

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

HAAF-260-PIPE2-G^{-Z-a-s}

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.24

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: G1289.D

Level: (low/med) MED

Date Received: 07/24/98

% Moisture: not dec. 7

Date Analyzed: 07/31/98

GC Column: DB624 ID: 0.54(mm)

Dilution Factor: 1

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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Gasoline	490000	
Surrogate amount spiked	270000	

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

b Name: SWL-TULSA Contract:

HAAF-260-PIPE2-
G

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977B

Matrix: (soil/water) SOIL Lab Sample ID: 34977.24

Sample wt/vol: 27.8g Lab File ID: 5AH0730B

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

% Moisture: 7.46 pH: 8.02 Date Extracted: 07/25/98

Extraction Method: CONT/S Date Analyzed: 08/01/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	ug/kg	
91-20-3	NAPHTHALENE-----	345		U
208-96-8	ACENAPHTHYLENE-----	345		U
83-32-9	ACENAPHTHENE-----	432		U
86-73-7	FLUORENE-----	129		U
85-01-8	PHENANTHRENE-----	173		U
120-12-7	ANTHRACENE-----	10.8		U
206-44-0	FLUORANTHENE-----	90.6		U
129-00-0	PYRENE-----	194		U
56-55-3	BENZO (a) ANTHRACENE-----	34.5		U
218-01-9	CHRYSENE-----	108		U
205-99-2	BENZO (b) FLUORANTHENE-----	12.9		U
207-08-9	BENZO (k) FLUORANTHENE-----	9.71		U
50-32-8	BENZO (a) PYRENE-----	16.2		U
53-70-3	DIBENZO (a, h) ANTHRACENE-----	140		U
191-24-2	BENZO (g, h, i) PERYLENE-----	151		U
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	36.7		U

SURROGATE AMOUNT SPIKED (ug/kg dry wt.) 540
2-F BIPHENYL & TERPHENYL

GAS - DIS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HAAR-260-DIS-1-A-DUP

260-DIS-DUP

HAAR-260-DIS-1-A-DUP

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977 - 6

Matrix: (soil/water) SOIL

Lab Sample ID: 34990.12

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C26729.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 11

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

71-43-2-----	BENZENE	6	U
108-88-3-----	TOLUENE	6	U
100-41-4-----	ETHYL BENZENE	6	U
13-302-07-----	m,p-XYLENES	6	U
95-47-6-----	o-XYLENE	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260DIS-1-G

1/1/98

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977

Matrix: (soil/water) SOIL

Lab Sample ID: 34990.11

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C26728.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 8

Date Analyzed: 07/31/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND		
71-43-2-----	BENZENE	6	
108-88-3-----	TOLUENE	5	U
100-41-4-----	ETHYL BENZENE	2	J
13-302-07-----	m,p-XYLENES	3	J
95-47-6-----	o-XYLENE	5	U

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

HAAF-260-DIS-1-G-S

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) SOIL

Lab Sample ID: 34990.11

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G1255.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 8

Date Analyzed: 07/27/98

GC Column: DB624 ID: 0.54(mm)

Dilution Factor: 1

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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Gasoline		120	
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Surrogate amount spiked		22	
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1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA

Contract:

~~DIS-1-DUP~~
HAAF-260-~~DIS-DUP~~
~~DIS-1-G-DUP~~

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) SOIL

Lab Sample ID: 34990.12

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: G1256.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec..11

Date Analyzed: 07/27/98

GC Column: DB624 ID: 0.54 (mm)

Dilution Factor: 1

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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Gasoline	52	
Surrogate amount spiked	22	

1D
PAH ANALYSIS DATA SHEET EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

HAAF-260-DIS-1-
G-S

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977A

Matrix: (soil/water) SOIL Lab Sample ID: 34990.11

Sample wt/vol: 27.6g Lab File ID: 5AH0730B

Level: (low/med) LOW Date Received: 07/25/98

% Moisture: 8.19 pH: 6.03 Date Extracted: 07/28/98

Extraction Method: CONT/S Date Analyzed: 08/02/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/kg Q
91-20-3	NAPHTHALENE-----	348	U
208-96-8	ACENAPHTHYLENE-----	348	U
83-32-9	ACENAPHTHENE-----	435	U
86-73-7	FLUORENE-----	130	U
85-01-8	PHENANTHRENE-----	174	U
120-12-7	ANTHRACENE-----	10.9	U
206-44-0	FLUORANTHENE-----	91.3	U
129-00-0	PYRENE-----	196	U
56-55-3	BENZO (a) ANTHRACENE-----	34.8	U
218-01-9	CHRYSENE-----	109	U
205-99-2	BENZO (b) FLUORANTHENE-----	13.0	U
207-08-9	BENZO (k) FLUORANTHENE-----	9.78	U
50-32-8	BENZO (a) PYRENE-----	16.3	U
53-70-3	DIBENZO (a, h) ANTHRACENE-----	141	U
191-24-2	BENZO (g, h, i) PERYLENE-----	152	U
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	37.0	U

SURROGATE AMOUNT SPIKED (ug/kg dry wt.) 543
2-F BIPHENYL & TERPHENYL

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

DIS-1-C-100P
HAAF-260-DIS-DU
P

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977A

Matrix: (soil/water) SOIL Lab Sample ID: 34990.12

Sample wt/vol: 26.8g Lab File ID: 5AH0730B

Level: (low/med) LOW Date Received: 07/25/98

% Moisture: 11.23 pH: 6.06 Date Extracted: 07/28/98

Extraction Method: CONT/S Date Analyzed: 08/02/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg)	ug/kg Q
91-20-3	NAPHTHALENE-----	358	U
208-96-8	ACENAPHTHYLENE-----	358	U
83-32-9	ACENAPHTHENE-----	448	U
86-73-7	FLUORENE-----	134	U
85-01-8	PHENANTHRENE-----	179	U
120-12-7	ANTHRACENE-----	11.2	U
206-44-0	FLUORANTHENE-----	94.0	U
129-00-0	PYRENE-----	201	U
56-55-3	BENZO (a) ANTHRACENE-----	35.8	U
218-01-9	CHRYSENE-----	112	U
205-99-2	BENZO (b) FLUORANTHENE-----	7.61	J
207-08-9	BENZO (k) FLUORANTHENE-----	10.1	U
50-32-8	BENZO (a) PYRENE-----	16.8	U
53-70-3	DIBENZO (a, h) ANTHRACENE-----	146	U
191-24-2	BENZO (g, h, i) PERYLENE-----	157	U
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	38.0	U

SURROGATE AMOUNT SPIKED (ug/kg dry wt.) 560
2-F BIPHENYL & TERPHENYL

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA

Contract:

HAAF-260-DIS-~~02~~ ²⁰⁶⁻⁵
-2-6-5

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.27

Sample wt/vol: 4.0 (g/mL) G.

Lab File ID: G1286.D

Level: (low/med) MED

Date Received: 07/24/98

% Moisture: not dec. 5

Date Analyzed: 07/31/98

GC Column: DB624 ID: 0.54(mm)

Dilution Factor: 1

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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Gasoline	800000	
Surrogate amount spiked	260000	

1D
TPH ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

G-7
HAAF-260-DIS-22

Lab Name: SWL-TULSA

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

Matrix: (soil/water) SOIL Lab Sample ID: 35977.27

Sample wt/vol: 21.6 (g/mL) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) N Date Received: 07/24/98

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/30/98

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/13/98

Injection Volume: 5.0 (uL) Dilution Factor: 250.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: MG/KG	Q
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-----DRH	21000	
Surrogate amount spiked	3008.51	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TJLSA

Contract: HUNTER ARMY

G-2-S
260DIS-G2
HAF-DIS-2-G-S

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.27

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C26697.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 4

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

71-43-2-----	BENZENE	74	
108-88-3-----	TOLUENE	4	J
100-41-4-----	ETHYL BENZENE	520	E
13-302-07-----	m,p-XYLENES	890	E
95-47-6-----	o-XYLENE	450	E

1-38

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAAF-260-DIS-G-2-S-DL
260DIS-G2DI
HAAF-DIS-2

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.27DL

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: UL5835.D

Level: (low/med) MED

Date Received: 07/24/98

% Moisture: not dec. 4

Date Analyzed: 08/04/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND		
71-43-2-----	BENZENE	640	U
108-88-3-----	TOLUENE	640	U
100-41-4-----	ETHYL BENZENE	1800	D
13-302-07-----	m,p-XYLENES	3000	D
95-47-6-----	o-XYLENE	1200	D

280

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Job Name: SWL-TULSA Contract:

HAAF-260-DIS-^{2-KG-5}G2

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977B

Matrix: (soil/water) SOIL Lab Sample ID: 34977.27

Sample wt/vol: 28.9g Lab File ID: 5AH0730B

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

% Moisture: 4.71 pH: 8.35 Date Extracted: 07/25/98

Extraction Method: CONT/S Date Analyzed: 08/01/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/kg)	ug/kg	Q
91-20-3	NAPHTHALENE-----	332		U
208-96-8	ACENAPHTHYLENE-----	332		U
83-32-9	ACENAPHTHENE-----	415		U
86-73-7	FLUORENE-----	124		U
85-01-8	PHENANTHRENE-----	1620		EP
120-12-7	ANTHRACENE-----	10.4		U
206-44-0	FLUORANTHENE-----	1170		EP
129-00-0	PYRENE-----	187		U
56-55-3	BENZO (a) ANTHRACENE-----	33.2		U
218-01-9	CHRYSENE-----	104		U
205-99-2	BENZO (b) FLUORANTHENE-----	12.4		U
207-08-9	BENZO (k) FLUORANTHENE-----	9.34		U
50-32-8	BENZO (a) PYRENE-----	15.6		U
53-70-3	DIBENZO (a, h) ANTHRACENE-----	135		U
191-24-2	BENZO (g, h, i) PERYLENE-----	145		U
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	35.3		U

SURROGATE AMOUNT SPIKED (ug/kg dry wt.) 525
2-F BIPHENYL & TERPHENYL

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

HAAF-260-DIS-G2
1000

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977B

Matrix: (soil/water) SOIL Lab Sample ID: 34977.27DL

Sample wt/vol: 28.9g Lab File ID: 2AH0831A

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

% Moisture: 4.71 pH: 8.35 Date Extracted: 07/25/98

Extraction Method: CONT/S Date Analyzed: 08/31/98

GPC Cleanup: (Y/N) N Dilution Factor: 2000.00

		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/kg)	ug/kg	Q
91-20-3	NAPHTHALENE-----	332000		U
208-96-8	ACENAPHTHYLENE-----	332000		U
83-32-9	ACENAPHTHENE-----	415000		U
86-73-7	FLUORENE-----	124000		U
85-01-8	PHENANTHRENE-----	35800		DJP
120-12-7	ANTHRACENE-----	10400		U
206-44-0	FLUORANTHENE-----	24900		DJP
129-00-0	PYRENE-----	187000		U
56-55-3	BENZO (a) ANTHRACENE-----	33200		U
218-01-9	CHRYSENE-----	104000		U
205-99-2	BENZO (b) FLUORANTHENE-----	12400		U
207-08-9	BENZO (k) FLUORANTHENE-----	9340		U
50-32-8	BENZO (a) PYRENE-----	15600		U
53-70-3	DIBENZO (a, h) ANTHRACENE-----	135000		U
191-24-2	BENZO (g, h, i) PERYLENE-----	145000		U
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	35300		U

SURROGATE AMOUNT SPIKED (ug/kg dry wt.)
2-F BIPHENYL & TERPHENYL

525

QA/QC
SOIL

1D
TPH ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

G-2-5-1ms
HAAF-260-DIS-~~G2M~~

Lab Name: SWL-TULSA

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

Matrix: (soil/water) SOIL

Lab Sample ID: 35977.29MSD

Sample wt/vol: 21.2 (g/mL) G

Lab File ID: _____

% Moisture: 4 decanted: (Y/N) N

Date Received: 07/24/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/30/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 08/13/98

Injection Volume: 5.0 (uL)

Dilution Factor: 250.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: MG/KG	Q
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-----DRH _____	13000	
Surrogate amount spiked	3068.06	

1D
TPH ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

G-2-5-1
HAAF-260-DIS-~~67~~

Lab Name: SWL-TULSA

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

Matrix: (soil/water) SOIL

Lab Sample ID: 35977.28MS

Sample wt/vol: 22.2 (g/mL) G

Lab File ID: _____

% Moisture: 4 decanted: (Y/N) N

Date Received: 07/24/98

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/30/98

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 08/13/98

Injection Volume: 5.0 (uL)

Dilution Factor: 250.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: MG/KG	Q
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-----DRH	9900	
Surrogate amount spiked	2927.35	

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

HAAF-260-DIS-62
MS

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977B

Matrix: (soil/water) SOIL Lab Sample ID: 34977.28MS

Sample wt/vol: 28.7g Lab File ID: 5AH0730B

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

% Moisture: 4.59 pH: 0.00 Date Extracted: 07/25/98

Extraction Method: CONT/S Date Analyzed: 08/01/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/kg)	ug/kg	Q
91-20-3	NAPHTHALENE-----	1750		
208-96-8	ACENAPHTHYLENE-----	1540		
83-32-9	ACENAPHTHENE-----	12000		
86-73-7	FLUORENE-----	1030		
85-01-8	PHENANTHRENE-----	1800		E
120-12-7	ANTHRACENE-----	164		
206-44-0	FLUORANTHENE-----	1320		E
129-00-0	PYRENE-----	450		
56-55-3	BENZO (a) ANTHRACENE-----	155		
218-01-9	CHRYSENE-----	838		
205-99-2	BENZO (b) FLUORANTHENE-----	83.0		
207-08-9	BENZO (k) FLUORANTHENE-----	33.9		
50-32-8	BENZO (a) PYRENE-----	31.5		
53-70-3	DIBENZO (a, h) ANTHRACENE-----	67.6		J
191-24-2	BENZO (g, h, i) PERYLENE-----	63.7		J
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	32.1		J

SURROGATE AMOUNT SPIKED (ug/kg dry wt.) 524
2-F BIPHENYL & TERPHENYL

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

HAAF-260-DIS-62
MSD 100X
2-cd-s
sem
9/9/98

Lab Code: SWOK Case No: EARTH-VA SDG No:

34977B

Matrix: (soil/water) SOIL Lab Sample ID: 34977.29MDDL

Sample wt/vol: 28.7g Lab File ID: 2AH0829A

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

% Moisture: 4.59 pH: 0.00 Date Extracted: 07/25/98

Extraction Method: CONT/S Date Analyzed: 08/30/98

GPC Cleanup: (Y/N) N Dilution Factor: 200.00

		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/kg)	ug/kg	Q
91-20-3	NAPHTHALENE-----	17700		DJ
208-96-8	ACENAPHTHYLENE-----	5500		DJ
83-32-9	ACENAPHTHENE-----	5360		DJ
86-73-7	FLUORENE-----	9690		DJ
85-01-8	PHENANTHRENE-----	18100		D
120-12-7	ANTHRACENE-----	1770		D
206-44-0	FLUORANTHENE-----	12800		D
129-00-0	PYRENE-----	13700		DJ
56-55-3	BENZO (a) ANTHRACENE-----	2000		DJ
218-01-9	CHRYSENE-----	6520		DJ
205-99-2	BENZO (b) FLUORANTHENE-----	379		DJ
207-08-9	BENZO (k) FLUORANTHENE-----	116		DJ
50-32-8	BENZO (a) PYRENE-----	216		DJ
53-70-3	DIBENZO (a, h) ANTHRACENE-----	13600		U
191-24-2	BENZO (g, h, i) PERYLENE-----	670		DJ
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	183		DJ

SURROGATE AMOUNT SPIKED (ug/kg dry wt.)
2-F BIPHENYL & TERPHENYL

524

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

HAAF-260-DIS-62
MS 5

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977B

Matrix: (soil/water) SOIL Lab Sample ID: 34977.28MSDL

Sample wt/vol: 28.7g Lab File ID: 2AH0829A

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

% Moisture: 4.59 pH: 0.00 Date Extracted: 07/25/98

Extraction Method: CONT/S Date Analyzed: 08/30/98

GPC Cleanup: (Y/N) N Dilution Factor: 100.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)	ug/kg	Q
91-20-3	NAPHTHALENE-----	7140	DJ	
208-96-8	ACENAPHTHYLENE-----	2690	DJ	
83-32-9	ACENAPHTHENE-----	2650	DJ	
86-73-7	FLUORENE-----	4710	DJ	
85-01-8	PHENANTHRENE-----	8680	D	
120-12-7	ANTHRACENE-----	841	DJ	
206-44-0	FLUORANTHENE-----	6160	DJ	
129-00-0	PYRENE-----	6910	DJ	
56-55-3	BENZO (a) ANTHRACENE-----	1180	DJ	
218-01-9	CHRYSENE-----	2460	DJ	
205-99-2	BENZO (b) FLUORANTHENE-----	157	DJ	
207-08-9	BENZO (k) FLUORANTHENE-----	39.0	DJ	
50-32-8	BENZO (a) PYRENE-----	784	U	
53-70-3	DIBENZO (a, h) ANTHRACENE-----	6790	U	
191-24-2	BENZO (g, h, i) PERYLENE-----	435	DJ	
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	78.0	DJ	

SURROGATE AMOUNT SPIKED (ug/kg dry wt.)
2-F BIPHENYL & TERPHENYL

524

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

2-4-5
HAAF-260-DIS-G2
MSD

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977B

Matrix: (soil/water) SOIL Lab Sample ID: 34977.29MSD

Sample wt/vol: 28.8g Lab File ID: 5AH0730B

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

% Moisture: 4.59 pH: 0.00 Date Extracted: 07/25/98

Extraction Method: CONT/S Date Analyzed: 08/01/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/kg)	ug/kg	Q
91-20-3	NAPHTHALENE-----	3960		
208-96-8	ACENAPHTHYLENE-----	3910		
83-32-9	ACENAPHTHENE-----	22000		
86-73-7	FLUORENE-----	2400		
85-01-8	PHENANTHRENE-----	2440		E
120-12-7	ANTHRACENE-----	249		
206-44-0	FLUORANTHENE-----	418		E
129-00-0	PYRENE-----	551		
56-55-3	BENZO (a) ANTHRACENE-----	341		
218-01-9	CHRYSENE-----	326		
205-99-2	BENZO (b) FLUORANTHENE-----	110		
207-08-9	BENZO (k) FLUORANTHENE-----	47.6		
50-32-8	BENZO (a) PYRENE-----	50.8		
53-70-3	DIBENZO (a, h) ANTHRACENE-----	146		
191-24-2	BENZO (g, h, i) PERYLENE-----	139		J
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	60.0		

SURROGATE AMOUNT SPIKED (ug/kg dry wt.) 524
2-F BIPHENYL & TERPHENYL

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

HAAF-260-DIS-^{D-}~~2~~ 2-5-MSD
~~S-MSD~~

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977A

Matrix: (soil/water) SOIL Lab Sample ID: 34990.13MSD

Sample wt/vol: 26.5g Lab File ID: 5AH0730B

Level: (low/med) LOW Date Received: 07/25/98

% Moisture: 12.09 pH: 0.00 Date Extracted: 07/28/98

Extraction Method: CONT/S Date Analyzed: 08/02/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/kg Q
91-20-3	NAPHTHALENE-----	247	J
208-96-8	ACENAPHTHYLENE-----	285	J
83-32-9	ACENAPHTHENE-----	566	
86-73-7	FLUORENE-----	63.6	J
85-01-8	PHENANTHRENE-----	85.0	J
120-12-7	ANTHRACENE-----	5.18	J
206-44-0	FLUORANTHENE-----	48.6	J
129-00-0	PYRENE-----	173	J
56-55-3	BENZO (a) ANTHRACENE-----	60.2	
218-01-9	CHRYSENE-----	157	
205-99-2	BENZO (b) FLUORANTHENE-----	21.7	
207-08-9	BENZO (k) FLUORANTHENE-----	5.16	J
50-32-8	BENZO (a) PYRENE-----	57.0	
53-70-3	DIBENZO (a, h) ANTHRACENE-----	181	
191-24-2	BENZO (g, h, i) PERYLENE-----	175	
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	58.4	

SURROGATE AMOUNT SPIKED (ug/kg dry wt.)
2-F BIPHENYL & TERPHENYL

566

1D
PAH ANALYSIS DATA SHEET

EPA SAMPLE NO:

Lab Name: SWL-TULSA Contract:

HAAF-260-DIS-2-
S-MS

Lab Code: SWOK Case No: EARTH-VA SDG No: 34977A

Matrix: (soil/water) SOIL Lab Sample ID: 34990.13MS

Sample wt/vol: 26.5g Lab File ID: 5AH0730B

Level: (low/med) LOW Date Received: 07/25/98

% Moisture: 12.09 pH: 0.00 Date Extracted: 07/28/98

Extraction Method: CONT/S Date Analyzed: 08/02/98

GPC Cleanup: (Y/N) N Dilution Factor: 2.00

		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/kg)	ug/kg	Q
91-20-3	NAPHTHALENE-----	226		J
208-96-8	ACENAPHTHYLENE-----	297		J
83-32-9	ACENAPHTHENE-----	594		
86-73-7	FLUORENE-----	70.2		J
85-01-8	PHENANTHRENE-----	85.2		J
120-12-7	ANTHRACENE-----	4.95		J
206-44-0	FLUORANTHENE-----	45.6		J
129-00-0	PYRENE-----	165		J
56-55-3	BENZO (a) ANTHRACENE-----	55.8		
218-01-9	CHRYSENE-----	145		
205-99-2	BENZO (b) FLUORANTHENE-----	20.5		
207-08-9	BENZO (k) FLUORANTHENE-----	4.89		J
50-32-8	BENZO (a) PYRENE-----	53.9		
53-70-3	DIBENZO (a, h) ANTHRACENE-----	168		
191-24-2	BENZO (g, h, i) PERYLENE-----	164		
193-39-5	INDENO (1, 2, 3-cd) PYRENE-----	56.2		

SURROGATE AMOUNT SPIKED (ug/kg dry wt.)
2-F BIPHENYL & TERPHENYL

566

FORM I

V-73

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAAP-260-DIS-G-2-S-MSD
~~260DIS G2MSD~~
HAAP

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.29MSD

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C26661.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 4

Date Analyzed: 07/29/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

71-43-2-----	BENZENE	100	
108-88-3-----	TOLUENE	41	
100-41-4-----	ETHYL BENZENE	280	E
13-302-07-----	m,p-XYLENES	97	
95-47-6-----	o-XYLENE	2	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAAP-260-DIS-G-2-S-MS
260DIS-G2M
HAAP-

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.28MS

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: C26660.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 4

Date Analyzed: 07/29/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.

COMPOUND

71-43-2-----	BENZENE	120	
108-88-3-----	TOLUENE	48	
100-41-4-----	ETHYL BENZENE	370	E
13-302-07-----	m,p-XYLENES	160	
95-47-6-----	o-XYLENE	58	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260DIS4-DMS

HAFF-

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.31MS

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: I28249.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 6

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

71-43-2-----	BENZENE	43	
108-88-3-----	TOLUENE	43	
100-41-4-----	ETHYL BENZENE	27	
13-302-07-----	m,p-XYLENES	48	
95-47-6-----	o-XYLENE	32	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

4-D-5-MSD
260DIS4-BMF

HAAF-

Lab Code: SWOK

Case No.: EARTH-V SAS No.:

SDG No.: 34977

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.31MSD

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: I28250.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 6

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

71-43-2-----	BENZENE	40	
108-88-3-----	TOLUENE	38	
100-41-4-----	ETHYL BENZENE	27	
13-302-07-----	m,p-XYLENES	47	
95-47-6-----	o-XYLENE	31	

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA

Contract:

HAAF-260-DIS ^{G-2-S-MS} ~~G-2-S-MS~~

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.29MSD

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: G1288.D

Level: (low/med) MED

Date Received: 07/24/98

% Moisture: not dec. 5

Date Analyzed: 07/31/98

GC Column: DB624 ID: 0.54(mm)

Dilution Factor: 1

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

Gasoline	7800000	
Surrogate amount spiked	260000	

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

HAAF-260-DIS-G

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) SOIL

Lab Sample ID: 34977.28MS

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: G1287.D

Level: (low/med) MED

Date Received: 07/24/98

% Moisture: not dec. 5

Date Analyzed: 07/31/98

GC Column: DB624 ID: 0.54(mm)

Dilution Factor: 1

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

Gasoline	7900000	
Surrogate amount spiked	260000	

APPENDIX VI

ALTERNATE THRESHOLD LEVEL (ATL) CALCULATIONS

Georgia EPD has approved alternate threshold levels (ATLs) for soil at the site. ATLs were approved in a July 31st correspondence from Georgia EPD (Logan to Director, Engineering and housing). The approved ATLs are:

- 100 mg/kg for benzene,
- 500 mg/kg for TPH.

APPENDIX VII

MONITORING WELL DETAILS

LIST OF ABBREVIATIONS USED
ON HTW BORING LOGS

ODOR

N - NONE
T - TRACE
SL - SLIGHT
M - MEDIUM
ST - STRONG
VS - VERY STRONG

MOISTURE CONTENT

V.D. - VERY DAMP
SAT - SATURATED

COLOR

BK - BLACK
BRN - BROWN
GRA - GRAY
ORG - ORANGE
YLW - YELLOW

DK - DARK
LT - LIGHT

MATERIAL

GVL - GRAVEL
ASP - ASPHALT
CON - CONCRETE

DRILLING LOG		SOUTH ATLANTIC		INSTALLATION HUNTER ARMY AIRFIELD		SHEET 1 OF 1 SHEETS	
1. PROJECT		TAC SHOP REFUELING STATION PHASE II SITE INVESTIGATION		10. SIZE AND TYPE OF BIT		5 1/2" AUGER BUCKET	
2. LOCATION (CONTINUED OF SHEET)		BUILDING 1343, SEE PLAN		11. DIALS FOR ELEVATION SHOWN (TBM or MSL)		MSL	
3. DRILLING AGENCY		SAVANNAH DISTRICT.		12. MANUFACTURER'S DESIGNATION OF DRILL		HAND AUGER	
4. HOLE NO. (AS SHOWN ON DRILLING AND ON THE MAP)		MM-3		13. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN		14. TOTAL NUMBER CORE BOXES	15. ELEVATION GROUND WATER
5. NAME OF DRILLER		HORACE FULCHER		16. DATE HOLE		STARTED	COMPLETED
6. DIRECTION OF HOLE		☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		17. ELEVATION TOP OF HOLE		23.98'	
7. THICKNESS OF OVERBURDEN		8.0'		18. TOTAL CORE RECOVERY FOR BORING		N/A	
8. DEPTH DRILLED INTO ROCK		0.0'		19. SIGNATURE OF INSPECTOR		TONI NICHOLSON, GEOLOGIST	
9. TOTAL DEPTH OF HOLE		8.0'					

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Supplied)	WELL CONST- RCTION	BOX OR SAMPLE NO.	REMARKS (Drilling time, water level, depth of water, etc., if significant)
23.98'	0		8" Manhole cover			DEPTH TO WATER DURING DRILLING: 4.5'.
23.48'			Asphalt.			
			Gravel and sand.			WATER LEVEL READING 24 HRS. AFTER HOLE COMPLETED: 4.0'.
21.98'	2		SM Silty SAND, brown, very fine, damp.			NOTE: SEE HTW LOG FOR MORE INFORMATION.
20.48'	4		SP Poorly graded SAND, fine to medium grained, subangular, tan, very damp to wet. Saturated.		MW3-1 MW3-2	TOP OF WELL SCREEN IS AT 3.0'. TOP OF FILTER SAND IS AT 2.8'. TOP OF BENTONITE IS AT 1.0'. SCREEN IS 2" DIA. PVC TRILOC. 0.010 SLOT SIZE.
15.98'	8		BOTTOM OF HOLE AT 8.0'			
	10					
	12					

NOTE: SOILS VISUALLY
FIELD CLASSIFIED IN
ACCORDANCE WITH THE
UNITED SOIL CLASSIFICATION
SYSTEM.

HTW BORING LOG

[illegible]

DRILLING LOG		SOUTH ATLANTIC		INSTALLATION HUNTER ARMY AFIELD		SHEET 1 OF 1 SHEETS	
1. PROJECT TAC SHOP REFUELING STATION PHASE II SITE INVESTIGATION				10. SIZE AND TYPE OF BIT 5 1/2" AUGER BUCKET			
2. LOCATION (Continuation of Sheet)				11. DATUM FOR ELEVATION SHOWN (FEET or MSL)			
BUILDING 1343. SEE PLAN				MSL			
3. DRILLING AGENCY				12. MANUFACTURER'S DESIGNATION OF DRILL			
SAVANNAH DISTRICT				HAND AUGER			
4. HOLE NO. (As shown on drawing and this sheet)				13. TOTAL NO. OF OVER- -BURDEN SAMPLES TAKEN			
MW-4				DISTURBED 2 UNDISTURBED 0			
5. NAME OF DRILLER				14. TOTAL NUMBER CORE BOXES			
HORACE FULCHER				0			
6. DIRECTION OF HOLE				15. ELEVATION GROUND WATER			
☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				SEE BELOW			
7. THICKNESS OF OVERBURDEN 7.5'				16. DATE HOLE			
8. DEPTH DRILLED INTO ROCK 0.0'				STARTED 3-12-91 COMPLETED 3-12-91			
9. TOTAL DEPTH OF HOLE 7.5'				17. ELEVATION TOP OF HOLE 22.80'			
				18. TOTAL CORE RECOVERY FOR BORING N/A			
				19. SIGNATURE OF INSPECTOR			
				TOM NICHOLSON, GEOLOGIST			

ELEVATION	DEPTH	LOGGING	CLASSIFICATION OF MATERIALS (Described)	WELL CONST-RUCTION	SIZE OR SAMPLE NO.	REMARKS (Drilling fluid, water level, depth of weathering, etc. if appropriate)
22.80'	0		8" Manhole cover			DEPTH TO WATER DURING DRILLING: 3.8'.
22.10'	0.7		Gravel.			
	2		SM Silty SAND, tan to brown, fine to very fine grained. Rootlets in top 1.0 foot.			WATER LEVEL. READING 24 HRS. AFTER HOLE COMPLETED: 3.3'.
	2.5		Gray with CL layer 0.3" thick, brown.		MW4-1	
	3		Fine to medium grained.			NOTE: SEE HYD LOG FOR MORE INFORMATION.
	4		Saturated.			
	4.5		Brown.		MW4-2	
17.80'	5.5		SC Clayey SAND, fine grained, dark brown.			TOP OF WELL SCREEN IS AT 2.5'. TOP OF FILTER SAND IS AT 1.5'. TOP OF BENTONITE IS AT 0.5'. SCREEN IS 2" DIA. BY TRILOC. 0.010 SLOT SIZE.
16.30'	6.5		SM Silty SAND, very fine to fine grained, light gray.			
15.30'	7.5		BOTTOM OF HOLE AT 7.5'			
	8					
	10					
	12					

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

A-8

HTW BORING LOG

[illegible]

DRILLING LOG		SOUTH ATLANTIC		INSTALLATION HUNTER ARMY FIELD		SHEET 1 OF 1 SHEETS	
1. PROJECT TAG SHOP REFUELING STATION PHASE II SITE INVESTIGATION				10. SIZE AND TYPE OF BIT 5 1/2" AUGER BUCKET			
2. LOCATION (Address or Station)				11. DATE FOR ELEVATION SHOWN (750 or 100)			
BUILDING 1343, SEE PLAN				MSL			
3. DRILLING AGENCY				12. MANUFACTURER'S DESIGNATION OF DRILL			
SAVANNAH DISTRICT				HAND AUGER			
4. HOLE IDENTIFICATION (Drilling Log and File Number)				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN			
MW-5				DISTURBED 1 UNDISTURBED 0			
5. NAME OF DRILLER				14. TOTAL NUMBER CORE BOXES			
HORACE FULCHER				0			
6. DIRECTION OF HOLE				15. ELEVATION GROUND WATER			
☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				SEE BELOW			
7. THICKNESS OF OVERBURDEN 8.5'				16. DATE HOLE STARTED 3-12-91 COMPLETED 3-12-91			
8. DEPTH DRILLED INTO ROCK 0.0'				17. ELEVATION TOP OF HOLE 24.05'			
9. TOTAL DEPTH OF HOLE 8.5'				18. TOTAL CORE RECOVERY FOR BORING N/A			
				19. SIGNATURE OF INSPECTOR TONI NICHOLSON, GEOLOGIST			

ELEVATION a	DEPTH b	LOGGING c	CLASSIFICATION OF MATERIALS (Description) d	WELL CONST- RUNCTION e	BOX OR SAMPLE NO. f	REMARKS (Include time, water, temp, depth of penetration, etc. if significant) g
24.05'	0		8" Manhole cover			DEPTH TO WATER DURING DRILLING: 5.5'.
23.55'			Asphalt.			
22.55'			Gravel and sand.			WATER LEVEL READING 24 HRS. AFTER HOLE COMPLETED: 4.2'.
21.55'	2		SM Silty SAND, brown to dark brown, very fine to fine grained, damp.			NOTE: SEE HTW LOG FOR MORE INFORMATION.
20.05'	4		SP Poorly graded SAND, light gray, fine to medium grained, damp.			
			SM Silty SAND, very fine to fine grained, dark brown, very damp to wet.			TOP OF WELL SCREEN IS AT 3.5'. TOP OF FILTER SAND IS AT 2.3' TOP OF BENTONITE IS AT 1.3'. SCREEN IS 2" DIA. P TRILOC. 0.010 SLOT SIZE
	6		Dark tan, saturated.		MW5-1	
15.55'	8					
			BOTTOM OF HOLE AT 8.5'			
	10		NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.			
	12					

A-10

HTW BORING LOG

PROJECT: TACTICAL EQUIPMENT SHOP REFUELING STATION, BUILDING 1343 PHASE I SITE INVESTIGATION										BORING NO. MW-5			
LOCATION: HUNTER ARMY AIRFIELD, SAVANNAH, GEORGIA										ELEVATION: 24.05'			
WATER LEVEL DURING DRILLING: 5.5'					24-HOUR WATER LEVEL READING: 4.2'								
WEATHER: CLEAR, 65°					DRILLER: HORACE FULCHER								
REMARKS: 0.0 - 1.5 ASPHALT UNDERLAIN BY GRAVEL AND SAND					GEOLOGIST: TONI F. NICHOLSON								
SAMPLE NO.	ODOR	DEPTH (FT.)		DATE (1981)	BLOWS PER FOOT	MOISTURE CONTENT	CLASSIFICATION	COLOR	SAMPLES		AT TOP OF H		
		FROM	TO						OVA (ppm)	HNU (ppm)	CGI		O ₂
											FIELD HEADSPACE ANALYSIS	FIELD HEADSPACE ANALYSIS	
SL		1.5	2.0	3/12	-	DAMP	SM	BRN	20		0	20.8	
M		2.0	2.5	3/12	-	DAMP	SM	DK. BRN	30				
SL		2.5	3.0	3/12	-	DAMP	SP	LT. GRA			0	20.8	
SL		3.0	3.5	3/12	-	DAMP	SP	LT. GRA					
SL		3.5	4.0	3/12	-	DAMP	SP	LT. GRA	50		0	20.8	
T		4.0	4.5	3/12	-	V.D.	SM	DK. BRN					
T		4.5	5.0	3/12	-	V.D.	SM	DK. BRN			0	20.8	
T		5.0	5.5	3/12	-	WET	SM	DK. BRN	12				
MWS-1		5.5	6.0	3/12	-	SAT.	SM	DK. TAN			0	20.8	
T		6.0	6.5	3/12	-	SAT.	SM	DK. TAN					
T		6.5	7.0	3/12	-	SAT.	SM	DK. TAN			0	20.8	
T		7.0	7.5	3/12	-	SAT.	SM	DK. TAN					
T		7.5	8.0	3/12	-	SAT.	SM	DK. TAN			0	20.8	
T		8.0	8.5	3/12	-	SAT.	SM	DK. TAN					

DRILLING LOG		JTH ATLANTIC		HUNTER ARMY FIELD		OF 1 SHEET	
1. PROJECT		TAG SHIP REFUELING STATION PHASE B SITE INVESTIGATION		12. SIZE AND TYPE OF BIT		5/8" AUGER BUCKET	
2. LOCATION (ADDRESS OR GRID)		BUILDING 1343, SEE PLAN		13. DATES FOR ELEVATION SHOWN (TOP OF WELL)		MSL	
3. ORIGIN AGENCY		SAVANNAH DISTRICT		14. MANUFACTURER'S DESIGNATION OF DRILL		HAND AUGER	
4. HOLE NO. AND SHOWN ON DRAWING AND AND FILE NUMBER		MW-6 (A-6)		15. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN		DISTURBED 2 UNDISTURBED 0	
5. NAME OF DRILLER		HORACE FULCHER		16. TOTAL NUMBER CORE BOXES		0	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				17. ELEVATION GROUND WATER		SEE BELOW	
7. THICKNESS OF OVERBURDEN		8.0'		18. DATE HOLE		STARTED 3-11-91 COMPLETED 3-11-91	
8. DEPTH DRILLED INTO ROCK		0.0'		19. ELEVATION TOP OF HOLE		23.52'	
9. TOTAL DEPTH OF HOLE		8.0'		20. TOTAL CORE RECOVERY FOR BOXES		N/A	
				21. SIGNATURE OF INSPECTOR		TONI NICHOLSON, GEOLOGIST	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	WELL CONSTRUCTION	BOX OR SAMPLE NO.	REMARKS (Include well water level, date of sampling, etc., if appropriate)
23.52'	0		Manhole cover			DEPTH TO WATER DURING DRILLING: 5.8'. WATER LEVEL READING 24 HRS. AFTER HOLE COMPLETED: 3.3'. NOTE: SEE HTW LOG FOR MORE INFORMATION. TOP OF WELL SCREEN IS AT 3.8'. TOP OF FILTER SAND IS AT 2.8'. TOP OF BENTONITE IS AT 1.8'. SCREEN IS 2" DIA. PY TRILOC. 0.010 SLOT SIZE.
21.52'	2		0.7' concrete underlain by gravel and (SM) silty SAND.			
	4		SM Silty SAND, tan to yellow tan, very fine to fine grained.			
	6		Soil has petroleum sheen at 4.0' to 5.5'.			
15.52'	8		BOTTOM OF HOLE AT 8.0'		AG-1 AG-2	
	10					
	12					

NOTE: SOILS VISUALLY
FIELD CLASSIFIED IN
ACCORDANCE WITH THE
UNIFIED SOIL CLASSIFICATION
SYSTEM

HIW BUKING LOG

[illegible]

APPENDIX VIII

GROUNDWATER LABORATORY RESULTS

SAMPLE NUMBERING SCHEME

Sample numbers were assigned to reflect the area from which they were collected. Examples of the sample numbering scheme are presented below. For all sample numbers include the HAAF-260 prefix.

Sample ID Number	Description
PIPE-1-D-S	Soil sample collected from the piping trench and tested for diesel range products.
PIPE-1-G-S	Soil sample collected from the piping trench and tested for gasoline range products.
DIS-D-1-S or DIS-1-D-S	Soil sample collected from the dispenser area and tested for diesel range products.
DIS-G-1-S OR DIS-1-G-S	Soil sample collected from the dispenser area and tested for gasoline range products.
UST-D-1-GW	Groundwater sample collected from the UST area and tested for diesel range products.
UST-G-1-GW	Groundwater sample collected from the UST area and tested for gasoline range products.

Summary of Methods

Soil

BTEX by SW846 5031/8260

PAHs by SW846 8310

Groundwater

VOCs by Sw846 5031/8260

SVOCs by SW846 8270

Summary of Qualifiers

U = not detected

J = estimated value

B = analyte found in sample and associate blank

P = greater than 25% difference detected concentration between the two GC columns.

D = compound required dilution.

Special Notes:

Many of the soil PAH analyses required re-analysis because method criteria were exceeded. The re-analyses are included in the data package. They are identified by "RE" after the sample ID. Where appropriate, based on validation of the data, the data from the re-analyses has been included in the data table

1700 W. Albany • Broken Arrow, Oklahoma 74012-1421
Office: 918-251-2858 • Fax 918-251-2599

S. LING FIRM

FAITH Tech

CLIENT CONTACT

Teen mikes

PHONE NUMBER

423-493-9400

P.O. or PROPOSAL NUMBER

PROJECT NAME

三才

ANALYTICAL TESTS REQUESTED

SAMPLER, (Signature)

EMPLER, (Signature)

[illegible]

matrice spike / ms pup

5.3c, 6.3c, 2.3c, 21c,
4.9c, 4.5c

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
<i>Michael B. Reed</i>	7-23	1059	Foley
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: (Signature)
	10/18/98	930	S. Hedges
REMARKS:			

[SR012-1192-03]

GW - DIESEL

12
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. _____

Lab Name: SWL-TULSA

Contract: HUNTER ARMY UST-D-1-GW
HMAF-260-UST-D-1-G

Lab Code: SWCK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil, water: WATER

Lab Sample ID: 34990.01

Sample wt/vol: 5.0 g/mL ML

Lab File ID: W32148.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	J
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	18	
75-25-2	BROMOFORM	5	U
127-13-4	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	2	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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

UST-D-1-

HAAF-260-UST-D-1-6

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.01

Sample wt/vol: 5.0 g/mL ML

Lab File ID: N32148.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	2	U
98-06-6-----tert	BUTYLBENZENE	5	U
135-98-8-----sec	BUTYLBENZENE	2	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	1	U
99-87-6-----p	ISOPROPYLTOLUENE	5	U
91-20-3-----	NAPHTHALENE	22	U
103-65-1-----n	PROPYLBENZENE	1	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	8	U
108-67-8-----1	3 5-TRIMETHYLBENZENE	6	U
74-97-5-----	BROMOCHLOROMETHANE	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

260USTD1GW

HAARF-260-03T-D-1-GW

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11249.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/01/98

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	2	J
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	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
65-85-0-----Benzoic Acid	42	JB
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	8	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	39	
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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260USTD1GW

HAAP-260-UST-D-1

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11249.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/01/98

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
99-09-2-----	3-Nitroaniline	50	U
83-32-9-----	Acenaphthene	6	J
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	3	J
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	11	
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	21	
120-12-7-----	Anthracene	3	J
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	4	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	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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY HAAP-260-UST-D-2-COL

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil/water) WATER

Lab Sample ID: 34990.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: N32149.D

Level: (low/med) LCW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
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	1	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	4	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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

UST-D-2-GW

HAAP-260-UST-D-2

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.02

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: W32149.0

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L
---------	----------	--

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
99-87-8-----	p-ISOPROPYLTOLUENE	5	U
91-20-3-----	NAPHTHALENE	4	J
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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260USTD2GWRE

HAAF-260-UST-D-2-

GWRE

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.02RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11396.D

Level: (low/med) LOW

Date Received: 07/25/98

% 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: 6.3

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

108-95-2-----	Phenol	4	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	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
65-85-0-----	Benzoic Acid	12	J
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	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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260USTD2GWRE

HAAF-260-UST-D-2

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.02RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11396.D

Level: (low/med) LOW

Date Received: 07/25/98

% 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: 6.3

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	10	U
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	10	U
120-12-7-----Anthracene	10	U
84-74-2-----Di-n-butylphthalate	1	JB
206-44-0-----Fluoranthene	10	U
129-00-0-----Pyrene	10	U
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	11	
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

12
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY HAMP-260-UST-D-3-G
Gw

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil/water: WATER

Lab Sample ID: 34990.03

Sample wt/vol: 5.0 'g/mL' ML

Lab File ID: TL3866.2

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 08/06/98

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	1	J
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	34	
75-25-2	-----BROMOFORM	5	U
127-18-4	-----TETRACHLOROETHENE	5	U
108-88-3	-----TOLUENE	1	J
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	4	J
156-60-5	-----trans-1 2-DICHLOROETHENE	5	U
13-302-07	-----m,p-XYLENES	2	J
95-47-6	-----o-XYLENE	1	J
105-93-4	-----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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

UST-D-3-GM

44AF-260-05F-A

6

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.03

Sample wt/vol: 5.0 g/mL ML

Lab File ID: UL3866.2

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 03/06/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Q

CAS NO.	COMPOUND		
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	1	U
103-65-1-----n	PROPYLBENZENE	5	U
87-61-6-----1 2 3	TRICHLOROBENZENE	5	U
120-32-1-----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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260USTD3GWRE
260-UST-D-3
HAAR-UST-D-3-GWRE

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.03RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11397.D

Level: (low/med) LOW

Date Received: 07/25/98

% 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: 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
100-51-6-----Benzyl alcohol	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	2	J
65-85-0-----Benzoic Acid	43	J
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	6	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	2	J
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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWRE

AAAF-260-UST-D 4

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.04RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11398.D

Level: (low/med) LOW

Date Received: 07/25/98

% 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: 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
100-51-6-----Benzyl alcohol	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
65-85-0-----Benzoic Acid	34	J
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	
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	29	
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	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

USTD4GWRE

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HAAP-260-051-A-4-GWRE

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.04RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11398.D

Level: (low/med) LOW

Date Received: 07/25/98

% 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: 6.1

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	2	J
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	1	J
84-66-2-----Diethylphthalate	10	U
7005-72-3-----4-Chlorophenyl-phenylether	10	U
86-73-7-----Fluorene	4	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	5	J
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	20	U
56-55-3-----Benzo(a)anthracene	10	U
218-01-9-----Chrysene	10	U
117-81-7-----bis(2-Ethylhexyl)phthalate	6	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

GW - GAS

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAAP-
260-UST1-G-aw

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: 34977.19

Sample wt/vol: 5.0 g/mL) ML

Lab File ID: R30330.2

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	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	3200	E
75-25-2	BROMOFORM	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	8	
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	360	E
100-42-5	STYRENE	5	U
156-59-2	cis-1 2-DICHLOROETHENE	6	
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	17	
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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HAAP-250-UST1-7 10

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil/water: WATER

Lab Sample ID: 34977.19

Sample wt/vol: 3.0 (g/mL) ML

Lab File ID: R30330.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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
104-51-3-----	n-BUTYLBENZENE	24	
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	13	
99-87-6-----	p-ISOPROPYLTOLUENE	5	U
91-20-3-----	NAPHTHALENE	77	
103-65-1-----	n-PROPYLBENZENE	15	
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	8	
108-67-8-----	1 3 5-TRIMETHYLBENZENE	2	U
74-97-5-----	BROMOCHLOROMETHANE	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAAP-
260-USTL-GDL+0

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: 34977.19DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30344.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

Column: (pack/cap) CAP

Dilution Factor: 20.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3-----	CHLOROMETHANE	100	U
74-83-9-----	BROMOMETHANE	100	U
75-01-4-----	VINYL CHLORIDE	100	U
75-00-3-----	CHLOROETHANE	100	U
75-09-2-----	METHYLENE CHLORIDE	100	U
75-35-4-----	1 1-DICHLOROETHENE	100	U
75-34-3-----	1 1-DICHLOROETHANE	100	U
67-66-3-----	CHLOROFORM	100	U
107-06-2-----	1 2-DICHLOROETHANE	100	U
71-55-6-----	1 1 1-TRICHLOROETHANE	100	U
56-23-5-----	CARBON TETRACHLORIDE	100	U
75-27-4-----	BROMODICHLOROMETHANE	100	U
78-87-5-----	1 2-DICHLOROPROPANE	100	U
79-01-6-----	TRICHLOROETHENE	100	U
124-48-1-----	DIBROMOCHLOROMETHANE	100	U
79-00-5-----	1 1 2-TRICHLOROETHANE	100	U
71-43-2-----	BENZENE	3000	D
75-25-2-----	BROMOFORM	100	U
127-18-4-----	TETRACHLOROETHENE	100	U
108-88-3-----	TOLUENE	100	U
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	100	U
108-90-7-----	CHLOROBENZENE	100	U
100-41-4-----	ETHYL BENZENE	300	D
100-42-5-----	STYRENE	100	U
156-59-2-----	cis-1 2-DICHLOROETHENE	100	U
156-60-5-----	trans-1 2-DICHLOROETHENE	100	U
13-302-07-----	m,p-XYLENES	100	U
95-47-6-----	o-XYLENE	100	U
106-93-4-----	1 2-DIBROMOETHANE	100	U
630-20-6-----	1 1 1 2-TETRACHLOROETHANE	100	U
96-18-4-----	1 2 3-TRICHLOROPROPANE	100	U
75-71-8-----	DICHLORODIFLUOROMETHANE	100	U
75-69-4-----	TRICHLOROFLUOROMETHANE	100	U
74-95-3-----	DIBROMOMETHANE	100	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAARF-
260-UST1-GALR

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: 34977.19DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30344.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

Column: (pack/cap) CAP

Dilution Factor: 20.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

96-12-8-----1	2-DIBROMO-3-CHLOROPROPANE	100	U
108-86-1-----	BROMOBENZENE	100	U
104-51-8-----	n-BUTYLBENZENE	100	U
98-06-6-----	tert-BUTYLBENZENE	100	U
135-98-8-----	sec-BUTYLBENZENE	100	U
95-49-8-----	2-CHLOROTOLUENE	100	U
106-43-4-----	4-CHLOROTOLUENE	100	U
95-50-1-----	1 2-DICHLOROBENZENE	100	U
541-73-1-----	1 3-DICHLOROBENZENE	100	U
106-46-7-----	1 4-DICHLOROBENZENE	100	U
142-28-9-----	1 3-DICHLOROPROPANE	100	U
594-20-7-----	2 2-DICHLOROPROPANE	100	U
563-58-6-----	1 1-DICHLOROPROPENE	100	U
87-68-3-----	HEXACHLOROBUTADIENE	100	U
98-82-8-----	ISOPROPYLBENZENE	100	U
99-87-6-----	p-ISOPROPYLTOLUENE	100	U
91-20-3-----	NAPHTHALENE	80	JBD
103-65-1-----	n-PROPYLBENZENE	100	U
87-61-6-----	1 2 3-TRICHLOROBENZENE	100	U
120-82-1-----	1 2 4-TRICHLOROBENZENE	100	U
95-63-6-----	1 2 4-TRIMETHYLBENZENE	100	U
108-67-8-----	1 3 5-TRIMETHYLBENZENE	100	U
74-97-5-----	BROMOCHLOROMETHANE	100	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAAF-260-USTF-G-GW
W F260UST1G

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.19

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11244.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/01/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.7

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

108-95-2-----	Phenol	14	
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	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
65-85-0-----	Benzoic Acid	11	JB
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	29	
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	2	J
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

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO. _____

HAAF-260-UST1-G

~~HAAF-260-UST1-G-GW~~

Lab Name: SWL-TULSA

Contract: _____

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) WATER

Lab Sample ID: 34977.19

Sample wt/vol: 5 (g/mL) ML

Lab File ID: G1299.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB624 ID: 0.54(mm)

Dilution Factor: 20

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

Gasoline	11000	
Surrogate amount spiked	400	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

~~HAAP-260-UST2-G~~

~~HAAP-260-UST2-G-G~~

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.18

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30329.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
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	1100	U
75-25-2	BROMOFORM	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	13	
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	220	U
100-42-5	STYRENE	5	U
156-59-2	cis-1 2-DICHLOROETHENE	1	U
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	39	
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

12
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HAAF-260-UST2-G

HAAF-260-UST-1

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil/water: WATER

Lab Sample ID: 34977.18

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30329.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	2	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	14	U
99-87-6-----p	ISOPROPYLTOLUENE	5	U
91-20-3-----	NAPHTHALENE	67	U
103-65-1-----n	PROPYLBENZENE	4	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	19	U
108-67-8-----1 3	5-TRIMETHYLBENZENE	12	U
74-97-5-----	BROMOCHLOROMETHANE	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HAAF-260-UST2-GDL
HAAF-260-UST-2-GDL-6
JM

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.18DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30343.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 03/01/98

Column: (pack/cap) CAP

Dilution Factor: 10.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
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	1600	D
75-25-2	BROMOFORM	50	U
127-18-4	TETRACHLOROETHENE	50	U
108-88-3	TOLUENE	50	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	50	U
108-90-7	CHLOROBENZENE	50	U
100-41-4	ETHYL BENZENE	310	D
100-42-5	STYRENE	50	U
156-59-2	cis-1 2-DICHLOROETHENE	15	JD
156-60-5	trans-1 2-DICHLOROETHENE	50	U
13-302-07	m,p-XYLENES	24	JD
95-47-6	o-XYLENE	50	U
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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HAAF-260-UST2-0011
HAAF-260-UST-2
GU-

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.18DL

Sample wt/vol: 5.0 g/mL ML

Lab File ID: R30343.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

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	52	BD
103-65-1-----	n-PROPYLBENZENE	12	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	25	JD
108-67-8-----	1 3 5-TRIMETHYLBENZENE	15	JD
74-97-5-----	BROMOCHLOROMETHANE	50	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HAAF-260-UST-2-GRE-GW
F260UST2GRE

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.18RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11391.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: 6.0

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

108-95-2-----Phenol	9	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	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
65-85-0-----Benzoic Acid	10	J
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	37	
106-47-8-----4-Chloroaniline	10	U
87-68-3-----Hexachlorobutadiene	10	U
59-50-7-----4-Chloro-3-methylphenol	1	J
91-57-6-----2-Methylnaphthalene	2	J
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.

12AAF-260-UST-2-GRE-GW
F260UST2GRE

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: 34977.18RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11391.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: 6.0

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	1	JB
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
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	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	2	JB
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
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	10	U
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

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA

Contract:

HAAF-260-UST2-G

~~HAAF-260-UST2-G-GW~~

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) WATER

Lab Sample ID: 34977.18

Sample wt/vol: 5 (g/mL) ML

Lab File ID: G1298.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

GC Column: DB624 ID: 0.54 (mm)

Dilution Factor: 10

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

Gasoline	2700	
Surrogate amount spiked	200	

PZ

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-1-GW

HADP-260-PZ-1-CW

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.16

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: E30325.3

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	
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	54	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	53	U
156-59-2	cis-1 2-DICHLOROETHENE	5	U
156-60-5	trans-1 2-DICHLOROETHENE	2	U
13-302-07	m,p-XYLENES	5	U
95-47-6	o-XYLENE	22	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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-1-GW

HAAP-260-PZ-1-GW

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.15

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30325.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	7	
98-06-6-----	tert-BUTYLBENZENE	5	U
135-98-8-----	sec-BUTYLBENZENE	8	
95-49-8-----	2-CHLOROTOLUENE	5	
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	15	
99-87-6-----	p-ISOPROPYLTOLUENE	6	
91-20-3-----	NAPHTHALENE	220	E
103-65-1-----	n-PROPYLBENZENE	25	
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	130	
108-67-8-----	1 3 5-TRIMETHYLBENZENE	42	
74-97-5-----	BROMOCHLOROMETHANE	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-1-GWDL

HAAP-260-PZ-1-GWDL

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.16DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30363.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 08/03/98

Column: (pack/cap) CAP

Dilution Factor: 2.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

96-12-8-----1	2-DIBROMO-3-CHLOROPROPANE	10	U
108-86-1-----	BROMOBENZENE	10	U
104-51-8-----	n-BUTYLBENZENE	3	JD
98-06-6-----	tert-BUTYLBENZENE	10	U
135-98-8-----	sec-BUTYLBENZENE	5	JD
95-49-8-----	2-CHLOROTOLUENE	10	U
106-43-4-----	4-CHLOROTOLUENE	10	U
95-50-1-----	1 2-DICHLOROBENZENE	10	U
541-73-1-----	1 3-DICHLOROBENZENE	10	U
106-46-7-----	1 4-DICHLOROBENZENE	10	U
142-28-9-----	1 3-DICHLOROPROPANE	10	U
594-20-7-----	2 2-DICHLOROPROPANE	10	U
563-58-6-----	1 1-DICHLOROPROPENE	10	U
87-68-3-----	HEXACHLOROBUTADIENE	10	U
98-82-8-----	ISOPROPYLBENZENE	5	JD
99-87-6-----	p-ISOPROPYLTOLUENE	2	JD
91-20-3-----	NAPHTHALENE	170	D
103-65-1-----	n-PROPYLBENZENE	8	JD
87-61-6-----	1 2 3-TRICHLOROBENZENE	10	U
120-82-1-----	1 2 4-TRICHLOROBENZENE	2	JD
95-63-6-----	1 2 4-TRIMETHYLBENZENE	77	D
108-67-8-----	1 3 5-TRIMETHYLBENZENE	19	D
74-97-5-----	BROMOCHLOROMETHANE	10	U

12
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-1-GWDI

HAAP-260-PZ-1-GWDI

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.16DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: E30363.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 08/03/98

Column: (pack/cap) CAP

Dilution Factor: 2.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

74-87-3	CHLOROMETHANE	2	JD
74-83-9	BROMOMETHANE	10	U
75-01-4	VINYL CHLORIDE	10	U
75-00-3	CHLOROETHANE	10	U
75-09-2	METHYLENE CHLORIDE	10	U
75-35-4	1 1-DICHLOROETHENE	10	U
75-34-3	1 1-DICHLOROETHANE	10	U
67-66-3	CHLOROFORM	10	U
107-06-2	1 2-DICHLOROETHANE	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
79-01-6	TRICHLOROETHENE	10	U
124-48-1	DIBROMOCHLOROMETHANE	10	U
79-00-5	1 1 2-TRICHLOROETHANE	10	U
71-43-2	BENZENE	37	U
75-25-2	BROMOFORM	10	D
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	26	U
100-42-5	STYRENE	10	D
156-59-2	cis-1 2-DICHLOROETHENE	10	U
156-60-5	trans-1 2-DICHLOROETHENE	10	U
13-302-07	m,p-XYLENES	16	U
95-47-6	o-XYLENE	10	D
106-93-4	1 2-DIBROMOETHANE	10	U
630-20-6	1 1 1 2-TETRACHLOROETHANE	10	U
96-18-4	1 2 3-TRICHLOROPROPANE	10	U
75-71-8	DICHLORODIFLUOROMETHANE	10	U
75-69-4	TRICHLOROFLUOROMETHANE	10	U
74-95-3	DIBROMOMETHANE	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

F260PZ2GWRE

HAARF-260-PZ-2-GwRE

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.17RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11389.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: 6.2

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

108-95-2-----Phenol	2	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	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
65-85-0-----Benzoic Acid	10	J
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	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.

F260PZ2GWRE

~~HAAF-260-PZ-2G~~

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: 34977.17RE

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11389.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: 6.2

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	10	U
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	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	1	JB
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
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	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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

P23-GW

HAAP-260-P23-GW

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil/water) WATER

Lab Sample ID: 34977.15

Sample wt/vol: 5.0 g/mL) ML

Lab File ID: R30324.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	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	13	
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY HANF-260-P23

223-GW

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.15

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30324.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	2	J
75-00-3	CHLOROETHANE	3	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	26	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	2	J
100-42-5	STYRENE	5	U
156-59-2	cis-1 2-DICHLOROETHENE	2	J
156-60-5	trans-1 2-DICHLOROETHENE	5	U
13-302-07	m,p-XYLENES	2	J
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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HA4F260P23GW

HA4F-260-PZ-3-G6

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.15

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11241.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 07/31/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.5

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

108-95-2-----	Phenol	6	J
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	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
65-85-0-----	Benzoic Acid	16	JB
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	6	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	2	J
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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

HAAF260P23GW

HAAF-260-PZ-3-5

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.15

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11241.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 07/31/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.5

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	10	U
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	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	3	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	20	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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260-P2-4GW

HARF-260-P2-4-GW

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil/water: WATER

Lab Sample ID: 34977.14

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30323.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	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	2	J
124-48-1-----	DIBROMOCHLOROMETHANE	5	U
79-00-5-----	1 1 2-TRICHLOROETHANE	5	U
71-43-2-----	BENZENE	280	(E)
75-25-2-----	BROMOFORM	5	U
127-18-4-----	TETRACHLOROETHENE	5	U
108-88-3-----	TOLUENE	3	J
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7-----	CHLOROBENZENE	5	U
100-41-4-----	ETHYL BENZENE	130	
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	20	
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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260-P2-4GW

HAAF-260-P2-4

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.14

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30323.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	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-DICHLOROPROPANE	5	U
87-68-3-----	HEXACHLOROBUTADIENE	5	U
98-82-8-----	ISOPROPYLBENZENE	9	
99-87-6-----	p-ISOPROPYLTOLUENE	5	U
91-20-3-----	NAPHTHALENE	90	
103-65-1-----	n-PROPYLBENZENE	15	
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	4	J
108-67-8-----	1 3 5-TRIMETHYLBENZENE	3	J
74-97-5-----	BROMOCHLOROMETHANE	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

260-P2-4GWDL1

HAAP-260-P2-4-GWDL

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: soil/water) WATER

Lab Sample ID: 34977.14DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30341.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

Column: (pack/cap) CAP

Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	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	10	U
75-35-4-----	1 1-DICHLOROETHENE	10	U
75-34-3-----	1 1-DICHLOROETHANE	10	U
67-66-3-----	CHLOROFORM	10	U
107-06-2-----	1 2-DICHLOROETHANE	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
79-01-6-----	TRICHLOROETHENE	10	U
124-48-1-----	DIBROMOCHLOROMETHANE	10	U
79-00-5-----	1 1 2-TRICHLOROETHANE	10	U
71-43-2-----	BENZENE	250	D
75-25-2-----	BROMOFORM	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	120	D
100-42-5-----	STYRENE	10	U
156-59-2-----	cis-1 2-DICHLOROETHENE	10	U
156-60-5-----	trans-1 2-DICHLOROETHENE	10	U
13-302-07-----	m,p-XYLENES	12	D
95-47-6-----	o-XYLENE	10	U
106-93-4-----	1 2-DIBROMOETHANE	10	U
630-20-6-----	1 1 1 2-TETRACHLOROETHANE	10	U
96-18-4-----	1 2 3-TRICHLOROPROPANE	10	U
75-71-8-----	DICHLORODIFLUOROMETHANE	10	U
75-69-4-----	TRICHLOROFLUOROMETHANE	10	U
74-95-3-----	DIBROMOMETHANE	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

260-P2-4GMDL

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

NAAP-260-PZ-4

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.14DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30341.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 08/01/98

Column: (pack/cap) CAP

Dilution Factor: 2.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

96-12-8-----1	2-DIBROMO-3-CHLOROPROPANE	10	U
108-86-1-----	BROMOBENZENE	10	U
104-51-8-----	n-BUTYLBENZENE	3	JBD
98-06-6-----	tert-BUTYLBENZENE	10	U
135-98-8-----	sec-BUTYLBENZENE	2	JD
95-49-8-----	2-CHLOROTOLUENE	10	U
106-43-4-----	4-CHLOROTOLUENE	10	U
95-50-1-----	1 2-DICHLOROBENZENE	10	U
541-73-1-----	1 3-DICHLOROBENZENE	10	U
106-46-7-----	1 4-DICHLOROBENZENE	10	U
142-28-9-----	1 3-DICHLOROPROPANE	10	U
594-20-7-----	2 2-DICHLOROPROPANE	10	U
563-58-6-----	1 1-DICHLOROPROPENE	10	U
87-68-3-----	HEXACHLOROBUTADIENE	4	JBD
98-82-8-----	ISOPROPYLBENZENE	3	JD
99-87-6-----	p-ISOPROPYLTOLUENE	10	U
91-20-3-----	NAPHTHALENE	98	BD
103-65-1-----	n-PROPYLBENZENE	10	JD
87-61-6-----	1 2 3-TRICHLOROBENZENE	2	JD
120-82-1-----	1 2 4-TRICHLOROBENZENE	10	U
95-63-6-----	1 2 4-TRIMETHYLBENZENE	2	JD
108-67-8-----	1 3 5-TRIMETHYLBENZENE	2	JD
74-97-5-----	BROMOCHLOROMETHANE	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

F260P24GW
HAAF-260-PZ-4-GW

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.14

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11240.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 07/31/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.4

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

108-95-2-----Phenol	8	J
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	1	J
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
65-85-0-----Benzoic Acid	12	JB
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	34	
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	4	J
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.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

F260P24GW

HAAF-260-PZ-4-G10

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.14

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11240.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 07/31/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.4

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	3	J
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
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	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	4	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	20	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

QA/QC
WATER

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P23-GWMS

HAAP-260-P23-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: 34977.15MS

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30326.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	44	
74-83-9-----	BROMOMETHANE	45	
75-01-4-----	VINYL CHLORIDE	60	
75-00-3-----	CHLOROETHANE	68	
75-09-2-----	METHYLENE CHLORIDE	61	
75-35-4-----	1 1-DICHLOROETHENE	52	
75-34-3-----	1 1-DICHLOROETHANE	47	
67-66-3-----	CHLOROFORM	51	
107-06-2-----	1 2-DICHLOROETHANE	54	
71-55-6-----	1 1 1-TRICHLOROETHANE	51	
56-23-5-----	CARBON TETRACHLORIDE	50	
75-27-4-----	BROMODICHLOROMETHANE	52	
78-87-5-----	1 2-DICHLOROPROPANE	53	
79-01-6-----	TRICHLOROETHENE	58	
124-48-1-----	DIBROMOCHLOROMETHANE	48	
79-00-5-----	1 1 2-TRICHLOROETHANE	53	
71-43-2-----	BENZENE	77	
75-25-2-----	BROMOFORM	44	
127-18-4-----	TETRACHLOROETHENE	52	
108-88-3-----	TOLUENE	59	
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	50	
108-90-7-----	CHLOROBENZENE	54	
100-41-4-----	ETHYL BENZENE	60	
100-42-5-----	STYRENE	58	
156-59-2-----	cis-1 2-DICHLOROETHENE	56	
156-60-5-----	trans-1 2-DICHLOROETHENE	50	
13-302-07-----	m,p-XYLENES	120	
95-47-6-----	o-XYLENE	61	
106-93-4-----	1 2-DIBROMOETHANE	57	
630-20-6-----	1 1 1 2-TETRACHLOROETHANE	51	
96-18-4-----	1 2 3-TRICHLOROPROPANE	44	
75-71-8-----	DICHLORODIFLUOROMETHANE	54	
75-69-4-----	TRICHLOROFLUOROMETHANE	53	
74-95-3-----	DIBROMOMETHANE	55	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

P23-GWMS

HAAC-260-PZ-3-GW

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.15MS

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30326.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	64	
108-86-1-----	BROMOBENZENE	53	
104-51-8-----n	BUTYLBENZENE	45	
98-06-6-----tert	BUTYLBENZENE	49	
135-98-8-----sec	BUTYLBENZENE	47	
95-49-8-----2	CHLOROTOLUENE	51	
106-43-4-----4	CHLOROTOLUENE	50	
95-50-1-----1	2-DICHLOROBENZENE	52	
541-73-1-----1	3-DICHLOROBENZENE	50	
106-46-7-----1	4-DICHLOROBENZENE	52	
142-28-9-----1	3-DICHLOROPROPANE	51	
594-20-7-----2	2-DICHLOROPROPANE	53	
563-58-6-----1	1-DICHLOROPROPENE	53	
87-68-3-----	HEXACHLOROBUTADIENE	40	
98-82-8-----	ISOPROPYLBENZENE	51	
99-87-6-----p	ISOPROPYLTOLUENE	48	
91-20-3-----	NAPHTHALENE	76	
103-65-1-----n	PROPYLBENZENE	52	
87-61-6-----1 2 3	TRICHLOROBENZENE	52	
120-82-1-----1 2 4	TRICHLOROBENZENE	46	
95-63-6-----1 2 4	TRIMETHYLBENZENE	51	
108-67-8-----1 3 5	TRIMETHYLBENZENE	50	
74-97-5-----	BROMOCHLOROMETHANE	54	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

P23-GWMSD

Lab Name: SWL-FULSA

Contract: HUNTER ARMY

HAFF-260-P23-

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.15MSD

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30327.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND		
74-87-3	CHLOROMETHANE	38	
74-83-9	BROMOMETHANE	40	
75-01-4	VINYL CHLORIDE	46	
75-00-3	CHLOROETHANE	51	
75-09-2	METHYLENE CHLORIDE	49	
75-35-4	1 1-DICHLOROETHENE	51	
75-34-3	1 1-DICHLOROETHANE	48	
67-66-3	CHLOROFORM	50	
107-06-2	1 2-DICHLOROETHANE	49	
71-55-6	1 1 1-TRICHLOROETHANE	45	
56-23-5	CARBON TETRACHLORIDE	44	
75-27-4	BROMODICHLOROMETHANE	44	
78-87-5	1 2-DICHLOROPROPANE	43	
79-01-6	TRICHLOROETHENE	48	
124-48-1	DIBROMOCHLOROMETHANE	41	
79-00-5	1 1 2-TRICHLOROETHANE	43	
71-43-2	BENZENE	71	
75-25-2	BROMOFORM	43	
127-18-4	TETRACHLOROETHENE	45	
108-88-3	TOLUENE	50	
79-34-5	1 1 2 2-TETRACHLOROETHANE	44	
108-90-7	CHLOROBENZENE	46	
100-41-4	ETHYL BENZENE	49	
100-42-5	STYRENE	47	
156-59-2	cis-1 2-DICHLOROETHENE	56	
156-60-5	trans-1 2-DICHLOROETHENE	51	
13-302-07	m,p-XYLENES	98	
95-47-6	o-XYLENE	50	
106-93-4	1 2-DIBROMOETHANE	46	
630-20-6	1 1 1 2-TETRACHLOROETHANE	43	
96-18-4	1 2 3-TRICHLOROPROPANE	40	
75-71-8	DICHLORODIFLUOROMETHANE	41	
75-69-4	TRICHLOROFLUOROMETHANE	52	
74-95-3	DIBROMOMETHANE	50	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

P23-GWMSD

WAAF-260-PZ2-GW

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.15MSD

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30327.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/31/98

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	51	
108-86-1-----	BROMOBENZENE	44	
104-51-8-----	n-BUTYLBENZENE	40	
98-06-6-----	tert-BUTYLBENZENE	43	
135-98-8-----	sec-BUTYLBENZENE	43	
95-49-8-----	2-CHLOROTOLUENE	44	
106-43-4-----	4-CHLOROTOLUENE	42	
95-50-1-----	1 2-DICHLOROBENZENE	45	
541-73-1-----	1 3-DICHLOROBENZENE	43	
106-46-7-----	1 4-DICHLOROBENZENE	45	
142-28-9-----	1 3-DICHLOROPROPANE	41	
594-20-7-----	2 2-DICHLOROPROPANE	47	
563-58-6-----	1 1-DICHLOROPROPENE	45	
87-68-3-----	HEXACHLOROBUTADIENE	41	
98-82-8-----	ISOPROPYLBENZENE	44	
99-87-6-----	p-ISOPROPYLTOLUENE	42	
91-20-3-----	NAPHTHALENE	60	
103-65-1-----	n-PROPYLBENZENE	43	
87-61-6-----	1 2 3-TRICHLOROBENZENE	45	
120-82-1-----	1 2 4-TRICHLOROBENZENE	42	
95-63-6-----	1 2 4-TRIMETHYLBENZENE	41	
108-67-8-----	1 3 5-TRIMETHYLBENZENE	42	
74-97-5-----	BROMOCHLOROMETHANE	52	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

~~ST-D-4-GWMSD~~
HAAF-260-VST-
D-4-GWMSD

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.06MSD

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30366.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 08/03/99

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	41	
74-83-9	BROMOMETHANE	36	
75-01-4	VINYL CHLORIDE	40	
75-00-3	CHLOROETHANE	46	
75-09-2	METHYLENE CHLORIDE	53	
75-35-4	1 1-DICHLOROETHENE	51	
75-34-3	1 1-DICHLOROETHANE	49	
67-66-3	CHLOROFORM	49	
107-06-2	1 2-DICHLOROETHANE	50	
71-55-6	1 1 1-TRICHLOROETHANE	47	
56-23-5	CARBON TETRACHLORIDE	46	
75-27-4	BROMODICHLOROMETHANE	47	
78-87-5	1 2-DICHLOROPROPANE	46	
79-01-6	TRICHLOROETHENE	46	
124-48-1	DIBROMOCHLOROMETHANE	44	
79-00-5	1 1 2-TRICHLOROETHANE	45	
71-43-2	BENZENE	93	
75-25-2	BROMOFORM	48	
127-18-4	TETRACHLOROETHENE	46	
108-88-3	TOLUENE	51	
79-34-5	1 1 2 2-TETRACHLOROETHANE	45	
108-90-7	CHLOROBENZENE	46	
100-41-4	ETHYL BENZENE	91	
100-42-5	STYRENE	51	
156-59-2	cis-1 2-DICHLOROETHENE	54	
156-60-5	trans-1 2-DICHLOROETHENE	50	
13-302-07	m,p-XYLENES	120	
95-47-6	o-XYLENE	49	
106-93-4	1 2-DIBROMOETHANE	48	
630-20-6	1 1 1 2-TETRACHLOROETHANE	46	
96-18-4	1 2 3-TRICHLOROPROPANE	42	
75-71-8	DICHLORODIFLUOROMETHANE	41	
75-69-4	TRICHLOROFLUOROMETHANE	44	
74-95-3	DIBROMOMETHANE	48	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

ST-D-4-GWMSD

HAAP-260-05T-D

GWMSD

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.06MSD

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30366.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 08/03/98

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	58	
108-86-1-----	BROMOBENZENE	44	
104-51-8-----	n-BUTYLBENZENE	46	
98-06-6-----	tert-BUTYLBENZENE	51	
135-98-8-----	sec-BUTYLBENZENE	48	
95-49-8-----	2-CHLOROTOLUENE	44	
106-43-4-----	4-CHLOROTOLUENE	43	
95-50-1-----	1 2-DICHLOROBENZENE	45	
541-73-1-----	1 3-DICHLOROBENZENE	45	
106-46-7-----	1 4-DICHLOROBENZENE	43	
142-28-9-----	1 3-DICHLOROPROPANE	43	
594-20-7-----	2 2-DICHLOROPROPANE	48	
563-58-6-----	1 1-DICHLOROPROPENE	47	
87-68-3-----	HEXACHLOROBUTADIENE	38	
98-82-8-----	ISOPROPYLBENZENE	55	
99-87-6-----	p-ISOPROPYLTOLUENE	52	
91-20-3-----	NAPHTHALENE	230	E
103-65-1-----	n-PROPYLBENZENE	61	
87-61-6-----	1 2 3-TRICHLOROBENZENE	40	
120-82-1-----	1 2 4-TRICHLOROBENZENE	39	
95-63-6-----	1 2 4-TRIMETHYLBENZENE	140	
108-67-8-----	1 3 5-TRIMETHYLBENZENE	48	
74-97-5-----	BROMOCHLOROMETHANE	48	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

ST-D-4-GWMS

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.05MS

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30365.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 08/03/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.

COMPOUND

Q

74-87-3-----	CHLOROMETHANE	40	
74-83-9-----	BROMOMETHANE	38	
75-01-4-----	VINYL CHLORIDE	39	
75-00-3-----	CHLOROETHANE	35	
75-09-2-----	METHYLENE CHLORIDE	54	
75-35-4-----	1 1-DICHLOROETHENE	53	
75-34-3-----	1 1-DICHLOROETHANE	51	
67-66-3-----	CHLOROFORM	51	
107-06-2-----	1 2-DICHLOROETHANE	49	
71-55-6-----	1 1 1-TRICHLOROETHANE	47	
56-23-5-----	CARBON TETRACHLORIDE	46	
75-27-4-----	BROMODICHLOROMETHANE	46	
78-87-5-----	1 2-DICHLOROPROPANE	46	
79-01-6-----	TRICHLOROETHENE	46	
124-48-1-----	DIBROMOCHLOROMETHANE	44	
79-00-5-----	1 1 2-TRICHLOROETHANE	45	
71-43-2-----	BENZENE	87	
75-25-2-----	BROMOFORM	48	
127-18-4-----	TETRACHLOROETHENE	47	
108-88-3-----	TOLUENE	52	
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	47	
108-90-7-----	CHLOROBENZENE	48	
100-41-4-----	ETHYL BENZENE	100	
100-42-5-----	STYRENE	50	
156-59-2-----	cis-1 2-DICHLOROETHENE	57	
156-60-5-----	trans-1 2-DICHLOROETHENE	52	
13-302-07-----	m,p-XYLENES	130	
95-47-6-----	o-XYLENE	51	
106-93-4-----	1 2-DIBROMOETHANE	48	
630-20-6-----	1 1 1 2-TETRACHLOROETHANE	45	
96-18-4-----	1 2 3-TRICHLOROPROPANE	45	
75-71-8-----	DICHLORODIFLUOROMETHANE	40	
75-69-4-----	TRICHLOROFLUOROMETHANE	43	
74-95-3-----	DIBROMOMETHANE	48	

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

ST-D-4-GWMS

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

HAAP-260-UST-D

GWMS

Matrix: (soil/water) WATER

Lab Sample ID: 34990.05MS

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30365.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. _____

Date Analyzed: 08/03/98

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Q

CAS NO.

COMPOUND

96-12-8-----1	2-DIBROMO-3-CHLOROPROPANE	60	
108-86-1-----	BROMOBENZENE	45	
104-51-8-----	n-BUTYLBENZENE	50	
98-06-6-----	tert-BUTYLBENZENE	57	
135-98-8-----	sec-BUTYLBENZENE	52	
95-49-8-----	2-CHLOROTOLUENE	44	
106-43-4-----	4-CHLOROTOLUENE	44	
95-50-1-----	1 2-DICHLOROBENZENE	44	
541-73-1-----	1 3-DICHLOROBENZENE	45	
106-46-7-----	1 4-DICHLOROBENZENE	44	
142-28-9-----	1 3-DICHLOROPROPANE	42	
594-20-7-----	2 2-DICHLOROPROPANE	49	
563-58-6-----	1 1-DICHLOROPROPENE	47	
87-68-3-----	HEXACHLOROBUTADIENE	37	
98-82-8-----	ISOPROPYLBENZENE	60	
99-87-6-----	p-ISOPROPYLTOLUENE	50	
91-20-3-----	NAPHTHALENE	250	E
103-65-1-----	n-PROPYLBENZENE	72	
87-61-6-----	1 2 3-TRICHLOROBENZENE	41	
120-82-1-----	1 2 4-TRICHLOROBENZENE	38	
95-63-6-----	1 2 4-TRIMETHYLBENZENE	180	
108-67-8-----	1 3 5-TRIMETHYLBENZENE	44	
74-97-5-----	BROMOCHLOROMETHANE	50	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-2-GWMS

NAF-260-PZ-2-GWMS

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.17MS

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30307.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	49	
74-83-9-----	BROMOMETHANE	57	
75-01-4-----	VINYL CHLORIDE	51	
75-00-3-----	CHLOROETHANE	61	
75-09-2-----	METHYLENE CHLORIDE	54	
75-35-4-----	1 1-DICHLOROETHENE	48	
75-34-3-----	1 1-DICHLOROETHANE	48	
67-66-3-----	CHLOROFORM	48	
107-06-2-----	1 2-DICHLOROETHANE	50	
71-55-6-----	1 1 1-TRICHLOROETHANE	49	
56-23-5-----	CARBON TETRACHLORIDE	48	
75-27-4-----	BROMODICHLOROMETHANE	50	
78-87-5-----	1 2-DICHLOROPROPANE	48	
79-01-6-----	TRICHLOROETHENE	48	
124-48-1-----	DIBROMOCHLOROMETHANE	52	
79-00-5-----	1 1 2-TRICHLOROETHANE	51	
71-43-2-----	BENZENE	48	
75-25-2-----	BROMOFORM	55	
127-18-4-----	TETRACHLOROETHENE	48	
108-88-3-----	TOLUENE	49	
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	56	
108-90-7-----	CHLOROBENZENE	48	
100-41-4-----	ETHYL BENZENE	48	
100-42-5-----	STYRENE	48	
156-59-2-----	cis-1 2-DICHLOROETHENE	50	
156-60-5-----	trans-1 2-DICHLOROETHENE	46	
13-302-07-----	m,p-XYLENES	96	
95-47-6-----	o-XYLENE	48	
106-93-4-----	1 2-DIBROMOETHANE	52	
630-20-6-----	1 1 1 2-TETRACHLOROETHANE	50	
96-18-4-----	1 2 3-TRICHLOROPROPANE	57	
75-71-8-----	DICHLORODIFLUOROMETHANE	49	
75-69-4-----	TRICHLOROFLUOROMETHANE	51	
74-95-3-----	DIBROMOMETHANE	52	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-2-GWMS

NAAF-260-PZ-2-A

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.17MS

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30307.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	60	
108-86-1-----	BROMOBENZENE	48	
104-51-8-----	n-BUTYLBENZENE	45	
98-06-6-----	tert-BUTYLBENZENE	47	
135-98-8-----	sec-BUTYLBENZENE	45	
95-49-8-----	2-CHLOROTOLUENE	47	
106-43-4-----	4-CHLOROTOLUENE	44	
95-50-1-----	1 2-DICHLOROBENZENE	50	
541-73-1-----	1 3-DICHLOROBENZENE	48	
106-46-7-----	1 4-DICHLOROBENZENE	47	
142-28-9-----	1 3-DICHLOROPROPANE	50	
594-20-7-----	2 2-DICHLOROPROPANE	48	
563-58-6-----	1 1-DICHLOROPROPENE	49	
87-68-3-----	HEXACHLOROBUTADIENE	47	
98-82-8-----	ISOPROPYLBENZENE	47	
99-87-6-----	p-ISOPROPYLTOLUENE	45	
91-20-3-----	NAPHTHALENE	55	
103-65-1-----	n-PROPYLBENZENE	45	
87-61-6-----	1 2 3-TRICHLOROBENZENE	49	
120-82-1-----	1 2 4-TRICHLOROBENZENE	49	
95-63-6-----	1 2 4-TRIMETHYLBENZENE	43	
108-67-8-----	1 3 5-TRIMETHYLBENZENE	46	
74-97-5-----	BROMOCHLOROMETHANE	52	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-2-GWMSD

HAAF-240-PZ-

2-GWMSD

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.17MSD

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30308.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

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.

COMPOUND

Q

74-87-3-----	CHLOROMETHANE	46	
74-83-9-----	BROMOMETHANE	54	
75-01-4-----	VINYL CHLORIDE	49	
75-00-3-----	CHLOROETHANE	59	
75-09-2-----	METHYLENE CHLORIDE	52	
75-35-4-----	1 1-DICHLOROETHENE	48	
75-34-3-----	1 1-DICHLOROETHANE	49	
67-66-3-----	CHLOROFORM	49	
107-06-2-----	1 2-DICHLOROETHANE	50	
71-55-6-----	1 1 1-TRICHLOROETHANE	48	
56-23-5-----	CARBON TETRACHLORIDE	48	
75-27-4-----	BROMODICHLOROMETHANE	50	
78-87-5-----	1 2-DICHLOROPROPANE	49	
79-01-6-----	TRICHLOROETHENE	49	
124-48-1-----	DIBROMOCHLOROMETHANE	50	
79-00-5-----	1 1 2-TRICHLOROETHANE	51	
71-43-2-----	BENZENE	48	
75-25-2-----	BROMOFORM	55	
127-18-4-----	TETRACHLOROETHENE	50	
108-88-3-----	TOLUENE	49	
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	54	
108-90-7-----	CHLOROBENZENE	49	
100-41-4-----	ETHYL BENZENE	47	
100-42-5-----	STYRENE	47	
156-59-2-----	cis-1 2-DICHLOROETHENE	50	
156-60-5-----	trans-1 2-DICHLOROETHENE	50	
13-302-07-----	m,p-XYLENES	96	
95-47-6-----	o-XYLENE	49	
106-93-4-----	1 2-DIBROMOETHANE	52	
630-20-6-----	1 1 1 2-TETRACHLOROETHANE	50	
96-18-4-----	1 2 3-TRICHLOROPROPANE	56	
75-71-8-----	DICHLORODIFLUOROMETHANE	47	
75-69-4-----	TRICHLOROFLUOROMETHANE	52	
74-95-3-----	DIBROMOMETHANE	53	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

PZ-2-GWMSF
6805-260-PZ-2-1

Lab Code: SWOK

Case No.: EARTHVA SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.17MSD

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: R30308.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	63	
108-86-1-----	BROMOBENZENE	47	
104-51-8-----	n-BUTYLBENZENE	43	
98-06-6-----	tert-BUTYLBENZENE	46	
135-98-8-----	sec-BUTYLBENZENE	45	
95-49-8-----	2-CHLOROTOLUENE	47	
106-43-4-----	4-CHLOROTOLUENE	44	
95-50-1-----	1 2-DICHLOROBENZENE	48	
541-73-1-----	1 3-DICHLOROBENZENE	47	
106-46-7-----	1 4-DICHLOROBENZENE	47	
142-28-9-----	1 3-DICHLOROPROPANE	50	
594-20-7-----	2 2-DICHLOROPROPANE	46	
563-58-6-----	1 1-DICHLOROPROPENE	49	
87-68-3-----	HEXACHLOROBUTADIENE	45	
98-82-8-----	ISOPROPYLBENZENE	47	
99-87-6-----	p-ISOPROPYLTOLUENE	44	
91-20-3-----	NAPHTHALENE	53	
103-65-1-----	n-PROPYLBENZENE	46	
87-61-6-----	1 2 3-TRICHLOROBENZENE	45	
120-82-1-----	1 2 4-TRICHLOROBENZENE	47	
95-63-6-----	1 2 4-TRIMETHYLBENZENE	45	
108-67-8-----	1 3 5-TRIMETHYLBENZENE	44	
74-97-5-----	BROMOCHLOROMETHANE	52	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWMS

1/AAF-2/00-

UST-D-4-GWMS

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.05MS

Sample wt/vol: 500 (g/mL) ML

Lab File ID: M11256.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/01/98

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	200	
111-44-4-----	bis(2-Chloroethyl)ether	20	U
95-57-8-----	2-Chlorophenol	230	E
541-73-1-----	1,3-Dichlorobenzene	20	U
106-46-7-----	1,4-Dichlorobenzene	100	
100-51-6-----	Benzyl alcohol	20	U
95-50-1-----	1,2-Dichlorobenzene	20	U
95-48-7-----	2-Methylphenol	20	U
108-60-1-----	bis(2-Chloroisopropyl)ether	20	U
106-44-5-----	4-Methylphenol	20	U
621-64-7-----	N-Nitroso-di-n-propylamine	140	
67-72-1-----	Hexachloroethane	20	U
98-95-3-----	Nitrobenzene	20	U
78-59-1-----	Isophorone	16	J
88-75-5-----	2-Nitrophenol	20	U
105-67-9-----	2,4-Dimethylphenol	20	U
65-85-0-----	Benzoic Acid	100	U
111-91-1-----	bis(2-Chloroethoxy)methane	20	U
120-83-2-----	2,4-Dichlorophenol	20	U
120-82-1-----	1,2,4-Trichlorobenzene	110	
91-20-3-----	Naphthalene	340	E
106-47-8-----	4-Chloroaniline	20	U
87-68-3-----	Hexachlorobutadiene	20	U
59-50-7-----	4-Chloro-3-methylphenol	240	E
91-57-6-----	2-Methylnaphthalene	780	E
77-47-4-----	Hexachlorocyclopentadiene	20	U
88-06-2-----	2,4,6-Trichlorophenol	20	U
95-95-4-----	2,4,5-Trichlorophenol	100	U
91-58-7-----	2-Chloronaphthalene	20	U
88-74-4-----	2-Nitroaniline	100	U
131-11-3-----	Dimethylphthalate	20	U
208-96-8-----	Acenaphthylene	20	U
606-20-2-----	2,6-Dinitrotoluene	20	U

1
GASOLINE ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

WAAF-FB-260

Lab Name: SWL-TULSA

Contract:

Lab Code: SWOK

Case No.: EARTH-VA

SDG No.: 34977A

Matrix: (soil/water) WATER

Lab Sample ID: 34977.22

Sample wt/vol: 5 (g/mL) ML

Lab File ID: G1284.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. _____

Date Analyzed: 07/30/98

GC Column: DB624 ID: 0.54(mm)

Dilution Factor: 1

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

Gasoline		6	J
Surrogate amount spiked		20	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWREMS

HAAR-260-03T-D-4-

GWREMS

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.05REMS

Sample wt/vol: 525 (g/mL) ML

Lab File ID: M11402.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 08/04/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/08/98

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
---------	----------	--	---

99-09-2-----	3-Nitroaniline	95	U
83-32-9-----	Acenaphthene	130	
51-28-5-----	2,4-Dinitrophenol	95	U
121-14-2-----	2,4-Dinitrotoluene	99	
100-02-7-----	4-Nitrophenol	280	E
132-64-9-----	Dibenzofuran	19	U
84-66-2-----	Diethylphthalate	19	U
7005-72-3-----	4-Chlorophenyl-phenylether	19	U
86-73-7-----	Fluorene	25	
100-01-6-----	4-Nitroaniline	95	U
534-52-1-----	4,6-Dinitro-2-methylphenol	95	U
86-30-6-----	N-Nitrosodiphenylamine (1)	19	U
101-55-3-----	4-Bromophenylphenylether	19	U
118-74-1-----	Hexachlorobenzene	19	U
87-86-5-----	Pentachlorophenol	260	E
85-01-8-----	Phenanthrene	56	
120-12-7-----	Anthracene	19	U
84-74-2-----	Di-n-butylphthalate	19	U
206-44-0-----	Fluoranthene	19	U
129-00-0-----	Pyrene	110	
85-68-7-----	Butylbenzylphthalate	19	U
91-94-1-----	3,3'-Dichlorobenzidine	38	U
56-55-3-----	Benzo(a)anthracene	19	U
218-01-9-----	Chrysene	19	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	50	
117-84-0-----	Di-n-octylphthalate	19	U
205-99-2-----	Benzo(b)fluoranthene	19	U
207-08-9-----	Benzo(k)fluoranthene	19	U
50-32-8-----	Benzo(a)pyrene	19	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	19	U
53-70-3-----	Dibenz(a,h)anthracene	19	U
191-24-2-----	Benzo(g,h,i)perylene	19	U

(1) - Cannot be separated from Diphenylamine

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWMS

HAZF-260-051-

D-4-GW

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.05MS

Sample wt/vol: 500 (g/mL) ML

Lab File ID: M11256.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/01/98

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
---------	----------	--	---

99-09-2-----	3-Nitroaniline	100	U
83-32-9-----	Acenaphthene	190	
121-14-2-----	2,4-Dinitrotoluene	20	U
51-28-5-----	2,4-Dinitrophenol	100	U
100-02-7-----	4-Nitrophenol	300	E
132-64-9-----	Dibenzofuran	20	U
84-66-2-----	Diethylphthalate	20	U
7005-72-3-----	4-Chlorophenyl-phenylether	20	U
86-73-7-----	Fluorene	140	
100-01-6-----	4-Nitroaniline	100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	100	U
86-30-6-----	N-Nitrosodiphenylamine (1)	20	U
101-55-3-----	4-Bromophenylphenylether	20	U
118-74-1-----	Hexachlorobenzene	20	U
87-86-5-----	Pentachlorophenol	160	
85-01-8-----	Phenanthrene	290	E
120-12-7-----	Anthracene	20	U
84-74-2-----	Di-n-butylphthalate	20	U
206-44-0-----	Fluoranthene	20	U
129-00-0-----	Pyrene	140	
85-68-7-----	Butylbenzylphthalate	20	U
91-94-1-----	3,3'-Dichlorobenzidine	40	U
56-55-3-----	Benzo(a)anthracene	20	U
218-01-9-----	Chrysene	4	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	530	E
117-84-0-----	Di-n-octylphthalate	20	U
205-99-2-----	Benzo(b)fluoranthene	20	U
207-08-9-----	Benzo(k)fluoranthene	20	U
50-32-8-----	Benzo(a)pyrene	20	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	20	U
53-70-3-----	Dibenz(a,h)anthracene	20	U
191-24-2-----	Benzo(g,h,i)perylene	20	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWREMS

HAAF-260-UST

D-4-GWREM

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.05REMS

Sample wt/vol: 525 (g/mL) ML

Lab File ID: M11402.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 08/04/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/08/98

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	190	
111-44-4-----	bis(2-Chloroethyl) ether	19	U
95-57-8-----	2-Chlorophenol	210	E
541-73-1-----	1,3-Dichlorobenzene	19	U
106-46-7-----	1,4-Dichlorobenzene	110	
100-51-6-----	Benzyl alcohol	19	U
95-50-1-----	1,2-Dichlorobenzene	19	U
95-48-7-----	2-Methylphenol	19	U
108-60-1-----	bis(2-Chloroisopropyl) ether	19	U
106-44-5-----	4-Methylphenol	19	U
621-64-7-----	N-Nitroso-di-n-propylamine	120	
67-72-1-----	Hexachloroethane	19	U
98-95-3-----	Nitrobenzene	19	U
78-59-1-----	Isophorone	6	J
88-75-5-----	2-Nitrophenol	19	U
105-67-9-----	2,4-Dimethylphenol	19	U
65-85-0-----	Benzoic Acid	95	U
111-91-1-----	bis(2-Chloroethoxy) methane	19	U
120-83-2-----	2,4-Dichlorophenol	19	U
120-82-1-----	1,2,4-Trichlorobenzene	110	
91-20-3-----	Naphthalene	130	
106-47-8-----	4-Chloroaniline	19	U
87-68-3-----	Hexachlorobutadiene	19	U
59-50-7-----	4-Chloro-3-methylphenol	230	E
91-57-6-----	2-Methylnaphthalene	260	E
77-47-4-----	Hexachlorocyclopentadiene	19	U
88-06-2-----	2,4,6-Trichlorophenol	19	U
95-95-4-----	2,4,5-Trichlorophenol	95	U
91-58-7-----	2-Chloronaphthalene	19	U
88-74-4-----	2-Nitroaniline	95	U
131-11-3-----	Dimethylphthalate	19	U
208-96-8-----	Acenaphthylene	19	U
606-20-2-----	2,6-Dinitrotoluene	19	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWREMSD

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

444F-260-UST-

D-4-GWRE

Matrix: (soil/water) WATER

Lab Sample ID: 34990.06REMS

Sample wt/vol: 525 (g/mL) ML

Lab File ID: M11410.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 08/04/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/10/98

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	180	
111-44-4-----	bis(2-Chloroethyl)ether	19	U
95-57-8-----	2-Chlorophenol	190	E
541-73-1-----	1,3-Dichlorobenzene	19	U
106-46-7-----	1,4-Dichlorobenzene	100	
100-51-6-----	Benzyl alcohol	19	U
95-50-1-----	1,2-Dichlorobenzene	19	U
95-48-7-----	2-Methylphenol	19	U
108-60-1-----	bis(2-Chloroisopropyl)ether	19	U
106-44-5-----	4-Methylphenol	19	U
621-64-7-----	N-Nitroso-di-n-propylamine	100	
67-72-1-----	Hexachloroethane	19	U
98-95-3-----	Nitrobenzene	19	U
78-59-1-----	Isophorone	7	J
88-75-5-----	2-Nitrophenol	19	U
105-67-9-----	2,4-Dimethylphenol	19	U
65-85-0-----	Benzoic Acid	95	U
111-91-1-----	bis(2-Chloroethoxy)methane	19	U
120-83-2-----	2,4-Dichlorophenol	19	U
120-82-1-----	1,2,4-Trichlorobenzene	110	
91-20-3-----	Naphthalene	120	
106-47-8-----	4-Chloroaniline	19	U
87-68-3-----	Hexachlorobutadiene	19	U
59-50-7-----	4-Chloro-3-methylphenol	210	E
91-57-6-----	2-Methylnaphthalene	220	E
77-47-4-----	Hexachlorocyclopentadiene	19	U
88-06-2-----	2,4,6-Trichlorophenol	19	U
95-95-4-----	2,4,5-Trichlorophenol	95	U
91-58-7-----	2-Chloronaphthalene	19	U
88-74-4-----	2-Nitroaniline	95	U
131-11-3-----	Dimethylphthalate	19	U
208-96-8-----	Acenaphthylene	19	U
606-20-2-----	2,6-Dinitrotoluene	19	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWREMSD
HAAF-260-UST-D-4-
GWREMSD

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.06REMS

Sample wt/vol: 525 (g/mL) ML

Lab File ID: M11410.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 08/04/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/10/98

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

99-09-2-----	3-Nitroaniline	95	U
83-32-9-----	Acenaphthene	110	
51-28-5-----	2,4-Dinitrophenol	95	U
121-14-2-----	2,4-Dinitrotoluene	85	
100-02-7-----	4-Nitrophenol	230	E
132-64-9-----	Dibenzofuran	6	J
84-66-2-----	Diethylphthalate	19	U
7005-72-3-----	4-Chlorophenyl-phenylether	19	U
86-73-7-----	Fluorene	19	
100-01-6-----	4-Nitroaniline	95	U
534-52-1-----	4,6-Dinitro-2-methylphenol	95	U
86-30-6-----	N-Nitrosodiphenylamine (1)	19	U
101-55-3-----	4-Bromophenylphenylether	19	U
118-74-1-----	Hexachlorobenzene	19	U
87-86-5-----	Pentachlorophenol	180	
85-01-8-----	Phenanthrene	40	
120-12-7-----	Anthracene	19	U
84-74-2-----	Di-n-butylphthalate	19	U
206-44-0-----	Fluoranthene	19	U
129-00-0-----	Pyrene	110	
85-68-7-----	Butylbenzylphthalate	19	U
91-94-1-----	3,3'-Dichlorobenzidine	38	U
56-55-3-----	Benzo(a)anthracene	19	U
218-01-9-----	Chrysene	19	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	42	
117-84-0-----	Di-n-octylphthalate	19	U
205-99-2-----	Benzo(b)fluoranthene	19	U
207-08-9-----	Benzo(k)fluoranthene	19	U
50-32-8-----	Benzo(a)pyrene	19	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	19	U
53-70-3-----	Dibenz(a,h)anthracene	19	U
191-24-2-----	Benzo(g,h,i)perylene	19	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWMSD

44AF-260-UST

D-4-GW

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.06MSD

Sample wt/vol: 500 (g/mL) ML

Lab File ID: M11283.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/03/98

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	200	E
111-44-4-----	bis(2-Chloroethyl)ether	20	U
95-57-8-----	2-Chlorophenol	220	E
541-73-1-----	1,3-Dichlorobenzene	20	U
106-46-7-----	1,4-Dichlorobenzene	110	
100-51-6-----	Benzyl alcohol	20	U
95-50-1-----	1,2-Dichlorobenzene	20	U
95-48-7-----	2-Methylphenol	20	U
108-60-1-----	bis(2-Chloroisopropyl)ether	20	U
106-44-5-----	4-Methylphenol	20	U
621-64-7-----	N-Nitroso-di-n-propylamine	140	
67-72-1-----	Hexachloroethane	20	U
98-95-3-----	Nitrobenzene	20	U
78-59-1-----	Isophorone	16	J
88-75-5-----	2-Nitrophenol	20	U
105-67-9-----	2,4-Dimethylphenol	20	U
65-85-0-----	Benzoic Acid	100	U
111-91-1-----	bis(2-Chloroethoxy)methane	20	U
120-83-2-----	2,4-Dichlorophenol	20	U
120-82-1-----	1,2,4-Trichlorobenzene	110	
91-20-3-----	Naphthalene	280	E
106-47-8-----	4-Chloroaniline	20	U
87-68-3-----	Hexachlorobutadiene	20	U
59-50-7-----	4-Chloro-3-methylphenol	260	E
91-57-6-----	2-Methylnaphthalene	690	E
77-47-4-----	Hexachlorocyclopentadiene	20	U
88-06-2-----	2,4,6-Trichlorophenol	20	U
95-95-4-----	2,4,5-Trichlorophenol	100	U
91-58-7-----	2-Chloronaphthalene	20	U
88-74-4-----	2-Nitroaniline	100	U
131-11-3-----	Dimethylphthalate	20	U
208-96-8-----	Acenaphthylene	20	U
606-20-2-----	2,6-Dinitrotoluene	20	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

USTD4GWMSD
HAAF-260-037-D-4-
GWMSD

ab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34990.06MSD

Sample wt/vol: 500 (g/mL) ML

Lab File ID: M11283.D

Level: (low/med) LOW

Date Received: 07/25/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/03/98

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

99-09-2-----	3-Nitroaniline	100	U
83-32-9-----	Acenaphthene	160	
121-14-2-----	2,4-Dinitrotoluene	20	U
51-28-5-----	2,4-Dinitrophenol	100	U
100-02-7-----	4-Nitrophenol	310	E
132-64-9-----	Dibenzofuran	20	U
84-66-2-----	Diethylphthalate	20	U
7005-72-3-----	4-Chlorophenyl-phenylether	20	U
86-73-7-----	Fluorene	120	
100-01-6-----	4-Nitroaniline	100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	100	U
86-30-6-----	N-Nitrosodiphenylamine (1)	20	U
101-55-3-----	4-Bromophenylphenylether	20	U
118-74-1-----	Hexachlorobenzene	20	U
87-86-5-----	Pentachlorophenol	160	
85-01-8-----	Phenanthrene	230	E
120-12-7-----	Anthracene	20	U
84-74-2-----	Di-n-butylphthalate	20	U
206-44-0-----	Fluoranthene	20	U
129-00-0-----	Pyrene	120	
85-68-7-----	Butylbenzylphthalate	20	U
91-94-1-----	3,3'-Dichlorobenzidine	40	U
56-55-3-----	Benzo(a)anthracene	20	U
218-01-9-----	Chrysene	3	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	550	E
117-84-0-----	Di-n-octylphthalate	20	U
205-99-2-----	Benzo(b)fluoranthene	20	U
207-08-9-----	Benzo(k)fluoranthene	20	U
50-32-8-----	Benzo(a)pyrene	20	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	20	U
53-70-3-----	Dibenz(a,h)anthracene	20	U
191-24-2-----	Benzo(g,h,i)perylene	20	U

(1) - Cannot be separated from Diphenylamine

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WAAF-FB-260

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.22

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11247.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/01/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 7.8

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	10	U
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	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	1	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	20	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	18	
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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WAAF-FB-260

Lab Name: SWL-TULSA

Contract: HUNTER ARMY

Lab Code: SWOK

Case No.: EARTH- SAS No.:

SDG No.: 34977

Matrix: (soil/water) WATER

Lab Sample ID: 34977.22

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: M11247.D

Level: (low/med) LOW

Date Received: 07/24/98

% Moisture: not dec. 0 dec.

Date Extracted: 07/27/98

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/01/98

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 7.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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108-95-2-----Phenol	2	J
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	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
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	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	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

1D
TPH ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

~~WAAF~~
WAAF-FB-260

Lab Name: SWL-TULSA

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

Matrix: (soil/water) WATER Lab Sample ID: 35977.22

Sample wt/vol: 1055 (g/mL) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date Received: 07/24/98

Extraction: (SepF/Cont/Sonc) S Date Extracted: 07/29/98

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/13/98

Injection Volume: 5.0 (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	Q
-----DRH		180	
Surrogate amount spiked		473.93	

APPENDIX IX

CONTAMINATED SOIL DISPOSAL MANIFESTS

Soil disposal manifests are not provided in this report due to the fact that USTs #25 and #26, facility identification #9-025008, were closed in-place with concrete slurry. Soils were not excavated during in-place closure activities, and thus soil disposal was not required for the site.

APPENDIX X

SITE RANKING FORM

SITE RANKING FORM

Facility Name: USTs #25 & #26, Building 1343

Ranked by: William Duffy

County: CHATHAM Facility ID#: 9-025008

Date Ranked: January 4, 1999

SOIL CONTAMINATION

A. Total PAHs -
Maximum Concentration found on the site
(Assume <0.660 mg/kg if only gasoline
was stored on site)

- ☐ ≤ 0.660 mg/kg = 0
- ☐ > 0.66 - 1 mg/kg = 10
- ☐ > 1 - 10 mg/kg = 25
- ☒ > 10 mg/kg = 50

B. Total Benzene -
Maximum Concentration found on the site

- ☐ ≤ 0.005 mg/kg = 0
- ☐ > 0.005 - .05 mg/kg = 1
- ☐ > 0.05 - 1 mg/kg = 10
- ☒ > 1 - 10 mg/kg = 25
- ☐ > 10 - 50 mg/kg = 40
- ☐ > 50 mg/kg = 50

C. Depth to Groundwater
(bls = below land surface)

- ☐ > 50' bls = 1
- ☐ > 25' - 50' bls = 2
- ☐ > 10' - 25' bls = 5
- ☒ ≤ 10' bls = 10

Fill in the blanks: (A. 50) + (B. 25) = (75) x (C. 10) = (D. 750)

GROUNDWATER CONTAMINATION

E. Free Product (Nonaqueous-phase
liquid hydrocarbons; See Guidelines
for definition of "sheen").

- ☒ No free product = 0
- ☐ Sheen - 1/8" = 250
- ☐ > 1/8" - 6" = 500
- ☐ > 6" - 1ft. = 1,000
- ☐ For every additional inch, add another
100 points = 1,000 +

F. Dissolved Benzene -
Maximum Concentration at the site
(One well must be located at the source
of the release.)

- ☐ ≤ 5 ug/L = 0
- ☐ > 5 - 100 ug/L = 5
- ☐ > 100 - 1,000 ug/L = 50
- ☒ > 1,000 - 10,000 ug/L = 100
- ☐ > 10,000 ug/L = 250

Fill in the blanks: (E. 0) + (F. 100) = (G. 100)

POTENTIAL RECEPTORS (MUST BE FIELD-VERIFIED)

Distance from nearest contaminant plume boundary to the nearest downgradient and hydraulically connected Point of Withdrawal for water supply. If the point of withdrawal is not hydraulically connected, evidence as outlined in the CAP-A guidance document MUST be presented to substantiate this claim.

H. Public Water Supply

- ☐ Impacted = 2000
☐ ≤ 500' = 500
☐ > 500' - 1/4 mi = 25
☐ > 1/4 mi - 1 mi = 10
☐ > 1 mi - 2 mi = 2
**** ☒ > 2 mi = 0

For lower susceptibility areas only:

- ☐ > 1 mi = 0

Note: If site is in lower susceptibility area, do not use the shaded areas.

I. Non-Public Water Supply

- ☐ Impacted = 1000
☐ ≤ 100' = 500
☐ > 100' - 500' = 25
☐ > 500' - 1/4 mi = 5
☐ > 1/4 - 1/2 mi = 2
☒ > 1/2 mi = 0

For lower susceptibility areas only:

- ☐ > 1/4 mi = 0

J. Distance from nearest Contaminant Plume boundary to downgradient Surface Waters OR UTILITY TRENCHES & VAULTS (a utility trench may be omitted from ranking if its invert elevation is more than 5 feet above the water table)

- ☐ Impacted = 500
☒ ≤ 500' = 50
☐ > 500' - 1,000' = 5
☐ > 1,000' = 1

K. Distance from any Free Product to basements and crawl spaces

- ☐ Impacted = 500
☐ < 500' = 50
☐ > 500' - 1,000' = 5
☒ > 1,000' or no free product. = 0

Fill in the blanks: (H. 0) + (I. 0) + (J. 50) + (K. 0) = L. 50

(G. 100) x (L. 50) = M. 5000

(M. 5000) + (D. 750) = N. 5750

P. SUSCEPTIBILITY AREA MULTIPLIER

- ☐ If site is located in a Low Ground-Water Pollution Susceptibility Area = 0.5
☒ All other sites = 1

Q. EXPLOSION HAZARD

Have any explosive petroleum vapors, possibly originating from this release, been detected in any subsurface structure (e.g., utility trenches, basements, vaults, crawl spaces, etc.)?

- ☐ Yes = 200,000
☒ No = 0

Fill in the blanks: (N. 5750) x (P. 1) = (5750) + (Q. 0)
= 5750

ENVIRONMENTAL SENSITIVITY SCORE

****No hydraulic connection exists between the surficial aquifer that is located in the area of the former USTs #25 and #26 and the Floridian Aquifer used for water supply. (see pages X-4 through X-5 for additional justification)

SITERANK.FRM

OTHER GEOLOGIC AND HYDROLOGIC DATA

The following information is presented to provide supplemental information to Section II.D.5 of the CAP-Part A form and Item H of the Site Ranking form, and provides detailed information relating to the geologic and hydrogeologic conditions at Hunter Army Airfield (HAAF) which supports the Installation's determination that the water withdrawal point(s) located at HAAF are not hydraulically connected to the surficial aquifer.

1.0 REGIONAL AND LOCAL GEOLOGY

HAAF is located within the coastal plain physiographic province. This province is typified by nine southeastward dipping strata that increase in thickness from 0 feet at the fall line located approximately 350 miles inland from the Atlantic coast, to approximately 4,200 feet at the coast. State geologic records describe a probable petroleum exploration well (the No. 1 Jelks-Rogers) located in the region as encountering crystalline basement rocks at a depth of 4,254 feet BGS. This well provides the most complete record for Cretaceous, Tertiary, and Quaternary sedimentary strata in the region.

The Cretaceous section was found to be approximately 1,970 feet thick and dominated by clastics. The Tertiary section was found to be approximately 2,170 feet thick and dominated by limestone with a 175-foot-thick cap of dark green phosphatic clay. This clay is regionally extensive and is known as the Hawthorn Group. The interval from approximately 110 feet to the surface is Quaternary in age and composed primarily of sand with interbeds of clay or silt. This section is undifferentiated into separate formations (Metcalf & Eddy 1996).

The surface soil located throughout the HAAF garrison area consists of Stilson loamy sand. The surface layer of this soil is typically dark grayish-brown loamy sand measuring approximately 6 inches in depth. The surface layer is underlain by material consisting of pale yellow loamy sand and extends to a depth of approximately 29 inches. The subsoil is dominantly sandy clay loam and extends to a depth of 72 inches or more (Metcalf & Eddy 1996).

2.0 REGIONAL AND LOCAL HYDROGEOLOGY

The hydrogeology in the vicinity of HAAF is dominated by two aquifers. These are referred to as the Principal (Floridan) Aquifer and the Surficial Aquifer. The Principal Aquifer is the lowermost hydrologic unit and is regionally extensive from South Carolina through Georgia, Alabama, and most of Florida. Known elsewhere as the Floridan, this aquifer is composed primarily of Tertiary-age limestone, including the Bug Island Formation, the Ocala Group, and the Suwannee Limestone. These formations are approximately 800 feet thick, and groundwater from this aquifer is used primarily for drinking water (Arora 1984).

The confining layer for the Principal Artesian aquifer is the phosphatic clay of the Hawthorn Group and ranges in thickness from 15 to 90 feet. The vertical hydraulic conductivity of this confining unit is on the order of 10^{-8} cm/sec. There are minor occurrences of aquifer material within the Hawthorn Group; however, they have limited utilization (Miller 1990). The Hawthorn Group has been divided into three formations: Cooswhatchie Formation, Markshead Formation, and the Parachula Formation, which are listed from youngest to oldest.

The Coosawhatchie Formation is composed predominantly of clay but also has sandy clay, argillaceous sand, and phosphorite units. The formation is approximately 170 feet thick in the Savannah Georgia area. This unit disconformably overlies the Markshead Formation and is distinguished from the underlying unit by dark phosphatic clays or phosphorite in the lower part and fine-grained sand in the upper part.

The Marshead Formation is approximately 70 feet thick in the Savannah Georgia area and consists of light-colored phosphatic, slightly dolomitic, argillaceous sand to fine-grained sandy clay with scattered beds of dolostone and limestone.

The Parachula Formation consists of sand, clay, limestone, and dolomite, and is approximately 10 feet thick in the Savannah Georgia area. The Parachula Formation generally overlies the Suwannee Limestone in Georgia.

The uppermost hydrologic unit is the Surficial Aquifer, which consists of widely varying amounts of sand and clay ranging from 55 to 150 feet in thickness, and is composed primarily of the Satilla and Cypresshead Formations in the Savannah vicinity (Arora 1984). This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges from approximately 2 to 10 feet below ground surface (Geraghty and Miller 1993). Groundwater in the Surficial Aquifer system is under confined, or water table conditions. The base of the aquifer corresponds to the top of the underlying dense clay of the Hawthorn Group, identified to be located at 40 to 50 feet below ground surface (depending on the area of HAAF); thus, the effective aquifer thickness would be approximately 35 to 45 feet. Soil surveys for Liberty and Long Counties describe the occurrence of a perched water table within the Stilson loamy sands present within HAAF (Looper 1980).

Groundwater encountered at all the underground storage tank investigation sites is part of the Surficial Aquifer system. Based on the fact that all public and non-public water supply wells draw water from the Principal (Floridan) Aquifer, and that the Hawthorn confining unit separates the Principal Aquifer from the Surficial Aquifer, it is concluded that there is no hydraulic interconnection between the Surficial Aquifer (and associated groundwater plumes, if applicable) located beneath former UST sites and identified water supply withdrawal points at HAAF.

APPENDIX XI

COPIES OF PUBLIC NOTIFICATION LETTERS AND CERTIFIED RECEIPTS OR NEWSPAPER NOTICE

**** PUBLIC NOTICE ****

Notification of Corrective Action Plan
Underground Storage Tank Releases
Hunter Army Airfield
Savannah, Georgia

The United States Army Corps of Engineers and Fort Stewart Directorate of Public Works has prepared a Corrective Action Plan (CAP)-Part A report for the Underground Storage Tanks #25 and #26 at Building 1343, Facility ID 9-025008, to assess the environmental impact of diesel or gasoline releases. This report was submitted to the Georgia Environmental Protection Division on or about March 31, 1999.

The Georgia rules for UST Management require notification of the public most directly affected by the plans. If you would like a copy of the plan, please contact:

Commander
3d Infantry Division (Mechanized) and Fort Stewart
ATTN: AFZP-DEV (T. Rutland)
1557 Frank Cochran Drive
Building 1139
Fort Stewart, Georgia 31314-4928

A copy of the plan will be mailed at a nominal copying and shipping fee.

If you desire to make comments on the plan, or to examine the Georgia Environmental Protection Division's files, you should contact the Corrective Action Unit, Underground Storage Tank Management Program, Environmental Protection Division, at (404) 362-2687. The Underground Storage Tank Management Program will accept public comments on the CAP-Part A report up to 30 days after submittal to the Georgia Environmental Protection Division. Their mailing address is:

Corrective Action Unit
Underground Storage Tank Management Program
4244 International Parkway
Suite 100
Atlanta, Georgia 30354

APPENDIX XII

GUST TRUST FUND REIMBURSEMENT APPLICATION AND CLAIM FOR REIMBURSEMENT

Hunter Army Airfield is a federally owned facility and has funded this investigation for the USTs #25 and #26 site, Building 1343, Facility ID #9-025008, using Operation and Maintenance Account funds. Application for Georgia Underground Storage Tank Trust Fund reimbursement is not being pursued at this time.

ATTACHMENT A

REFERENCES

ATTACHMENT A

Arora, Ram, 1984. *Hydrologic Evaluation for Underground Injection Control in the Coastal Plain of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geological Survey.

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Furlow, J. W., 1969. *Stratigraphy and Economic Geology of the Eastern Chatham County Phosphate Deposit*, Department of Mines and Mining, Division of Conservation, Georgia Geologic Survey, Bulletin 82.

Georgia Department of Natural Resources (GA DNR), 1976. *Geologic Map of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey (reprinted 1997).

GA DNR, I 998b. *Underground Storage Tank Corrective Action Plan-Part A Guidance*, Department of Natural Resources, Environmental Protection Division.

Herrick, S. M., 1961. *Wells Logs of the Coastal Plain of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey.

Huddlestun, P. F., 1988. *A Revision of the Lithostratigraphic Units of the Coastal Plain of Georgia, The Miocene through Holocene*, Department of Natural Resources,