Pensacola, Pensacola, Florida consists of two (2) soil environmental samples. The environmental samples were analyzed for Polycyclic Aromatic Hydrocarbons (PAHs) and Metals.

The samples were collected by Tetra Tech NUS on December 15, 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 8310 and SW-846 Method 6010B analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- Data Completeness *
- Holding Times
- Initial/Continuing Calibration Standards *
- Laboratory Method/Field Quality Control Blanks *
- 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.

Polycyclic Aromatic Hydrocarbon Fraction

The continuing calibration check sample failed high for benzo(a)pyrene. Results for benzo(a)pyrene were flagged "C" for calibration noncompliance.

Holding times were exceeded for all samples therefore all results are flagged "J" as estimated due to holding time noncompliance.

All other quality control criteria for this fraction were met.

Metals Fraction

Laboratory Blank Analysis

Affected sample : 43DR00901

Analyte	Maximum Concentration	Action Level(soil)
Antimony	5.4 ug/L	2.7 mg/kg
Calcium	7.1 mg/kg[1]	35.5 mg/kg
Copper	0.75 ug/L	0.375 mg/kg
Iron	32.4 ug/L	16.2 mg/kg
Lead	2.7 ug/L	1.35 mg/kg
Nickel	5.8 ug/L	2.9 mg/kg
Potassium	43 mg/kg[1]	215 mg/kg
Vanadium	0.63 ug/L	0.315 mg/kg
Zinc	0.22 mg/kg[1]	1.1 mg/kg

[1] Maximum concentration is present in the preparation blank.

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in initial, continuing, and preparation blanks. Dilution factors, percent solids, and sample aliquots were taken into consideration when evaluating for blank contamination, but not in the quantities above. Results between the Instrument Detection Limit (IDL) and the action level are reported as nondetects.

All other quality control criteria for this fraction were met.

Executive Summary

Laboratory performance: The PAH continuing calibration check sample failed high for benzo(a)pyrene. Results for benzo(a)pyrene were flagged "J" for calibration noncompliance. Holding times were exceeded for PAHs in all samples therefore all results are flagged "J" as estimated due to holding time noncompliance. The result for Antimony in sample 43DR00901 is between the Instrument Detection Limit (IDL) and the action level and is reported as a nondetect.

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.

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

CTO096-NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F8427R

SAMPLE NUMBER:	43DR00901	43DR01501		
SAMPLE DATE:	12/15/00	12/15/00	/ /	/ /
LABORATORY ID:	F8427-1R	F8427-2R		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG	UG/KG		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	800	UJ	H	490	UJ	H						
2-METHYLNAPHTHALENE	800	UJ	H	490	UJ	H						
ACENAPHTHENE	1600	UJ	H	980	UJ	H						
ACENAPHTHYLENE	1600	UJ	H	980	UJ	H						
ANTHRACENE	800	UJ	H	490	UJ	H						
BENZO(A)ANTHRACENE	800	UJ	H	490	UJ	H						
BENZO(A)PYRENE	160	UJ	C H	140	J	C H						
BENZO(B)FLUORANTHENE	160	UJ	H	135	J	H						
BENZO(G,H,I)PERYLENE	160	UJ	H	126	J	H						
BENZO(K)FLUORANTHENE	160	UJ	H	94.2	J	HP						
CHRYSENE	800	UJ	H	490	UJ	H						
DIBENZO(A,H)ANTHRACENE	160	UJ	H	98	UJ	H						
FLUORANTHENE	800	UJ	H	243	J	HP						
FLUORENE	800	UJ	H	490	UJ	H						
INDENO(1,2,3-CD)PYRENE	160	UJ	H	160	J	H						
NAPHTHALENE	800	UJ	H	490	UJ	H						
PHENANTHRENE	800	UJ	H	490	UJ	H						
PYRENE	800	UJ	H	214	J	HP						

HOLDING TIME
02/09/01

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/KG	43DR00901	F8427-1R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
MG/KG	43DR01501	F8427-2R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
UG/KG	43DR00901	F8427-1R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47
UG/KG	43DR01501	F8427-2R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47

NAS PENSACOLA

SOIL DATA
Accutest, NJ
SDG: F8427R

SAMPLE NUMBER:	43DR00901			43DR01501			/ /			/ /		
SAMPLE DATE:	12/15/00			12/15/00								
LABORATORY ID:	F8427-1R			F8427-2R								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	MG/KG			MG/KG								
FIELD DUPLICATE OF:												
INORGANICS	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
ANTIMONY	1.4	~~B~~ U	A	40.1								
ARSENIC	1.2			6.7								
BARIUM	188			483								
CALCIUM	6580			8610								
COPPER	108			682								
IRON	17700			75500								
LEAD	251			2120								
NICKEL	29.7			36.6								
POTASSIUM	2530			242	~~B~~							
VANADIUM	60.1			52.3								
ZINC	1060			6380								

F8427R

HOLDING TIME
02/09/01

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/KG	43DR00901	F8427-1R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
MG/KG	43DR01501	F8427-2R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
UG/KG	43DR00901	F8427-1R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47
UG/KG	43DR01501	F8427-2R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47

APPENDIX B

Results as Reported by the Laboratory

ACCUTEST

Report of Analysis

Client Sample ID:	43DR00901		
Lab Sample ID:	F8427-1R	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	EPA 8310 SW846 3550B	**Percent Solids:**	41.9
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA006230.D	1	01/31/01	MRE	01/30/01	OP2650	GAA232
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	1600	ug/kg	
208-96-8	Acenaphthylene	ND	1600	ug/kg	
120-12-7	Anthracene	ND	800	ug/kg	
56-55-3	Benzo(a)anthracene	ND	800	ug/kg	
50-32-8	Benzo(a)pyrene	ND	160	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	160	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	160	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	160	ug/kg	
218-01-9	Chrysene	ND	800	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	160	ug/kg	
206-44-0	Fluoranthene	ND	800	ug/kg	
86-73-7	Fluorene	ND	800	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	160	ug/kg	
91-20-3	Naphthalene	ND	800	ug/kg	
90-12-0	1-Methylnaphthalene	ND	800	ug/kg	
91-57-6	2-Methylnaphthalene	ND	800	ug/kg	
85-01-8	Phenanthrene	ND	800	ug/kg	
129-00-0	Pyrene	ND	800	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		22-130%
92-94-4	p-Terphenyl	90%		53-130%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

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

ACCUTEST

Report of Analysis

Client Sample ID: 43DR00901
Lab Sample ID: F8427-1R
Matrix: SO - Soil
Project: NAS Pensacola

Date Sampled: 12/15/00
Date Received: 12/16/00
Percent Solids: 41.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method
Antimony	1.4 B	12.0	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Arsenic	1.2	1.0	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Barium	188	40.1	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Calcium	6580	1000	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Copper	108	5.0	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Iron	17700	20.1	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Lead	251	20.1	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Nickel	29.7	8.0	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Potassium	2530	1000	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Vanadium	60.1	10.0	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Zinc	1060	4.0	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B

RL = Reporting Limit

ACCUTEST

Report of Analysis

Client Sample ID:	43DR01501		
Lab Sample ID:	F8427-2R	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
Method:	EPA 8310 SW846 3550B	**Percent Solids:**	68.2
Project:	NAS Pensacola		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA006250.D	1	01/31/01	MRE	01/30/01	OP2650	GAA232
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	980	ug/kg	
208-96-8	Acenaphthylene	ND	980	ug/kg	
120-12-7	Anthracene	ND	490	ug/kg	
56-55-3	Benzo(a)anthracene	ND	490	ug/kg	
50-32-8	Benzo(a)pyrene	140	98	ug/kg	
205-99-2	Benzo(b)fluoranthene	135	98	ug/kg	
191-24-2	Benzo(g,h,i)perylene	126	98	ug/kg	
207-08-9	Benzo(k)fluoranthene	94.2	98	ug/kg	J
218-01-9	Chrysene	ND	490	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	98	ug/kg	
206-44-0	Fluoranthene	243	490	ug/kg	J
86-73-7	Fluorene	ND	490	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	160	98	ug/kg	
91-20-3	Naphthalene	ND	490	ug/kg	
90-12-0	1-Methylnaphthalene	ND	490	ug/kg	
91-57-6	2-Methylnaphthalene	ND	490	ug/kg	
85-01-8	Phenanthrene	ND	490	ug/kg	
129-00-0	Pyrene	214	490	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		22-130%
92-94-4	p-Terphenyl	82%		53-130%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

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

ACCUTEST

Report of Analysis

Client Sample ID:	43DR01501		
Lab Sample ID:	F8427-2R	**Date Sampled:**	12/15/00
Matrix:	SO - Soil	**Date Received:**	12/16/00
		Percent Solids:	68.2
Project:	NAS Pensacola		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method
Antimony	40.1	7.9	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Arsenic	6.7	0.65	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Barium	483	26.2	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Calcium	8610	655	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Copper	682	3.3	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Iron	75500	13.1	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Lead	2120	13.1	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Nickel	36.6	5.2	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Potassium	242 B	655	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Vanadium	52.3	6.5	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B
Zinc	6380	2.6	mg/kg	1	01/31/01	02/01/01	JK	SW846 6010B

RL = Reporting Limit

APPENDIX C

Support Documentation

ACCUTEST

Sample Summary

Tetra-Tech, NUS

Job No: F8427R

NAS Pensacola
Project No: Site 43, N0189

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
F8427-1R	12/15/00	11:00 LWS	12/16/00	SO	Soil	43DR00901
F8427-2R	12/15/00	11:15 LWS	12/16/00	SO	Soil	43DR01501

ACCUTEST

CHAIN OF CUSTODY

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Tetra Tech NUS
ADDRESS: 1401 Oven Park Dr.
CITY, STATE, ZIP: Tallahassee FL 32312
SEND REPORT TO: ~~Howard Engler~~
PHONE #: 850-385-9899

FACILITY INFORMATION

PROJECT NAME: Site 43
LOCATION: NAS Pensacola OU1 Drum Sampling
PROJECT NO.: N0189
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	TPH, DRO, GRO	LAB USE ONLY
F8427-1	43DR00901	12-15-00	1100	LWS	SO	2					X	2	
2	43DR01501	12-15-00	1115	LWS	SO	2					X	2	

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

- [x] STANDARD
- [ ] COMMERCIAL "B"
- [x] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

Soil = sample 1501
Cat Litter = (Fullers earth?) = sample 0901

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. Gary W Smith	12-15-00 15:30	1. [illegible] 12/19/00	2.		2.
3.		3.	4.		4.
5.		5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 2.7 C

Quantitation Report (QT Reviewed)

Signal #1 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1B.CH Vial: 1
Signal #2 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1A.CH
Acq On : 31-Jan-2001, 10:28:09 Operator: MIKEE
Sample : CC194-20 Inst : DAD
Misc : op2650,gaa232,soil,,,5, Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jan 31 10:45 2001 Quant Results File: 8310_46.RES

Quant Method : C:\HPCHEM\1\METHODS\8310_46.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Wed Jan 31 10:10:18 2001
Response via : Initial Calibration
DataAcq Meth : 8310_46.M

Volume Inj. : 15ul
Signal #1 Phase : Pinnacle PAH Signal #2 Phase: Pinnacle PAH
Signal #1 Info : DAD 270nm Signal #2 Info : DAD 254nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppm	ppm
	System Monitoring Compounds						
8) S	O-Terphenyl	8.35	8.35	6969639	11741904	20.989	20.939
	Spiked Amount 20.000 Range 22 - 130 Recovery =					104.95%	104.70%
12) S	P-Terphenyl	10.38	10.38	28887138	15067178	21.412	22.354
	Spiked Amount 20.000 Range 53 - 130 Recovery =					107.06%	111.77%
	Target Compounds						
1)	Naphthalene	5.99	5.99	9251530	5879985	21.423	22.018
2)	Acenaphthylene	6.54	6.54	3584309	3708722	21.302	21.295
3)	1-Methyl Naphtha	6.88	6.88	7963978	3600369	21.488	22.472
4)	2-Methyl Naphtha	7.08	7.08	7834154	4937222	21.426	22.136
5)	Acenaphthene	7.29	7.29	6114404	2192220	21.640	22.042
6)	Fluorene	7.48	7.48	20807266	25408623	21.165	21.933
7)	Phenanthrene	8.05	8.05	18322222	57808750	21.038	19.939
9)	Anthracene	8.61	8.62	1647182	75773858	20.257	18.220
10)	Fluoranthene	9.15	9.15	16396570	15518767	21.642	21.236
11)	Pyrene	9.62	9.62	23251241	15530526	21.071	22.577
13)	Benzo(a)Anthrace	10.89	10.89	22899373	17017010	10.866	10.770
14)	Chrysene	11.26	11.26	26228454	26031223	10.423	11.245
15)	Benzo(b)Fluorant	12.26	12.26	11865355	17471984	10.746	10.749
16)	Benzo(k)Fluorant	12.81	12.81	7221557	12354265	10.702	10.160
17)	Benzo(a) Pyrene	13.40	13.40	14166458	15655660	11.703	11.815 High
18)	Dibenzo(a,h)anth	14.19	14.19	11324187	3690478	10.833	11.120
19)	Benzo(g,h,i) Per	14.97	14.97	7804220	5805803	10.802	10.940
20)	Indeno(1,2,3-cd)	15.52	15.52	5884680	12353987	10.573	10.129

MPL

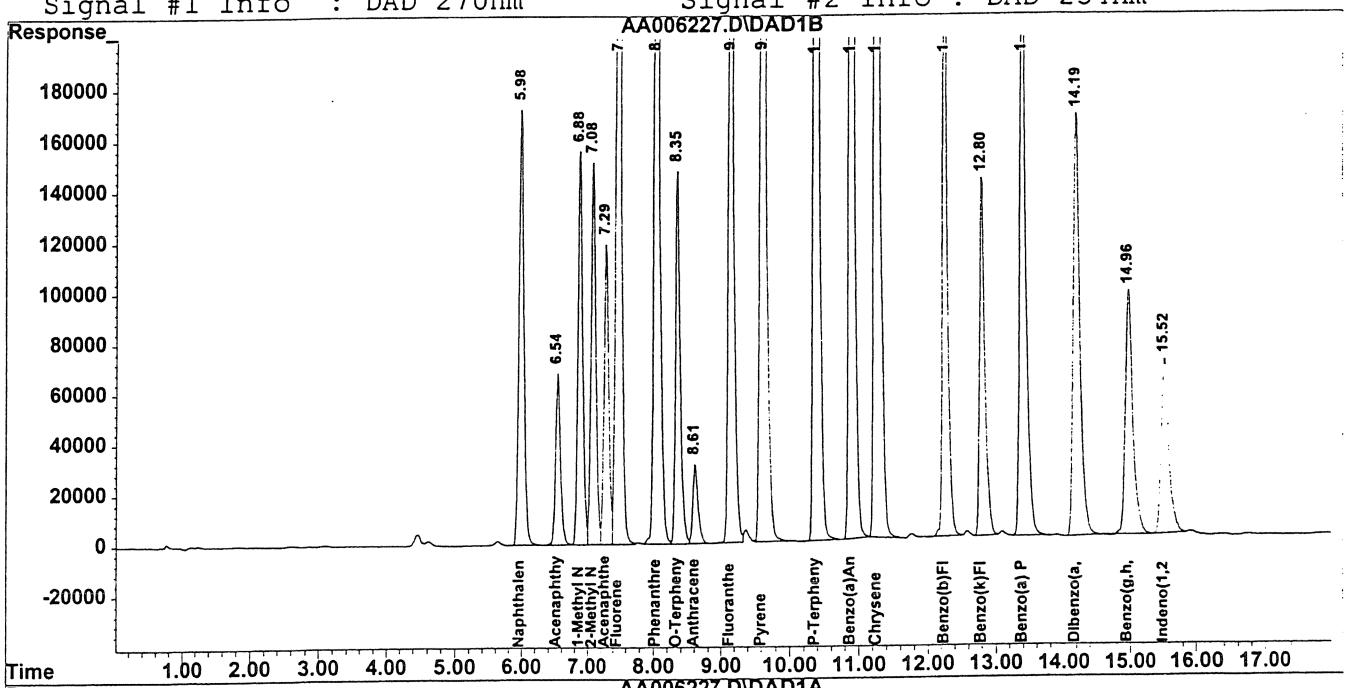
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

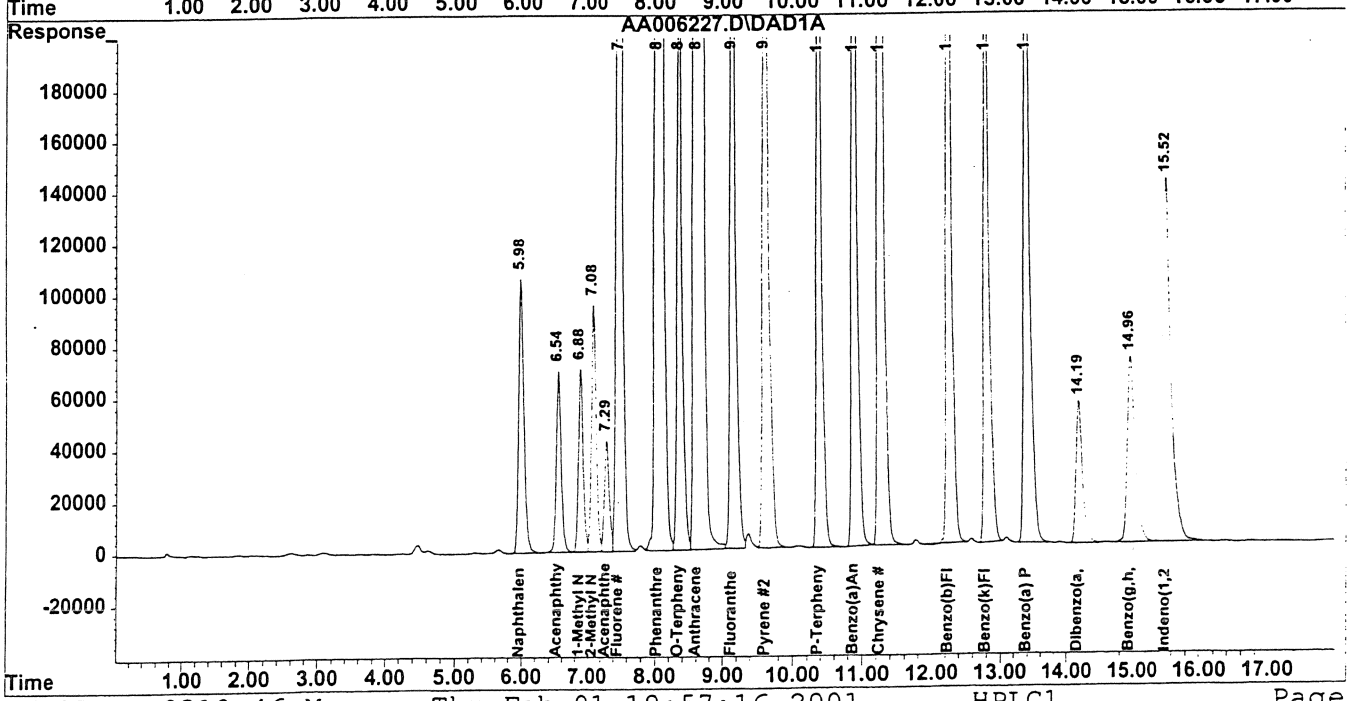
Quantitation Report

Signal #1 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1B.CH Vial: 1
Signal #2 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1A.CH
Acq On : 31-Jan-2001, 10:28:09 Operator: MIKEE
Sample : CC194-20 Inst : DAD
Misc : op2650,gaa232,soil,,,5, Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jan 31 10:45 2001 Quant Results File: 8310_46.RES

Quant Method : C:\HPCHEM\1\METHODS\8310_46.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Wed Jan 31 10:10:18 2001
Response via : Multiple Level Calibration
DataAcq Meth : 8310_46.M

Volume Inj. : 15ul
Signal #1 Phase : Pinnacle PAH Signal #2 Phase: Pinnacle PAH
Signal #1 Info : DAD 270nm Signal #2 Info : DAD 254nm





Evaluate Continuing Calibration Report

Signal #1 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1B.CH Vial: 1
Signal #2 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1A.CH
Acq On : 31-Jan-2001, 10:28:09 Operator: MIKEE
Sample : CC194-20 Inst : DAD
Misc : op2650,gaa232,soil,,,5, Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8310_46.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Thu Feb 01 09:29:31 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1		Naphthalene	20.000	21.423	-7.1	105	0.00
2		Acenaphthylene	20.000	21.302	-6.5	103	0.00
3		1-Methyl Naphthalene	20.000	21.488	-7.4	105	0.00
4		2-Methyl Naphthalene	20.000	21.426	-7.1	104	0.00
5		Acenaphthene	20.000	21.640	-8.2	105	0.00
6		Fluorene	20.000	21.165	-5.8	102	0.00
7		Phenanthrene	20.000	21.038	-5.2	102	0.00
8	S	O-Terphenyl	20.000	20.989	-4.9	102	0.01
9		Anthracene	20.000	20.257	-1.3	100	0.00
10		Fluoranthene	20.000	21.642	-8.2	104	0.00
11		Pyrene	20.000	21.071	-5.4	103	0.00
12	S	P-Terphenyl	20.000	21.412	-7.1	104	0.00
13		Benzo(a)Anthracene	10.000	10.866	-8.7	105	0.00
14		Chrysene	10.000	10.423	-4.2	104	0.00
15		Benzo(b)Fluoranthene	10.000	10.746	-7.5	103	0.00
16		Benzo(k)Fluoranthene	10.000	10.702	-7.0	104	0.00
17		Benzo(a) Pyrene	10.000	11.703	-17.0#	112	0.00
18		Dibenzo(a,h)anthracene	10.000	10.833	-8.3	106	0.00
19		Benzo(g,h,i) Perylene	10.000	10.802	-8.0	105	-0.01
20		Indeno(1,2,3-cd)pyrene	10.000	10.573	-5.7	102	-0.01

Signal #2

1		Naphthalene	20.000	22.018	-10.1	107	0.00
2		Acenaphthylene	20.000	21.295	-6.5	101	0.00
3		1-Methyl Naphthalene	20.000	22.472	-12.4	108	0.00
4		2-Methyl Naphthalene	20.000	22.136	-10.7	108	0.00
5		Acenaphthene	20.000	22.042	-10.2	108	0.00
6		Fluorene	20.000	21.933	-9.7	106	0.00
7		Phenanthrene	20.000	19.939	0.3	98	0.00
8	S	O-Terphenyl	20.000	20.939	-4.7	102	0.01
9		Anthracene	20.000	18.220	8.9	94	0.00
10		Fluoranthene	20.000	21.236	-6.2	102	0.00
11		Pyrene	20.000	22.577	-12.9	109	0.00
12	S	P-Terphenyl	20.000	22.354	-11.8	109	0.00
13		Benzo(a)Anthracene	10.000	10.770	-7.7	104	0.00
14		Chrysene	10.000	11.245	-12.4	109	0.00
15		Benzo(b)Fluoranthene	10.000	10.749	-7.5	104	0.00
16		Benzo(k)Fluoranthene	10.000	10.160	-1.6	98	0.00
17		Benzo(a) Pyrene	10.000	11.815	-18.2#	114	0.00
18		Dibenzo(a,h)anthracene	10.000	11.120	-11.2	108	0.00
19		Benzo(g,h,i) Perylene	10.000	10.940	-9.4	106	0.00
20		Indeno(1,2,3-cd)pyrene	10.000	10.129	-1.3	98	-0.01

artial Sequence: C:\HPCHEM\1\SEQUENCE\0131PAH.S

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA006227	01:01		CC194-20
No	2	2	8310_46	AA006228	02:01		OP2650-BS
No	3	3	8310_46	AA006229	03:01		OP2650-MB
No	4	4	8310_46	AA006230	04:01		F8427-1R
No	5	5	8310_46	AA006231	05:01		F8427-2R
No	6	6	8310_46	AA006232	06:01		F8798-1
No	7	7	8310_46	AA006233	07:01		F8798-2
No	8	8	8310_46	AA006234	08:01		F8798-3
No	9	9	8310_46	AA006235	09:01		F8812-1
No	10	10	8310_46	AA006236	10:01		F8812-2
No	11	11	8310_46	AA006237	11:01		F8812-3
No	12	12	8310_46	AA006238	12:01		CC194-10
No	13	13	8310_46	AA006239	13:01		F8812-4
No	14	14	8310_46	AA006240	14:01		F8812-5,4
No	15	15	8310_46	AA006241	15:01		F8812-6
No	16	16	8310_46	AA006242	16:01		F8812-7,4
No	17	17	8310_46	AA006243	17:01		OP2650-MS,4
No	18	18	8310_46	AA006244	18:01		OP2650-MSD,4
No	19	19	8310_46	AA006245	19:01		F8812-8
No	20	20	8310_46	AA006246	20:01		F8812-9
No	21	21	8310_46	AA006247	21:01		F8812-10
No	22	2	8310_46	AA006248	22:01		F8812-17,4
No	23	1	8310_46	AA006249	23:01		CC194-20
No	24	3	8310_46	AA006250	24:01		F8427-2R
No	25	4	8310_46	AA006251	25:01		F8812-1
No	26	5	8310_46	AA006252	26:01		F8812-2,4
No	27	6	8310_46	AA006253	27:01		F8812-3
No	28	1	8310_46	AA006254	28:01		ECC194-20

HPLC ANALYSIS LOG

DATE: 01/31/01
COLUMN TYPE: Pin. PAH
INSTRUMENT: HPLC 1

METHODS: 8310
METHOD FILE: 8310-46
CALIB. DATE: 12-4-00

ANALYST: M. Eger
RUN BATCH: GAA 232
AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	MATRIX	OP BATCH	INITIAL AMOUNT	FINAL VOLUME	DILUTION FACTOR	RUN OK	COMMENTS
AM006227	1	CC194-20	8310	S981				2X	✓	high for B(A)P
28	2	OP2650-BS		S	OP2650	30g	5	1X	✓	✓
29	3	⊥ -MB							✓	✓
30	4	F8427-1R							✓	ND (OOH)
31	5	⊥ -2R							✓	✓ RR For B(A)P
32	6	F8498-1							✓	ND
33	7	⊥ -2							✓	ND
34	8	⊥ -3							✓	ND
35	9	F8812-1							X	RR for B(A)P
36	10	⊥ -2							X	RR @ 4X
37	11	⊥ -3							X	RR for B(A)P
38	12	CC194-10		S981				4X	✓	PASSED
39	13	F8812-4		S	OP2650	30g	5	1X	✓	BDL
40	14	-5					10	4X	✓	✓
41	15	-6					5	1X	✓	ND
42	16	-7						4X	✓	✓ Benzo(k) Sig #2
43	17	OP2650-MS						4X	✓	✓
44	18	⊥ -MSD						4X	✓	✓
45	19	F8812-8						1X	✓	✓
46	20	-9							✓	✓
47	21	-10							✓	ND
48	2	-17					10	4X	✓	✓ Benzo(k) Sig #2
49	1	CC194-20		S981					✓	PASSED
50	3	F8427-2R		S	OP2650	30g	5	1X	✓	✓ (OOH)
51	4	F8812-1					5		✓	✓

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: M. Eger.

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DATE: 01/31/01	METHODS: 8310	ANALYST: M. Zgu
COLUMN TYPE: Pin, PAH	METHOD FILE: 8310-46	RUN BATCH: GAA 232
INSTRUMENT: HPLC 1	CALIB. DATE: 12-4-00	AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	MATRIX	OP BATCH	INITIAL AMOUNT	FINAL VOLUME	DILUTION FACTOR	RUN OK	COMMENTS
AA00 6252	5	F8812-2	8310	S	op2650	30g	5	4x	✓	✓
53	6	F8812-3	↓	↓	↓	↓	↓	1x	✓	1mW, 2mW & 2x
54	1	ECC194-20	↓	S981				2x	✓	passed

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: M. Zgu

Partial Sequence: C:\HPCHEM\1\SEQUENCE\1204PAH.S

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA005557	01:01		L6 PAH S939
No	2	2	8310_46	AA005558	02:01		L1 PAH
No	3	3	8310_46	AA005559	03:01		L2 PAH
No	4	4	8310_46	AA005560	04:01		L3 PAH
No	5	5	8310_46	AA005561	05:01		L4 PAH
No	6	6	8310_46	AA005562	06:01		L5 PAH
No	7	7	8310_46	AA005563	07:01		L6 PAH
No	8	8	8310_46	AA005564	08:01		PAH ICV S940
No	9	9	8310_46	AA005565	09:01		OP2376-BS2
No	10	10	8310_46	AA005566	10:01		OP2376-MB2
No	11	11	8310_46	AA005567	11:01		F8241-2,100RE
No	12	12	8310_46	AA005568	12:01		F8241-4,4RE
No	13	13	8310_46	AA005569	13:01		F8241-6,20RE
No	14	14	8310_46	AA005570	14:01		F8241-8,30
No	15	15	8310_46	AA005571	15:01		F8240-1RE
No	16	16	8310_46	AA005572	16:01		F8240-2
No	17	17	8310_46	AA005573	17:01		F8240-3RE
No	18	5	8310_46	AA005574	18:01		L4 PAH
No	19	18	8310_46	AA005575	19:01		F8240-4RE
No	20	19	8310_46	AA005576	20:01		F8240-5RE
No	21	20	8310_46	AA005577	21:01		F8240-6RE
No	22	21	8310_46	AA005578	22:01		F8240-7RE
No	23	22	8310_46	AA005579	23:01		F8240-8,2RE
No	24	23	8310_46	AA005580	24:01		F8240-9RE
No	25	24	8310_46	AA005581	25:01		F8240-10RE
No	26	5	8310_46	AA005582	26:01		L4 CCV

HPLC ANALYSIS LOG

DATE: 12-4-00	METHODS: 8310	ANALYST: M. Egan
COLUMN TYPE: Pin. PAH	METHOD FILE: 8310-46	RUN BATCH: GAA194
INSTRUMENT: HPLC 1	CALIB. DATE: 12-4-00	AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	MATRIX	OP BATCH	INITIAL AMOUNT	FINAL VOLUME	DILUTION FACTOR	RUN OK	COMMENTS
AA005557	1	L6 PAH	8310	S939				1X	✓	
58	2	L1						100X	✓	
59	3	L2						20X	✓	
60	4	L3						4X	✓	
61	5	L4						2X	✓	
62	6	L5						1.5:2	✓	
63	7	L6						1X	✓	
64	8	PAH ICV		S940				1X	✓	PASSED
65	9	OP 2376-1352		~~S~~ W	OP2376	1000	1	1X	✓	✓
66	10	-1482				1000		1X	✓	✓
67	11	F8241-2 RE				980		100X	✓	✓
68	12	-4 RE				980		4X	✓	✓
69	13	-6 RE				980	5	~~20X~~ 4X	✓	(20X) ✓
70	14	-8				990	1	30X	✓	FROM 1st Batch
71	15	F8240-1 RE				970		1X	✓	✓
72	16	-2				980			✓	From 1st Batch
73	17	-3 RE				980			✓	
74	5	CCV		S939				2X	✓	PASSED
75	18	F8240-4 RE		W		980		1X	✓	✓
76	19	-5 RE				980			✓	✓
77	20	-6 RE				970			✓	✓
78	21	-7 RE				950			✓	✓
79	22	-8 RE				980		2X	✓	✓
80	23	-9 RE				1000		1X	✓	
81	24	-10 RE				960			✓	ND

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: M. Egan

HPLC ANALYSIS LOG

DATE: 12-4-00	METHODS: 8310	ANALYST: M. Eger
COLUMN TYPE: Pin. PAH	METHOD FILE: 8310-46	RUN BATCH: GAA / 94
INSTRUMENT: HPLC 1	CALIB. DATE: 12-4-00	AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	MATRIX	OP BATCH	INITIAL AMOUNT	FINAL VOLUME	DILUTION FACTOR	RUN OK	COMMENTS
AA005583	5	L4 CCV	8310	SS39				2x	✓	PASSED

M. Eger

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: M. Eger

SOLID SAMPLE PREP REPORT

Date: 01/30/01 Method*: 8310 Batch#: OP2650

Batch Started On: 01/30/01 Prior Number Of Samples in Batch : Ø Analyst: cl

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 2650 MB	1	30.0	0.5 mL	-	5.0	
OP 2650 BS	1	↓	↓	0.5 mL	↓	
F8427-1	2	↓	↓	↓	↓	
-2	2	↓	↓	↓	↓	
F8798-1	1	↓	↓	↓	↓	
-2	2	↓	↓	↓	↓	
-3	1	↓	↓	↓	↓	
F8812-1	1	↓	↓	↓	↓	
-2	1	↓	↓	↓	↓	
-3	1	↓	↓	↓	↓	
-4	1	↓	↓	↓	↓	
-5	1	↓	↓	↓	10.0	
-6	1	↓	↓	↓	5.0	
-7	3	↓	↓	↓	↓	MS/MSD
-8	1	↓	↓	↓	↓	
-9	1	↓	↓	↓	↓	
-10	4	↓	↓	↓	↓	
-17	3	↓	↓	↓	10.0	
					cl 01/30/01	
OP 2650 MS	3	30.0	0.5 mL	0.5 mL	5.0	F8812-7
OP 2650 MSD	3	↓	↓	↓	↓	↓
OP DUP						

Surrogate ID: E763 D Conc: 200 ppm Exp. Date: 5-13-01 Bath Temp.: 72°C

witness DP

Spike ID: E766 Conc: 200/100 ppm Exp. Date: 05/13/01 Bath Temp2.: -

CH2CL2 Lot#: CA118 Hexane Lot#: - Na2SO4 Lot#: T44630

Acetonitrile Reagent #: 007396 Reagent #: - Reagent #: -

Comments:

Relinquished By: [signature] Date: 01/30/01

Accepted By: [signature] Date: 1-31-01

...for OW846 methods is 3550B for soils and 3580A for oils.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC
QC Limits: result < RL

Date Analyzed: 02/01/01
Run ID: MA2196

Methods: SW846 6010B
Units: ug/l

Metal	RL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	9.44	anr							
Antimony	5.0	2.56	1.7	<5.0	1.9	<5.0	0.40	<5.0	2.0	<5.0
Arsenic	10	3.15	0.83	<10	-1.1	<10	0.63	<10	0.19	<10
Barium	200	.94	0.38	<200	0.060	<200	0.010	<200	0.080	<200
Beryllium	5.0	.22	anr							
Cadmium	5.0	.27	anr							
Calcium	1000	10.2	9.3	<1000	2.1	<1000	14.9	<1000	4.2	<1000
Chromium	10	.35	anr							
Cobalt	50	.55	anr							
Copper	25	.71	0.75	<25	-0.040	<25	-0.030	<25	-0.28	<25
Iron	300	9.02	3.6	<300	3.7	<300	8.5	<300	6.0	<300
Lead	5.0	1.16	2.7	<5.0	0.93	<5.0	0.96	<5.0	1.1	<5.0
Magnesium	5000	25.5	anr							
Manganese	15	.26	anr							
Molybdenum	50	1.01								
Nickel	40	.8	0.12	<40	-0.29	<40	0.050	<40	0.0	<40
Potassium	5000	49	387	<5000	344	<5000	339	<5000	377	<5000
Selenium	10	2.5	anr							
Silver	10	.59	anr							
Sodium	5000	173	anr							
Thallium	10	2.07	anr							
Tin	50	1.03								
Vanadium	50	.58	0.63	<50	0.080	<50	0.040	<50	-0.060	<50
Zinc	20	.36	1.6	<20	0.31	<20	0.020	<20	0.45	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC
QC Limits: result < RL

Date Analyzed: 02/01/01
Run ID: MA2196

Methods: SW846 6010B
Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	9.44	anr							
Antimony	5.0	2.56	1.3	<5.0	2.4	<5.0	4.5	<5.0	5.4	<6.0<
Arsenic	10	3.15	1.7	<10	0.98	<10	0.40	<10	1.1	<10
Barium	200	.94	0.060	<200	0.18	<200	0.27	<200	0.36	<200
Beryllium	5.0	.22	anr							
Cadmium	5.0	.27	anr							
Calcium	1000	10.2	7.3	<1000	6.3	<1000	7.8	<1000	9.0	<1000
Chromium	10	.35	anr							
Cobalt	50	.55	anr							
Copper	25	.71	-0.12	<25	-0.16	<25	0.41	<25	0.41	<25
Iron	300	9.02	4.5	<300	24.9	<300	26.5	<300	32.4	<300<
Lead	5.0	1.16	0.96	<5.0	1.8	<5.0	1.3	<5.0	1.1	<5.0
Magnesium	5000	25.5	anr							
Manganese	15	.26	anr							
Molybdenum	50	1.01								
Nickel	40	.8	1.4	<40	3.5	<40	5.3	<40<	5.8	<40<
Potassium	5000	49	372	<5000	355	<5000	387	<5000	420	<5000
Selenium	10	2.5	anr							
Silver	10	.59	anr							
Sodium	5000	173	anr							
Thallium	10	2.07	anr							
Tin	50	1.03								
Vanadium	50	.58	-0.010	<50	0.13	<50	0.32	<50	0.62	<50
Zinc	20	.36	0.20	<20	0.33	<20	0.18	<20	0.34	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

QC Batch ID: MP3301
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 01/31/01

Metal	RL	IDL	MB raw	final
Aluminum	20.0	.94		
Antimony	6.0	.26	0.10	<6.0
Arsenic	0.50	.32	0.01	<0.50
Barium	20.0	.09	0.07	<20.0
Beryllium	0.50	.02		
Cadmium	0.40	.03	anr	
Calcium	500	1	7.1	<500
Chromium	1.0	.04	anr	
Cobalt	5.0	.06		
Copper	2.5	.07	0.06	<2.5
Iron	10.0	.9	2.8	<10.0
Lead	10.0	.12	0.17	<10.0
Magnesium	500	2.6		
Manganese	1.5	.03		
Molybdenum	5.0	.1		
Nickel	4.0	.08	0.07	<4.0
Potassium	500	4.9	43.0	<500
Selenium	10.0	.25		
Silver	1.0	.06		
Sodium	500	17.3		
Thallium	1.0	.21		
Tin	5.0	.1		
Vanadium	5.0	.06	0.03	<5.0
Zinc	2.0	.04	0.22	<2.0

Associated samples MP3301: F8427-1R, F8427-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC Date Analyzed: 02/01/01 Methods: SW846 6010B
Analyst: JK Run ID: MA2196
Parameters: Sb,As,Ba,Ca,Cu,Fe,Pb,Ni,K,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:08	MA2196-ICV1	1		
09:13	MA2196-ICB1	1		
09:40	MA2196-CCV1	1		
09:46	MA2196-CCB1	1		
09:52	MA2196-CRI1	1		
09:57	MA2196-CRIA1	1		
10:04	MA2196-ICSA1	1		
10:10	MA2196-ICSAB1	1		
10:15	MA2196-CCV2	1		
10:20	MA2196-CCB2	1		
10:26	MP3301-MB1	1		
10:32	MP3301-B1	1		
10:37	MP3301-D1	1		
10:42	F8427-1R	1		
10:48	MP3301-S1	1		
11:06	MP3301-SD1	5		
11:12	F8427-2R	1		
11:17	ZZZZZZ	1		
11:26	MP3299-MB1	1		
11:34	MA2196-CCV3	1		
11:40	MA2196-CCB3	1		
11:48	MP3299-B1	1		
11:54	MP3299-D1	1		
11:59	F8834-1A	1		(sample used for QC only; not part of login F8427R)
12:04	MP3299-S1	1		
12:09	MP3299-S2	1		
12:15	MP3299-SD1	5		
12:20	ZZZZZZ	1		
12:25	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:41	MP3299-SD1	5		
12:46	MA2196-CCV4	1		
12:52	MA2196-CCB4	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC Date Analyzed: 02/01/01 Methods: SW846 6010B
Analyst: JK Run ID: MA2196
Parameters: Sb,As,Ba,Ca,Cu,Fe,Pb,Ni,K,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:58	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:47	MA2196-CCV5	1		
13:53	MA2196-CCB5	1		
14:02	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:28	ZZZZZZ	1		
14:33	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:44	ZZZZZZ	1		
14:49	MA2196-CCV6	1		
14:54	MA2196-CCB6	1		
15:00	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:15	ZZZZZZ	1		
15:21	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:31	ZZZZZZ	1		
15:36	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:47	MA2196-CCV7	1		
15:52	MA2196-CCB7	1		

Refer to raw data for calibration curve and standards.

Metals Digestion Log: Soil

MP3301

:thod Of Digestion: SW846 3050B Temp: 95 Thermometer ID#: 46

	HNO_3	HCl	H_2O_2
ided:	—	—	—
ig:	FISHER	FISHER	FISHER
t #:	1100041	419100	983019

mple #	Wt	Final Vol	% Solid	Digestion Factor	Date	Comments
F8427-1R-DUP	1.013	100			1-31-01	
F8427-1R-MS	1.09					2mL ACC 219 + 1mL CN6348 + .25mL ACC108
-1RMSD	1.15					SAME AS MS
F8427-1R	1.19					
-2R	1.12					
F8835-1	1.10					
F8840-1	1.15					
-2	1.21					
-3	1.07					
-4	1.12					
-5	1.00					
-6	1.16					
-7	1.06					
-8	1.13					
F8843-1	1.01					
-2	.97					
-3	1.07					
-4	1.14					
-5	1.01					
-6	1.04					
-7	1.21					
-8, -9	1.08/1.03					
LB/SB						
LB/SB						SAME AS MS

nalyst's Signature: [signature] Date: 1-31-01

C Review: _____ Date: _____