

APPENDIX D
BASELINE CONDITIONS

Maxxam Job #: A645766
Report Date:
2006/05/24

Clean Earth Technologies
Client Project #: FAC

Project name: ENFIELD
Sampler Initials:

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

	Units	MW-1	MW-2	MW-3	MW-4
PAHs					
1-Methylnaphthalene	ug/L	0.05	ND	ND	1.6
2-Methylnaphthalene	ug/L	0.06	ND	ND	0.5
Acenaphthene	ug/L	ND	0.05	ND	ND
Acenaphthylene	ug/L	ND	0.04	ND	0.1
Anthracene	ug/L	ND	ND	ND	0.05
Benzo(a)anthracene	ug/L	ND	ND	ND	ND
Benzo(a)pyrene	ug/L	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/L	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/L	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/L	ND	ND	ND	ND
Chrysene	ug/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ug/L	ND	ND	ND	ND
Fluoranthene	ug/L	ND	ND	ND	0.04
Fluorene	ug/L	0.08	0.08	ND	0.26
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND	ND	ND
Naphthalene	ug/L	ND	ND	ND	0.3
Perylene	ug/L	ND	ND	0.28	ND
Phenanthrene	ug/L	0.1	ND	ND	0.23
Pyrene	ug/L	ND	ND	ND	0.09

ND = Not detected

Maxxam Job #: A645766
 Report Date: 2006/05/24

ATLANTIC RCAP-MS DISSOLVED IN WATER (WATER)

	Units	MW-1	MW-2	MW-3	MW-4
INORGANICS					
Total Alkalinity (Total as CaCO3)	mg/L	25	22	55	95
Dissolved Chloride (Cl)	mg/L	12	54	31	130
Colour	TCU	ND	ND	10	5
Hardness (CaCO3)	mg/L	34	100	88	190
Nitrate + Nitrite	mg/L	3.2	21	8.8	26
Nitrite (N)	mg/L	0.59	2.1	1.2	3.6
Nitrogen (Ammonia Nitrogen)	mg/L	0.54	4.3	ND	7
Total Organic Carbon (C)	mg/L	2.9	ND	67	6
Orthophosphate (P)	mg/L	ND	ND	ND	ND
pH	pH	6.33	6.34	6.65	7.11
Reactive Silica (SiO2)	mg/L	9.1	11	13	9.4
Dissolved Sulphate (SO4)	mg/L	8	13	8	18
Turbidity	NTU	94	790	>1000	84
Conductivity	uS/cm	130	400	270	810
RCAP CALCULATIONS					
Anion Sum	me/L	1.24	3.77	2.75	7.9
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	25	22	54	95
Calculated TDS	mg/L	83	259	175	488
Carb. Alkalinity (calc. as CaCO3)	mg/L	ND	ND	ND	ND
Cation Sum	me/L	1.13	3.41	2.5	7.22
Ion Balance (% Difference)	%	4.56	5.08	4.65	4.48
Langelier Index (@ 20C)	N/A	-2.55	-2.2	-1.52	-0.561
Langelier Index (@ 4C)	N/A	-2.8	-2.45	-1.77	-0.809
Saturation pH (@ 20C)	N/A	8.88	8.54	8.17	7.67
Saturation pH (@ 4C)	N/A	9.13	8.79	8.42	7.92
Elements (ICP-MS)					
Dissolved Aluminum (Al)	ug/L	120	110	160	30
Dissolved Antimony (Sb)	ug/L	5	ND	ND	5
Dissolved Arsenic (As)	ug/L	7	5	46	3
Dissolved Barium (Ba)	ug/L	21	78	32	120
Dissolved Beryllium (Be)	ug/L	ND	ND	ND	ND
Dissolved Bismuth (Bi)	ug/L	ND	ND	ND	ND
Dissolved Boron (B)	ug/L	34	150	89	250
Dissolved Cadmium (Cd)	ug/L	0.5	0.6	ND	0.9
Dissolved Chromium (Cr)	ug/L	ND	ND	ND	ND
Dissolved Cobalt (Co)	ug/L	9	22	4	14
Dissolved Copper (Cu)	ug/L	4	12	14	11
Dissolved Iron (Fe)	ug/L	89	60	120	ND
Dissolved Lead (Pb)	ug/L	0.7	ND	ND	ND
Dissolved Manganese (Mn)	ug/L	810	3300	1400	3900

Dissolved Molybdenum (Mo)	ug/L	33	130	8	82
Dissolved Nickel (Ni)	ug/L	3	11	2	6
Dissolved Selenium (Se)	ug/L	ND	ND	ND	ND
Dissolved Silver (Ag)	ug/L	ND	1.2	ND	0.6
Dissolved Strontium (Sr)	ug/L	61	200	130	310
Dissolved Thallium (Tl)	ug/L	ND	0.1	ND	ND
Dissolved Tin (Sn)	ug/L	ND	ND	ND	ND
Dissolved Titanium (Ti)	ug/L	5	6	5	ND
Dissolved Uranium (U)	ug/L	0.1	ND	0.3	1.4
Dissolved Vanadium (V)	ug/L	ND	ND	ND	ND
Dissolved Zinc (Zn)	ug/L	7	14	ND	7
Elements (ICP-OES)					
Dissolved Calcium (Ca)	mg/L	11	34	30	65
Dissolved Magnesium (Mg)	mg/L	1.3	4.3	3.3	6.4
Dissolved Phosphorus (P)	mg/L	ND	ND	ND	ND
Dissolved Potassium (K)	mg/L	2.2	4.2	2.3	6.5
Dissolved Sodium (Na)	mg/L	8.2	22	16	64
RCAP CALCULATIONS					
Nitrate (N)	mg/L	2.6	19	7.5	23

ND = Not detected

Maxxam Job #: A645766
 Report Date: 2006/05/24

Clean Earth Technologies
 Client Project #: FAC
 Project name: ENFIELD
 Sampler Initials:

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

	Units	MW-1	MW-2	MW-3	MW-4
TPH COMPOUNDS					
Benzene	mg/L	0.001	0.011	0.038	0.041
Toluene	mg/L	0.001	0.003	0.009	0.011
Ethylbenzene	mg/L	ND	ND	ND	0.002
Xylene (Total)	mg/L	ND	ND	ND	0.006
C6 - C10 (less BTEX)	mg/L	ND	ND	ND	0.02
>C10-C21 Hydrocarbons	mg/L	0.08	0.06	0.08	0.09
>C21-<C32 Hydrocarbons	mg/L	ND	0.2	0.1	ND
Modified TPH (Tier1)	mg/L	ND	0.3	0.2	0.1

ND = Not detected

Maxxam Job #: A677781
 Report Date: 2006/08/04

Clean Earth Technologies
 Client Project #: FACILITY
 Project name: ENFIELD
 Sampler Initials:

ATLANTIC VOC IN WATER PKG. (WATER)

Maxxam ID		N43436	N43437	N43438	N43439	
Sampling Date		01/08/2006	01/08/2006	01/08/2006	01/08/2006	
COC Number		B13429	B13429	B13429	B13429	
	Units	MW-1	MW-2	MW-3	MW-4	RDL
CHLOROBENZENES						
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.5
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	1
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	1
Chlorobenzene	ug/L	ND	ND	ND	ND	1
VOLATILES						
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	1
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	1
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	1
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	2
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	2
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	1
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	1
Benzene	ug/L	ND	ND	ND	ND	1
Bromodichloromethane	ug/L	ND	ND	ND	ND	1
Bromoform	ug/L	ND	ND	ND	ND	1
Bromomethane	ug/L	ND	ND	ND	ND	8
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	1
Chloroethane	ug/L	ND	ND	ND	ND	8
Chloroform	ug/L	ND	ND	ND	ND	1
Chloromethane	ug/L	ND	ND	ND	ND	8
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	2
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	2
Dibromochloromethane	ug/L	ND	ND	ND	ND	1
Ethylbenzene	ug/L	ND	ND	ND	ND	1
Ethylene Dibromide	ug/L	ND	ND	ND	ND	1
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	3
o-Xylene	ug/L	ND	ND	ND	ND	1
p+m-Xylene	ug/L	ND	ND	ND	ND	2
Styrene	ug/L	ND	ND	ND	ND	1
Tetrachloroethylene	ug/L	ND	ND	ND	ND	1
Toluene	ug/L	ND	ND	ND	ND	1
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	2
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	1
Trichloroethylene	ug/L	ND	ND	ND	ND	1
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	8
Vinyl Chloride	ug/L	ND	ND	ND	ND	1

Surrogate Recovery (%)						
4-Bromofluorobenzene	%	92	90	87	87	
D4-1,2-Dichloroethane	%	106	106	106	112	
D8-Toluene	%	93	94	94	90	

ND = Not detected

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Maxxam Job #: A645766
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Clean Earth Technologies
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Project name: ENFIELD
Sampler Initials:

ATLANTIC LOW MUST IN SOIL (POTABLE)

	Units	SA1	SA2	SA3	SA4
INORGANICS					
Moisture	%	10	27	22	13
TPH COMPOUNDS					
Benzene	mg/kg	ND	ND	ND	ND
Toluene	mg/kg	ND	ND	ND	ND
Ethylbenzene	mg/kg	ND	ND	ND	ND
Xylene (Total)	mg/kg	ND	ND	ND	ND
C6 - C10 (less BTEX)	mg/kg	ND	ND	ND	ND
>C10-C21 Hydrocarbons	mg/kg	ND	ND	ND	ND
>C21-<C32 Hydrocarbons	mg/kg	ND	50	ND	ND
Modified TPH (Tier1)	mg/kg	ND	50	ND	ND

ND = Not detected

(1) Possible lube oil fraction.

Clean Earth Technologies

Maxxam Job #:
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Client Project #: FAC
Project name: ENFIELD
Sampler Initials:

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

	Units	SA1	SA2	SA3	SA4
Elements (ICP-MS)					
Available Aluminum (Al)	mg/kg	13000	9800	16000	13000
Available Antimony (Sb)	mg/kg	ND	ND	ND	ND
Available Arsenic (As)	mg/kg	12	8	12	14
Available Barium (Ba)	mg/kg	32	14	34	33
Available Beryllium (Be)	mg/kg	ND	ND	ND	ND
Available Boron (B)	mg/kg	ND	ND	ND	ND
Available Cadmium (Cd)	mg/kg	ND	ND	ND	ND
Available Chromium (Cr)	mg/kg	17	11	16	16
Available Cobalt (Co)	mg/kg	14	4	17	12
Available Copper (Cu)	mg/kg	18	7	22	23
Available Iron (Fe)	mg/kg	21000	16000	22000	19000
Available Lead (Pb)	mg/kg	20	14	13	22
Available Manganese (Mn)	mg/kg	600	180	730	480
Available Molybdenum (Mo)	mg/kg	ND	ND	ND	ND
Available Nickel (Ni)	mg/kg	20	8	20	19
Available Selenium (Se)	mg/kg	ND	ND	ND	ND
Available Silver (Ag)	mg/kg	ND	ND	ND	ND
Available Strontium (Sr)	mg/kg	9	ND	ND	6
Available Thallium (Tl)	mg/kg	0.1	ND	0.1	0.2
Available Uranium (U)	mg/kg	0.9	0.5	1	0.8
Available Vanadium (V)	mg/kg	17	18	16	16
Available Zinc (Zn)	mg/kg	41	21	42	43

ND = Not detected

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Maxxam Job #: A645766
 Report Date:
 2006/05/24

Clean Earth Technologies
 Client Project #: FAC
 Project name: ENFIELD
 Sampler Initials:

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		M05980	M05981	M05982	M05983		
Sampling Date		11/05/2006	11/05/2006	11/05/2006	11/05/2006		
COC Number		B 3342	B 3342	B 3342	B 3342		
	Units	SA1	SA2	SA3	SA4	RDL	QC Batch
PAHs							
1-Methylnaphthalene	mg/kg	ND	ND	ND	ND	0.005	972864
2-Methylnaphthalene	mg/kg	ND	ND	ND	ND	0.005	972864
Acenaphthene	mg/kg	ND	ND	ND	ND	0.005	972864
Acenaphthylene	mg/kg	ND	ND	ND	0.02	0.005	972864
Anthracene	mg/kg	ND	ND	ND	ND	0.005	972864
Benzo(a)anthracene	mg/kg	0.007	ND	ND	ND	0.005	972864
Benzo(a)pyrene	mg/kg	0.006	ND	ND	ND	0.005	972864
Benzo(b)fluoranthene	mg/kg	0.007	ND	ND	ND	0.005	972864
Benzo(g,h,i)perylene	mg/kg	ND	ND	ND	ND	0.005	972864
Benzo(k)fluoranthene	mg/kg	0.007	ND	ND	ND	0.005	972864
Chrysene	mg/kg	0.007	ND	ND	ND	0.005	972864
Dibenzo(a,h)anthracene	mg/kg	ND	ND	ND	ND	0.005	972864
Fluoranthene	mg/kg	0.009	ND	ND	ND	0.005	972864
Fluorene	mg/kg	ND	ND	ND	ND	0.005	972864
Indeno(1,2,3-cd)pyrene	mg/kg	ND	ND	ND	ND	0.005	972864
Naphthalene	mg/kg	0.012	0.008	ND	ND	0.005	972864
Perylene	mg/kg	ND	ND	ND	ND	0.005	972864
Phenanthrene	mg/kg	0.006	ND	ND	ND	0.005	972864
Pyrene	mg/kg	0.008	ND	ND	ND	0.005	972864
Surrogate Recovery (%)							
D10-Anthracene	%	87	89	92	86		972864
D14-Terphenyl	%	92	95	89	91		972864
D8-Acenaphthylene	%	79	81	78	81		972864

ND = Not detected
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A651830
 Report Date: 2006/06/08

Clean Earth Technologies
 Client Project #: FAC
 Project name: ENFIELD
 Sampler Initials:

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

	Units	GFC1 DOWNSTREAM	GFC1 UPSTREAM
TPH COMPOUNDS			
Benzene	mg/L	ND	ND
Toluene	mg/L	ND	ND
Ethylbenzene	mg/L	ND	ND
Xylene (Total)	mg/L	ND	ND
C6 - C10 (less BTEX)	mg/L	ND	ND
>C10-C21 Hydrocarbons	mg/L	ND	ND
>C21-<C32 Hydrocarbons	mg/L	ND	ND
Modified TPH (Tier1)	mg/L	ND	ND

ND = Not detected

Maxxam Job #: A651830
 Report Date:
 2006/06/08

Clean Earth
 Technologies
 Client Project #: FAC

Project name: ENFIELD
 Sampler Initials:

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

	Units	GFC1 DOWNSTREAM	GFC1 UPSTREAM
PAHs			
1-Methylnaphthalene	ug/L	ND	ND
2-Methylnaphthalene	ug/L	ND	ND
Acenaphthene	ug/L	ND	ND
Acenaphthylene	ug/L	ND	ND
Anthracene	ug/L	ND	ND
Benzo(a)anthracene	ug/L	ND	ND
Benzo(a)pyrene	ug/L	ND	ND
Benzo(b)fluoranthene	ug/L	ND	ND
Benzo(g,h,i)perylene	ug/L	ND	ND
Benzo(k)fluoranthene	ug/L	ND	ND
Chrysene	ug/L	ND	ND
Dibenzo(a,h)anthracene	ug/L	ND	ND
Fluoranthene	ug/L	0.02	0.01
Fluorene	ug/L	ND	ND
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND
Naphthalene	ug/L	ND	ND
Perylene	ug/L	ND	ND
Phenanthrene	ug/L	0.05	0.04
Pyrene	ug/L	0.02	ND

ND = Not detected
 Maxxam Job #:
 A651830
 Report Date:
 2006/06/08

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

	Units	GFC1 DOWNSTREAM	GFC1 UPSTREAM
INORGANICS			
Total Alkalinity (Total as CaCO3)	mg/L	6	11
Dissolved Chloride (Cl)	mg/L	55	110
Colour	TCU	7	ND
Hardness (CaCO3)	mg/L	19	29
Nitrate + Nitrite	mg/L	0.07	0.15
Nitrite (N)	mg/L	ND	ND
Nitrogen (Ammonia Nitrogen)	mg/L	0.1	ND
Total Organic Carbon (C)	mg/L	1.9	1.5
Orthophosphate (P)	mg/L	ND	ND
pH	pH	7.19	6.57
Reactive Silica (SiO2)	mg/L	2.8	3.3
Dissolved Sulphate (SO4)	mg/L	9	11
Turbidity	NTU	<0.1	0.5
Conductivity	uS/cm	210	430
RCAP CALCULATIONS			
Anion Sum	me/L	1.86	3.69
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	6	11
Calculated TDS	mg/L	110	215
Carb. Alkalinity (calc. as CaCO3)	mg/L	ND	ND
Cation Sum	me/L	1.89	3.64
Ion Balance (% Difference)	%	0.855	0.723
Langelier Index (@ 20C)	N/A	-2.62	-2.79
Langelier Index (@ 4C)	N/A	-2.87	-3.04
Saturation pH (@ 20C)	N/A	9.81	9.36
Saturation pH (@ 4C)	N/A	10.1	9.61
Elements (ICP-MS)			
Total Aluminum (Al)	ug/L	68	45
Total Antimony (Sb)	ug/L	ND	ND
Total Arsenic (As)	ug/L	ND	ND
Total Barium (Ba)	ug/L	8	18
Total Beryllium (Be)	ug/L	ND	ND
Total Bismuth (Bi)	ug/L	ND	ND
Total Boron (B)	ug/L	8	7
Total Cadmium (Cd)	ug/L	ND	ND
Total Chromium (Cr)	ug/L	ND	ND
Total Cobalt (Co)	ug/L	ND	ND
Total Copper (Cu)	ug/L	2	4
Total Iron (Fe)	ug/L	140	53

Total Lead (Pb)	ug/L	ND	0.6
Total Manganese (Mn)	ug/L	71	7
Total Molybdenum (Mo)	ug/L	ND	ND
Total Nickel (Ni)	ug/L	ND	ND
Total Selenium (Se)	ug/L	ND	ND
Total Silver (Ag)	ug/L	ND	ND
Total Strontium (Sr)	ug/L	29	39
Total Thallium (Tl)	ug/L	ND	ND
Total Tin (Sn)	ug/L	ND	ND
Total Titanium (Ti)	ug/L	ND	ND
Total Uranium (U)	ug/L	ND	ND
Total Vanadium (V)	ug/L	ND	ND
Total Zinc (Zn)	ug/L	ND	ND
Elements (ICP-OES)			
Total Calcium (Ca)	mg/L	6.1	10
Total Magnesium (Mg)	mg/L	0.9	1
Total Phosphorus (P)	mg/L	ND	ND
Total Potassium (K)	mg/L	0.6	1.2
Total Sodium (Na)	mg/L	34	69
RCAP CALCULATIONS			
Nitrate (N)	mg/L	0.07	0.15

ND = Not detected