FORSCOM

Aboveground Storage Tank Removal Report

3d Inf Div (Mech)

PDO Yard
Aboveground Storage Tanks
3rd Infantry Division
Hunter Army Airfield
Savannah, Georgia

November 1998

Prepared for:
HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM
Oak Ridge, Tennessee 37831-7606
Managed by
LOCKHEED MARTIN ENERGY SYSTEMS, INC.
For the
U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-84OR21400

Prepared by:
Earth Tech, Inc.
800 Oak Ridge Turnpike, Suite C-100
Oak Ridge, Tennessee 37830

PDO YARD
ABOVEGROUND STORAGE TANKS
HUNTER ARMY AIRFIELD
SAVANNAH, GEORGIA

FINAL
ABOVEGROUND STORAGE TANK
REMOVAL REPORT

NOVEMBER 1998

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TAB 1
FIELD REPORT

FIELD REPORT: PDO Yard AST Removal

1. Introduction

This Field Report addresses work conducted by Earth Tech, Inc. (Earth Tech) to remove three aboveground storage tanks (ASTs) at Hunter Army Airfield in Savannah, Georgia on June 13-23, 1998. One of the tanks stored off-spec JP-8 (jet propellant #8) fuel, while the other two stored used oil. Since the tanks were aboveground, they were not regulated by the State of Georgia Department of Natural Resources. The site where these ASTs were located is an area being addressed under a Consent Order issued by the Georgia Environmental Protection Division (February 1994).

2. Description of Activities

On June 13-23, 1998, three ASTs located at the PDO (Property Disposal Office) Yard were removed. A description of each tank, its location, and method of closure is presented in Table 1.

After the tanks were removed, soil with visual contamination was removed from within the bermed area. Excavation of soil was taken to a depth of three feet, with the exception of a 15 × 15 foot area in the northeast corner where the excavation was taken to a depth of 4.2 feet. Approximately 450 cubic yards of soil was generated during excavation. The soil was stockpiled near the golf course at what is now the bioremediation cell area. During excavation of the northeast corner, groundwater was encountered and was noted to have a sheen on its surface.

After overexcavation, the soil and groundwater were sampled. Eight soil samples were taken from undisturbed soil approximately six inches below the excavation area. A water sample was collected from the area in the northeast corner that was excavated to groundwater. Samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and RCRA metals.

After the tanks were removed, they were cleaned, cut into sections, and then disposed of at a metal recycling center. Documentation for the disposal of the tanks is included in Tab 2 of this report.

A site map is located in Tab 3 of this report.

Photodocumentation of the site activities is located in Tab 4 of this report.

Field closure forms are located in Tab 5 of this report.

Analytical data are located in Tab 6 of this report.

Table 1. Description of Tanks

Location	UST/AST	Capacity (gallons)	Fuel Type	Tank Construction	Closure Method	Closure Date
PDO Yard	AST	20,000	off spec JP-8	single walled steel	removed and cut up	7/13/98
PDO Yard	AST	20,000	used oil	single walled steel	removed and cut up	7/13/98
PDO Yard	AST	18,000	used oil	single walled steel	removed and cut up	7/13/98

AST = aboveground storage tank
JP-8 = jet propellant number 8
UST = underground storage tank

3. Sample Screening and Analytical Results

Table 2 presents all results from soil screening and information pertaining to the soil and groundwater sampling. The table includes screening results, if available, sample type, sample collection depth, and sample name. The sample name corresponds to the analytical results summarized in Tables 3 (soil) and 4 (groundwater), and the analytical data in Tab 6.

Table 2. Screening Results and Sampling Information

Screening Results (ppm)	Screening Depth (feet bgs)	Sample Type	Sample Collection Depth (feet bgs)	Sample Name
NA	NA	soil	3.5	PDO-1
26	3	soil	3.5	PDO-2
31	3	soil	3.5	PDO-3
NA	NA	soil	3.5	PDO-4
83	0-2	soil	3.5	PDO-5
NA	NA	soil	3.5	PDO-6
NA	NA	soil	3.5	PDO-7
35	3	soil	3.5	PDO-8
176 and 240	0-1 and 4.2	water	4.2	PDO-9-GW

bgs = below ground surface
NA = not applicable
ppm = parts per million

Table 3. Analytical Results for Soil

	PDO-1		PDO-2		PDO-3		PDO-4		PDO-5		PDO-6		PDO-7		PDO-8	
	Results	Qualifiers	Results	Qualifiers	Results	Qualifiers	Results	Qualifiers	Results	Qualifiers	Results	Qualifiers	Results	Qualifiers	Results	Qualifiers
VOLATILE ORGANIC COMPOUNDS																
METHOD 8270, µg/kg																
METHYLENE CHLORIDE	5	J	6	J	5	U	5	U	4	J	6	U	5	U	5	U
NAPHTHALENE	6	U	6	U	5	U	78		5	U	6	U	5	U	5	U
SEMIVOLATILE ORGANIC COMPOUNDS																
Method 8270, µg/kg																
FLUORANTHENE	360	U	380	U	360	U	350	U	350	U	71	J	360	U	350	U
PYRENE	360	U	380	U	360	U	350	U	350	U	86	J	360	U	350	U
BENZO(A)ANTHRACENE	360	U	380	U	360	U	350	U	350	U	71	J	360	U	350	U
CHRYSENE	360	U	380	U	360	U	350	U	350	U	76	J	360	U	350	U
BENZO(B)FLUORANTHENE	360	U	380	U	360	U	350	U	350	U	84	J	360	U	350	U
BENZO(K)FLUORANTHENE	360	U	380	U	360	U	350	U	350	U	120	J	360	U	350	U
BENZO(A)PYRENE	360	U	380	U	360	U	350	U	350	U	96	J	360	U	350	U
INDENO(1,2,3-CD)PYRENE	360	U	380	U	360	U	350	U	350	U	42	J	360	U	350	U
BENZOIC ACID	1800	U	1800	U	1700	U	1700	U	1700	U	1900	U	1700	U	180	J
BIS 2 ETHYLHEXYL PHTHALATE	360	U	380	U	360	U	82	JB	350	U	52	JB	360	U	43	JB
RCRA METALS																
ICP/HG, mg/kg																
ARSENIC	0.73	B	0.79	B	1.0	B	1.2	B	1.7	B	9.6	B	1.6	B	0.44	B
BARIUM	11.4	*	17.6	*	9.1	*	9.0	*	13.7	*	22.4	*	16.9	*	16.3	*
CADMIUM	0.03	U	0.44	B	0.55	B	0.21	B	0.17	B	0.43	B	0.33	B	0.03	U
CHROMIUM	6.1		6.4		2.4		1.9		5.2		15.8		4.0		5.8	
LEAD	6.2	BN*	93.4	N*	88.4	N*	45.5	N*	33.6	N*	34.8	N*	54.6	N*	6.7	BN*
MERCURY	0.08		0.05		0.10		0.11		0.08		0.05		0.06		0.06	
SELENIUM	0.43	U	0.45	U	0.42	U	0.67	B	0.42	U	1.00	B	0.43	U	0.41	U
SILVER	0.13	U	0.13	U	0.12	U	0.13	U	0.13	B	0.19	B	0.19	B	0.12	U

Only compounds detected in one or more samples are shown

ICP/HG = metals analyzed by inductively coupled plasma; mercury analyzed by cold vapor
mg/kg = milligrams per kilogram
RCRA = Resource Conservation and Recovery Act
µg/kg = micrograms per kilogram

Organic Qualifier Flags:
U = not detected
J = estimated value
B = analyte found in sample and associated blank

Inorganic Qualifier Flags:
U = not detected
B = < the contract-required detection limit, but ≥ the instrument detection limit
N = spike sample recovery not within control limits
* = duplicate analysis not within control limits

Table 4. Analytical Results for Groundwater

	PDO-9-GW	
	Results	Qualifiers
VOLATILE ORGANIC COMPOUNDS		
METHOD 8270,µg/L		
1,2 DICHLOROETHANE	**2**	**J**
BENZENE	**190**	
TOLUENE	**740**	**D**
ETHYL BENZENE	**90**	
CIS-1 2 DICHLOROETHENE	**3**	**J**
M,P XYLENES	**340**	
O XYLENE	**200**	
N-BUTYLBENZENE	**5**	
SEC BUTYL BENZENE	**2**	**J**
4 CHLOROTOLUENE	**4**	**J**
HEXACHLOROBUTADIENE	**1**	**J**
ISOPROPYLBENZENE	**11**	
P-ISOPROPYLTOLUENE	**13**	
NAPHTHALENE	**83**	
N-PROPYLBENZENE	**4**	**J**
1,2,4 TRIMETHLYBENZENE	**190**	
1,3,5 TRIMETHYLBENZENE	**68**	
SEMIVOLATILE ORGANIC COMPOUNDS		
Method 8270, µg/L		
NAPHTHALENE	**2**	**J**
FLUORENE	**2**	**J**
PHENANTHRENE	**4**	**J**
PYRENE	**1**	**J**
PHENOL	**7**	**JB**
BENZYL ALCOHOL	**5**	**J**
2-METHYLPHENOL	**11**	
4-METHYLPHENOL	**16**	
2,4-DIMETHYLPHENOL	**10**	
2 METHYLNAPHTHALENE	**31**	
DI-N BUTYL PHTHALATE	**2**	**JB**
BIS 2 ETHYLHEXYL PHTHALATE	**20**	
Note: SVOC analyses reported are from the sample PDO-9-GWRE, a re-extraction run. Sample was re-extracted due to surrogates outside QC limits.		
The reported concentration for toluene is from the diluted sample. All other analyses are from the initial (nondiluted) run.		
Only compounds detected in the sample are shown.		

QC = quality control
SVOC = semivolatile organic compound
µg/L = micrograms per liter

Organic Qualifier Flags:
U = not detected
J = estimated value
B = analyte found in sample and associated blank
D = compound identified in an analysis at a secondary dilution factor

Table 4. Analytical Results for Groundwater (continued)

RCRA METALS		
ICP/HG, mg/L		
ARSENIC	**35.0**	**B**
BARIUM	**784**	
CADMIUM	**2.5**	**B**
CHROMIUM	**257**	
LEAD	**936**	
MERCURY	**3.3**	**N***
SELENIUM	**8.4**	**B**
SILVER	**1.2**	**U**
Note: SVOC analyses reported are from the sample PDO-9-GWRE, a re-extraction run. Sample was re-extracted due to surrogates outside QC limits.		
The reported concentration for toluene is from the diluted sample. All other analyses are from the initial (nondiluted) run.		
Only compounds detected in the sample are shown.		

ICP/HG = metals analyzed by inductively coupled plasma; mercury analyzed by cold vapor
QC = quality control
RCRA = Resource Conservation and Recovery Act
SVOC = semivolatile organic compound
µg/L = micrograms per liter

Inorganic Qualifier Flags:
U = not detected
B = < the contract-required detection limit, but
≥ the instrument detection limit
N = spike sample recovery not within control limits
* = duplicate analysis not within control limits

4. Conclusions and Recommendations

Three ASTs were removed and the soil within the bermed area was excavated based on the presence of visual contamination and the recommendations/guidance of the RCRA Compliance Unit, GA EPD. Samples collected following the excavation indicate that low concentrations of polynuclear aromatic hydrocarbons are present in the soil at concentrations ranging from 42 to 120 parts per billion. One portion of the area was excavated until groundwater was encountered. The groundwater in this area had a visible sheen and the groundwater sample collected from the area shows elevated levels of BTEX and other volatile organic compounds as well as elevated concentrations of lead and chromium. The groundwater in this area is known to contain levels of VOCs and is being investigated under a separate project. Recommendations for further work will be developed as part of the RCRA Facility Investigation being conducted by Metcalf and Eddy.

TAB 2
CERTIFICATES OF TANK DESTRUCTION

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY

800 Oak Ridge Turnpike
Suite C-100
Oak Ridge, Tennessee 37830
(423)483-9404 FAX (423)481-3834

Certificate of Tank Destruction

This certificate is issued by Earth Tech to:

Fort Stewart Department of Public Works

For the documentation of tank destruction as identified below:

PDO Yard, Hunter Army Airfield
UST site name

Tank Type: X Aboveground Storage Tank ____ Underground Storage Tank

Tank Capacity/Size: 18,000 gallons Tank Registration (if known) NA

Tank was:

- Cleaned and decontaminated on (date): July 14, 1998
- Removed from site on (date): July 17, 1998
- Received by (company and/or person's name) Savannah Steel

Procedures for tank destruction were performed in accordance with all federal, state, and local requirements.

Earth Tech, Inc.

26682
Earth Tech's job number

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY

800 Oak Ridge Turnpike
Suite C-100
Oak Ridge, Tennessee 37830
(423)483-9404 FAX (423)481-3834

Certificate of Tank Destruction

This certificate is issued by Earth Tech to:

Fort Stewart Department of Public Works

For the documentation of tank destruction as identified below:

PDO Yard, Hunter Army Airfield
UST site name

Tank Type: __X__ Aboveground Storage Tank ____ Underground Storage Tank

Tank Capacity/Size: 20,000 gallons Tank Registration (if known) NA

Tank was:

- Cleaned and decontaminated on (date): July 15, 1998
- Removed from site on (date): July 17, 1998
- Received by (company and/or person's name) Savannah Steel

Procedures for tank destruction were performed in accordance with all federal, state, and local requirements.

Earth Tech, Inc.

26682
Earth Tech's job number

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY

800 Oak Ridge Turnpike
Suite C-100
Oak Ridge, Tennessee 37830
(423)483-9404 FAX (423)481-3834

Certificate of Tank Destruction

This certificate is issued by Earth Tech to:

Fort Stewart Department of Public Works

For the documentation of tank destruction as identified below:

PDO Yard, Hunter Army Airfield
UST site name

Tank Type: X Aboveground Storage Tank ____ Underground Storage Tank

Tank Capacity/Size: 20,000 gallons Tank Registration (if known) NA

Tank was:

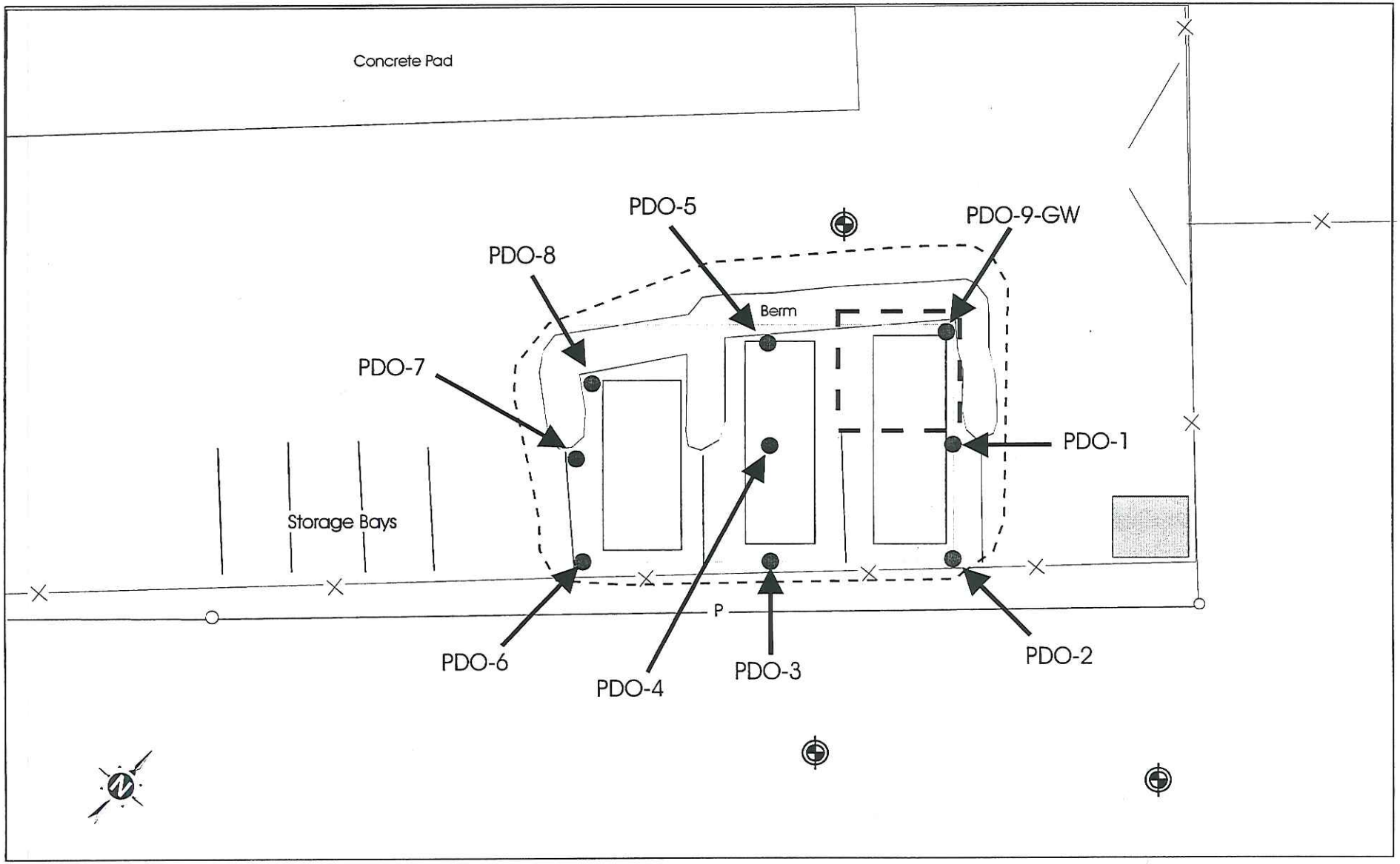
- Cleaned and decontaminated on (date): July 16, 1998
- Removed from site on (date): July 17, 1998
- Received by (company and/or person's name) Savannah Steel

Procedures for tank destruction were performed in accordance with all federal, state, and local requirements.

Earth Tech, Inc.

26682
Earth Tech's job number

TAB 3
SITE MAP



EXPLANATION

Existing Groundwater Monitoring Well

Fence

Power Line

0 10 20 Feet

Infrastructure Well Locations are Approximate

Soil Sample Locations

Area excavated to 4.2 foot

Previous Location of AST

Area excavated to 3 foot

pdoyard2.cdr 11/98

Site Map
PDO Yard
Hunter Army Airfield

Figure 3-1

November, 1998

TAB 4
PHOTODOCUMENTATION

PDO Yard: Tanks at PDO Yard before removal.

PDO Yard: PDO Yard during removal of tanks.

PDO Yard: PDO Yard after removal of tanks.

PDO Yard: PDO Yard after site restoration.

TAB 5
FIELD CLOSURE FORMS

Title: POL Yard	Project No.: 26682 Project Name: Hunter Army Airfield	Page 1 of 13

Excavation/Cutting

Date of Saw Cut:	NA		
Date Cleaned:	7/14/98	Inerted Using:	CO_2 + Nitrogen
Date Backfilled:	7/24+27/98	Date Finished:	7/30/98

Waste Generated

Sludge:	~~0~~	Rinse Water:	~~0~~
Product:	~~0~~	Soil:	~150 yd^3
Amount of Fill:	~~0~~		
Amount of Grout:	NA		
Amount of Concrete:	NA		

Ust Data

Tank ID No.:	NA		
Volume of Tank:	~18,000	Tank Const.:	Single wall steel

Remarks: Tank contained used oil

By: M. Blizzard	Checked By: J. McKee	EARTH TECH A tyco INTERNATIONAL LTD. COMPANY
Date:	Date:	

Title: PDO Yard	Project No.: 26682	Page 12
	Project Name: Hunter Army Airfield	of 13

Excavation/Cutting

Date of Saw Cut:	NA		
Date Cleaned:	7/15/98	Inerted Using:	CO_2 + Nitrogen
Date Backfilled:	7/24+27/98	Date Finished:	7/30/98

Waste Generated

Sludge:	55 gal.	Rinse Water:	~~0~~
Product:	~~0~~	Soil:	~150 yd^3
Amount of Fill:	~~0~~		
Amount of Grout:	NA		
Amount of Concrete:	NA		

Ust Data

Tank ID No.:	NA		
Volume of Tank:	~20,000	Tank Const.:	Single wall steel

Remarks:

Tank contained used oil

By: M. Blizzard	Checked By: J. McKee	EARTH TEC
Date:	Date:	A tyco INTERNATIONAL LTD. COMPANY

Title: POL Yard	Project No.: 26682 Project Name: Hunter Army Airfield	Page # 3 of # 3

Excavation/Cutting

Date of Saw Cut:	NA		
Date Cleaned:	7/16/98	Inerted Using:	CO_2 & Nitrogen
Date Backfilled:	7/24 & 27/98	Date Finished:	7/30/98

Waste Generated

Sludge:	55 gal.	Rinse Water:	~~0~~
Product:	~~0~~	Soil:	~150 yd^3
Amount of Fill:	~~0~~		
Amount of Grout:	NA		
Amount of Concrete:	NA		

Ust Data

Tank ID No.:	NA		
Volume of Tank:	~20,000	Tank Const.:	Single wall Steel

Remarks:
Tank contained off-spec JP-8 fuel

By: M. Blizzard	Checked By: J. McKee	EARTH TEC A tyco INTERNATIONAL LTD. COMPANY
Date:	Date:	

TAB 6
ANALYTICAL DATA

CHAIN OF CUSTODY RECORD

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. Albany • Broken Arrow, Oklahoma 74012-1421
Office: 918-251-2858 • Fax 918-251-2599

TM

SAMPLING FIRM	CLIENT CONTACT	PHONE NUMBE
EARTH TECH	Jean McKee	423-483-9404

P.O. or PROPOSAL NUMBER	PROJECT NAME
	HAAF

SAMPLER: (Signature) Mike Bfrey

ANALYTICAL TESTS REQUESTED

SAMPLE ID	DATE	TIME	COMP	GRAB	LOCATION	MATRIX	NUMBER OF CONTAINERS	VOC 8260	SVOC 8270	RCRA metals						REMARKS
	7-23-98	09-12			PDO-1	Soil	3	X	X	X						
	"	0912			PDO-2	"	3	X	X	X						
	"	0915			PDO-3	"	3	X	X	X						
	"	0916			PDO-4	"	3	X	X	X						
	"	0917			PDO-5	"	3	X	X	X						
	"	0918			PDO-6	"	3	X	X	X						
	"	0920			PDO-7	"	3	X	X	X						
	"	0924			PDO-8	"	3	X	X	X						
	"				PDO-9-GW	H_2O	5	X	X	X						
	"	0948			PDO-MSD	Soil	3	X	X	X						Matrix Spike / MS DUP
	"	0946			PDO-1-DUP	"	3	X	X	X						DUP
	7-9-98	1545			HAAF-PDO-TB-1	H_2O	1	X								
																5.3c, 6.3c, 2.3c, 2.1c
																4.9c, 4.5c

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
Mike Bfrey	7-23	1854	FedEx

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: (Signature)
	7/24/98	930	J. Hedson

REMARKS:

[SR012-1192-03]

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: soil/water) SOIL Lab Sample ID: 34977.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26701.D

Level: low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 Date Analyzed: 07/30/98

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
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	6	U
156-60-5	trans-1 2-DICHLOROETHENE	6	U
13-302-07	m,p-XYLENES	6	U
95-47-6	o-XYLENE	6	U
106-93-4	1 2-DIBROMOETHANE	6	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	6	U
96-18-4	1 2 3-TRICHLOROPROPANE	6	U
75-71-8	DICHLORODIFLUOROMETHANE	6	U
75-69-4	TRICHLOROFLUOROMETHANE	6	U
74-95-3	DIBROMOMETHANE	6	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26701.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 Date Analyzed: 07/30/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	6	U
108-86-1	BROMOBENZENE	6	U
104-51-8	n-BUTYLBENZENE	6	U
98-06-6	tert-BUTYLBENZENE	6	U
135-98-8	sec-BUTYLBENZENE	6	U
95-49-8	2-CHLOROTOLUENE	6	U
106-43-4	4-CHLOROTOLUENE	6	U
95-50-1	1 2-DICHLOROBENZENE	6	U
541-73-1	1 3-DICHLOROBENZENE	6	U
106-46-7	1 4-DICHLOROBENZENE	6	U
142-28-9	1 3-DICHLOROPROPANE	6	U
594-20-7	2 2-DICHLOROPROPANE	6	U
563-58-6	1 1-DICHLOROPROPENE	6	U
87-68-3	HEXACHLOROBUTADIENE	6	U
98-82-8	ISOPROPYLBENZENE	6	U
99-87-6	p-ISOPROPYLTOLUENE	6	U
91-20-3	NAPHTHALENE	6	U
103-65-1	n-PROPYLBENZENE	6	U
87-61-6	1 2 3-TRICHLOROBENZENE	6	U
120-82-1	1 2 4-TRICHLOROBENZENE	6	U
95-63-6	1 2 4-TRIMETHYLBENZENE	6	U
108-67-8	1 3 5-TRIMETHYLBENZENE	6	U
74-97-5	BROMOCHLOROMETHANE	6	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: P16980.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/28/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.2 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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1800	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	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: P16980.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/28/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
121-14-2	2,4-Dinitrotoluene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	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	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	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	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	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	720	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	360	U
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 separated from Diphenylamine

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO1

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): SOIL Lab Sample ID: 34977.01
Level (low/med): LOW Date Received: 07/24/98
% Solids: 90.3

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	0.73	B		P
7440-39-3	Barium	11.4		*	P
7440-43-9	Cadmium	0.03	U		P
7440-47-3	Chromium	6.1			P
7439-92-1	Lead	6.2	B	N*	P
7439-97-6	Mercury	0.08			AV
7782-49-2	Selenium	0.43	U		P
7440-22-4	Silver	0.13	U		P

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

Comments:
CLIENT_ID = PDO-1

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1DUP

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26690.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 Date Analyzed: 07/30/98

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
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	6	U
156-60-5	trans-1 2-DICHLOROETHENE	6	U
13-302-07	m,p-XYLENES	6	U
95-47-6	o-XYLENE	6	U
106-93-4	1 2-DIBROMOETHANE	6	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	6	U
96-18-4	1 2 3-TRICHLOROPROPANE	6	U
75-71-8	DICHLORODIFLUOROMETHANE	6	U
75-69-4	TRICHLOROFLUOROMETHANE	6	U
74-95-3	DIBROMOMETHANE	6	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1DUP

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26690.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 Date Analyzed: 07/30/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	6	U
108-86-1	BROMOBENZENE	6	U
104-51-8	n-BUTYLBENZENE	6	U
98-06-6	tert-BUTYLBENZENE	6	U
135-98-8	sec-BUTYLBENZENE	6	U
95-49-8	2-CHLOROTOLUENE	6	U
106-43-4	4-CHLOROTOLUENE	6	U
95-50-1	1 2-DICHLOROBENZENE	6	U
541-73-1	1 3-DICHLOROBENZENE	6	U
106-46-7	1 4-DICHLOROBENZENE	6	U
142-28-9	1 3-DICHLOROPROPANE	6	U
594-20-7	2 2-DICHLOROPROPANE	6	U
563-58-6	1 1-DICHLOROPROPENE	6	U
87-68-3	HEXACHLOROBUTADIENE	6	U
98-82-8	ISOPROPYLBENZENE	6	U
99-87-6	p-ISOPROPYLTOLUENE	6	U
91-20-3	NAPHTHALENE	6	U
103-65-1	n-PROPYLBENZENE	6	U
87-61-6	1 2 3-TRICHLOROBENZENE	6	U
120-82-1	1 2 4-TRICHLOROBENZENE	6	U
95-63-6	1 2 4-TRIMETHYLBENZENE	6	U
108-67-8	1 3 5-TRIMETHYLBENZENE	6	U
74-97-5	BROMOCHLOROMETHANE	6	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1DUP

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.04

Sample wt/vol: 30.5 (g/mL) G Lab File ID: P16981.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 dec. Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/28/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.0 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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1700	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	1700	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-1DUP

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.04

Sample wt/vol: 30.5 (g/mL) G Lab File ID: P16981.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 10 dec. Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/28/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
121-14-2	2,4-Dinitrotoluene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	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	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	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	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	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	720	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	360	U
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 separated from Diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-2

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26704.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 14 Date Analyzed: 07/30/98

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	J
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	6	U
156-60-5	trans-1 2-DICHLOROETHENE	6	U
13-302-07	m,p-XYLENES	6	U
95-47-6	o-XYLENE	6	U
106-93-4	1 2-DIBROMOETHANE	6	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	6	U
96-18-4	1 2 3-TRICHLOROPROPANE	6	U
75-71-8	DICHLORODIFLUOROMETHANE	6	U
75-69-4	TRICHLOROFLUOROMETHANE	6	U
74-95-3	DIBROMOMETHANE	6	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-2

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26704.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 14 Date Analyzed: 07/30/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	6	U
108-86-1	BROMOBENZENE	6	U
104-51-8	n-BUTYLBENZENE	6	U
98-06-6	tert-BUTYLBENZENE	6	U
135-98-8	sec-BUTYLBENZENE	6	U
95-49-8	2-CHLOROTOLUENE	6	U
106-43-4	4-CHLOROTOLUENE	6	U
95-50-1	1 2-DICHLOROBENZENE	6	U
541-73-1	1 3-DICHLOROBENZENE	6	U
106-46-7	1 4-DICHLOROBENZENE	6	U
142-28-9	1 3-DICHLOROPROPANE	6	U
594-20-7	2 2-DICHLOROPROPANE	6	U
563-58-6	1 1-DICHLOROPROPENE	6	U
87-68-3	HEXACHLOROBUTADIENE	6	U
98-82-8	ISOPROPYLBENZENE	6	U
99-87-6	p-ISOPROPYLTOLUENE	6	U
91-20-3	NAPHTHALENE	6	U
103-65-1	n-PROPYLBENZENE	6	U
87-61-6	1 2 3-TRICHLOROBENZENE	6	U
120-82-1	1 2 4-TRICHLOROBENZENE	6	U
95-63-6	1 2 4-TRIMETHYLBENZENE	6	U
108-67-8	1 3 5-TRIMETHYLBENZENE	6	U
74-97-5	BROMOCHLOROMETHANE	6	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-2

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.05

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16982.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 14 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/28/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 4.8 Dilution Factor: 1.0

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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1800	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	1800	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-2

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.05

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16982.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 14 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/28/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 4.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
121-14-2	2,4-Dinitrotoluene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	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	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenylphenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
56-55-3	Benzo(a)anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)phthalate	380	U
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)fluoranthene	380	U
50-32-8	Benzo(a)pyrene	380	U
193-39-5	Indeno(1,2,3-cd)pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO2

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): SOIL
Level (low/med): LOW
% Solids: 86.1
Lab Sample ID: 34977.05
Date Received: 07/24/98

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	0.79	B		P
7440-39-3	Barium	17.6		*	P
7440-43-9	Cadmium	0.44	B		P
7440-47-3	Chromium	6.4			P
7439-92-1	Lead	93.4		N*	P
7439-97-6	Mercury	0.05			AV
7782-49-2	Selenium	0.45	U		P
7440-22-4	Silver	0.13	U		P

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

Comments:
CLIENT_ID = PDO-2

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-3

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26718.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 07/31/98

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	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	5	U
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	5	U
95-47-6	o-XYLENE	5	U
106-93-4	1 2-DIBROMOETHANE	5	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	5	U
96-18-4	1 2 3-TRICHLOROPROPANE	5	U
75-71-8	DICHLORODIFLUOROMETHANE	5	U
75-69-4	TRICHLOROFLUOROMETHANE	5	U
74-95-3	DIBROMOMETHANE	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-3

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26718.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 07/31/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	5	U
108-86-1	BROMOBENZENE	5	U
104-51-8	n-BUTYLBENZENE	5	U
98-06-6	tert-BUTYLBENZENE	5	U
135-98-8	sec-BUTYLBENZENE	5	U
95-49-8	2-CHLOROTOLUENE	5	U
106-43-4	4-CHLOROTOLUENE	5	U
95-50-1	1 2-DICHLOROBENZENE	5	U
541-73-1	1 3-DICHLOROBENZENE	5	U
106-46-7	1 4-DICHLOROBENZENE	5	U
142-28-9	1 3-DICHLOROPROPANE	5	U
594-20-7	2 2-DICHLOROPROPANE	5	U
563-58-6	1 1-DICHLOROPROPENE	5	U
87-68-3	HEXACHLOROBUTADIENE	5	U
98-82-8	ISOPROPYLBENZENE	5	U
99-87-6	p-ISOPROPYLTOLUENE	5	U
91-20-3	NAPHTHALENE	5	U
103-65-1	n-PROPYLBENZENE	5	U
87-61-6	1 2 3-TRICHLOROBENZENE	5	U
120-82-1	1 2 4-TRICHLOROBENZENE	5	U
95-63-6	1 2 4-TRIMETHYLBENZENE	5	U
108-67-8	1 3 5-TRIMETHYLBENZENE	5	U
74-97-5	BROMOCHLOROMETHANE	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-3

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.06

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16983.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.8 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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1700	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	1700	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-3

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.06

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16983.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
121-14-2	2,4-Dinitrotoluene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	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	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	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	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	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	710	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	360	U
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 separated from Diphenylamine

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO3

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): SOIL
Level (low/med): LOW
% Solids: 91.6
Lab Sample ID: 34977.06
Date Received: 07/24/98

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	B		P
7440-39-3	Barium	9.1		*	P
7440-43-9	Cadmium	0.55	B		P
7440-47-3	Chromium	2.4			P
7439-92-1	Lead	88.4		N*	P
7439-97-6	Mercury	0.10			AV
7782-49-2	Selenium	0.42	U		P
7440-22-4	Silver	0.12	U		P

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

Comments:
CLIENT_ID_=_PDO-3

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-4

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: I28256.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 08/05/98

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	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	5	U
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	5	U
95-47-6	o-XYLENE	5	U
106-93-4	1 2-DIBROMOETHANE	5	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	5	U
96-18-4	1 2 3-TRICHLOROPROPANE	5	U
75-71-8	DICHLORODIFLUOROMETHANE	5	U
75-69-4	TRICHLOROFLUOROMETHANE	5	U
74-95-3	DIBROMOMETHANE	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-4

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: soil/water) SOIL Lab Sample ID: 34977.07

Sample wt./vol: 5.0 (g/mL) G Lab File ID: I28256.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 08/05/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	5	U
108-86-1	BROMOBENZENE	5	U
104-51-8	n-BUTYLBENZENE	5	U
98-06-6	tert-BUTYLBENZENE	5	U
135-98-8	sec-BUTYLBENZENE	5	U
95-49-8	2-CHLOROTOLUENE	5	U
106-43-4	4-CHLOROTOLUENE	5	U
95-50-1	1 2-DICHLOROBENZENE	5	U
541-73-1	1 3-DICHLOROBENZENE	5	U
106-46-7	1 4-DICHLOROBENZENE	5	U
142-28-9	1 3-DICHLOROPROPANE	5	U
594-20-7	2 2-DICHLOROPROPANE	5	U
563-58-6	1 1-DICHLOROPROPENE	5	U
87-68-3	HEXACHLOROBUTADIENE	5	U
98-82-8	ISOPROPYLBENZENE	5	U
99-87-6	p-ISOPROPYLTOLUENE	5	U
91-20-3	NAPHTHALENE	78	
103-65-1	n-PROPYLBENZENE	5	U
87-61-6	1 2 3-TRICHLOROBENZENE	5	U
120-82-1	1 2 4-TRICHLOROBENZENE	5	U
95-63-6	1 2 4-TRIMETHYLBENZENE	5	U
108-67-8	1 3 5-TRIMETHYLBENZENE	5	U
74-97-5	BROMOCHLOROMETHANE	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-4

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.07

Sample wt/vol: 30.6 (g/mL) G Lab File ID: P16984.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.6 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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1700	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	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-4

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.07

Sample wt/vol: 30.6 (g/mL) G Lab File ID: P16984.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
121-14-2	2,4-Dinitrotoluene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	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	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	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	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	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	700	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	82	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 separated from Diphenylamine

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO4

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): SOIL Lab Sample ID: 34977.07
Level (low/med): LOW Date Received: 07/24/98
% Solids: 92.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.2	B		P
7440-39-3	Barium	9.0		*	P
7440-43-9	Cadmium	0.21	B		P
7440-47-3	Chromium	1.9			P
7439-92-1	Lead	45.5		N*	P
7439-97-6	Mercury	0.11			AV
7782-49-2	Selenium	0.67	B		P
7440-22-4	Silver	0.13	U		P

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

Comments:
CLIENT_ID_=_PDO-4

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-5

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26707.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 7 Date Analyzed: 07/30/98

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	J
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	5	U
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	5	U
95-47-6	o-XYLENE	5	U
106-93-4	1 2-DIBROMOETHANE	5	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	5	U
96-18-4	1 2 3-TRICHLOROPROPANE	5	U
75-71-8	DICHLORODIFLUOROMETHANE	5	U
75-69-4	TRICHLOROFLUOROMETHANE	5	U
74-95-3	DIBROMOMETHANE	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-5

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26707.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 7 Date Analyzed: 07/30/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	5	U
108-86-1	BROMOBENZENE	5	U
104-51-8	n-BUTYLBENZENE	5	U
98-06-6	tert-BUTYLBENZENE	5	U
135-98-8	sec-BUTYLBENZENE	5	U
95-49-8	2-CHLOROTOLUENE	5	U
106-43-4	4-CHLOROTOLUENE	5	U
95-50-1	1 2-DICHLOROBENZENE	5	U
541-73-1	1 3-DICHLOROBENZENE	5	U
106-46-7	1 4-DICHLOROBENZENE	5	U
142-28-9	1 3-DICHLOROPROPANE	5	U
594-20-7	2 2-DICHLOROPROPANE	5	U
563-58-6	1 1-DICHLOROPROPENE	5	U
87-68-3	HEXACHLOROBUTADIENE	5	U
98-82-8	ISOPROPYLBENZENE	5	U
99-87-6	p-ISOPROPYLTOLUENE	5	U
91-20-3	NAPHTHALENE	5	U
103-65-1	n-PROPYLBENZENE	5	U
87-61-6	1 2 3-TRICHLOROBENZENE	5	U
120-82-1	1 2 4-TRICHLOROBENZENE	5	U
95-63-6	1 2 4-TRIMETHYLBENZENE	5	U
108-67-8	1 3 5-TRIMETHYLBENZENE	5	U
74-97-5	BROMOCHLOROMETHANE	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-5

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.08

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16985.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 7 dec. Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.3 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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1700	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	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
I31-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-5

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.08

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16985.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 7 dec. Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
121-14-2	2,4-Dinitrotoluene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	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	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	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	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	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	700	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
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 separated from Diphenylamine

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO5

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): SOIL
Level (low/med): LOW
% Solids: 92.7
Lab Sample ID: 34977.08
Date Received: 07/24/98

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.7	B		P
7440-39-3	Barium	13.7		*	P
7440-43-9	Cadmium	0.17	B		P
7440-47-3	Chromium	5.2			P
7439-92-1	Lead	33.6		N*	P
7439-97-6	Mercury	0.08			AV
7782-49-2	Selenium	0.42	U		P
7440-22-4	Silver	0.13	B		P

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

Comments:
CLIENT_ID_=_PDO-5

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-6

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26720.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 18 Date Analyzed: 07/31/98

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
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	6	U
156-60-5	trans-1 2-DICHLOROETHENE	6	U
13-302-07	m,p-XYLENES	6	U
95-47-6	o-XYLENE	6	U
106-93-4	1 2-DIBROMOETHANE	6	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	6	U
96-18-4	1 2 3-TRICHLOROPROPANE	6	U
75-71-8	DICHLORODIFLUOROMETHANE	6	U
75-69-4	TRICHLOROFLUOROMETHANE	6	U
74-95-3	DIBROMOMETHANE	6	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-6

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C26720.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 18 Date Analyzed: 07/31/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	6	U
108-86-1	BROMOBENZENE	6	U
104-51-8	n-BUTYLBENZENE	6	U
98-06-6	tert-BUTYLBENZENE	6	U
135-98-8	sec-BUTYLBENZENE	6	U
95-49-8	2-CHLOROTOLUENE	6	U
106-43-4	4-CHLOROTOLUENE	6	U
95-50-1	1 2-DICHLOROBENZENE	6	U
541-73-1	1 3-DICHLOROBENZENE	6	U
106-46-7	1 4-DICHLOROBENZENE	6	U
142-28-9	1 3-DICHLOROPROPANE	6	U
594-20-7	2 2-DICHLOROPROPANE	6	U
563-58-6	1 1-DICHLOROPROPENE	6	U
87-68-3	HEXACHLOROBUTADIENE	6	U
98-82-8	ISOPROPYLBENZENE	6	U
99-87-6	p-ISOPROPYLTOLUENE	6	U
91-20-3	NAPHTHALENE	6	U
103-65-1	n-PROPYLBENZENE	6	U
87-61-6	1 2 3-TRICHLOROBENZENE	6	U
120-82-1	1 2 4-TRICHLOROBENZENE	6	U
95-63-6	1 2 4-TRIMETHYLBENZENE	6	U
108-67-8	1 3 5-TRIMETHYLBENZENE	6	U
74-97-5	BROMOCHLOROMETHANE	6	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-6

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.09

Sample wt/vol: 30.1 (g/mL) G Lab File ID: P16986.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 18 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.6 Dilution Factor: 1.0

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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1900	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	1900	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-6

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.09

Sample wt/vol: 30.1 (g/mL) G Lab File ID: P16986.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 18 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 5.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	400	U
121-14-2	2,4-Dinitrotoluene	400	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	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	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenylphenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	71	J
129-00-0	Pyrene	86	J
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	800	U
56-55-3	Benzo(a)anthracene	71	J
218-01-9	Chrysene	76	J
117-81-7	bis(2-Ethylhexyl)phthalate	52	JB
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	84	J
207-08-9	Benzo(k)fluoranthene	120	J
50-32-8	Benzo(a)pyrene	96	J
193-39-5	Indeno(1,2,3-cd)pyrene	42	J
53-70-3	Dibenz(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID

PDO6

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract:EARTH-VA__
Lab Code: SWOK__ Case No.: 34977 SAS No.: _____ SDG No.: 34977_
Matrix (soil/water): SOIL_ Lab Sample ID: 34977.09
Level (low/med): LOW__ Date Received: 07/24/98
% Solids: _81.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.6	B		P
7440-39-3	Barium	22.4		*	P
7440-43-9	Cadmium	0.43	B		P
7440-47-3	Chromium	15.8			P
7439-92-1	Lead	34.8		N*	P
7439-97-6	Mercury	0.05			AV
7782-49-2	Selenium	1.00	B		P
7440-22-4	Silver	0.19	B		P

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM
Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
CLIENT_ID_=_PDO-6

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-7

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: I28253.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 08/05/98

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	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	5	U
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	5	U
95-47-6	o-XYLENE	5	U
106-93-4	1 2-DIBROMOETHANE	5	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	5	U
96-18-4	1 2 3-TRICHLOROPROPANE	5	U
75-71-8	DICHLORODIFLUOROMETHANE	5	U
75-69-4	TRICHLOROFLUOROMETHANE	5	U
74-95-3	DIBROMOMETHANE	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-7

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: I28253.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 08/05/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	5	U
108-86-1	BROMOBENZENE	5	U
104-51-8	n-BUTYLBENZENE	5	U
98-06-6	tert-BUTYLBENZENE	5	U
135-98-8	sec-BUTYLBENZENE	5	U
95-49-8	2-CHLOROTOLUENE	5	U
106-43-4	4-CHLOROTOLUENE	5	U
95-50-1	1 2-DICHLOROBENZENE	5	U
541-73-1	1 3-DICHLOROBENZENE	5	U
106-46-7	1 4-DICHLOROBENZENE	5	U
142-28-9	1 3-DICHLOROPROPANE	5	U
594-20-7	2 2-DICHLOROPROPANE	5	U
563-58-6	1 1-DICHLOROPROPENE	5	U
87-68-3	HEXACHLOROBUTADIENE	5	U
98-82-8	ISOPROPYLBENZENE	5	U
99-87-6	p-ISOPROPYLTOLUENE	5	U
91-20-3	NAPHTHALENE	5	U
103-65-1	n-PROPYLBENZENE	5	U
87-61-6	1 2 3-TRICHLOROBENZENE	5	U
120-82-1	1 2 4-TRICHLOROBENZENE	5	U
95-63-6	1 2 4-TRIMETHYLBENZENE	5	U
108-67-8	1 3 5-TRIMETHYLBENZENE	5	U
74-97-5	BROMOCHLOROMETHANE	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-7

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.10

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16987.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

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/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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	1700	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	1700	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-7

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.10

Sample wt/vol: 30.3 (g/mL) G Lab File ID: P16987.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/29/98

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/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
121-14-2	2,4-Dinitrotoluene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	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	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	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	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	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	710	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	360	U
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 separated from Diphenylamine

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO7

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): SOIL Lab Sample ID: 34977.10
Level (low/med): LOW Date Received: 07/24/98
% Solids: 91.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.6	B		P
7440-39-3	Barium	16.9		*	P
7440-43-9	Cadmium	0.33	B		P
7440-47-3	Chromium	4.0			P
7439-92-1	Lead	54.6		N*	P
7439-97-6	Mercury	0.06			AV
7782-49-2	Selenium	0.43	U		P
7440-22-4	Silver	0.19	B		P

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

Comments:
CLIENT_ID_=_PDO-7

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-8RE

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.11RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: I28252.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 08/05/98

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
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	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
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
75-25-2	BROMOFORM	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
156-59-2	cis-1 2-DICHLOROETHENE	5	U
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	5	U
95-47-6	o-XYLENE	5	U
106-93-4	1 2-DIBROMOETHANE	5	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	5	U
96-18-4	1 2 3-TRICHLOROPROPANE	5	U
75-71-8	DICHLORODIFLUOROMETHANE	5	U
75-69-4	TRICHLOROFLUOROMETHANE	5	U
74-95-3	DIBROMOMETHANE	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-8RE

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.11RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: I28252.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 Date Analyzed: 08/05/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	5	U
108-86-1	BROMOBENZENE	5	U
104-51-8	n-BUTYLBENZENE	5	U
98-06-6	tert-BUTYLBENZENE	5	U
135-98-8	sec-BUTYLBENZENE	5	U
95-49-8	2-CHLOROTOLUENE	5	U
106-43-4	4-CHLOROTOLUENE	5	U
95-50-1	1 2-DICHLOROBENZENE	5	U
541-73-1	1 3-DICHLOROBENZENE	5	U
106-46-7	1 4-DICHLOROBENZENE	5	U
142-28-9	1 3-DICHLOROPROPANE	5	U
594-20-7	2 2-DICHLOROPROPANE	5	U
563-58-6	1 1-DICHLOROPROPENE	5	U
87-68-3	HEXACHLOROBUTADIENE	5	U
98-82-8	ISOPROPYLBENZENE	5	U
99-87-6	p-ISOPROPYLTOLUENE	5	U
91-20-3	NAPHTHALENE	10	
103-65-1	n-PROPYLBENZENE	5	U
87-61-6	1 2 3-TRICHLOROBENZENE	5	U
120-82-1	1 2 4-TRICHLOROBENZENE	5	U
95-63-6	1 2 4-TRIMETHYLBENZENE	5	U
108-67-8	1 3 5-TRIMETHYLBENZENE	5	U
74-97-5	BROMOCHLOROMETHANE	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-8

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.11

Sample wt/vol: 30.4 (g/mL) G Lab File ID: P17044.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/31/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 4.9 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
100-51-6	Benzyl alcohol	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
65-85-0	Benzoic Acid	180	J
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	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-8

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) SOIL Lab Sample ID: 34977.11

Sample wt/vol: 30.4 (g/mL) G Lab File ID: P17044.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 8 dec. Date Extracted:07/27/98

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/31/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
121-14-2	2,4-Dinitrotoluene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	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	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	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	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	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	710	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	43	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 separated from Diphenylamine

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO8

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): SOIL Lab Sample ID: 34977.11
Level (low/med): LOW Date Received: 07/24/98
% Solids: 92.3

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	0.44	B		P
7440-39-3	Barium	16.3		*	P
7440-43-9	Cadmium	0.03	U		P
7440-47-3	Chromium	5.8			P
7439-92-1	Lead	6.7	B	N*	P
7439-97-6	Mercury	0.06			AV
7782-49-2	Selenium	0.41	U		P
7440-22-4	Silver	0.12	U		P

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

Comments:
CLIENT_ID_=_PDO-8

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-9-GW

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) WATER Lab Sample ID: 34977.12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R30309.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. _____ Date Analyzed: 07/30/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	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	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	2	J
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
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	190	
75-25-2	BROMOFORM	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	770	E
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	90	
100-42-5	STYRENE	5	U
156-59-2	cis-1 2-DICHLOROETHENE	3	J
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	340	
95-47-6	o-XYLENE	200	
106-93-4	1 2-DIBROMOETHANE	5	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	5	U
96-18-4	1 2 3-TRICHLOROPROPANE	5	U
75-71-8	DICHLORODIFLUOROMETHANE	5	U
75-69-4	TRICHLOROFLUOROMETHANE	5	U
74-95-3	DIBROMOMETHANE	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-9-GW

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) WATER Lab Sample ID: 34977.12

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R30309.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. _____ Date Analyzed: 07/30/98

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	5	U
108-86-1	BROMOBENZENE	5	U
104-51-8	n-BUTYLBENZENE	5	
98-06-6	tert-BUTYLBENZENE	5	U
135-98-8	sec-BUTYLBENZENE	2	J
95-49-8	2-CHLOROTOLUENE	5	U
106-43-4	4-CHLOROTOLUENE	4	J
95-50-1	1 2-DICHLOROBENZENE	5	U
541-73-1	1 3-DICHLOROBENZENE	5	U
106-46-7	1 4-DICHLOROBENZENE	5	U
142-28-9	1 3-DICHLOROPROPANE	5	U
594-20-7	2 2-DICHLOROPROPANE	5	U
563-58-6	1 1-DICHLOROPROPENE	5	U
87-68-3	HEXACHLOROBUTADIENE	1	J
98-82-8	ISOPROPYLBENZENE	11	
99-87-6	p-ISOPROPYLTOLUENE	13	
91-20-3	NAPHTHALENE	83	
103-65-1	n-PROPYLBENZENE	4	J
87-61-6	1 2 3-TRICHLOROBENZENE	5	U
120-82-1	1 2 4-TRICHLOROBENZENE	5	U
95-63-6	1 2 4-TRIMETHYLBENZENE	190	
108-67-8	1 3 5-TRIMETHYLBENZENE	68	
74-97-5	BROMOCHLOROMETHANE	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-9-GWDL

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) WATER Lab Sample ID: 34977.12DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R30321.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. _____ Date Analyzed: 07/31/98

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	50	U
74-83-9	BROMOMETHANE	50	U
75-01-4	VINYL CHLORIDE	50	U
75-00-3	CHLOROETHANE	50	U
75-09-2	METHYLENE CHLORIDE	50	U
75-35-4	1 1-DICHLOROETHENE	50	U
75-34-3	1 1-DICHLOROETHANE	50	U
67-66-3	CHLOROFORM	50	U
107-06-2	1 2-DICHLOROETHANE	50	U
71-55-6	1 1 1-TRICHLOROETHANE	50	U
56-23-5	CARBON TETRACHLORIDE	50	U
75-27-4	BROMODICHLOROMETHANE	50	U
78-87-5	1 2-DICHLOROPROPANE	50	U
79-01-6	TRICHLOROETHENE	50	U
124-48-1	DIBROMOCHLOROMETHANE	50	U
79-00-5	1 1 2-TRICHLOROETHANE	50	U
71-43-2	BENZENE	200	D
75-25-2	BROMOFORM	50	U
127-18-4	TETRACHLOROETHENE	50	U
108-88-3	TOLUENE	740	D
79-34-5	1 1 2 2-TETRACHLOROETHANE	50	U
108-90-7	CHLOROBENZENE	50	U
100-41-4	ETHYL BENZENE	87	D
100-42-5	STYRENE	50	U
156-59-2	cis-1 2-DICHLOROETHENE	50	U
156-60-5	trans-1 2-DICHLOROETHENE	50	U
13-302-07	m,p-XYLENES	260	D
95-47-6	o-XYLENE	190	D
106-93-4	1 2-DIBROMOETHANE	50	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	50	U
96-18-4	1 2 3-TRICHLOROPROPANE	50	U
75-71-8	DICHLORODIFLUOROMETHANE	50	U
75-69-4	TRICHLOROFLUOROMETHANE	50	U
74-95-3	DIBROMOMETHANE	50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-9-GWDL

Lab Name: SWL-TULSA Contract: HUNTER ARMY

Lab Code: SWOK Case No.: EARTHVA SAS No.: SDG No.: 34977

Matrix: (soil/water) WATER Lab Sample ID: 34977.12DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R30321.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. _____ Date Analyzed: 07/31/98

Column: (pack/cap) CAP Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
96-12-8	1 2-DIBROMO-3-CHLOROPROPANE	50	U
108-86-1	BROMOBENZENE	50	U
104-51-8	n-BUTYLBENZENE	50	U
98-06-6	tert-BUTYLBENZENE	50	U
135-98-8	sec-BUTYLBENZENE	50	U
95-49-8	2-CHLOROTOLUENE	50	U
106-43-4	4-CHLOROTOLUENE	50	U
95-50-1	1 2-DICHLOROBENZENE	50	U
541-73-1	1 3-DICHLOROBENZENE	50	U
106-46-7	1 4-DICHLOROBENZENE	50	U
142-28-9	1 3-DICHLOROPROPANE	50	U
594-20-7	2 2-DICHLOROPROPANE	50	U
563-58-6	1 1-DICHLOROPROPENE	50	U
87-68-3	HEXACHLOROBUTADIENE	50	U
98-82-8	ISOPROPYLBENZENE	50	U
99-87-6	p-ISOPROPYLTOLUENE	50	U
91-20-3	NAPHTHALENE	12	JD
103-65-1	n-PROPYLBENZENE	23	JD
87-61-6	1 2 3-TRICHLOROBENZENE	50	U
120-82-1	1 2 4-TRICHLOROBENZENE	50	U
95-63-6	1 2 4-TRIMETHYLBENZENE	170	D
108-67-8	1 3 5-TRIMETHYLBENZENE	43	JD
74-97-5	BROMOCHLOROMETHANE	50	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-9-GWRE

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) WATER Lab Sample ID: 34977.12RE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: M11386.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 0 dec. Date Extracted:08/04/98

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 08/07/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 4.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	7	JB
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
100-51-6	Benzyl alcohol	5	J
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	11	
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	16	
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	
65-85-0	Benzoic Acid	50	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	2	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	31	
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PDO-9-GWRE

Lab Name: SWL-TULSA Contract: HUNTER ARMY

ab Code: SWOK Case No.: EARTH- SAS No.: SDG No.: 34977

Matrix: (soil/water) WATER Lab Sample ID: 34977.12RE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: M11386.D

Level: (low/med) LOW Date Received: 07/24/98

% Moisture: not dec. 0 dec. Date Extracted:08/04/98

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 08/07/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N pH: 4.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	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	2	J
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	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	50	U
85-01-8	Phenanthrene	4	J
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	2	JB
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	1	J
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	
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

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE ID: PDO9GW

Lab Name: SOUTHWEST_LAB_OF_OK Contract: EARTH-VA
Lab Code: SWOK Case No.: 34977 SAS No.: SDG No.: 34977
Matrix (soil/water): WATER Lab Sample ID: 34977.12
Level (low/med): LOW Date Received: 07/24/98
% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	35.0	B		P
7440-39-3	Barium	784			P
7440-43-9	Cadmium	2.5	B		P
7440-47-3	Chromium	257			P
7439-92-1	Lead	936			P
7439-97-6	Mercury	3.3		N*	AV
7782-49-2	Selenium	8.4	B		P
7440-22-4	Silver	1.2	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
CLIENT_ID_=_PDO-9-GW