Remedial Investigation Report Addendum
Supplemental Soil Investigation at Pump Station 38

Stratford Army Engine Plant
Stratford, Connecticut

1. Introduction

This addendum present the results of the supplemental soil investigation conducted in the vicinity of Pump Station 38 (Building 38). The purpose of the supplemental soil investigation was to identify the source of polychlorinated biphenyls (PCBs) detected in waste oil collected from the storm water sump located inside Building 38. PCBs were detected in a sample of the waste oil in April 2006. The investigation was conducted by Osprey Environmental Engineering, LLC of Clinton, Connecticut.

Previous investigation results for this area are provided in Section 7.1 of the Final Remedial Investigation Report (ASCIM, 2004). Previous investigations identified volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), PCBs and metals in soil in the vicinity of Building 38. PCBs were detected in soil at a concentration of 74 milligrams per kilogram (mg/kg). Free phase petroleum hydrocarbons were also identified during previous investigations in a monitoring well WC-5S located to the north of Building 38 and in nearby soil borings.

2. Scope of Investigation

The scope of the investigation included collection of soil samples from 39 borings in the vicinity of Building 38. Figure 1 shows the soil boring locations and the extent of the investigation. The borings were installed in a grid pattern between Building 38 and Building 13. Soil borings were completed using direct-push drilling and sampling equipment. Visual observations of stained soil and/or free phase hydrocarbons were noted and a Photoionization detector (PID) was used to screen soil cores for organic vapors. Two soil samples from each boring were submitted to Connecticut Environmental Testing, Inc., for the following analysis: PCBs by EPA Method 8082, VOCs by EPA Method 8260, and TPH by EPA Method 418.1.

One-inch diameter PVC well points were installed in seven of the soil borings. Monitoring wells were designated based on their position with respect to the grid, e.g. MWB7 is a monitoring well installed in boring B7. Monitoring well locations are shown on Figure 1. Groundwater samples were collected using dedicated bailers. Three volumes of water were purged from the wells and samples were then collected for analysis. The groundwater samples were submitted to Connecticut Environmental Testing, Inc., for the following analysis: TPH by EPA Method 418.1, PCBs by EPA Method 8082, and VOCs by EPA Method 8260.

The monitoring wells were completed using a one inch diameter poly vinyl chlorinated (PVC) pipe with slotted screen placed in the open boreholes. The groundwater results were used for screening purposes only and results were not compared to risk-based criteria because of the temporary well construction methods used.

3. Results

Laboratory results for soils are presented in Table 1 and Table 2. Laboratory results for groundwater are presented in Table 3. Field observations are provided in Table 4.

In soil, VOCs detected include toluene, ethylbenzene, xylenes, naphthalene and other fuel related compounds. Concentrations of VOCs were all below risk-based criteria. TPH was detected in soil at concentrations ranging from 120 mg/kg to 40,000 mg/kg. TPH was detected at several locations at concentrations in excess of risk-based criteria including Industrial/Commercial Direct Exposure Criteria (I/C DEC) and the Pollutant Mobility Criteria for a GB classified aquifer (GB PMC). PCBs were detected in soil at concentration ranging from 0.33 mg/kg to 28 mg/kg. PCBs were detected in soil in excess of CTDEP risk-based criteria, including I/C DEC and GB PMC at several locations.

Fuel related VOCs and chlorinated solvents were detected in groundwater samples confirming Remedial Investigation results. PCBs were detected in several groundwater samples during the supplemental soil investigation but were not detected in groundwater during previous investigations.

Field observations confirm the presence of free phase petroleum hydrocarbons in shallow soils in the vicinity of Building 38. An oily sheen was noted on the water sample from well B7, and free phase petroleum hydrocarbons were noted on top of the water sample from well G6. During a previous investigation, free phase petroleum hydrocarbons were measured in a nearby monitoring well WC-5S and were present in soil borings completed in the area.

4. Conclusions

The results of the supplemental soil investigation confirm the Remedial Investigation results. TPH and PCBs are present in soils in the vicinity of Building 38 in excess of CTDEP risk-based criteria. Results of the supplemental soil investigation suggest that the highest concentrations of PCBs are nearest to Building 38.

Following the detection of PCBs in waste oil in April 2006, the storm line trunk sections leading to Building 38 were lined to prevent infiltration of free phase hydrocarbons into the storm water sump. The storm water sump in Building 38 was then cleaned of sediments and oils. Free phase hydrocarbons have not since infiltrated in to the storm water sump in Building 38.

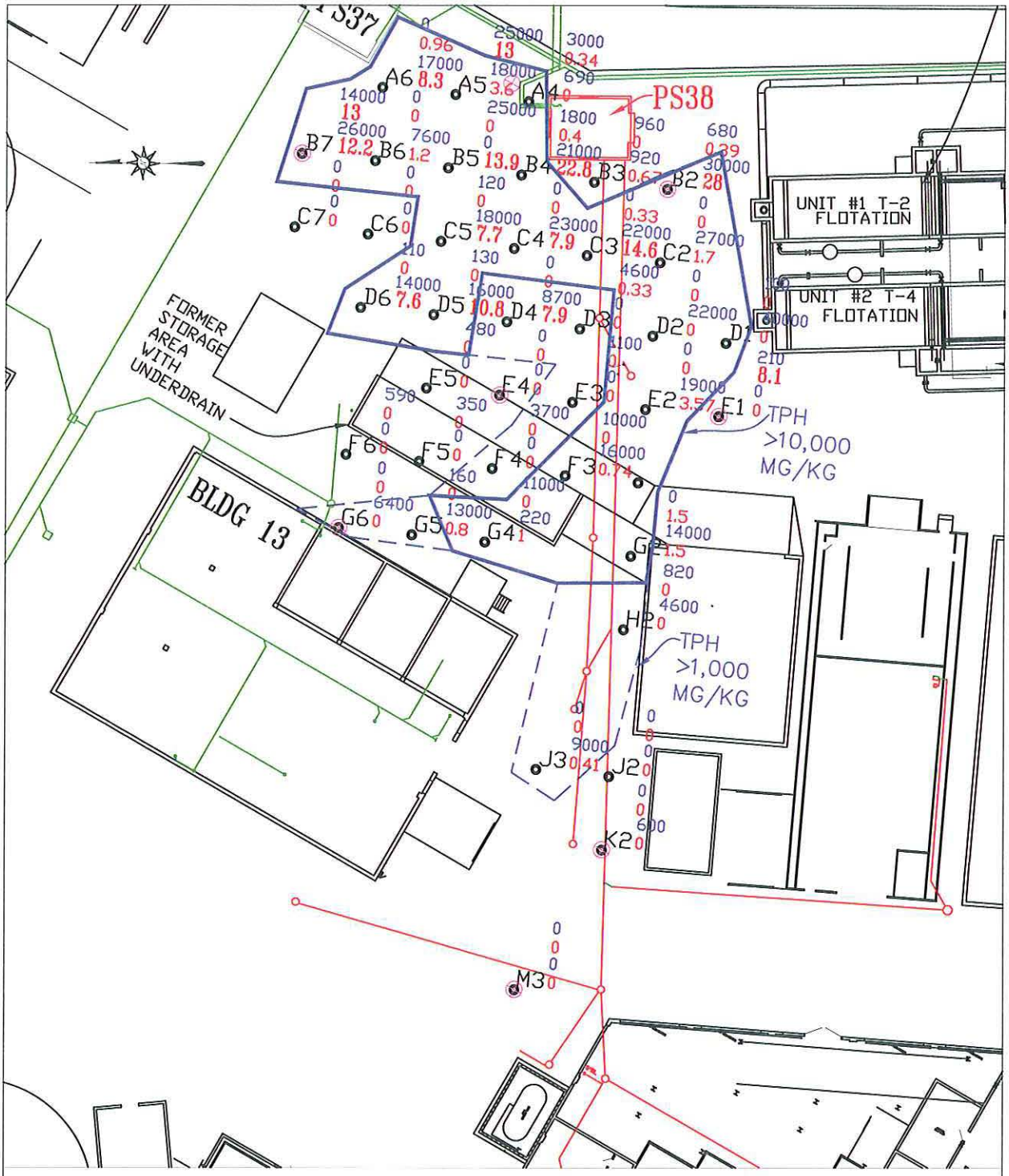

Figure 1

OVERVIEW
PUMP STATION 38 PCB SOIL INVESTIGATION
STRATFORD ARMY ENGINE PLANT
STRATFORD, CT

OSPREY
ENVIRONMENTAL ENGINEERING, LLC
146 East Main Street
Clinton, CT 06413
Phone (860) 669-8651
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DRAWN BY: RJC
SCALE: 1"=40'
DATE: 07.11.07
REVISIONS:

Table 1
PCB and TPH Concentrations in Soil
Stratford Army Engine Plant
Supplemental Soil Investigation (Pump Station 38)

Sample ID	Direct Contact	Mobility	A4	A4	A5	A5	A6	A6	B2	B2	B3[1]	B3[1]
Sample Depth (in)	Industrial	Criteria	(12-24)	(46-52)	(12-20)	(48-58)	(20-30)	(60-70)	(20-30)	(70-80)	(30-40)	(80-90)
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--
PCB-1248	--	--	ND	ND	13	2	ND	8.3	ND	ND	--	--
PCB-1254	--	--	ND	ND	ND	1.6	ND	ND	ND	ND	--	--
PCB-1260	--	--	0.34	ND	ND	ND	0.96	ND	0.39	28	--	--
Total PCB	10	0.005	0.34	ND	13	3.6	0.96	8.3	0.39	28	ND	0.67
TPH	2500	2500	3000**	690**	25000**	18000**	ND	17000**	680**	30000**	960	920

Any values exceeding standards are shown shaded.

Sample ID	Direct Contact	Mobility	B4	B4	B5	B5	B6	B6	B7	B7	C2	C2
Sample Depth (in)	Industrial	Criteria	(40-50)	(60-70)	(25-35)	(55-65)	(20-30)	(50-60)	(22-29)	(60-70)	(40-50)	(80-90)
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	--	--	ND	6.3	ND	8.9	ND	1.2	ND	7.1	ND	ND
PCB-1254	--	--	ND	4.5	ND	5	ND	ND	13	5.1	ND	ND
PCB-1260	--	--	0.4	12	ND	ND	ND	ND	ND	ND	ND	1.7
Total PCB	10	0.005	0.4	22.8	ND	13.9	ND	1.2	13	12.2	ND	1.7
TPH	2500	2500	1800**	21000**	25000**	ND	ND	7600**	14000**	26000**	ND	27000**

Any values exceeding standards are shown shaded.

Sample ID	Direct Contact	Mobility	C3	C3	C4	C4	C5	C5	C6	C6	C7	C7
Sample Depth (in)	Industrial	Criteria	(40-50)	(60-70)	(20-30)	(60-70)	(20-30)	(60-70)	(20-30)	(70-80)	(20-30)	(80-90)
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	--	--	ND	9.7	ND	5	ND	4.7	ND	ND	ND	ND
PCB-1254	--	--	0.33	4.9	ND	2.9	ND	3	ND	ND	ND	ND
PCB-1260	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB	10	0.005	0.33	14.6	ND	7.9	ND	7.7	ND	ND	ND	ND
TPH	2500	2500	ND	22000**	ND	23000***	120****	18000***	ND	ND	ND	ND

Any values exceeding standards are shown shaded.

Table 1
PCB and TPH Concentrations in Soil
Stratford Army Engine Plant
Supplemental Soil Investigation (Pump Station 38)

Sample ID	Direct Contact	Mobility	D1	D1	D2	D2	D3	D3	D4	D4	D5	D5
Sample Depth (in)	Industrial	Criteria	(20-30)	(80-90)	(20-30)	(70-80)	(25-35)	(80-90)	(30-40)	(80-90)	(20-30)	(70-80)
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	--	--	ND	ND	ND	ND	ND	ND	ND	5.4	ND	7.2
PCB-1254	--	--	ND	ND	ND	ND	ND	ND	ND	2.5	ND	3.6
PCB-1260	--	--	ND	ND	ND	ND	0.33	ND	ND	ND	ND	ND
Total PCB	10	0.005	ND	ND	ND	ND	0.33	ND	ND	7.9	ND	10.8
TPH	2500	2500	100*	40000***	ND	22000***	4600*	ND	ND	8700***	130**	16000*

Any values exceeding standards are shown shaded.

Sample ID	Direct Contact	Mobility	D6	D6	E1	E1	E2	E2	E3	E3	E4	E4
Sample Depth (in)	Industrial	Criteria	(20-30)	(80-90)	(15-25)	(85-95)	(15-25)	(80-90)	(20-30)	(80-90)	(15-25)	(90-100)
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	--	--	ND	5.1	ND	ND	ND	2.8	ND	ND	ND	ND
PCB-1254	--	--	ND	2.5	ND	ND	ND	0.77	ND	ND	ND	ND
PCB-1260	--	--	ND	ND	8.1	ND	ND	ND	ND	ND	ND	ND
Total PCB	10	0.005	ND	7.6	8.1	ND	ND	3.57	ND	ND	ND	ND
TPH	2500	2500	110*	14000*	210*	ND	ND	19000	1100*	ND	ND	ND

Any values exceeding standards are shown shaded.

Sample ID	Direct Contact	Mobility	E5	E5	F3	F3	F4	F4	F5[1]	F5[1]	F6[1]	F6[1]
Sample Depth (in)	Industrial	Criteria	(15-25)	(80-90)	(20-30)	(80-90)	(20-30)	(80-90)	(20-30)	(85-95)	(20-30)	(80-90)
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
PCB-1248	--	--	ND	ND	ND	0.38	ND	ND	--	--	--	--
PCB-1254	--	--	ND	ND	ND	0.36	ND	ND	--	--	--	--
PCB-1260	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
Total PCB	10	0.005	ND	ND	0.74	ND	ND	ND	ND	ND	ND	ND
TPH	2500	2500	210***	ND	10000*	16000*	3700*	ND	350	ND	590	ND

Any values exceeding standards are shown shaded.

Table 1
PCB and TPH Concentrations in Soil
Stratford Army Engine Plant
Supplemental Soil Investigation (Pump Station 38)

Sample ID	Direct Contact	Mobility	G2	G2	G4	G4	G5	G5	G6	G6	H2	H2
Sample Depth (in)	Industrial	Criteria	(40-50)	(80-90)	(20-30)	(80-90)	(20-30)	(80-90)	(30-40)	(80-90)	(40-50)	(70-80)
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	--	--	ND	ND	ND	ND	ND	0.8	ND	ND	ND	ND
PCB-1254	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1260	--	--	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB	10	0.005	1.5	ND	ND	ND	ND	0.8	ND	ND	ND	ND
TPH	2500	2500	ND	14000*	220***	11000**	160***	13000**	ND	6400*	820**	4600*
Any values exceeding standards are shown shaded.												

Sample ID	Direct Contact	Mobility	J2	J2	J3	J3	K2	K2	M3	M3		
Sample Depth (in)	Industrial	Criteria	(30-40)	(70-80)	(30-40)	(70-80)	(40-50)	(75-85)	(40-50)	(70-80)		
Sample Date	I/C DEC	GB PMC	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07	22-May-07
(Reporting units are in mg/kg)												
PCB-1016	--	--	ND	ND	ND	ND	ND	ND	ND	ND		
PCB-1221	--	--	ND	ND	ND	ND	ND	ND	ND	ND		
PCB-1232	--	--	ND	ND	ND	ND	ND	ND	ND	ND		
PCB-1242	--	--	ND	ND	ND	ND	ND	ND	ND	ND		
PCB-1248	--	--	ND	ND	ND	ND	ND	ND	ND	ND		
PCB-1254	--	--	ND	ND	ND	ND	ND	ND	ND	ND		
PCB-1260	--	--	ND	ND	ND	0.41	ND	ND	ND	ND		
Total PCB	10	0.005	ND	ND	ND	0.41	ND	ND	ND	ND		
TPH	2500	2500	ND	ND	ND	9000*	ND	600*	ND	ND		
Any values exceeding standards are shown shaded.												

Notes:
-- Not applicable
* Motor oil range
** Unknown range
***Gasoline/motor oil range

Table 2
Volatile Organic Compound Concentrations in Soil
Stratford Army Engine Plant
Supplemental Soil Investigation (Pump Sation 38)

Sample ID	Direct Contact	Mobility	A5 1220	B2 7080	B4 6070	B5 5565	B7 6070	C2 8090	C3 7080	C4 6070	C5 6070	D1 8090
Sample Depth (in)	Industrial	Criteria	(12-20)	(70-80)	(60-70)	(55-65)	(60-70)	(80-90)	(70-80)	(60-70)	(60-70)	(80-90)
Sample Date	I/C DEC	GB PMC	21-May-07	21-May-07	21-May-07	21-May-07	21-May-07	21-May-07	21-May-07	21-May-07	21-May-07	21-May-07
(Reporting units are in ug/kg)												
MTBE	1.0E+06	2.0E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	2.0E+05	2.0E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1.0E+06	6.7E+04	680	ND	ND	1200	5500	ND	ND	ND	ND	ND
Chlorobenzene	1.0E+06	2.0E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.0E+06	1.0E+04	ND	250	ND	1300	2800	ND	ND	760	ND	380
m+p xylenes*	1.0E+06	2.0E+04	ND	560	480	4700	11000	370	ND	2600	510	1400
o-xylene*	1.0E+06	2.0E+04	ND	1200	340	3200	5000	400	ND	1100	ND	530
Styrene	1.0E+06	2.0E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	--	--	ND	310	ND	1100	1200	ND	ND	760	440	440
Bromobenzene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-propylbenzene	--	--	ND	610	ND	2400	2300	270	ND	1800	900	1100
2-Chlorotoluene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	--	--	1200	3600	1200	14000	19000	2200	820	9800	5800	5900
tert-butylbenzene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	--	--	700	7900	4000	8500	8600	5000	2600	7300	11000	15000
sec-butylbenzene	--	--	870	980	330	3500	4100	420	ND	3400	820	1900
1,3-Dichlorobenzene	1.0E+06	1.2E+05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	--	--	340	1600	1000	5000	6200	1100	260	4400	860	2600
1,4-Dichlorobenzene	2.4E+05	1.5E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.0E+06	3.1E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-butylbenzene	--	--	ND	ND	ND	9400	11000	ND	ND	ND	1800	ND
1,2,4-Trichlorobenzene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	2.5E+06	5.6E+04	ND	960	2000	11000	13000	3400	580	12000	210	6100
1,2,3-Trichlorobenzene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

-- not available
Notes:
* total xylenes

Table 3
Groundwater Sampling Results
Stratford Army Engine Plant
Supplemental Soil Investigation (Pump Station 38)

Sample ID	MW-A6	MW-B2	MW-B7	MW-E1	MW-E4	MW-G6	MW-K2	MW-M3
Sample Date	8-Jun-07	8-Jun-07	8-Jun-07	8-Jun-07	8-Jun-07	8-Jun-07	8-Jun-07	8-Jun-07
(Reporting units are in mg/L)								
Benzene	27	ND	13	ND	ND	ND	ND	ND
n-Butylbenzene	1.4	ND	14	ND	ND	ND	ND	ND
sec-Butylbenzene	1.4	3.6	10	ND	ND	ND	ND	ND
tert-Butylbenzene	ND	ND	ND	1.7	ND	ND	ND	ND
Carbon disulfide	ND	8	16	ND	ND	ND	ND	ND
Chlorobenzene	9.6	6	120	ND	5.1	ND	ND	ND
Chloroethane	68	37	200	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	10	4.4	29	ND	4.9	ND	ND	ND
1,3-Dichlorobenzene	ND	4.2	ND	1.6	ND	ND	ND	ND
1,4-Dichlorobenzene	2.8	47	2.4	3.9	ND	ND	ND	ND
1,1-Dichloroethane	47	120	31	ND	ND	ND	ND	7
cis-1,2-Dichloroethene	2500	1400	2900	ND	ND	ND	ND	100
trans-1,2-Dichloroethene	89	13	95	ND	ND	ND	ND	ND
1,1-Dichloroethene	8.2	6.1	21	ND	ND	ND	ND	34
Ethylbenzene	19	10	80	1.6	ND	ND	ND	ND
Isopropylbenzene	4.3	8.4	14	4.8	2.2	9.2	ND	ND
4-Isopropyltoluene	ND	6.7	18	ND	1.4	4.1	ND	ND
Napthalene	1.2	40	130	ND	ND	23	1.5	ND
n-Propylbenzene	5.9	12	26	4.8	2.3	14	ND	ND
Tetrachloroethylene	ND	1.6	ND	ND	ND	ND	ND	1.6
Toluene	74	4.4	250	ND	ND	ND	ND	ND
1,2,3 Trichlorobenzene	ND	ND	ND	1.4	ND	ND	ND	ND
1,2,4 Trichlorobenzene	5.6	4.5	ND	11	ND	ND	ND	ND
1,2,4 Trimethylbenzene	11	160	680	ND	1	180	3	ND
1,3,5-Trimethylbenzene	3	42	130	2.6	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	14
Trichloroethylene	ND	1.7	13	ND	ND	ND	ND	74
Vinyl chloride	830	1300	11000	ND	1.4	2.2	ND	ND
Xylene (total)	26.7	77	450	8.2	ND	ND	ND	ND
PCB-1016	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	7.7	ND	ND	17	ND	ND
PCB-1254	ND	ND	6.6	ND	ND	ND	ND	ND
PCB-1260	20	2.4	ND	ND	ND	ND	ND	ND
Total PCB	20	2.4	14.3	ND	ND	17	ND	ND
TPH	6.8	11	25	1.3	1.3	2,100	3.6	0.6

Table 4
Field Observations
Stratford Army Engine Plant
Supplemental Soil Investigation (Pump Station 38)

Boring ID	Total Depth (in)	Sample Depths	Free Product Interval	PID Measurment (ppm)
A4	90	12-24", 46-52"	48-60	
A5	100	12-20",48-58"	84-96	
A6	96	20-30",60-70"	52-96	400 at 50" decreasing to 50 at 90"
B2	144	20-30", 70-80"	62-120	190 at 80-90"
B3	96	30-40", 80-90"	70-96	100 at 70-96"
B4	96	40-50", 60-70"		1350 at 64-72", 230 at 72-96"
B5	96	25-35", 55-65"		ranged from 330-780 at 42-96"
B6	96	20-30", 50-60"		645 at 53-59", 415 at 59-74", 210 at 74-96"
B7	144	22-29", 60-70"		155 at 29-52", 770 at 52-57", 1250 at 57-90", 190 at 90-96"
C2	96	40-50", 80-90"		320 at 69-96"
C3	96	40-50", 60-70"		500 at 64-80", 320 at 80-96"
C4	96	20-30", 60-70"		700 at 58-70", 1300 at 70-77", 90 at 77-84"
C5	96	20-30", 60-70"		13 at 54-56", 2200 at 56-96"
C6	96	20-30", 70-80"		670 at 52-61", 1230 at 61-72", 160 at 72-96"
C7	96	20-30", 80-90"		580 at 48-76", 200 at 76-96"
D1	96	20-30", 80-90"		400 at 80-90"
D2	96	20-30", 70-80"	67-90	270 at 62-67", 320 at 67-90"
D3	96	25-35", 80-90"		200 at 68-76", 500 at 76-86"
D4	96	30-40", 80-90"		250 at 80-90"
D5	96	20-30", 70-80"		370 at 70-72", 280 at 72-80"
D6	96	20-30", 80-90"		
E1	144	15-25", 85-95"		
E2	96	15-25", 80-90"		
E3	96	20-30", 80-90"		
E4	96	15-25", 90-100"		
E5	96	15-25", 80-90"		
F3	96	20-30", 80-90"		
F4	96	20-30", 80-90"		
F5	96	20-30", 85-95"		
F6	96	20-30", 80-90"		
G2	96	40-50", 80-90"		
G4	96	20-30", 80-90"	73-96	700 at 73-96"
G5	96	20-30", 80-90"	80-96	720 at 86-96"
G6	144	30-40", 80-90"	68-144	110 at 80-90"
H2	96	40-50", 70-80"		
J2	96	30-40", 70-80"		
J3	96	30-40", 70-80"		
K2	144	40-50", 75-85"		
M3	96	40-50", 70-80"		