



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

PROJECT NARRATIVE

David Heislein
MACTEC Engineering & Consulting, Inc.
107 Audubon Road
Wakefield, MA 01880

RE: Providence Gorham Site
ESS Laboratory Work Order Number: 0801152

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this Project Narrative, the entire report has been paginated. The ESS Laboratory Certifications sheet is the final report page. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been mailed. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

Date: January 16, 2008

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration may be used instead of automated integration because it produces more accurate results. All ICP Metals were analyzed using the established linear dynamic range to determine acceptable analytical results.

ESS Laboratory certifies that the test results meet the requirements of NELAC, except where noted within this project narrative.

Sample Receipt

The following sample(s) were received on January 15, 2008 for the analyses specified on the enclosed Chain of Custody Record.

Laboratory ID	Matrix	Client SampleID
0801152-01	Ground Water	West UST



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Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site

ESS Laboratory Work Order: 0801152

PROJECT NARRATIVE

8260B Volatile Organic Compounds

BA81511-BS1 **Blank Spike recovery is above upper control limit.**
tert-Butylbenzene, Vinyl Chloride

8270C Semi-Volatile Organic Compounds

BA81509-BS1 **Blank Spike recovery is below lower control limit.**
Benzoic Acid

BA81509-BSD1 **Blank Spike recovery is below lower control limit.**
Benzoic Acid

BA81509-BSD1 **Relative percent difference for duplicate is outside of criteria.**
2,4-Dinitrophenol, N-Nitrosodimethylamine, Pyridine

BRA0141-CCV1 **Continuing Calibration recovery is below lower control limit.**
2,4-Dinitrophenol

8270C(SIM) Polynuclear Aromatic Hydrocarbons

0801152-01 **Reported above the quantitation limit; Estimated value.**
2-Methylnaphthalene

No other observations noted.

End of Project Narrative.



ESS Laboratory

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CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: West UST
 Date Sampled: 01/15/08 10:30
 Percent Solids: N/A
 Initial Volume: 10
 Final Volume: 10
 Extraction Method: 5030B

ESS Laboratory Work Order: 0801152
 ESS Laboratory Sample ID: 0801152-01
 Sample Matrix: Ground Water
 Analyst: RES

8260B Volatile Organic Compounds

Analyte	Results	Units	MRL	RI - GA		Analyzed
				Limit	DF	
1,1,1,2-Tetrachloroethane	ND	mg/L	0.0010		1	01/15/08
1,1,1-Trichloroethane	ND	mg/L	0.0010	0.2	1	01/15/08
1,1,2,2-Tetrachloroethane	ND	mg/L	0.0005		1	01/15/08
1,1,2-Trichloroethane	ND	mg/L	0.0010	0.005	1	01/15/08
1,1-Dichloroethane	ND	mg/L	0.0010		1	01/15/08
1,1-Dichloroethene	ND	mg/L	0.0010	0.007	1	01/15/08
1,1-Dichloropropene	ND	mg/L	0.0020		1	01/15/08
1,2,3-Trichlorobenzene	ND	mg/L	0.0010		1	01/15/08
1,2,3-Trichloropropane	ND	mg/L	0.0010		1	01/15/08
1,2,4-Trichlorobenzene	ND	mg/L	0.0010	0.07	1	01/15/08
1,2,4-Trimethylbenzene	0.0070	mg/L	0.0010		1	01/15/08
1,2-Dibromo-3-Chloropropane	ND	mg/L	0.0050	0.0002	1	01/15/08
1,2-Dibromoethane	ND	mg/L	0.0010	0.00005	1	01/15/08
1,2-Dichlorobenzene	ND	mg/L	0.0010	0.6	1	01/15/08
1,2-Dichloroethane	ND	mg/L	0.0010	0.005	1	01/15/08
1,2-Dichloropropane	ND	mg/L	0.0010	0.005	1	01/15/08
1,3,5-Trimethylbenzene	0.0012	mg/L	0.0010		1	01/15/08
1,3-Dichlorobenzene	ND	mg/L	0.0010	0.6	1	01/15/08
1,3-Dichloropropane	ND	mg/L	0.0010		1	01/15/08
1,4-Dichlorobenzene	ND	mg/L	0.0010	0.075	1	01/15/08
1,4-Dioxane - Screen	ND	mg/L	0.500		1	01/15/08
1-Chlorohexane	ND	mg/L	0.0010		1	01/15/08
2,2-Dichloropropane	ND	mg/L	0.0010		1	01/15/08
2-Butanone	ND	mg/L	0.0250		1	01/15/08
2-Chlorotoluene	ND	mg/L	0.0010		1	01/15/08
2-Hexanone	ND	mg/L	0.0100		1	01/15/08
4-Chlorotoluene	ND	mg/L	0.0010		1	01/15/08
4-Isopropyltoluene	ND	mg/L	0.0010		1	01/15/08
4-Methyl-2-Pentanone	ND	mg/L	0.0250		1	01/15/08
Acetone	ND	mg/L	0.0250		1	01/15/08
Benzene	ND	mg/L	0.0010	0.005	1	01/15/08
Bromobenzene	ND	mg/L	0.0020		1	01/15/08
Bromochloromethane	ND	mg/L	0.0010		1	01/15/08
Bromodichloromethane	ND	mg/L	0.0006		1	01/15/08
Bromoform	ND	mg/L	0.0010		1	01/15/08



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Percent Solids: N/A
Initial Volume: 10
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Extraction Method: 5030B

ESS Laboratory Work Order: 0801152
ESS Laboratory Sample ID: 0801152-01
Sample Matrix: Ground Water
Analyst: RES

8260B Volatile Organic Compounds

Bromomethane	ND	mg/L	0.0020		1	01/15/08
Carbon Disulfide	ND	mg/L	0.0010		1	01/15/08
Carbon Tetrachloride	ND	mg/L	0.0010	0.005	1	01/15/08
Chlorobenzene	ND	mg/L	0.0010	0.1	1	01/15/08
Chloroethane	ND	mg/L	0.0020		1	01/15/08
Chloroform	ND	mg/L	0.0010		1	01/15/08
Chloromethane	ND	mg/L	0.0020		1	01/15/08
cis-1,2-Dichloroethene	ND	mg/L	0.0010	0.07	1	01/15/08
cis-1,3-Dichloropropene	ND	mg/L	0.0004		1	01/15/08
Dibromochloromethane	ND	mg/L	0.0010		1	01/15/08
Dibromomethane	ND	mg/L	0.0010		1	01/15/08
Dichlorodifluoromethane	ND	mg/L	0.0020		1	01/15/08
Diethyl Ether	ND	mg/L	0.0010		1	01/15/08
Di-isopropyl ether	ND	mg/L	0.0010		1	01/15/08
Ethyl tertiary-butyl ether	ND	mg/L	0.0010		1	01/15/08
Ethylbenzene	ND	mg/L	0.0010	0.7	1	01/15/08
Hexachlorobutadiene	ND	mg/L	0.0006		1	01/15/08
Hexachloroethane	ND	mg/L	0.0010		1	01/15/08
Isopropylbenzene	ND	mg/L	0.0010		1	01/15/08
Methyl tert-Butyl Ether	ND	mg/L	0.0010	0.04	1	01/15/08
Methylene Chloride	ND	mg/L	0.0040	0.005	1	01/15/08
Naphthalene	0.0079	mg/L	0.0010	0.02	1	01/15/08
n-Butylbenzene	ND	mg/L	0.0010		1	01/15/08
n-Propylbenzene	ND	mg/L	0.0010		1	01/15/08
sec-Butylbenzene	ND	mg/L	0.0010		1	01/15/08
Styrene	ND	mg/L	0.0010	0.1	1	01/15/08
tert-Butylbenzene	ND	mg/L	0.0010		1	01/15/08
Tertiary-amyl methyl ether	ND	mg/L	0.0010		1	01/15/08
Tetrachloroethene	ND	mg/L	0.0010	0.005	1	01/15/08
Tetrahydrofuran	ND	mg/L	0.0050		1	01/15/08
Toluene	ND	mg/L	0.0010	1	1	01/15/08
trans-1,2-Dichloroethene	ND	mg/L	0.0010	0.1	1	01/15/08
trans-1,3-Dichloropropene	ND	mg/L	0.0005		1	01/15/08
Trichloroethene	ND	mg/L	0.0010	0.005	1	01/15/08
Trichlorofluoromethane	ND	mg/L	0.0010		1	01/15/08
Vinyl Acetate	ND	mg/L	0.0050		1	01/15/08



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Percent Solids: N/A
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Extraction Method: 5030B

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ESS Laboratory Sample ID: 0801152-01
Sample Matrix: Ground Water
Analyst: RES

8260B Volatile Organic Compounds

Vinyl Chloride	ND	mg/L	0.0010	0.002	1	01/15/08
Xylene O	0.0016	mg/L	0.0010	10	1	01/15/08
Xylene P,M	ND	mg/L	0.0020	10	1	01/15/08
Xylenes (Total)	ND	mg/L	0.0030	10	1	01/15/08
Trihalomethanes (Total)	ND	mg/L	0.0036	0.1		01/15/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	89 %		70-130
Surrogate: 4-Bromofluorobenzene	99 %		70-130
Surrogate: Dibromofluoromethane	99 %		70-130
Surrogate: Toluene-d8	99 %		70-130



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 Date Sampled: 01/15/08 10:30
 Percent Solids: N/A
 Initial Volume: 950
 Final Volume: 1
 Extraction Method: 3520C

ESS Laboratory Work Order: 0801152
 ESS Laboratory Sample ID: 0801152-01
 Sample Matrix: Ground Water
 Analyst: VSC
 Prepared: 01/15/08

8270C Semi-Volatile Organic Compounds

Analyte	Results	Units	MRL	RI - GA		Analyzed
				Limit	DF	
1,1-Biphenyl	ND	mg/L	0.01		1	01/16/08
1,2,4-Trichlorobenzene	ND	mg/L	0.01	0.07	1	01/16/08
1,2-Dichlorobenzene	ND	mg/L	0.01	0.6	1	01/16/08
1,3-Dichlorobenzene	ND	mg/L	0.01	0.6	1	01/16/08
1,4-Dichlorobenzene	ND	mg/L	0.01	0.075	1	01/16/08
2,3,4,6-Tetrachlorophenol	ND	mg/L	0.05		1	01/16/08
2,4,5-Trichlorophenol	ND	mg/L	0.01		1	01/16/08
2,4,6-Trichlorophenol	ND	mg/L	0.01		1	01/16/08
2,4-Dichlorophenol	ND	mg/L	0.01		1	01/16/08
2,4-Dimethylphenol	ND	mg/L	0.05		1	01/16/08
2,4-Dinitrophenol	ND	mg/L	0.05		1	01/16/08
2,4-Dinitrotoluene	ND	mg/L	0.01		1	01/16/08
2,6-Dinitrotoluene	ND	mg/L	0.01		1	01/16/08
2-Chloronaphthalene	ND	mg/L	0.01		1	01/16/08
2-Chlorophenol	ND	mg/L	0.01		1	01/16/08
2-Methylnaphthalene	0.03	mg/L	0.01		1	01/16/08
2-Methylphenol	ND	mg/L	0.01		1	01/16/08
2-Nitroaniline	ND	mg/L	0.01		1	01/16/08
2-Nitrophenol	ND	mg/L	0.01		1	01/16/08
3,3'-Dichlorobenzidine	ND	mg/L	0.02		1	01/16/08
3+4-Methylphenol	ND	mg/L	0.02		1	01/16/08
3-Nitroaniline	ND	mg/L	0.01		1	01/16/08
4,6-Dinitro-2-Methylphenol	ND	mg/L	0.05		1	01/16/08
4-Bromophenyl-phenylether	ND	mg/L	0.01		1	01/16/08
4-Chloro-3-Methylphenol	ND	mg/L	0.01		1	01/16/08
4-Chloroaniline	ND	mg/L	0.02		1	01/16/08
4-Chloro-phenyl-phenyl ether	ND	mg/L	0.01		1	01/16/08
4-Nitroaniline	ND	mg/L	0.01		1	01/16/08
4-Nitrophenol	ND	mg/L	0.05		1	01/16/08
Acetophenone	ND	mg/L	0.01		1	01/16/08
Aniline	ND	mg/L	0.01		1	01/16/08
Azobenzene	ND	mg/L	0.02		1	01/16/08
Benzoic Acid	ND	mg/L	0.1		1	01/16/08
Benzyl Alcohol	ND	mg/L	0.01		1	01/16/08
bis(2-Chloroethoxy)methane	ND	mg/L	0.01		1	01/16/08



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 Final Volume: 1
 Extraction Method: 3520C

ESS Laboratory Work Order: 0801152
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 Sample Matrix: Ground Water
 Analyst: VSC
 Prepared: 01/15/08

8270C Semi-Volatile Organic Compounds

Compound	Result	Unit	Limit	Concentration	Qualifier	Date
bis(2-Chloroethyl)ether	ND	mg/L	0.01		1	01/16/08
bis(2-chloroisopropyl)Ether	ND	mg/L	0.01		1	01/16/08
bis(2-Ethylhexyl)phthalate	ND	mg/L	0.006	0.006	1	01/16/08
Butylbenzylphthalate	ND	mg/L	0.01		1	01/16/08
Carbazole	ND	mg/L	0.01		1	01/16/08
Dibenzofuran	ND	mg/L	0.01		1	01/16/08
Diethylphthalate	ND	mg/L	0.01		1	01/16/08
Dimethylphthalate	ND	mg/L	0.01		1	01/16/08
Di-n-butylphthalate	ND	mg/L	0.01		1	01/16/08
Di-n-octylphthalate	ND	mg/L	0.01		1	01/16/08
Hexachlorobenzene	ND	mg/L	0.01	0.001	1	01/16/08
Hexachlorobutadiene	ND	mg/L	0.01		1	01/16/08
Hexachlorocyclopentadiene	ND	mg/L	0.05		1	01/16/08
Hexachloroethane	ND	mg/L	0.005		1	01/16/08
Isophorone	ND	mg/L	0.01		1	01/16/08
Nitrobenzene	ND	mg/L	0.01		1	01/16/08
N-Nitrosodimethylamine	ND	mg/L	0.01		1	01/16/08
N-Nitroso-Di-n-Propylamine	ND	mg/L	0.01		1	01/16/08
N-nitrosodiphenylamine	ND	mg/L	0.02		1	01/16/08
Pentachlorophenol	ND	mg/L	0.05	0.001	1	01/16/08
Phenol	ND	mg/L	0.01		1	01/16/08
Pyridine	ND	mg/L	0.1		1	01/16/08

Surrogate	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	71 %		30-130
Surrogate: 2,4,6-Tribromophenol	81 %		15-110
Surrogate: 2-Chlorophenol-d4	67 %		15-110
Surrogate: 2-Fluorobiphenyl	79 %		30-130
Surrogate: 2-Fluorophenol	65 %		15-110
Surrogate: Nitrobenzene-d5	80 %		30-130
Surrogate: Phenol-d6	69 %		15-110
Surrogate: p-Terphenyl-d14	83 %		30-130



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 Date Sampled: 01/15/08 10:30
 Percent Solids: N/A
 Initial Volume: 910
 Final Volume: 0.25
 Extraction Method: 3510C

ESS Laboratory Work Order: 0801152
 ESS Laboratory Sample ID: 0801152-01
 Sample Matrix: Ground Water
 Analyst: VSC
 Prepared: 01/15/08

8270C(SIM) Polynuclear Aromatic Hydrocarbons

Analyte	E	Results	Units	MRL	RI - GA		Analyzed
					Limit	DF	
2-Methylnaphthalene		0.0196	mg/L	0.00022		1	01/16/08
Acenaphthene		0.00032	mg/L	0.00022		1	01/16/08
Acenaphthylene		ND	mg/L	0.00022		1	01/16/08
Anthracene		ND	mg/L	0.00022		1	01/16/08
Benzo(a)anthracene		ND	mg/L	0.00005		1	01/16/08
Benzo(a)pyrene		ND	mg/L	0.00005	0.0002	1	01/16/08
Benzo(b)fluoranthene		ND	mg/L	0.00005		1	01/16/08
Benzo(g,h,i)perylene		ND	mg/L	0.00022		1	01/16/08
Benzo(k)fluoranthene		ND	mg/L	0.00005		1	01/16/08
Chrysene		ND	mg/L	0.00005		1	01/16/08
Dibenzo(a,h)Anthracene		ND	mg/L	0.00005		1	01/16/08
Fluoranthene		ND	mg/L	0.00022		1	01/16/08
Fluorene		0.00052	mg/L	0.00022		1	01/16/08
Hexachlorobenzene		ND	mg/L	0.00022	0.001	1	01/16/08
Indeno(1,2,3-cd)Pyrene		ND	mg/L	0.00005		1	01/16/08
Naphthalene		0.00317	mg/L	0.00022	0.02	1	01/16/08
Phenanthrene		0.00046	mg/L	0.00022		1	01/16/08
Pyrene		ND	mg/L	0.00022		1	01/16/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	42 %		30-130
Surrogate: 2,4,6-Tribromophenol	80 %		15-110
Surrogate: 2-Fluorobiphenyl	64 %		30-130
Surrogate: Nitrobenzene-d5	51 %		30-130
Surrogate: p-Terphenyl-d14	76 %		30-130



ENVIRONMENTAL SERVICES, INC.

1 Hill Ave.

Braintree, Ma 02184

781-830-7100

CLIENT	Texton
BATCH	West Tank
CLIENT ID	R11741303
INTERNAL ID	116080122
DATE RECEIVED	1/16/08

<u>PARAMETER</u>	<u>MDL</u>	<u>RESULTS</u>	<u>UNITS</u>	<u>METHOD NUMBER</u>
PCB'S-TOTAL	2.0	ND	MG/KG	600/4-81-045
TOTAL HALOGENS	100	<100	MG/KG	D808(u)/512(K) 9076
FLASHPOINT	----	>140	°F	1010(c)
ARSENIC - TOTAL	2.0	ND	MG/KG	3050/6010(c)
CADMIUM - TOTAL	0.30	ND	MG/KG	3050/6010(c)
CHROMIUM - TOTAL	0.30	ND	MG/KG	3050/6010(c)
COPPER - TOTAL	0.3	ND	MG/KG	3050/6010(c)
LEAD - TOTAL	1.0	1.0	MG/KG	3050/6010(c)
MOLYBDENUM - TOTAL	0.5	0.5	MG/KG	3050/6010(c)
NICKLE - TOTAL	0.3	ND	MG/KG	3050/6010(c)
SELENIUM - TOTAL	2	ND	MG/KG	3050/6010(c)
SILVER - TOTAL	0.2	ND	MG/KG	3050/6010(c)
ZINC - TOTAL	0.4	ND	MG/KG	3050/6010(c)
VANADIUM - TOTAL	2	ND	MG/KG	3050/6010(c)

Notes:

ND = Below Minimum Detection Limit

BTU/Gal. calculated from BTU/lb.

API Gravity corrected to 60 deg. F.

ANALYST SIGNATURE HoSze To

ANALYST HoSze To



ENVIRONMENTAL SERVICES, INC.

1 Hill Ave.

Braintree, Ma 02184

781-830-7100

CLIENT	Texon
BATCH	East Tank
CLIENT ID	RI1741303
INTERNAL ID	0116080121
DATE RECEIVED	1/16/08

<u>PARAMETER</u>	<u>MDL</u>	<u>RESULTS</u>	<u>UNITS</u>	<u>METHOD NUMBER</u>
PCB'S-TOTAL	2.0	ND	MG/KG	600/4-81-045
TOTAL HALOGENS	100	<100	MG/KG	D808(u)/512(K) 9076
FLASHPOINT	----	>140	°F	1010(c)
ARSENIC - TOTAL	2.0	ND	MG/KG	3050/6010(c)
CADMIUM - TOTAL	0.30	ND	MG/KG	3050/6010(c)
CHROMIUM - TOTAL	0.30	ND	MG/KG	3050/6010(c)
COPPER - TOTAL	0.3	ND	MG/KG	3050/6010(c)
LEAD - TOTAL	1.0	ND	MG/KG	3050/6010(c)
MOLYBDENUM - TOTAL	0.5	ND	MG/KG	3050/6010(c)
NICKLE - TOTAL	0.3	ND	MG/KG	3050/6010(c)
SELENIUM - TOTAL	2	ND	MG/KG	3050/6010(c)
SILVER - TOTAL	0.2	.97	MG/KG	3050/6010(c)
ZINC - TOTAL	0.4	ND	MG/KG	3050/6010(c)
VANADIUM - TOTAL	2	ND	MG/KG	3050/6010(c)

Notes:

ND = Below Minimum Detection Limit

BTU/Gal. calculated from BTU/lb.

API Gravity corrected to 60 deg. F.

ANALYST SIGNATURE HoSze To

ANALYST HoSze To