



engineering and constructing a better tomorrow

May 28, 2008

Mr. Joseph T. Martella II, Senior Engineer
RIDEM Office of Waste Management
Site Remediation Program
235 Providence Street
Providence, RI 02908

**RE: Retail Complex Soil Investigation
Former Gorham Manufacturing Facility
333 Adelaide Avenue, Providence, Rhode Island
MACTEC Project No. 3650050041.20**

Dear Mr. Martella:

This letter summarizes the soil investigation activities completed by MACTEC Engineering and Consulting, Inc. (MACTEC) between May 8 – 9, 2008, beneath the retail complex at the former Gorham Manufacturing Facility (the Site). The objective of this investigation was to characterize vadose zone soil beneath the building at several locations in support of the design and implementation of a soil vapor mitigation system. Textron will continue to investigate the Site to refine the site conceptual model and to identify and conduct cleanup activities at the Site.

BACKGROUND

Soil vapor and groundwater investigations in November 2007 and March 2008, respectively, at the retail complex, identified the presence of volatile organic compounds (VOCs) in the southwest corner of the former supermarket space. Reports from these investigations are located at the Rhode Island Department of Environmental Management (RIDEM) website: <http://www.dem.ri.gov/programs/benviron/waste/gorham.htm>. An additional investigation was completed in May 2008 to determine if soils beneath the building and above the water table are impacted by VOCs.

SITE PREPARATION ACTIVITIES

A soil investigation work plan was submitted to RIDEM dated May 7, 2008, and was posted on RIDEM's project website. MACTEC also distributed written notification of the proposed work to the abutters, stakeholders and building owner/occupants in accordance with the Remediation

Regulations prior to conducting the work. The notification was issued in both English and Spanish. In addition, Textron and MACTEC coordinated with the retail complex owner and occupants to minimize disturbance of business activities.

SCOPE OF WORK

MACTEC and its subcontractor, Geologic, Inc. of Norfolk, Massachusetts, advanced seven soil borings (SB-6 through SB-12) inside the former supermarket, and one soil boring (SB-13) was advanced inside the former Dollar Store (west of the former supermarket) with a Geoprobe® 6620 push probe. The soil borings were co-located with the previous soil gas sample locations, and the locations were reviewed with RIDEM prior to conducting the investigation. Please refer to the attached Figure 1 for the soil boring locations.

Soil borings were extended to 28 ft below ground surface (bgs), which is approximately 2 ft into the groundwater table. Soil was collected in 4 ft long soil cores. Soil from at least two depths within each 4 foot-long soil core was placed in Ziploc bag, and the headspace was screened with a photo-ionization detector (PID). One vadose zone soil sample was collected for laboratory analysis from each soil boring at the depth with the highest PID reading. For the eight borings, soil samples for laboratory analysis were collected from between 5 ft and 17 ft bgs. Soil samples were collected using plastic plungers and were immediately placed in VOA vials with methanol, consistent with current standards of practice. This sample collection procedure minimizes loss of VOCs from the samples prior to their analyses (USEPA Method 8260B).

Soil boring logs with associated PID headspace readings are included in Appendix A. Soil samples were delivered under chain of custody to ESS Laboratory of Cranston, Rhode Island for VOC analysis.

RESULTS

Only five of the fifty-four compounds analyzed by the laboratory were detected in at least one soil sample. These five compounds included trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), cis-1,2-dichloroethene, methylene chloride, and toluene. All but three of these detected concentrations (TCE) were detected below the method reporting limit, and most were near the method detection limit. Table 1 presents a summary of analytical results for those compounds detected. The laboratory report for the soil samples is included as Appendix B.

TCE and 1,1,1-TCA were detected most frequently (seven of eight samples) and the other compounds were detected in only one or two of the samples. Table 1 presents the comparison of detected concentrations to the Remediation Regulations soil direct exposure criteria and soil leachability criteria. The comparison shows:

- Concentrations of all detected compounds in soil samples are well below the industrial/commercial direct exposure criteria, which are applicable for this parcel;
- Concentrations of all detected compounds in soil samples are well below the leachability criteria for areas with category GB groundwater (applicable for this parcel); and
- Concentrations of all detected compounds in soil samples are well below the residential direct exposure criteria. Although these residential criteria are not applicable to soil at this parcel, this comparison indicates that the detected soil levels are very low and do not pose any health concern.

No visual or olfactory evidence of petroleum contamination was observed in the soil borings. Therefore, consistent with the work plan, the soil samples were not analyzed for total petroleum hydrocarbons (TPH). Toluene is the only petroleum-related VOC that was detected. The two detected concentrations were well below applicable criteria.

CONCLUSIONS

Based on the results of the soil investigation beneath the retail complex, vadose zone soil is not a substantial source of VOCs in soil vapor. Also, there is no indication that soil in the vadose zone is significantly contaminated with VOCs, since all detected concentrations were well below industrial/commercial and residential direct exposure criteria and leachability criteria. This investigation confirms that VOCs in groundwater are the primary source of VOCs in soil vapor beneath the retail complex.

Feel free to contact either Dave Heislein at (781) 213-5655 or Greg Simpson of Textron at (401) 457-2635 with any questions. We are available either for a conference call or to meet with RIDEM to address any questions you may have on this report.

Sincerely,
MACTEC Engineering and Consulting, Inc.



Michael J. Murphy
Senior Principal Scientist



David E. Heislein
Principal Engineer

Attachment: Figure 1
Table 1
Appendix A – Soil Boring Logs
Appendix B – ESS Laboratory Report for Soil Samples

cc: T. Deller, City of Providence
P. Grivers, EA Engineering, Science, and Technology
G. Simpson, Textron, Inc.
J. Schiff, Textron, Inc.
G. Wilson, Kimco Realty
J. Morgan, Stop & Shop, LLC
Knight Memorial Library Repository
MACTEC Project File [P:\TEXTRON\GORHAM\Stop & Shop\soil boring program\REPORT Soil Borings at Retail Complex_052808.doc]

TABLES

Table 1. Summary of Analytical Results for Detected Compounds in Soil - May 2008
Retail Complex Soil Investigation
Former Gorham Manufacturing Facility
Providence, Rhode Island

Parameter	Frequency of Detection	Range of Reporting Limits for Non-Detects	Range of Detected Concentrations	Average of Samples	Leachability Criteria for GB Groundwater (mg/Kg)	Soil Direct Exposure Criteria - Residential (mg/Kg)	Soil Direct Exposure Criteria - Industrial/Commercial (mg/Kg)	SB-6 SB609 5/8/2008 9 ft	SB-7 SB713 5/8/2008 13 ft	SB-8 SB805 5/8/2008 5 ft
Volatile Organics (mg/Kg)										
1,1,1-Trichloroethane	7 / 8	0.047 : 0.047	0.0176 - 0.0673	0.033938	160	540	10000	0.0179 J	0.0261 J	0.0673 J
cis-1,2-Dichloroethene	1 / 8	0.042 : 0.0687	0.0466 - 0.0466	0.028919	60	630	10000	0.0561 U	0.0451 U	0.0687 U
Methylene chloride	1 / 8	0.21 : 0.344	0.0292 - 0.0292	0.121275	NA	45	760	0.0292 J	0.225 U	0.344 U
Toluene	2 / 8	0.042 : 0.0687	0.0169 - 0.024	0.025269	54	190	10000	0.0561 U	0.0451 U	0.0687 U
Trichloroethene	7 / 8	0.047 : 0.047	0.016 - 0.146	0.065288	20	13	520	0.0561 J	0.018 J	0.0879
Percent Solid (%)										
Percent Solid	8 / 8		86 - 99	92				90	99	86

Notes:

1. Soil Direct Exposure Criteria and Leachability Criteria are from Rhode Island Remediation Regulations.
2. Residential Direct Exposure Criteria are not applicable and are shown for illustrative purposes only.
3. Average of samples includes one-half the reporting limit for non-detects.

J - Value is estimated: reported concentration is above the Method Detection Limit and below the Method Reporting Limit
U - Not detected, value is the detection limit

NA - Not Available

Table 1. Summary of Analytical Results for Detected Compounds in Soil - May 2008
Retail Complex Soil Investigation
Former Gorham Manufacturing Facility
Providence, Rhode Island

Parameter	SB-9 SB917 5/8/2008 17 ft	SB-10 SB1010 5/9/2008 10 ft	SB-11 SB1107 5/9/2008 7 ft	SB-12 SB1209 5/9/2008 9 ft	SB-13 SB1314 5/9/2008 14 ft
Volatile Organics (mg/Kg)					
1,1,1-Trichloroethane	0.0353 J	0.0176 J	0.047 U	0.0567 J	0.0271 J
cis-1,2-Dichloroethene	0.042 U	0.0466 J	0.047 U	0.0604 U	0.0502 U
Methylene chloride	0.21 U	0.315 U	0.235 U	0.302 U	0.251 U
Toluene	0.042 U	0.024 J	0.0169 J	0.0604 U	0.0502 U
Trichloroethene	0.016 J	0.0328 J	0.047 U	0.142	0.146
Percent Solid (%)					
Percent Solid	97	90	91	87	95

Notes:

1. Soil Direct Exposure Criteria and Leachability Criteria are from Rhode Island Remediation Regulations.
2. Residential Direct Exposure Criteria are not applicable and are shown for illustrative purposes only.
3. Average of samples includes one-half the reporting limit for non-detects.

J - Value is estimated: reported concentration is above the Method Detection Limit and below the Method Reporting Limit
U - Not detected, value is the detection limit

NA - Not Available

Prepared by / Date: KJC 05/21/08

Checked by / Date: PJM 5/22/08

FIGURES



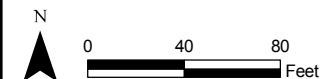
Note:

1. Soil gas symbol size is proportional based on detected concentration of 1,1,1-TCA.

- Soil Boring Location
- Monitoring Well
- Soil Gas Sample

Legend

- Current Building
- Pavement Outline



Prepared by BJR | Checked by PJM

SG-11 Soil Gas Location ID
1,000 1,1,1-TCA Concentration (ppbv) at 21 ft bgs (Nov. 07)

Figure 1
Soil Boring Locations
Inside Retail Complex

Retail Complex Soil Investigation
Former Gorham Manufacturing Facility
Providence, Rhode Island



APPENDIX A
Soil Boring Logs



Soil Boring Log

MACTEC
107 Audubon Road
Wakefield, MA

Boring Location: SB-6

Page 1 of 3

Project Name: Gorham

Geologist: Phil Muller

Date Started: 5.8.08

Drilling Company: Geologic

Date Completed: 5.8.08

Drilling Method: Geoprobe

Total Depth: 28'


Depth to Water: 26'

Job No. 3650050041.20

Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
0	0 - 0.5' concrete slab 0.5' - 1.3' grey SILT, tr. fine Sand, tr. Gravel 1.3' - 1.8' brown f. to med. SAND	4/3.1	0.1 @ 1.2'	—	
	1.8' - 2.2' grey SILT 2.2' - 2.5' Cobble 2.5' - 3.5' dk grey/brown SILT and f. SAND, tr. Gravel		0.9 @ 2.9'		
4	4 - 4.9' dk. grey/brown SILT and f. SAND, some Gravel 4.9 - 5.3' grey SILT	4/4	1.7 @ 5'	—	
	5.3' - 8' mix of brown med. to f. SAND, tr. Gravel, sand grey SILT (alternating layers)		1.7 @ 7'		
8	8 - 10.1' brown/grey f. to med. SAND, some silt, tr. Gravel 10.1 - 12 tan, f. to coarse SAND	4/4	2.5 @ 9'	—	SB609
			0.9 @ @ 11'		
12					

Prepared by: PSM

Checked by: DEW 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: <u>SB-6</u>		Page <u>2</u> of <u>3</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: <u>5.8.08</u>		Drilling Company: Geologic	
	Date Completed: <u>5.8.08</u>		Drilling Method: Geoprobe	
	Total Depth: <u>28'</u>		Depth to Water: <u>26'</u>	
	Job No. 3650050041.20			

Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
12	12.6'-14.2' Medley of brown fi to med. SAND, tr. Gravel; grey SILT and fi SAND; and brown coarse SAND and cobbles	4/3.4	1.3 @ 13.8'	-	
16	14.2-16 lt. grey fi to med. SAND, tr. iron stains		0.1 @ 15'		
	16-17' grey w/ black specs fi to coarse SAND 17-17.8' lt. brown fi to med. SAND	4/4	0.5 @ 17'	-	
	17.8-18.3 lt. brown fi to coarse SAND, some Gravel 18.3-20 tan fi. SAND		0.9 @ 18'		
	and st ^{pm} grey SILT tr. Gravel				
20	20.5-21' grey f. SAND and SILT ^{pm} , some Gravel Some Sil ^{pm} 21'-22' dk. grey, fine SAND	4/3.5	2.5 @ 21'	-	
24	22-24' grey/dk. grey very f. SAND		2.1 @ 22.5'		

Prepared by: PJM
 Checked by: DEW 5/12/08



Soil Boring Log

MACTEC
107 Audubon Road
Wakefield, MA

Boring Location: SB-6

Page 3 of 3

Project Name: Gorham

Geologist: Phil Muller

Date Started: 5.8.08

Drilling Company: Geologic

Date Completed: 5.8.08

Drilling Method: Geoprobe

Total Depth: 28'

Depth to Water: 26'

Job No. 3650050041.20

24

28


Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
	24.6 - 26.1 brown and dk. brown f. to med. SAND, some Gravel 26.1 - 28' grey /dk. grey	4/3.4	1.9 @ 25' 0.5 @ 27'	—	
	Very fi SAND, moist				
	End of boring @ 28'				

Prepared by: PSM
Checked by: JEH 5/12/08

MACTEC Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: SB-7		Page <u>1</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: 5.8.08		Drilling Company: Geologic	
	Date Completed: 5.8.08		Drilling Method: Geoprobe	
	Total Depth: 28'		Depth to Water: 26'	
	Job No. 3650050041.20			


Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
0	0 - 0.5' concrete slab 0.5 - 1.8' ^{PM} 2.5' Grey SILT, ^{PM} tr. some f. sand, trace Gravel ^{PM} 2.5' 1.8' - 3.3'	4/3.3	0.9 @ 1'	-	
4	light grey SILT, and some f. SAND sand SAND ^{PM} lens of brown med. SAND @ 3'		4.4 @ 3'		
8	4.4 - 8' brown f. to coarse SAND, some Gravel lens of grey SILT @ 7.2'	4/3.6	3.2 @ 5' 2.5 @ 7'	-	
	8 - 9.4' brown f. to coarse SAND, some Gravel black stained soil @ 9.2' wood fragment @ 9.2' lens of grey SILT @ 8.8' and 9.3'	4/4	8.7 @ 9.2'		
	9.3 - 10.7 7.3 - 8.3' brown f. to coarse SAND, some Gravel ^{PM} 10.3 - 12' 8.3 - 12' red/orange f. to coarse SAND, some Gravel		5.6 @ 11'		
12	0.4' slough 12.4 - 14.5 red/orange f. to coarse SAND, some Gravel	4/4 ^{PM} 3.6	9.5 @ 13'	-	SB713
14.5					

Prepared by: **PSM**
 Checked by: **DEW 5/12/08**

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: <u>SB-7</u>		Page <u>2</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: <u>5.8.08</u>		Drilling Company: Geologic	
	Date Completed: <u>5.8.08</u>		Drilling Method: Geoprobe	
	Total Depth: <u>28'</u>		Depth to Water: <u>26'</u>	
	Job No. 3650050041.20			

Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
14.5	14.5 - 16 golden brown f. to med. to coarse SAND, tr. Gravel lens of tan f. SAND @ 14.6		3.6 @ 15'		
16	16-17' lt brown f. to coarse SAND, some Gravel 17-17.5' grey f. to med. SAND and SILT	4/4	4.4 @ 17'	—	
20	17.5' - 18.2' golden brown f. SAND 18.2 - 20' red/orange/tan f. to coarse SAND and GRAVEL		2.1 @ 18.5'		
24	20-24' brown/reddish brown f. to coarse SAND and GRAVEL	4/4	7.9 @ 21' 2.5 @ 23'	—	
28	26.4-28' dk. grey f. to med. SAND, moist (tip was wet) tr. Gravel, odor	4/1.7	19.1 @ 27.4	—	
	End of boring @ 28'				

Prepared by: BM
 Checked by: DEW 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: SB-8		Page <u>1</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: 5-8-08		Drilling Company: Geologic	
	Date Completed: 5-8-08		Drilling Method: Geoprobe	
	Total Depth: 28'		Depth to Water: 26'	
	Job No. 3650050041.20			

Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
0	0 - 0.5' concrete slab				
	0.5 - 2.4' grey SILT	4/3.2	0.5 @ 1'	—	
	2.4 - 3.1' grey/H. brown f. SAND and SILT, tr. Gravel				
	(pm) 3.1 - 4 3.5' grey SILT, some f. Sand		0.9 @ 2.5'		
4'	4-5' grey SILT				
	5'-7' grey/brown f. to med. SAND and SILT, tr. Gravel	4/4	2.5 @ 5'	—	SB805
	7-8' brown f. to coarse SAND, some Gravel		2.5 @ 7'		
8'	8.7-9.5 grey SILT and grey, f. to med. SAND				
	9.5 (pm) 8.5 10.5 brown, f. to coarse SAND, some Gravel	4/3.3	1.7 @ 9'	—	
	10.5 - 11.1 lt. grey med. SAND tr. Gravel		1.3 @ 11'		
	11.1 - 12 f. SAND, grey				
12	12.6-13.4 brown/grey f. to coarse SAND, tr. Gravel	4/3A	1.3 @ 13'	—	
13.4					

Prepared by: **PJM**
Checked by:

DEW 5/12/08

MACTEC Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: <u>SB-8</u>		Page <u>2</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: <u>5.8.08</u>		Drilling Company: Geologic	
	Date Completed: <u>5.8.08</u>		Drilling Method: Geoprobe	
	Total Depth: <u>28</u>		Depth to Water: <u>26</u>	
	Job No. 3650050041.20			

13.4'

Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
	13.4 - 14.2' brown/grey f. to med. SAND and grey SILT, tr. Gravel 14.2 - 16' H. brown/grey f. SAND		1.3 @ 15'	1.3 PM	
	cobble @ 15.5				
16'	16-20' H. brown/grey f. SAND, tr. Gravel PM lens of coarse SAND + GRAVEL @ 16.9'	4/4	2.1 @ 17'	—	
	lense of SAND and SILT @ 16.7'		1.7 @ 19'		
20'	PM 20' - 21' - 24' grey/brown f. to med SAND, tr. Gravel	4/3'	0.9 @ 22'	—	
24'	26-28' tan, grey v. f. SAND, wet	4/2'	4.8 @ 26.7	—	
28'	End of boring at 28' bgs				

Prepared by: PJM
 Checked by:

DEA 5/12/08




Soil Boring Log

MACTEC
107 Audubon Road
Wakefield, MA

Boring Location: SB-9		Page <u>1</u> of <u>2</u>	
Project Name: Gorham	Geologist: Phil Muller		
Date Started: 5-8-08	Drilling Company: Geologic		
Date Completed: 5-8-08	Drilling Method: Geoprobe		
Total Depth: 28'	Depth to Water: 26'		
Job No. 3650050041.20			


Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
0	0-0.5' concrete slab 0.5-2.5 grey SILT, some brown f. sand, tr. Gravel lens of tan f. SAND and GRAVEL @ 1.3'	4/3.4'	0.9 @ 1'	—	
	2.5-3.6' brick and grey f. to coarse SAND and GRAVEL		0.5 @ 3'		
	Grey SILT in tip				
4'	4-4.4' lt. brown f. to med. SAND 4.4-4.8' grey SILT, some f. sand	4/4		—	
	4.8-5.2' lt. brown med. SAND, some Gravel 5.2-5.4' grey SILT		1.3 @ 5'		
	5.4-8' medley of lt. brown med. to coarse SAND; grey SILT; brick @ 7.3'		0.9 @ 7'		
8'	8-9.1 brown/grey f. to coarse SAND, some silt tr. brick	4/4	0.9 @ 9'	—	
9.1					

Prepared by: **PSM**
 Checked by: **Drew** 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: <u>SB-9</u>		Page <u>2</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: <u>5.8.08</u>		Drilling Company: Geologic	
	Date Completed: <u>28 5.8.08</u>		Drilling Method: Geoprobe	
	Total Depth: <u>28'</u>		Depth to Water: <u>26'</u>	
	Job No. 3650050041.20			

Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
9.1	9.1 - 12' tan f. to coarse SAND, tr. Gravel		1.3 @ 11'		
12	12 - 14.2' tan f. to coarse SAND, tr. Gravel 14.2 - 16' medley of brown f. to med SAND, grey SILT, tr. Gravel, trace brick	4/4	0.5 @ 13'	—	
16	16 - 20' grey, f. to med. SAND tr. Gravel	4/4	1.3 @ 17'	—	SB917
20	20.9 - 22.3 grey f. to med, tr. Gravel 22.3 - 24 grey v.f. SAND	4/3.1	0.1 @ 21'	—	
24	grey, v.f. SAND, wet (trace iron stains)	4/15	0.1 @ 23'	—	
28	End of boring @ 28'		8.3 @ 27'	—	


Prepared by: PSM
 Checked by: DEA 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: SB-10		Page <u>1</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: 5.9.08		Drilling Company: Geologic	
	Date Completed: 5.9.08		Drilling Method: Geoprobe	
	Total Depth: 28'		Depth to Water: 26'	
	Job No. 3650050041.20			

Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
0	0 - 0.5' concrete slab				
	0.5' - 3.6' medley of grey SILT; f. to coarse SAND, grey/brown, some	4/3.1	0.0 @ 1'	—	
	Gravel, tr. brick		0.1 @ 2.5'		
4	4 - 6.3' grey SILT and f. SAND, some Gravel	4/3.7	0.5 @ 5'		
	6.3 - 7.7' brown, f. to coarse SAND, tr. Gravel, tr. Brick				
	tr. silt		2.1 @ 7'		
8	9.5 - 11.1' grey SILT and grey f. to med SAND, tr. Gravel, tr. Brick, odor	4/2.5	2.1 @ 10.2'	—	SB1010
	11.1 - 12' brown, med. to coarse SAND, some Gravel		0.1 @ 11.5'		
12	14 - 14.6' grey SILT and grey/brown f. to med. SAND, tr. Gravel, tr. Brick	4/2	0.5 @ 14.1'	—	
14.6					


Prepared by: **PSM**
 Checked by:

DEW 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: <u>SB-10</u>		Page <u>2</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: <u>5.9.08</u>		Drilling Company: Geologic	
	Date Completed: <u>5.9.08</u>		Drilling Method: Geoprobe	
	Total Depth: <u>28'</u>		Depth to Water: <u>26'</u>	
	Job No. 3650050041.20			


Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
14.6	14.6 - 16' tan f. to coarse SAND (finer sand near 14.6', coarser sand near 16') tr. Gravel		0.1 @ 15'		
16	(pm) 17.6 17.4 - 18.6' tan/brown f. to coarse SAND, tr Gravel 18.6 - 19.1' grey f.	4/2.6	0.1 @ 18'	—	
20	SAND, some silt, trace Gravel 19.1 - 20' H. brown f. to coarse SAND, tr. Gravel		0.9 @ 19'		
24	21.3 - 24' H. grey f. SAND	4/2.7	0.1 @ 22' 0.1 @ 23'	—	
28'	25.5 - 27' f. to medium coarse SAND w/ layers of coarse lens SAND (color ranges from (H. grey to dk. brown), wet 27 - 28' f. to coarse SAND, wet, black and orange stained	4/2.5	2.5 @ 26'		
	End of boring @ 28'		0.1 @ 27.3		

Prepared by: PSM
 Checked by: DEW 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: SB-11		Page <u>1</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: 5.9.08		Drilling Company: Geologic	
	Date Completed: 5.9.08		Drilling Method: Geoprobe	
	Total Depth: 28'		Depth to Water: 26' 24'	
	Job No. 3650050041.20			


Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
0	0 - 0.5' concrete slab				
4'	0.5 - 3.7' grey SILT, trace Gravel, tr. f. SAND lens	4/3.3	0.1 @ 1' 0.0 @ 3'	—	
	4.6 - 5' grey SILT, tr. f. Sand	4/3.5	0.1 @ 5'	—	
	5 - 6.1' brown med. to coarse SAND, tr. Gravel				
	6.1' - 7.2' grey SILT and brown f. SAND; cobble @ 6.4' charred wood @ 6.6'		0.5 @ 7'		SB1107
	7.2' - 8' dk. brown f. to coarse SAND, tr. Gravel				
8'	8 - 9.4' medley of tan f. to coarse SAND; grey SILT	4/4	0.5 @ 9'	—	
	9.4 - 10.6' brown med. to coarse SAND, some Gravel				
	10.6' - 12' tan f. SAND tip: orange med to coarse SAND		0.1 @ 11'		
12	12.4 - 13' tan f. SAND		0.1 @ 13'		
16	13 - 16' ^{lt. brown} f. to coarse SAND and GRAVEL	4/4 (pm) 3.6'	0.1 @ 15'	—	

Prepared by: **PJM**
 Checked by: **DEW 5/12/08**

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: <u>S'B-11</u>		Page <u>2</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: <u>5.9.08</u>		Drilling Company: Geologic	
	Date Completed: <u>5.9.08</u>		Drilling Method: Geoprobe	
	Total Depth: <u>28'</u>		Depth to Water: <u>24'</u>	
	Job No. 3650050041.20			


Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
16	16.7 - 17.6' lt. brown f. to coarse SAND, tr. Gravel 17.6 - 17.9' grey f. to	4/3.3		—	
	med. SAND, some silt 17.9 - 20' lt. brown, med. to coarse SAND, tr. Gravel		0.1 @ 18' 0.1 @ 19'		
20	20 - 21.6' brown/grey f. to coarse SAND, tr. Gravel, tr. silt (pm) 21.6' - 24' 23' lt. grey	4/4	0.5 @ 21'	—	
	f. SAND 23 - 24' grey v.f. SAND moist		0.1 @ 23'		
24	25.5 - 25.9' lt. grey med. SAND, wet 25.9 - 26.5' lt. brown med. SAND, wet	4/2.5		—	
	26.5 - 28' dk. grey/brown med. to coarse SAND, wet		0.1 @ 28'		
28	End of boring @ 28'				

Prepared by: PJM
 Checked by: Drew 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: SB-12		Page <u>1</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: 5-9-08		Drilling Company: Geologic	
	Date Completed: 5-9-08		Drilling Method: Geoprobe	
	Total Depth: 28		Depth to Water: 26'	
	Job No. 3650050041.20			


Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
0	0 - 0.5' concrete slab 0.5 - 1.3' grey SILT and f. SAND, tr. Gravel, tr. Brick	4/1.8	0.1 @ 1'	-	
1	1.3 - 1.7' brown f. to coarse SAND, tr. Gravel 1.7 - 2.3' grey SILT, some f. Sand				
4	4.8 - 8' grey SILT, tr. Gravel. Brick @ 5.3' tan, med. to coarse SAND lens @ 6.9'. moist @ 6.5'	4/3.2	0.5 @ 5' 1.3 @ 7'	-	
8	8.4 - 9.4' grey/brown SILT and f. SAND 9.4' - 10.2' lt. grey	4/3.6	2.5 @ 9'	-	SB1209
12	coarse SAND, some Gravel 10.2' - 12' tan/lt grey f. to med. SAND, tr. Gravel		0.5 @ 11		
13	13.1 - 13.7' grey f. to med SAND, tr. Gravel 13.7 - 14.1' grey SILT	4/2.9	0.1 @ 13.4'	-	
16	tr. Gravel, 14.1 - 16 lt. grey/brown f. to coarse SAND, some Gravel		0.1 @ 15'		

Prepared by: **RJM**
 Checked by: **DEA 5/12/08**

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: <u>SB-12</u>		Page <u>2</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: <u>5.9.07</u>		Drilling Company: Geologic	
	Date Completed: <u>5.9.07</u>		Drilling Method: Geoprobe	
	Total Depth: <u>28'</u>		Depth to Water: <u>26'</u>	
	Job No. 3650050041.20			


Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
16'	16.8 - 17.6' H grey/tan f. to coarse SAND, some Gravel	4/3.2	1.3 @		
	17.6 - 18.3' grey SILT and f. SAND, tr. Gravel		18'		
20'	18.3' - 20' dk. grey f. to coarse SAND, tr. Gravel		0.1 @		
	20 - 21.5 - 22.7' brown/dk grey f. to coarse SAND, tr. Gravel	4/4	21'		
22.7 - 24' v.f. SAND, H. grey	23'				
24'					
28'	25.7' - 28' H. grey / dk. grey v.f. SAND, wet	4/2.3'	15 @		
	End of boring @ 28'		27'		

Prepared by: PJM
 Checked by: DEL 5/12/08

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: SB-13		Page <u>1</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: 5.9.08		Drilling Company: Geologic	
	Date Completed: 5.9.08		Drilling Method: Geoprobe	
	Total Depth: 28'		Depth to Water: 26'	
	Job No. 3650050041.20			

Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
0	0 - 0.5' concrete slab		0.0 @		
	0.5' - 3.4' brown and dk brown f. to coarse SAND, tr. Gravel	4/2.9	1'	—	
			0.1 @		
			2.5'		
4'	grey SILT lens @ 2.6' (some iron staining throughout sand)				
8'	4.5 - 8' brown and dk brown f. to coarse SAND, tr. Gravel	4/3.5	0.1 @	—	
		6.2'	5'		
		6.2'	0.1 @		
		5.7' (PM)	7'		
	8.8 - 9.5' grey/brown f. to med SAND and SILT	4/3.2	0.1 @	—	
	9.5 - 12' lt. grey/brown f. to coarse SAND, some Gravel		9.5'		
			0.1 @		
			11'		
12'	13.8 - 14.4' dk. grey f. to med. SAND	4/2.2	0.9 @	—	SB1314
	14.4 - 16' lt. grey and black		14'		
			0.0 @		
	f. to coarse SAND, some Gravel		15'		
16'					

Prepared by: **PSM**
 Checked by: **DET 5/12/08**

 Soil Boring Log MACTEC 107 Audubon Road Wakefield, MA	Boring Location: SB-13		Page <u>2</u> of <u>2</u>	
	Project Name: Gorham		Geologist: Phil Muller	
	Date Started: 5.9.08		Drilling Company: Geologic	
	Date Completed: 5.9.08		Drilling Method: Geoprobe	
	Total Depth: 28'		Depth to Water: 26'	
	Job No. 3650050041.20			

Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
16'	17.7 - 20' grey/brown f. to coarse SAND and GRAVEL	4/2.3	0.1 @ 18'	0.1 @ 18'	
20	20.8 - 24' grey/brown f. to coarse SAND and GRAVEL	4/3.2	0.1 @ 21.5'	0.1 @ 21.5'	
24	26.4 - 28' grey f. SAND, moist	4/1.6	0.9 @ 27'	0.9 @ 27'	
28	End of Boring @ 28'			(pm)	

Prepared by: **PJM**
 Checked by: **DEW 5/12/08**

APPENDIX B

ESS Laboratory Report for Soil Samples



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: 0805113

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: May 14, 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 May 08, 2008 for the analyses specified on the enclosed Chain of Custody Record.

Laboratory ID	Matrix	Client SampleID
0805113-01	Soil	SB609
0805113-02	Soil	SB713
0805113-03	Soil	SB805
0805113-04	Soil	SB917



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805113

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Methanol

BE80914-BS1 **Blank Spike recovery is above upper control limit.**

Acetone

BE80914-BSD1 **Relative percent difference for duplicate is outside of criteria.**

Acetone

No other observations noted.

End of Project Narrative.



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB609
Date Sampled: 05/08/08 10:10
Percent Solids: 90
Initial Volume: 16.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-01
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte	Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.112	0.0370	220	1	05/09/08
1,1,1-Trichloroethane	J 0.0179	mg/kg dry	0.0561	0.0146	10000	1	05/09/08
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0561	0.0168	29	1	05/09/08
1,1,2-Trichloroethane	ND	mg/kg dry	0.0561	0.0179	100	1	05/09/08
1,1-Dichloroethane	ND	mg/kg dry	0.0561	0.0157	10000	1	05/09/08
1,1-Dichloroethene	ND	mg/kg dry	0.0561	0.0135	9.5	1	05/09/08
1,1-Dichloropropene	ND	mg/kg dry	0.0561	0.0146		1	05/09/08
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0561	0.0168		1	05/09/08
1,2,3-Trichloropropane	ND	mg/kg dry	0.0561	0.0168		1	05/09/08
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0561	0.0123	10000	1	05/09/08
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0561	0.0135		1	05/09/08
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.336	0.112	4.1	1	05/09/08
1,2-Dibromoethane	ND	mg/kg dry	0.0561	0.0123	0.07	1	05/09/08
1,2-Dichlorobenzene	ND	mg/kg dry	0.0561	0.0123	10000	1	05/09/08
1,2-Dichloroethane	ND	mg/kg dry	0.0561	0.0123	63	1	05/09/08
1,2-Dichloropropane	ND	mg/kg dry	0.0561	0.0157	84	1	05/09/08
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0561	0.0146		1	05/09/08
1,3-Dichlorobenzene	ND	mg/kg dry	0.0561	0.0135	10000	1	05/09/08
1,3-Dichloropropane	ND	mg/kg dry	0.0561	0.0112		1	05/09/08
1,4-Dichlorobenzene	ND	mg/kg dry	0.0561	0.0146	240	1	05/09/08
1,4-Dioxane - Screen	ND	mg/kg dry	5.61	2.80		1	05/09/08
1-Chlorohexane	ND	mg/kg dry	0.0561	0.0146		1	05/09/08
2,2-Dichloropropane	ND	mg/kg dry	0.112	0.0280		1	05/09/08
2-Butanone	ND	mg/kg dry	1.40	0.280	10000	1	05/09/08
2-Chlorotoluene	ND	mg/kg dry	0.0561	0.0168		1	05/09/08
2-Hexanone	ND	mg/kg dry	0.561	0.0785		1	05/09/08
4-Chlorotoluene	ND	mg/kg dry	0.0561	0.0135		1	05/09/08
4-Isopropyltoluene	ND	mg/kg dry	0.0561	0.0146		1	05/09/08
4-Methyl-2-Pentanone	ND	mg/kg dry	0.561	0.0785	10000	1	05/09/08
Acetone	ND	mg/kg dry	1.40	0.448	10000	1	05/09/08
Benzene	ND	mg/kg dry	0.0561	0.0168	200	1	05/09/08
Bromobenzene	ND	mg/kg dry	0.0561	0.0123		1	05/09/08
Bromochloromethane	ND	mg/kg dry	0.0561	0.0168		1	05/09/08
Bromodichloromethane	ND	mg/kg dry	0.0561	0.0157	92	1	05/09/08
Bromoform	ND	mg/kg dry	0.0561	0.0179	720	1	05/09/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB609
Date Sampled: 05/08/08 10:10
Percent Solids: 90
Initial Volume: 16.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-01
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.112	0.0280	2900	1	05/09/08	
Carbon Disulfide	ND	mg/kg dry	0.0561	0.0135		1	05/09/08	
Carbon Tetrachloride	ND	mg/kg dry	0.0561	0.0157	44	1	05/09/08	
Chlorobenzene	ND	mg/kg dry	0.0561	0.0123	10000	1	05/09/08	
Chloroethane	ND	mg/kg dry	0.112	0.0370		1	05/09/08	
Chloroform	ND	mg/kg dry	0.0561	0.0135	940	1	05/09/08	
Chloromethane	ND	mg/kg dry	0.112	0.0179		1	05/09/08	
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0561	0.0168	10000	1	05/09/08	
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0561	0.0123		1	05/09/08	
Dibromochloromethane	ND	mg/kg dry	0.0561	0.0112	68	1	05/09/08	
Dibromomethane	ND	mg/kg dry	0.0561	0.0168		1	05/09/08	
Dichlorodifluoromethane	ND	mg/kg dry	0.0561	0.0135		1	05/09/08	
Diethyl Ether	ND	mg/kg dry	0.0561	0.0168		1	05/09/08	
Di-isopropyl ether	ND	mg/kg dry	0.0561	0.0135		1	05/09/08	
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0561	0.0112		1	05/09/08	
Ethylbenzene	ND	mg/kg dry	0.0561	0.0135	10000	1	05/09/08	
Hexachlorobutadiene	ND	mg/kg dry	0.0561	0.0179	73	1	05/09/08	
Isopropylbenzene	ND	mg/kg dry	0.0561	0.0123	10000	1	05/09/08	
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0561	0.0135	10000	1	05/09/08	
Methylene Chloride	J	0.0292	mg/kg dry	0.280	0.0224	760	1	05/09/08
Naphthalene	ND	mg/kg dry	0.0561	0.0168	10000	1	05/09/08	
n-Butylbenzene	ND	mg/kg dry	0.0561	0.0135		1	05/09/08	
n-Propylbenzene	ND	mg/kg dry	0.0561	0.0146		1	05/09/08	
sec-Butylbenzene	ND	mg/kg dry	0.0561	0.0146		1	05/09/08	
Styrene	ND	mg/kg dry	0.0561	0.0146	190	1	05/09/08	
tert-Butylbenzene	ND	mg/kg dry	0.0561	0.0135		1	05/09/08	
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0561	0.0168		1	05/09/08	
Tetrachloroethene	ND	mg/kg dry	0.0561	0.0179	110	1	05/09/08	
Tetrahydrofuran	ND	mg/kg dry	0.561	0.146		1	05/09/08	
Toluene	ND	mg/kg dry	0.0561	0.0157	10000	1	05/09/08	
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0561	0.0179	10000	1	05/09/08	
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0561	0.0135		1	05/09/08	
Trichloroethene	J	0.0561	mg/kg dry	0.0561	0.0135	520	1	05/09/08
Trichlorofluoromethane	ND	mg/kg dry	0.0561	0.0157		1	05/09/08	
Vinyl Acetate	ND	mg/kg dry	0.280	0.0224		1	05/09/08	
Vinyl Chloride	ND	mg/kg dry	0.0561	0.0135	3	1	05/09/08	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB609
Date Sampled: 05/08/08 10:10
Percent Solids: 90
Initial Volume: 16.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-01
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0561	0.0112	10000	1	05/09/08
Xylene P,M	ND	mg/kg dry	0.112	0.0280	10000	1	05/09/08
Xylenes (Total)	ND	mg/kg dry	0.168		10000	1	05/09/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	104 %		70-130
Surrogate: 4-Bromofluorobenzene	107 %		70-130
Surrogate: Dibromofluoromethane	109 %		70-130
Surrogate: Toluene-d8	109 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB713
 Date Sampled: 05/08/08 11:55
 Percent Solids: 99
 Initial Volume: 17
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805113
 ESS Laboratory Sample ID: 0805113-02
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte	Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0901	0.0297	220	1	05/09/08
1,1,1-Trichloroethane	J 0.0261	mg/kg dry	0.0451	0.0117	10000	1	05/09/08
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0451	0.0135	29	1	05/09/08
1,1,2-Trichloroethane	ND	mg/kg dry	0.0451	0.0144	100	1	05/09/08
1,1-Dichloroethane	ND	mg/kg dry	0.0451	0.0126	10000	1	05/09/08
1,1-Dichloroethene	ND	mg/kg dry	0.0451	0.0108	9.5	1	05/09/08
1,1-Dichloropropene	ND	mg/kg dry	0.0451	0.0117		1	05/09/08
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0451	0.0135		1	05/09/08
1,2,3-Trichloropropane	ND	mg/kg dry	0.0451	0.0135		1	05/09/08
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0451	0.0099	10000	1	05/09/08
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0451	0.0108		1	05/09/08
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.270	0.0901	4.1	1	05/09/08
1,2-Dibromoethane	ND	mg/kg dry	0.0451	0.0099	0.07	1	05/09/08
1,2-Dichlorobenzene	ND	mg/kg dry	0.0451	0.0099	10000	1	05/09/08
1,2-Dichloroethane	ND	mg/kg dry	0.0451	0.0099	63	1	05/09/08
1,2-Dichloropropane	ND	mg/kg dry	0.0451	0.0126	84	1	05/09/08
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0451	0.0117		1	05/09/08
1,3-Dichlorobenzene	ND	mg/kg dry	0.0451	0.0108	10000	1	05/09/08
1,3-Dichloropropane	ND	mg/kg dry	0.0451	0.0090		1	05/09/08
1,4-Dichlorobenzene	ND	mg/kg dry	0.0451	0.0117	240	1	05/09/08
1,4-Dioxane - Screen	ND	mg/kg dry	4.51	2.25		1	05/09/08
1-Chlorohexane	ND	mg/kg dry	0.0451	0.0117		1	05/09/08
2,2-Dichloropropane	ND	mg/kg dry	0.0901	0.0225		1	05/09/08
2-Butanone	ND	mg/kg dry	1.13	0.225	10000	1	05/09/08
2-Chlorotoluene	ND	mg/kg dry	0.0451	0.0135		1	05/09/08
2-Hexanone	ND	mg/kg dry	0.451	0.0631		1	05/09/08
4-Chlorotoluene	ND	mg/kg dry	0.0451	0.0108		1	05/09/08
4-Isopropyltoluene	ND	mg/kg dry	0.0451	0.0117		1	05/09/08
4-Methyl-2-Pentanone	ND	mg/kg dry	0.451	0.0631	10000	1	05/09/08
Acetone	ND	mg/kg dry	1.13	0.361	10000	1	05/09/08
Benzene	ND	mg/kg dry	0.0451	0.0135	200	1	05/09/08
Bromobenzene	ND	mg/kg dry	0.0451	0.0099		1	05/09/08
Bromochloromethane	ND	mg/kg dry	0.0451	0.0135		1	05/09/08
Bromodichloromethane	ND	mg/kg dry	0.0451	0.0126	92	1	05/09/08
Bromoform	ND	mg/kg dry	0.0451	0.0144	720	1	05/09/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB713
Date Sampled: 05/08/08 11:55
Percent Solids: 99
Initial Volume: 17
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-02
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.0901	0.0225	2900	1	05/09/08	
Carbon Disulfide	ND	mg/kg dry	0.0451	0.0108		1	05/09/08	
Carbon Tetrachloride	ND	mg/kg dry	0.0451	0.0126	44	1	05/09/08	
Chlorobenzene	ND	mg/kg dry	0.0451	0.0099	10000	1	05/09/08	
Chloroethane	ND	mg/kg dry	0.0901	0.0297		1	05/09/08	
Chloroform	ND	mg/kg dry	0.0451	0.0108	940	1	05/09/08	
Chloromethane	ND	mg/kg dry	0.0901	0.0144		1	05/09/08	
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0451	0.0135	10000	1	05/09/08	
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0451	0.0099		1	05/09/08	
Dibromochloromethane	ND	mg/kg dry	0.0451	0.0090	68	1	05/09/08	
Dibromomethane	ND	mg/kg dry	0.0451	0.0135		1	05/09/08	
Dichlorodifluoromethane	ND	mg/kg dry	0.0451	0.0108		1	05/09/08	
Diethyl Ether	ND	mg/kg dry	0.0451	0.0135		1	05/09/08	
Di-isopropyl ether	ND	mg/kg dry	0.0451	0.0108		1	05/09/08	
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0451	0.0090		1	05/09/08	
Ethylbenzene	ND	mg/kg dry	0.0451	0.0108	10000	1	05/09/08	
Hexachlorobutadiene	ND	mg/kg dry	0.0451	0.0144	73	1	05/09/08	
Isopropylbenzene	ND	mg/kg dry	0.0451	0.0099	10000	1	05/09/08	
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0451	0.0108	10000	1	05/09/08	
Methylene Chloride	ND	mg/kg dry	0.225	0.0180	760	1	05/09/08	
Naphthalene	ND	mg/kg dry	0.0451	0.0135	10000	1	05/09/08	
n-Butylbenzene	ND	mg/kg dry	0.0451	0.0108		1	05/09/08	
n-Propylbenzene	ND	mg/kg dry	0.0451	0.0117		1	05/09/08	
sec-Butylbenzene	ND	mg/kg dry	0.0451	0.0117		1	05/09/08	
Styrene	ND	mg/kg dry	0.0451	0.0117	190	1	05/09/08	
tert-Butylbenzene	ND	mg/kg dry	0.0451	0.0108		1	05/09/08	
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0451	0.0135		1	05/09/08	
Tetrachloroethene	ND	mg/kg dry	0.0451	0.0144	110	1	05/09/08	
Tetrahydrofuran	ND	mg/kg dry	0.451	0.117		1	05/09/08	
Toluene	ND	mg/kg dry	0.0451	0.0126	10000	1	05/09/08	
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0451	0.0144	10000	1	05/09/08	
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0451	0.0108		1	05/09/08	
Trichloroethene	J	0.0180	mg/kg dry	0.0451	0.0108	520	1	05/09/08
Trichlorofluoromethane	ND	mg/kg dry	0.0451	0.0126		1	05/09/08	
Vinyl Acetate	ND	mg/kg dry	0.225	0.0180		1	05/09/08	
Vinyl Chloride	ND	mg/kg dry	0.0451	0.0108	3	1	05/09/08	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB713
Date Sampled: 05/08/08 11:55
Percent Solids: 99
Initial Volume: 17
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-02
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0451	0.0090	10000	1	05/09/08
Xylene P,M	ND	mg/kg dry	0.0901	0.0225	10000	1	05/09/08
Xylenes (Total)	ND	mg/kg dry	0.135		10000	1	05/09/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	91 %		70-130
Surrogate: 4-Bromofluorobenzene	94 %		70-130
Surrogate: Dibromofluoromethane	95 %		70-130
Surrogate: Toluene-d8	95 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB805
 Date Sampled: 05/08/08 14:15
 Percent Solids: 86
 Initial Volume: 14.4
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805113
 ESS Laboratory Sample ID: 0805113-03
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte	Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.137	0.0453	220	1	05/09/08
1,1,1-Trichloroethane	J 0.0673	mg/kg dry	0.0687	0.0179	10000	1	05/09/08
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0687	0.0206	29	1	05/09/08
1,1,2-Trichloroethane	ND	mg/kg dry	0.0687	0.0220	100	1	05/09/08
1,1-Dichloroethane	ND	mg/kg dry	0.0687	0.0192	10000	1	05/09/08
1,1-Dichloroethene	ND	mg/kg dry	0.0687	0.0165	9.5	1	05/09/08
1,1-Dichloropropene	ND	mg/kg dry	0.0687	0.0179		1	05/09/08
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0687	0.0206		1	05/09/08
1,2,3-Trichloropropane	ND	mg/kg dry	0.0687	0.0206		1	05/09/08
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0687	0.0151	10000	1	05/09/08
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.412	0.137	4.1	1	05/09/08
1,2-Dibromoethane	ND	mg/kg dry	0.0687	0.0151	0.07	1	05/09/08
1,2-Dichlorobenzene	ND	mg/kg dry	0.0687	0.0151	10000	1	05/09/08
1,2-Dichloroethane	ND	mg/kg dry	0.0687	0.0151	63	1	05/09/08
1,2-Dichloropropane	ND	mg/kg dry	0.0687	0.0192	84	1	05/09/08
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0687	0.0179		1	05/09/08
1,3-Dichlorobenzene	ND	mg/kg dry	0.0687	0.0165	10000	1	05/09/08
1,3-Dichloropropane	ND	mg/kg dry	0.0687	0.0137		1	05/09/08
1,4-Dichlorobenzene	ND	mg/kg dry	0.0687	0.0179	240	1	05/09/08
1,4-Dioxane - Screen	ND	mg/kg dry	6.87	3.44		1	05/09/08
1-Chlorohexane	ND	mg/kg dry	0.0687	0.0179		1	05/09/08
2,2-Dichloropropane	ND	mg/kg dry	0.137	0.0344		1	05/09/08
2-Butanone	ND	mg/kg dry	1.72	0.344	10000	1	05/09/08
2-Chlorotoluene	ND	mg/kg dry	0.0687	0.0206		1	05/09/08
2-Hexanone	ND	mg/kg dry	0.687	0.0962		1	05/09/08
4-Chlorotoluene	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
4-Isopropyltoluene	ND	mg/kg dry	0.0687	0.0179		1	05/09/08
4-Methyl-2-Pentanone	ND	mg/kg dry	0.687	0.0962	10000	1	05/09/08
Acetone	ND	mg/kg dry	1.72	0.550	10000	1	05/09/08
Benzene	ND	mg/kg dry	0.0687	0.0206	200	1	05/09/08
Bromobenzene	ND	mg/kg dry	0.0687	0.0151		1	05/09/08
Bromochloromethane	ND	mg/kg dry	0.0687	0.0206		1	05/09/08
Bromodichloromethane	ND	mg/kg dry	0.0687	0.0192	92	1	05/09/08
Bromoform	ND	mg/kg dry	0.0687	0.0220	720	1	05/09/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB805
Date Sampled: 05/08/08 14:15
Percent Solids: 86
Initial Volume: 14.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-03
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.137	0.0344	2900	1	05/09/08
Carbon Disulfide	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
Carbon Tetrachloride	ND	mg/kg dry	0.0687	0.0192	44	1	05/09/08
Chlorobenzene	ND	mg/kg dry	0.0687	0.0151	10000	1	05/09/08
Chloroethane	ND	mg/kg dry	0.137	0.0453		1	05/09/08
Chloroform	ND	mg/kg dry	0.0687	0.0165	940	1	05/09/08
Chloromethane	ND	mg/kg dry	0.137	0.0220		1	05/09/08
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0687	0.0206	10000	1	05/09/08
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0687	0.0151		1	05/09/08
Dibromochloromethane	ND	mg/kg dry	0.0687	0.0137	68	1	05/09/08
Dibromomethane	ND	mg/kg dry	0.0687	0.0206		1	05/09/08
Dichlorodifluoromethane	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
Diethyl Ether	ND	mg/kg dry	0.0687	0.0206		1	05/09/08
Di-isopropyl ether	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0687	0.0137		1	05/09/08
Ethylbenzene	ND	mg/kg dry	0.0687	0.0165	10000	1	05/09/08
Hexachlorobutadiene	ND	mg/kg dry	0.0687	0.0220	73	1	05/09/08
Isopropylbenzene	ND	mg/kg dry	0.0687	0.0151	10000	1	05/09/08
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0687	0.0165	10000	1	05/09/08
Methylene Chloride	ND	mg/kg dry	0.344	0.0275	760	1	05/09/08
Naphthalene	ND	mg/kg dry	0.0687	0.0206	10000	1	05/09/08
n-Butylbenzene	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
n-Propylbenzene	ND	mg/kg dry	0.0687	0.0179		1	05/09/08
sec-Butylbenzene	ND	mg/kg dry	0.0687	0.0179		1	05/09/08
Styrene	ND	mg/kg dry	0.0687	0.0179	190	1	05/09/08
tert-Butylbenzene	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0687	0.0206		1	05/09/08
Tetrachloroethene	ND	mg/kg dry	0.0687	0.0220	110	1	05/09/08
Tetrahydrofuran	ND	mg/kg dry	0.687	0.179		1	05/09/08
Toluene	ND	mg/kg dry	0.0687	0.0192	10000	1	05/09/08
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0687	0.0220	10000	1	05/09/08
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0687	0.0165		1	05/09/08
Trichloroethene	0.0879	mg/kg dry	0.0687	0.0165	520	1	05/09/08
Trichlorofluoromethane	ND	mg/kg dry	0.0687	0.0192		1	05/09/08
Vinyl Acetate	ND	mg/kg dry	0.344	0.0275		1	05/09/08
Vinyl Chloride	ND	mg/kg dry	0.0687	0.0165	3	1	05/09/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB805
Date Sampled: 05/08/08 14:15
Percent Solids: 86
Initial Volume: 14.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-03
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0687	0.0137	10000	1	05/09/08
Xylene P,M	ND	mg/kg dry	0.137	0.0344	10000	1	05/09/08
Xylenes (Total)	ND	mg/kg dry	0.206		10000	1	05/09/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	103 %		70-130
Surrogate: 4-Bromofluorobenzene	106 %		70-130
Surrogate: Dibromofluoromethane	109 %		70-130
Surrogate: Toluene-d8	108 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB917
 Date Sampled: 05/08/08 16:05
 Percent Solids: 97
 Initial Volume: 19.1
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805113
 ESS Laboratory Sample ID: 0805113-04
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte	Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0841	0.0277	220	1	05/09/08
1,1,1-Trichloroethane	J 0.0353	mg/kg dry	0.0420	0.0109	10000	1	05/09/08
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0420	0.0126	29	1	05/09/08
1,1,2-Trichloroethane	ND	mg/kg dry	0.0420	0.0134	100	1	05/09/08
1,1-Dichloroethane	ND	mg/kg dry	0.0420	0.0118	10000	1	05/09/08
1,1-Dichloroethene	ND	mg/kg dry	0.0420	0.0101	9.5	1	05/09/08
1,1-Dichloropropene	ND	mg/kg dry	0.0420	0.0109		1	05/09/08
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0420	0.0126		1	05/09/08
1,2,3-Trichloropropane	ND	mg/kg dry	0.0420	0.0126		1	05/09/08
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0420	0.0092	10000	1	05/09/08
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0420	0.0101		1	05/09/08
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.252	0.0841	4.1	1	05/09/08
1,2-Dibromoethane	ND	mg/kg dry	0.0420	0.0092	0.07	1	05/09/08
1,2-Dichlorobenzene	ND	mg/kg dry	0.0420	0.0092	10000	1	05/09/08
1,2-Dichloroethane	ND	mg/kg dry	0.0420	0.0092	63	1	05/09/08
1,2-Dichloropropane	ND	mg/kg dry	0.0420	0.0118	84	1	05/09/08
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0420	0.0109		1	05/09/08
1,3-Dichlorobenzene	ND	mg/kg dry	0.0420	0.0101	10000	1	05/09/08
1,3-Dichloropropane	ND	mg/kg dry	0.0420	0.0084		1	05/09/08
1,4-Dichlorobenzene	ND	mg/kg dry	0.0420	0.0109	240	1	05/09/08
1,4-Dioxane - Screen	ND	mg/kg dry	4.20	2.10		1	05/09/08
1-Chlorohexane	ND	mg/kg dry	0.0420	0.0109		1	05/09/08
2,2-Dichloropropane	ND	mg/kg dry	0.0841	0.0210		1	05/09/08
2-Butanone	ND	mg/kg dry	1.05	0.210	10000	1	05/09/08
2-Chlorotoluene	ND	mg/kg dry	0.0420	0.0126		1	05/09/08
2-Hexanone	ND	mg/kg dry	0.420	0.0588		1	05/09/08
4-Chlorotoluene	ND	mg/kg dry	0.0420	0.0101		1	05/09/08
4-Isopropyltoluene	ND	mg/kg dry	0.0420	0.0109		1	05/09/08
4-Methyl-2-Pentanone	ND	mg/kg dry	0.420	0.0588	10000	1	05/09/08
Acetone	ND	mg/kg dry	1.05	0.336	10000	1	05/09/08
Benzene	ND	mg/kg dry	0.0420	0.0126	200	1	05/09/08
Bromobenzene	ND	mg/kg dry	0.0420	0.0092		1	05/09/08
Bromochloromethane	ND	mg/kg dry	0.0420	0.0126		1	05/09/08
Bromodichloromethane	ND	mg/kg dry	0.0420	0.0118	92	1	05/09/08
Bromoform	ND	mg/kg dry	0.0420	0.0134	720	1	05/09/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB917
Date Sampled: 05/08/08 16:05
Percent Solids: 97
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-04
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.0841	0.0210	2900	1	05/09/08	
Carbon Disulfide	ND	mg/kg dry	0.0420	0.0101		1	05/09/08	
Carbon Tetrachloride	ND	mg/kg dry	0.0420	0.0118	44	1	05/09/08	
Chlorobenzene	ND	mg/kg dry	0.0420	0.0092	10000	1	05/09/08	
Chloroethane	ND	mg/kg dry	0.0841	0.0277		1	05/09/08	
Chloroform	ND	mg/kg dry	0.0420	0.0101	940	1	05/09/08	
Chloromethane	ND	mg/kg dry	0.0841	0.0134		1	05/09/08	
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0420	0.0126	10000	1	05/09/08	
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0420	0.0092		1	05/09/08	
Dibromochloromethane	ND	mg/kg dry	0.0420	0.0084	68	1	05/09/08	
Dibromomethane	ND	mg/kg dry	0.0420	0.0126		1	05/09/08	
Dichlorodifluoromethane	ND	mg/kg dry	0.0420	0.0101		1	05/09/08	
Diethyl Ether	ND	mg/kg dry	0.0420	0.0126		1	05/09/08	
Di-isopropyl ether	ND	mg/kg dry	0.0420	0.0101		1	05/09/08	
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0420	0.0084		1	05/09/08	
Ethylbenzene	ND	mg/kg dry	0.0420	0.0101	10000	1	05/09/08	
Hexachlorobutadiene	ND	mg/kg dry	0.0420	0.0134	73	1	05/09/08	
Isopropylbenzene	ND	mg/kg dry	0.0420	0.0092	10000	1	05/09/08	
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0420	0.0101	10000	1	05/09/08	
Methylene Chloride	ND	mg/kg dry	0.210	0.0168	760	1	05/09/08	
Naphthalene	ND	mg/kg dry	0.0420	0.0126	10000	1	05/09/08	
n-Butylbenzene	ND	mg/kg dry	0.0420	0.0101		1	05/09/08	
n-Propylbenzene	ND	mg/kg dry	0.0420	0.0109		1	05/09/08	
sec-Butylbenzene	ND	mg/kg dry	0.0420	0.0109		1	05/09/08	
Styrene	ND	mg/kg dry	0.0420	0.0109	190	1	05/09/08	
tert-Butylbenzene	ND	mg/kg dry	0.0420	0.0101		1	05/09/08	
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0420	0.0126		1	05/09/08	
Tetrachloroethene	ND	mg/kg dry	0.0420	0.0134	110	1	05/09/08	
Tetrahydrofuran	ND	mg/kg dry	0.420	0.109		1	05/09/08	
Toluene	ND	mg/kg dry	0.0420	0.0118	10000	1	05/09/08	
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0420	0.0134	10000	1	05/09/08	
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0420	0.0101		1	05/09/08	
Trichloroethene	J	0.0160	mg/kg dry	0.0420	0.0101	520	1	05/09/08
Trichlorofluoromethane	ND	mg/kg dry	0.0420	0.0118		1	05/09/08	
Vinyl Acetate	ND	mg/kg dry	0.210	0.0168		1	05/09/08	
Vinyl Chloride	ND	mg/kg dry	0.0420	0.0101	3	1	05/09/08	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB917
Date Sampled: 05/08/08 16:05
Percent Solids: 97
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805113
ESS Laboratory Sample ID: 0805113-04
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0420	0.0084	10000	1	05/09/08
Xylene P,M	ND	mg/kg dry	0.0841	0.0210	10000	1	05/09/08
Xylenes (Total)	ND	mg/kg dry	0.126		10000	1	05/09/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	99 %		70-130
Surrogate: 4-Bromofluorobenzene	100 %		70-130
Surrogate: Dibromofluoromethane	103 %		70-130
Surrogate: Toluene-d8	103 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.

Client Project ID: Providence Gorham Site

ESS Laboratory Work Order: 0805113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE80914 - 5035

Blank

1,1,1,2-Tetrachloroethane	ND	0.100	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0500	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0500	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0500	mg/kg wet							
1,1-Dichloroethane	ND	0.0500	mg/kg wet							
1,1-Dichloroethene	ND	0.0500	mg/kg wet							
1,1-Dichloropropene	ND	0.0500	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0500	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0500	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0500	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0500	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.300	mg/kg wet							
1,2-Dibromoethane	ND	0.0500	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,2-Dichloroethane	ND	0.0500	mg/kg wet							
1,2-Dichloropropane	ND	0.0500	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0500	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,3-Dichloropropane	ND	0.0500	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0500	mg/kg wet							
1,4-Dioxane - Screen	ND	5.00	mg/kg wet							
1-Chlorohexane	ND	0.0500	mg/kg wet							
2,2-Dichloropropane	ND	0.100	mg/kg wet							
2-Butanone	ND	1.25	mg/kg wet							
2-Chlorotoluene	ND	0.0500	mg/kg wet							
2-Hexanone	ND	0.500	mg/kg wet							
4-Chlorotoluene	ND	0.0500	mg/kg wet							
4-Isopropyltoluene	ND	0.0500	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.500	mg/kg wet							
Acetone	ND	1.25	mg/kg wet							
Benzene	ND	0.0500	mg/kg wet							
Bromobenzene	ND	0.0500	mg/kg wet							
Bromochloromethane	ND	0.0500	mg/kg wet							
Bromodichloromethane	ND	0.0500	mg/kg wet							
Bromoform	ND	0.0500	mg/kg wet							
Bromomethane	ND	0.100	mg/kg wet							
Carbon Disulfide	ND	0.0500	mg/kg wet							
Carbon Tetrachloride	ND	0.0500	mg/kg wet							
Chlorobenzene	ND	0.0500	mg/kg wet							
Chloroethane	ND	0.100	mg/kg wet							
Chloroform	ND	0.0500	mg/kg wet							
Chloromethane	ND	0.100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0500	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0500	mg/kg wet							
Dibromochloromethane	ND	0.0500	mg/kg wet							



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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE80914 - 5035

Dibromomethane	ND	0.0500	mg/kg wet							
Dichlorodifluoromethane	ND	0.0500	mg/kg wet							
Diethyl Ether	ND	0.0500	mg/kg wet							
Di-isopropyl ether	ND	0.0500	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0500	mg/kg wet							
Ethylbenzene	ND	0.0500	mg/kg wet							
Hexachlorobutadiene	ND	0.0500	mg/kg wet							
Isopropylbenzene	ND	0.0500	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0500	mg/kg wet							
Methylene Chloride	ND	0.250	mg/kg wet							
Naphthalene	ND	0.0500	mg/kg wet							
n-Butylbenzene	ND	0.0500	mg/kg wet							
n-Propylbenzene	ND	0.0500	mg/kg wet							
sec-Butylbenzene	ND	0.0500	mg/kg wet							
Styrene	ND	0.0500	mg/kg wet							
tert-Butylbenzene	ND	0.0500	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0500	mg/kg wet							
Tetrachloroethene	ND	0.0500	mg/kg wet							
Tetrahydrofuran	ND	0.500	mg/kg wet							
Toluene	ND	0.0500	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0500	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0500	mg/kg wet							
Trichloroethene	ND	0.0500	mg/kg wet							
Vinyl Acetate	ND	0.250	mg/kg wet							
Vinyl Chloride	ND	0.0500	mg/kg wet							
Xylene O	ND	0.0500	mg/kg wet							
Xylene P,M	ND	0.100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	2.35		mg/kg wet	2.500		94	70-130			
Surrogate: 4-Bromofluorobenzene	2.43		mg/kg wet	2.500		97	70-130			
Surrogate: Dibromofluoromethane	2.49		mg/kg wet	2.500		100	70-130			
Surrogate: Toluene-d8	2.50		mg/kg wet	2.500		100	70-130			

LCS

1,1,1,2-Tetrachloroethane	2.52	0.100	mg/kg wet	2.500		101	70-130			
1,1,1-Trichloroethane	2.53	0.0500	mg/kg wet	2.500		101	70-130			
1,1,2,2-Tetrachloroethane	2.42	0.0500	mg/kg wet	2.500		97	70-130			
1,1,2-Trichloroethane	2.49	0.0500	mg/kg wet	2.500		100	70-130			
1,1-Dichloroethane	2.51	0.0500	mg/kg wet	2.500		100	70-130			
1,1-Dichloroethene	2.74	0.0500	mg/kg wet	2.500		110	70-130			
1,1-Dichloropropene	2.56	0.0500	mg/kg wet	2.500		102	70-130			
1,2,3-Trichlorobenzene	2.63	0.0500	mg/kg wet	2.500		105	70-130			
1,2,3-Trichloropropane	2.49	0.0500	mg/kg wet	2.500		100	70-130			
1,2,4-Trichlorobenzene	2.69	0.0500	mg/kg wet	2.500		108	70-130			
1,2,4-Trimethylbenzene	2.61	0.0500	mg/kg wet	2.500		104	70-130			
1,2-Dibromo-3-Chloropropane	2.50	0.300	mg/kg wet	2.500		100	70-130			
1,2-Dibromoethane	2.52	0.0500	mg/kg wet	2.500		101	70-130			
1,2-Dichlorobenzene	2.55	0.0500	mg/kg wet	2.500		102	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.

Client Project ID: Providence Gorham Site

ESS Laboratory Work Order: 0805113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE80914 - 5035

1,2-Dichloroethane	2.56	0.0500	mg/kg wet	2.500		103	70-130			
1,2-Dichloropropane	2.54	0.0500	mg/kg wet	2.500		102	70-130			
1,3,5-Trimethylbenzene	2.54	0.0500	mg/kg wet	2.500		101	70-130			
1,3-Dichlorobenzene	2.50	0.0500	mg/kg wet	2.500		100	70-130			
1,3-Dichloropropane	2.53	0.0500	mg/kg wet	2.500		101	70-130			
1,4-Dichlorobenzene	2.50	0.0500	mg/kg wet	2.500		100	70-130			
1,4-Dioxane - Screen	60.2	5.00	mg/kg wet	50.00		120	44-241			
1-Chlorohexane	2.50	0.0500	mg/kg wet	2.500		100	70-130			
2,2-Dichloropropane	2.85	0.100	mg/kg wet	2.500		114	70-130			
2-Butanone	15.2	1.25	mg/kg wet	12.50		122	70-130			
2-Chlorotoluene	2.57	0.0500	mg/kg wet	2.500		103	70-130			
2-Hexanone	13.7	0.500	mg/kg wet	12.50		109	70-130			
4-Chlorotoluene	2.52	0.0500	mg/kg wet	2.500		101	70-130			
4-Isopropyltoluene	2.45	0.0500	mg/kg wet	2.500		98	70-130			
4-Methyl-2-Pentanone	13.2	0.500	mg/kg wet	12.50		106	70-130			
Acetone	17.4	1.25	mg/kg wet	12.50		139	70-130			B+
Benzene	2.52	0.0500	mg/kg wet	2.500		101	70-130			
Bromobenzene	2.55	0.0500	mg/kg wet	2.500		102	70-130			
Bromochloromethane	2.39	0.0500	mg/kg wet	2.500		96	70-130			
Bromodichloromethane	2.77	0.0500	mg/kg wet	2.500		111	70-130			
Bromoform	2.60	0.0500	mg/kg wet	2.500		104	70-130			
Bromomethane	2.79	0.100	mg/kg wet	2.500		112	70-130			
Carbon Disulfide	2.91	0.0500	mg/kg wet	2.500		116	70-130			
Carbon Tetrachloride	2.57	0.0500	mg/kg wet	2.500		103	70-130			
Chlorobenzene	2.49	0.0500	mg/kg wet	2.500		100	70-130			
Chloroethane	2.56	0.100	mg/kg wet	2.500		103	70-130			
Chloroform	2.49	0.0500	mg/kg wet	2.500		100	70-130			
Chloromethane	2.25	0.100	mg/kg wet	2.500		90	70-130			
cis-1,2-Dichloroethene	2.73	0.0500	mg/kg wet	2.500		109	70-130			
cis-1,3-Dichloropropene	2.54	0.0500	mg/kg wet	2.500		102	70-130			
Dibromochloromethane	2.66	0.0500	mg/kg wet	2.500		106	70-130			
Dibromomethane	2.50	0.0500	mg/kg wet	2.500		100	70-130			
Dichlorodifluoromethane	2.11	0.0500	mg/kg wet	2.500		84	70-130			
Diethyl Ether	2.60	0.0500	mg/kg wet	2.500		104	70-130			
DI-Isopropyl ether	2.58	0.0500	mg/kg wet	2.500		103	70-130			
Ethyl tertiary-butyl ether	2.51	0.0500	mg/kg wet	2.500		100	70-130			
Ethylbenzene	2.51	0.0500	mg/kg wet	2.500		101	70-130			
Hexachlorobutadiene	2.82	0.0500	mg/kg wet	2.500		113	70-130			
Isopropylbenzene	2.27	0.0500	mg/kg wet	2.500		91	70-130			
Methyl tert-Butyl Ether	2.59	0.0500	mg/kg wet	2.500		104	70-130			
Methylene Chloride	2.57	0.250	mg/kg wet	2.500		103	70-130			
Naphthalene	2.59	0.0500	mg/kg wet	2.500		104	70-130			
n-Butylbenzene	2.59	0.0500	mg/kg wet	2.500		104	70-130			
n-Propylbenzene	2.54	0.0500	mg/kg wet	2.500		102	70-130			
sec-Butylbenzene	2.59	0.0500	mg/kg wet	2.500		104	70-130			
Styrene	2.49	0.0500	mg/kg wet	2.500		100	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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 Client Project ID: Providence Gorham Site

ESS Laboratory Work Order: 0805113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch BE80914 - 5035										
tert-Butylbenzene	2.59	0.0500	mg/kg wet	2.500		104	70-130			
Tertiary-aryl methyl ether	2.57	0.0500	mg/kg wet	2.500		103	70-130			
Tetrachloroethene	2.50	0.0500	mg/kg wet	2.500		100	70-130			
Tetrahydrofuran	2.65	0.500	mg/kg wet	2.500		106	70-130			
Toluene	2.45	0.0500	mg/kg wet	2.500		98	70-130			
trans-1,2-Dichloroethene	2.71	0.0500	mg/kg wet	2.500		108	70-130			
trans-1,3-Dichloropropene	2.32	0.0500	mg/kg wet	2.500		93	70-130			
Trichloroethene	2.56	0.0500	mg/kg wet	2.500		103	70-130			
Vinyl Acetate	2.34	0.250	mg/kg wet	2.500		94	70-130			
Vinyl Chloride	2.99	0.0500	mg/kg wet	2.500		120	70-130			
Xylene O	2.56	0.0500	mg/kg wet	2.500		102	70-130			
Xylene P,M	5.06	0.100	mg/kg wet	5.000		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	2.56		mg/kg wet	2.500		102	70-130			
Surrogate: 4-Bromofluorobenzene	2.52		mg/kg wet	2.500		101	70-130			
Surrogate: Dibromofluoromethane	2.57		mg/kg wet	2.500		103	70-130			
Surrogate: Toluene-d8	2.58		mg/kg wet	2.500		103	70-130			
LCS Dup										
1,1,1,2-Tetrachloroethane	2.49	0.100	mg/kg wet	2.500		100	70-130	1	20	
1,1,1-Trichloroethane	2.48	0.0500	mg/kg wet	2.500		99	70-130	2	20	
1,1,2,2-Tetrachloroethane	2.41	0.0500	mg/kg wet	2.500		97	70-130	0.2	20	
1,1,2-Trichloroethane	2.48	0.0500	mg/kg wet	2.500		99	70-130	0.3	20	
1,1-Dichloroethane	2.48	0.0500	mg/kg wet	2.500		99	70-130	1	20	
1,1-Dichloroethene	2.66	0.0500	mg/kg wet	2.500		106	70-130	3	20	
1,1-Dichloropropene	2.54	0.0500	mg/kg wet	2.500		102	70-130	0.7	20	
1,2,3-Trichlorobenzene	2.62	0.0500	mg/kg wet	2.500		105	70-130	0.3	20	
1,2,3-Trichloropropane	2.46	0.0500	mg/kg wet	2.500		98	70-130	1	20	
1,2,4-Trichlorobenzene	2.65	0.0500	mg/kg wet	2.500		106	70-130	1	20	
1,2,4-Trimethylbenzene	2.54	0.0500	mg/kg wet	2.500		102	70-130	3	20	
1,2-Dibromo-3-Chloropropane	2.48	0.300	mg/kg wet	2.500		99	70-130	1	20	
1,2-Dibromoethane	2.52	0.0500	mg/kg wet	2.500		101	70-130	0.04	20	
1,2-Dichlorobenzene	2.49	0.0500	mg/kg wet	2.500		100	70-130	2	20	
1,2-Dichloroethane	2.54	0.0500	mg/kg wet	2.500		101	70-130	1	20	
1,2-Dichloropropane	2.50	0.0500	mg/kg wet	2.500		100	70-130	2	20	
1,3,5-Trimethylbenzene	2.49	0.0500	mg/kg wet	2.500		100	70-130	2	20	
1,3-Dichlorobenzene	2.47	0.0500	mg/kg wet	2.500		99	70-130	1	20	
1,3-Dichloropropane	2.52	0.0500	mg/kg wet	2.500		101	70-130	0.6	20	
1,4-Dichlorobenzene	2.45	0.0500	mg/kg wet	2.500		98	70-130	2	20	
1,4-Dioxane - Screen	64.2	5.000	mg/kg wet	50.000		128	44-241	6	200	
1-Chlorohexane	2.44	0.0500	mg/kg wet	2.500		98	70-130	2	20	
2,2-Dichloropropane	2.96	0.100	mg/kg wet	2.500		118	70-130	4	20	
2-Butanone	15.0	1.25	mg/kg wet	12.50		120	70-130	1	20	
2-Chlorotoluene	2.50	0.0500	mg/kg wet	2.500		100	70-130	2	20	
2-Hexanone	13.3	0.500	mg/kg wet	12.50		106	70-130	3	20	
4-Chlorotoluene	2.46	0.0500	mg/kg wet	2.500		98	70-130	3	20	
4-Isopropyltoluene	2.40	0.0500	mg/kg wet	2.500		96	70-130	2	20	
4-Methyl-2-Pentanone	13.0	0.500	mg/kg wet	12.50		104	70-130	2	20	



ESS Laboratory

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CERTIFICATE OF ANALYSIS

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Client Project ID: Providence Gorham Site

ESS Laboratory Work Order: 0805113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch BE80914 - 5035										
Acetone	12.9	1.25	mg/kg wet	12.50		104	70-130	29	20	D+
Benzene	2.49	0.0500	mg/kg wet	2.500		100	70-130	1	20	
Bromobenzene	2.50	0.0500	mg/kg wet	2.500		100	70-130	2	20	
Bromochloromethane	2.43	0.0500	mg/kg wet	2.500		97	70-130	2	20	
Bromodichloromethane	2.73	0.0500	mg/kg wet	2.500		109	70-130	1	20	
Bromoform	2.59	0.0500	mg/kg wet	2.500		104	70-130	0.3	20	
Bromomethane	2.85	0.100	mg/kg wet	2.500		114	70-130	2	20	
Carbon Disulfide	2.53	0.0500	mg/kg wet	2.500		101	70-130	14	20	
Carbon Tetrachloride	2.53	0.0500	mg/kg wet	2.500		101	70-130	1	20	
Chlorobenzene	2.46	0.0500	mg/kg wet	2.500		98	70-130	1	20	
Chloroethane	2.51	0.100	mg/kg wet	2.500		100	70-130	2	20	
Chloroform	2.46	0.0500	mg/kg wet	2.500		98	70-130	1	20	
Chloromethane	2.17	0.100	mg/kg wet	2.500		87	70-130	4	20	
cis-1,2-Dichloroethene	2.70	0.0500	mg/kg wet	2.500		108	70-130	1	20	
cis-1,3-Dichloropropene	2.54	0.0500	mg/kg wet	2.500		102	70-130	0.1	20	
Dibromochloromethane	2.64	0.0500	mg/kg wet	2.500		106	70-130	0.6	20	
Dibromomethane	2.50	0.0500	mg/kg wet	2.500		100	70-130	0	20	
Dichlorodifluoromethane	2.03	0.0500	mg/kg wet	2.500		81	70-130	4	20	
Diethyl Ether	2.56	0.0500	mg/kg wet	2.500		102	70-130	1	20	
Di-isopropyl ether	2.54	0.0500	mg/kg wet	2.500		102	70-130	1	20	
Ethyl tertiary-butyl ether	2.48	0.0500	mg/kg wet	2.500		99	70-130	1	20	
Ethylbenzene	2.47	0.0500	mg/kg wet	2.500		99	70-130	2	20	
Hexachlorobutadiene	2.79	0.0500	mg/kg wet	2.500		111	70-130	1	20	
Isopropylbenzene	2.22	0.0500	mg/kg wet	2.500		89	70-130	2	20	
Methyl tert-Butyl Ether	2.57	0.0500	mg/kg wet	2.500		103	70-130	1	20	
Methylene Chloride	2.53	0.250	mg/kg wet	2.500		101	70-130	1	20	
Naphthalene	2.58	0.0500	mg/kg wet	2.500		103	70-130	0.3	20	
n-Butylbenzene	2.53	0.0500	mg/kg wet	2.500		101	70-130	2	20	
n-Propylbenzene	2.51	0.0500	mg/kg wet	2.500		100	70-130	1	20	
sec-Butylbenzene	2.52	0.0500	mg/kg wet	2.500		101	70-130	3	20	
Styrene	2.48	0.0500	mg/kg wet	2.500		99	70-130	0.6	20	
tert-Butylbenzene	2.53	0.0500	mg/kg wet	2.500		101	70-130	2	20	
Tertiary-amyl methyl ether	2.52	0.0500	mg/kg wet	2.500		101	70-130	2	20	
Tetrachloroethene	2.45	0.0500	mg/kg wet	2.500		98	70-130	2	20	
Tetrahydrofuran	2.53	0.500	mg/kg wet	2.500		101	70-130	5	20	
Toluene	2.39	0.0500	mg/kg wet	2.500		96	70-130	3	20	
trans-1,2-Dichloroethene	2.66	0.0500	mg/kg wet	2.500		106	70-130	2	20	
trans-1,3-Dichloropropene	2.31	0.0500	mg/kg wet	2.500		92	70-130	0.4	20	
Trichloroethene	2.52	0.0500	mg/kg wet	2.500		101	70-130	2	20	
Vinyl Acetate	2.28	0.250	mg/kg wet	2.500		91	70-130	3	20	
Vinyl Chloride	2.94	0.0500	mg/kg wet	2.500		118	70-130	2	20	
Xylene O	2.48	0.0500	mg/kg wet	2.500		99	70-130	3	20	
Xylene P,M	5.00	0.100	mg/kg wet	5.000		100	70-130	1	20	
Surrogate: 1,2-Dichloroethane-d4	2.57		mg/kg wet	2.500		103	70-130			
Surrogate: 4-Bromofluorobenzene	2.49		mg/kg wet	2.500		100	70-130			
Surrogate: Dibromofluoromethane	2.53		mg/kg wet	2.500		101	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE80914 - 5035

Surrogate: Toluene-d8	2.55		mg/kg wet	2.500		102	70-130			
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ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805113

Notes and Definitions

- U Analyte included in the analysis, but not detected
- J Reported between MDL and MRL; Estimated value.
- D+ Relative percent difference for duplicate is outside of criteria.
- D Diluted.
- B+ Blank Spike recovery is above upper control limit.
- ND Analyte NOT DETECTED above the detection limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805113

ESS LABORATORY CERTIFICATIONS

U.S. Army Corps of Engineers
Soil and Water

Navy Installation Restoration QA Program
Soil and Water

Rhode Island: A-179

Connecticut: PH-0750

Maine: RI002

Massachusetts: M-RI002

New Hampshire (NELAP accredited): 242405
Potable Water
Non Potable Water

New York (NELAP accredited): 11313
Potable Water
Non Potable Water
Solid and Hazardous Waste

United States Department of Agriculture
Soil Permit: S-54210

New Jersey (NELAP accredited): RI002
Potable Water
Non Potable Water
Soil and Hazardous Waste

Maryland: 301
Potable Water

ESS Laboratory

Division of Thielsch Engineering, Inc.
 185 Frances Avenue, Cranston, RI 02910-2211
 Tel. (401) 461-7181 Fax (401) 461-4486
 www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time Standard Other _____
 If faster than 5 days, prior approval by laboratory is required # _____
 State where samples were collected from:
 MA (R) CT NH NJ NY ME Other _____
 Is this project for any of the following: USACE Other _____
 MA-MCP Navy

Reporting Limits
 Ind./Comm. 0805113
 Electronic Deliverable Yes No EGNS
 Format: Excel Access PDF Other EXCEL

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Type of Containers	Number of Containers	Type of Containers	8260 PQA	8015 VPH	8021 MTE/BTEX GRO	8100 TPH DRO	EPH	w/o PAHs	4 Diesel	8081 PCB	8082 PCB	8270 PAH	SVOA 8270	RCRAS RCRAS PPI3 TAL23	TCLP-RCRA8	MCP-METALS (13)	MCP-METALS (13) w/Hg	% Solids	PID Headspace (µm)		
1	5-8-08	1010	X	S	S	SB609	6	2 1/4	X																				
2		1155	X	S	S	SB713	6	2 1/4	X																				
3		1415	X	S	S	SB805	6	2 1/4	X																				
4		1605	X	S	S	SB917	6	2 1/4	X																				

Project # 3050050041.20 Project Name (20 Char. or less) Gorham
 Address 107 Audubon Rd PO# _____
 City Wakefield State MA Zip 01080
 Telephone # 781 245 6606 Fax # _____
 Email Address deheislein@mactel.com

Container Type: P-Poly G-Glass S-Sterile V-VOA Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters
 Cooler Present Yes No Internal Use Only
 Seals Intact Yes No NA: [] Pickup [] Technicians _____
 Cooler Temp: 5.1

Preservation Code: 1- NP, 2- HCl, 3- H₂SO₄, 4- HNO₃, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____
 Sampled by: Phil Muller
 Comments: _____

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<u>Phil Muller</u>	<u>5-8-08 1702</u>	<u>Dave</u>	<u>5-8-08 1702</u>
_____	_____	_____	_____



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: 0805113

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: May 14, 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 May 08, 2008 for the analyses specified on the enclosed Chain of Custody Record.

Laboratory ID	Matrix	Client SampleID
0805113-01	Soil	SB609
0805113-02	Soil	SB713
0805113-03	Soil	SB805
0805113-04	Soil	SB917



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805113

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Methanol

BE80914-BS1 **Blank Spike recovery is above upper control limit.**

Acetone

BE80914-BSD1 **Relative percent difference for duplicate is outside of criteria.**

Acetone

No other observations noted.

End of Project Narrative.

VOA Data Package

VOA

Sample Data

ESS Laboratory

SDG: 0805113
CLASS: MSVOA
METHOD: 8260B

ANALYSES DATA PACKAGE COVER PAGE

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Client Sample Id:

Lab Sample Id:

SB609

0805113-01

SB713

0805113-02

SB805

0805113-03

SB917

0805113-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____

Name: _____

Date: _____

Title: _____

METHOD DETECTION AND REPORTING LIMITS

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Instrument: VMS4

Analyte	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	0.0330	0.100	mg/kg
1,1,1-Trichloroethane	0.0130	0.0500	mg/kg
1,1,2,2-Tetrachloroethane	0.0150	0.0500	mg/kg
1,1,2-Trichloroethane	0.0160	0.0500	mg/kg
1,1-Dichloroethane	0.0140	0.0500	mg/kg
1,1-Dichloroethene	0.0120	0.0500	mg/kg
1,1-Dichloropropene	0.0130	0.0500	mg/kg
1,2,3-Trichlorobenzene	0.0150	0.0500	mg/kg
1,2,3-Trichloropropane	0.0150	0.0500	mg/kg
1,2,4-Trichlorobenzene	0.0110	0.0500	mg/kg
1,2,4-Trimethylbenzene	0.0120	0.0500	mg/kg
1,2-Dibromo-3-Chloropropane	0.100	0.300	mg/kg
1,2-Dibromoethane	0.0110	0.0500	mg/kg
1,2-Dichlorobenzene	0.0110	0.0500	mg/kg
1,2-Dichloroethane	0.0110	0.0500	mg/kg
1,2-Dichloropropane	0.0140	0.0500	mg/kg
1,3,5-Trimethylbenzene	0.0130	0.0500	mg/kg
1,3-Dichlorobenzene	0.0120	0.0500	mg/kg
1,3-Dichloropropane	0.0100	0.0500	mg/kg
1,4-Dichlorobenzene	0.0130	0.0500	mg/kg
1,4-Dioxane - Screen	2.50	5.00	mg/kg
1-Chlorohexane	0.0130	0.0500	mg/kg
2,2-Dichloropropane	0.0250	0.100	mg/kg
2-Butanone	0.250	1.25	mg/kg
2-Chlorotoluene	0.0150	0.0500	mg/kg
2-Hexanone	0.0700	0.500	mg/kg
4-Chlorotoluene	0.0120	0.0500	mg/kg
4-Isopropyltoluene	0.0130	0.0500	mg/kg
4-Methyl-2-Pentanone	0.0700	0.500	mg/kg
Acetone	0.400	1.25	mg/kg
Benzene	0.0150	0.0500	mg/kg
Bromobenzene	0.0110	0.0500	mg/kg
Bromochloromethane	0.0150	0.0500	mg/kg
Bromodichloromethane	0.0140	0.0500	mg/kg
Bromoform	0.0160	0.0500	mg/kg
Bromomethane	0.0250	0.100	mg/kg
Carbon Disulfide	0.0120	0.0500	mg/kg

METHOD DETECTION AND REPORTING LIMITS

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Instrument: VMS4

Analyte	MDL	MRL	Units
Carbon Tetrachloride	0.0140	0.0500	mg/kg
Chlorobenzene	0.0110	0.0500	mg/kg
Chloroethane	0.0330	0.100	mg/kg
Chloroform	0.0120	0.0500	mg/kg
Chloromethane	0.0160	0.100	mg/kg
cis-1,2-Dichloroethene	0.0150	0.0500	mg/kg
cis-1,3-Dichloropropene	0.0110	0.0500	mg/kg
Dibromochloromethane	0.0100	0.0500	mg/kg
Dibromomethane	0.0150	0.0500	mg/kg
Dichlorodifluoromethane	0.0120	0.0500	mg/kg
Diethyl Ether	0.0150	0.0500	mg/kg
Di-isopropyl ether	0.0120	0.0500	mg/kg
Ethyl tertiary-butyl ether	0.0100	0.0500	mg/kg
Ethylbenzene	0.0120	0.0500	mg/kg
Hexachlorobutadiene	0.0160	0.0500	mg/kg
Isopropylbenzene	0.0110	0.0500	mg/kg
Methyl tert-Butyl Ether	0.0120	0.0500	mg/kg
Methylene Chloride	0.0200	0.250	mg/kg
Naphthalene	0.0150	0.0500	mg/kg
n-Butylbenzene	0.0120	0.0500	mg/kg
n-Propylbenzene	0.0130	0.0500	mg/kg
sec-Butylbenzene	0.0130	0.0500	mg/kg
Styrene	0.0130	0.0500	mg/kg
tert-Butylbenzene	0.0120	0.0500	mg/kg
Tertiary-amyl methyl ether	0.0150	0.0500	mg/kg
Tetrachloroethene	0.0160	0.0500	mg/kg
Tetrahydrofuran	0.130	0.500	mg/kg
Toluene	0.0140	0.0500	mg/kg
trans-1,2-Dichloroethene	0.0160	0.0500	mg/kg
trans-1,3-Dichloropropene	0.0120	0.0500	mg/kg
Trichloroethene	0.0120	0.0500	mg/kg
Trichlorofluoromethane	0.0140	0.0500	mg/kg
Vinyl Acetate	0.0200	0.250	mg/kg
Vinyl Chloride	0.0120	0.0500	mg/kg
Xylene O	0.0100	0.0500	mg/kg
Xylene P,M	0.0250	0.100	mg/kg

ORGANIC ANALYSIS DATA SHEET

8260B

SB609

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805113-01</u>
		File ID:	<u>M424064.D</u>
Sampled:	<u>05/08/08 10:10</u>	Prepared:	<u>05/09/08 07:00</u>
		Analyzed:	<u>05/09/08 15:41</u>
Solids:	<u>90.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>16.5 g / 15 ml</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	0.112	U
71-55-6	1,1,1-Trichloroethane	1	0.0179	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.0561	U
79-00-5	1,1,2-Trichloroethane	1	0.0561	U
75-34-3	1,1-Dichloroethane	1	0.0561	U
75-35-4	1,1-Dichloroethene	1	0.0561	U
563-58-6	1,1-Dichloropropene	1	0.0561	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0561	U
96-18-4	1,2,3-Trichloropropane	1	0.0561	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0561	U
95-63-6	1,2,4-Trimethylbenzene	1	0.0561	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	0.336	U
106-93-4	1,2-Dibromoethane	1	0.0561	U
95-50-1	1,2-Dichlorobenzene	1	0.0561	U
107-06-2	1,2-Dichloroethane	1	0.0561	U
78-87-5	1,2-Dichloropropane	1	0.0561	U
108-67-8	1,3,5-Trimethylbenzene	1	0.0561	U
541-73-1	1,3-Dichlorobenzene	1	0.0561	U
142-28-9	1,3-Dichloropropane	1	0.0561	U
106-46-7	1,4-Dichlorobenzene	1	0.0561	U
123-91-1	1,4-Dioxane - Screen	1	5.61	U
544-10-5	1-Chlorohexane	1	0.0561	U
594-20-7	2,2-Dichloropropane	1	0.112	U
78-93-3	2-Butanone	1	1.40	U
95-49-8	2-Chlorotoluene	1	0.0561	U
591-78-6	2-Hexanone	1	0.561	U
106-43-4	4-Chlorotoluene	1	0.0561	U
99-87-6	4-Isopropyltoluene	1	0.0561	U
108-10-1	4-Methyl-2-Pentanone	1	0.561	U
67-64-1	Acetone	1	1.40	U
71-43-2	Benzene	1	0.0561	U
108-86-1	Bromobenzene	1	0.0561	U
74-97-5	Bromochloromethane	1	0.0561	U
75-27-4	Bromodichloromethane	1	0.0561	U
75-25-2	Bromoform	1	0.0561	U
74-83-9	Bromomethane	1	0.112	U
75-15-0	Carbon Disulfide	1	0.0561	U
56-23-5	Carbon Tetrachloride	1	0.0561	U
108-90-7	Chlorobenzene	1	0.0561	U
75-00-3	Chloroethane	1	0.112	U

ORGANIC ANALYSIS DATA SHEET

8260B

SB609

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805113-01</u>
		File ID:	<u>M424064.D</u>
Sampled:	<u>05/08/08 10:10</u>	Prepared:	<u>05/09/08 07:00</u>
		Analyzed:	<u>05/09/08 15:41</u>
Solids:	<u>90.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>16.5 g / 15 ml</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0561	U
74-87-3	Chloromethane	1	0.112	U
156-59-2	cis-1,2-Dichloroethene	1	0.0561	U
10061-01-5	cis-1,3-Dichloropropene	1	0.0561	U
124-48-1	Dibromochloromethane	1	0.0561	U
74-95-3	Dibromomethane	1	0.0561	U
75-71-8	Dichlorodifluoromethane	1	0.0561	U
60-29-7	Diethyl Ether	1	0.0561	U
108-20-3	Di-isopropyl ether	1	0.0561	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0561	U
100-41-4	Ethylbenzene	1	0.0561	U
87-68-3	Hexachlorobutadiene	1	0.0561	U
98-82-8	Isopropylbenzene	1	0.0561	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0561	U
75-09-2	Methylene Chloride	1	0.0292	J
91-20-3	Naphthalene	1	0.0561	U
104-51-8	n-Butylbenzene	1	0.0561	U
103-65-1	n-Propylbenzene	1	0.0561	U
135-98-8	sec-Butylbenzene	1	0.0561	U
100-42-5	Styrene	1	0.0561	U
98-06-6	tert-Butylbenzene	1	0.0561	U
994-05-8	Tertiary-amyl methyl ether	1	0.0561	U
127-18-4	Tetrachloroethene	1	0.0561	U
109-99-9	Tetrahydrofuran	1	0.561	U
108-88-3	Toluene	1	0.0561	U
156-60-5	trans-1,2-Dichloroethene	1	0.0561	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0561	U
79-01-6	Trichloroethene	1	0.0561	J
75-69-4	Trichlorofluoromethane	1	0.0561	U
108-05-4	Vinyl Acetate	1	0.280	U
75-01-4	Vinyl Chloride	1	0.0561	U
95-47-6	Xylene O	1	0.0561	U
1330-20-7	Xylene P,M	1	0.112	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.525	2.63	104	70 - 130	D
4-Bromofluorobenzene	2.525	2.70	107	70 - 130	D
Dibromofluoromethane	2.525	2.75	109	70 - 130	D
Toluene-d8	2.525	2.75	109	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB609

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805113</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Soil</u>	Laboratory ID: <u>0805113-01</u>	File ID: <u>M424064.D</u>
Sampled: <u>05/08/08 10:10</u>	Prepared: <u>05/09/08 07:00</u>	Analyzed: <u>05/09/08 15:41</u>
Solids: <u>90.00</u>	Preparation: <u>5035</u>	Initial/Final: <u>16.5 g / 15 ml</u>
Batch: <u>BE80914</u>	Sequence: <u>BRE0111</u>	Calibration: <u>0805007</u> Instrument: <u>VMS4</u>

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5294367	6.48	5354239	6.47	
Chlorobenzene-d5	4352447	11.84	4408358	11.85	
1,4-Dichlorobenzene-D4	2323152	16.27	2408300	16.27	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

8260B

SB713

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805113-02</u>
		File ID:	<u>M424065.D</u>
Sampled:	<u>05/08/08 11:55</u>	Prepared:	<u>05/09/08 07:00</u>
		Analyzed:	<u>05/09/08 16:10</u>
Solids:	<u>99.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>17 g / 15 ml</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0451	U
74-87-3	Chloromethane	1	0.0901	U
156-59-2	cis-1,2-Dichloroethene	1	0.0451	U
10061-01-5	cis-1,3-Dichloropropene	1	0.0451	U
124-48-1	Dibromochloromethane	1	0.0451	U
74-95-3	Dibromomethane	1	0.0451	U
75-71-8	Dichlorodifluoromethane	1	0.0451	U
60-29-7	Diethyl Ether	1	0.0451	U
108-20-3	Di-isopropyl ether	1	0.0451	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0451	U
100-41-4	Ethylbenzene	1	0.0451	U
87-68-3	Hexachlorobutadiene	1	0.0451	U
98-82-8	Isopropylbenzene	1	0.0451	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0451	U
75-09-2	Methylene Chloride	1	0.225	U
91-20-3	Naphthalene	1	0.0451	U
104-51-8	n-Butylbenzene	1	0.0451	U
103-65-1	n-Propylbenzene	1	0.0451	U
135-98-8	sec-Butylbenzene	1	0.0451	U
100-42-5	Styrene	1	0.0451	U
98-06-6	tert-Butylbenzene	1	0.0451	U
994-05-8	Tertiary-amyl methyl ether	1	0.0451	U
127-18-4	Tetrachloroethene	1	0.0451	U
109-99-9	Tetrahydrofuran	1	0.451	U
108-88-3	Toluene	1	0.0451	U
156-60-5	trans-1,2-Dichloroethene	1	0.0451	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0451	U
79-01-6	Trichloroethene	1	0.0180	J
75-69-4	Trichlorofluoromethane	1	0.0451	U
108-05-4	Vinyl Acetate	1	0.225	U
75-01-4	Vinyl Chloride	1	0.0451	U
95-47-6	Xylene O	1	0.0451	U
1330-20-7	Xylene P,M	1	0.0901	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.228	2.02	91	70 - 130	D
4-Bromofluorobenzene	2.228	2.08	94	70 - 130	D
Dibromofluoromethane	2.228	2.13	95	70 - 130	D
Toluene-d8	2.228	2.13	95	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB713

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805113</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Soil</u>	Laboratory ID: <u>0805113-02</u>	File ID: <u>M424065.D</u>
Sampled: <u>05/08/08 11:55</u>	Prepared: <u>05/09/08 07:00</u>	Analyzed: <u>05/09/08 16:10</u>
Solids: <u>99.00</u>	Preparation: <u>5035</u>	Initial/Final: <u>17 g / 15 ml</u>
Batch: <u>BE80914</u>	Sequence: <u>BRE0111</u>	Calibration: <u>0805007</u>
		Instrument: <u>VMS4</u>

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5308031	6.47	5354239	6.47	
Chlorobenzene-d5	4368882	11.85	4408358	11.85	
1,4-Dichlorobenzene-D4	2319249	16.28	2408300	16.27	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

8260B

SB805

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805113-03</u>
		File ID:	<u>M424066.D</u>
Sampled:	<u>05/08/08 14:15</u>	Prepared:	<u>05/09/08 07:00</u>
		Analyzed:	<u>05/09/08 16:40</u>
Solids:	<u>86.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>14.4 g / 15 ml</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	0.137	U
71-55-6	1,1,1-Trichloroethane	1	0.0673	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.0687	U
79-00-5	1,1,2-Trichloroethane	1	0.0687	U
75-34-3	1,1-Dichloroethane	1	0.0687	U
75-35-4	1,1-Dichloroethene	1	0.0687	U
563-58-6	1,1-Dichloropropene	1	0.0687	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0687	U
96-18-4	1,2,3-Trichloropropane	1	0.0687	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0687	U
95-63-6	1,2,4-Trimethylbenzene	1	0.0687	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	0.412	U
106-93-4	1,2-Dibromoethane	1	0.0687	U
95-50-1	1,2-Dichlorobenzene	1	0.0687	U
107-06-2	1,2-Dichloroethane	1	0.0687	U
78-87-5	1,2-Dichloropropane	1	0.0687	U
108-67-8	1,3,5-Trimethylbenzene	1	0.0687	U
541-73-1	1,3-Dichlorobenzene	1	0.0687	U
142-28-9	1,3-Dichloropropane	1	0.0687	U
106-46-7	1,4-Dichlorobenzene	1	0.0687	U
123-91-1	1,4-Dioxane - Screen	1	6.87	U
544-10-5	1-Chlorohexane	1	0.0687	U
594-20-7	2,2-Dichloropropane	1	0.137	U
78-93-3	2-Butanone	1	1.72	U
95-49-8	2-Chlorotoluene	1	0.0687	U
591-78-6	2-Hexanone	1	0.687	U
106-43-4	4-Chlorotoluene	1	0.0687	U
99-87-6	4-Isopropyltoluene	1	0.0687	U
108-10-1	4-Methyl-2-Pentanone	1	0.687	U
67-64-1	Acetone	1	1.72	U
71-43-2	Benzene	1	0.0687	U
108-86-1	Bromobenzene	1	0.0687	U
74-97-5	Bromochloromethane	1	0.0687	U
75-27-4	Bromodichloromethane	1	0.0687	U
75-25-2	Bromoform	1	0.0687	U
74-83-9	Bromomethane	1	0.137	U
75-15-0	Carbon Disulfide	1	0.0687	U
56-23-5	Carbon Tetrachloride	1	0.0687	U
108-90-7	Chlorobenzene	1	0.0687	U
75-00-3	Chloroethane	1	0.137	U

ORGANIC ANALYSIS DATA SHEET

8260B

SB805

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805113-03</u>
		File ID:	<u>M424066.D</u>
Sampled:	<u>05/08/08 14:15</u>	Prepared:	<u>05/09/08 07:00</u>
		Analyzed:	<u>05/09/08 16:40</u>
Solids:	<u>86.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>14.4 g / 15 ml</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0687	U
74-87-3	Chloromethane	1	0.137	U
156-59-2	cis-1,2-Dichloroethene	1	0.0687	U
10061-01-5	cis-1,3-Dichloropropene	1	0.0687	U
124-48-1	Dibromochloromethane	1	0.0687	U
74-95-3	Dibromomethane	1	0.0687	U
75-71-8	Dichlorodifluoromethane	1	0.0687	U
60-29-7	Diethyl Ether	1	0.0687	U
108-20-3	Di-isopropyl ether	1	0.0687	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0687	U
100-41-4	Ethylbenzene	1	0.0687	U
87-68-3	Hexachlorobutadiene	1	0.0687	U
98-82-8	Isopropylbenzene	1	0.0687	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0687	U
75-09-2	Methylene Chloride	1	0.344	U
91-20-3	Naphthalene	1	0.0687	U
104-51-8	n-Butylbenzene	1	0.0687	U
103-65-1	n-Propylbenzene	1	0.0687	U
135-98-8	sec-Butylbenzene	1	0.0687	U
100-42-5	Styrene	1	0.0687	U
98-06-6	tert-Butylbenzene	1	0.0687	U
994-05-8	Tertiary-amyl methyl ether	1	0.0687	U
127-18-4	Tetrachloroethene	1	0.0687	U
109-99-9	Tetrahydrofuran	1	0.687	U
108-88-3	Toluene	1	0.0687	U
156-60-5	trans-1,2-Dichloroethene	1	0.0687	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0687	U
79-01-6	Trichloroethene	1	0.0879	
75-69-4	Trichlorofluoromethane	1	0.0687	U
108-05-4	Vinyl Acetate	1	0.344	U
75-01-4	Vinyl Chloride	1	0.0687	U
95-47-6	Xylene O	1	0.0687	U
1330-20-7	Xylene P,M	1	0.137	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	3.028	3.13	103	70 - 130	D
4-Bromofluorobenzene	3.028	3.22	106	70 - 130	D
Dibromofluoromethane	3.028	3.29	109	70 - 130	D
Toluene-d8	3.028	3.26	108	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB805

Laboratory: ESS Laboratory SDG: 0805113
Client: MACTEC Engineering & Consulting, Inc. Project: Providence Gorham Site
Matrix: Soil Laboratory ID: 0805113-03 File ID: M424066.D
Sampled: 05/08/08 14:15 Prepared: 05/09/08 07:00 Analyzed: 05/09/08 16:40
Solids: 86.00 Preparation: 5035 Initial/Final: 14.4 g / 15 ml
Batch: BE80914 Sequence: BRE0111 Calibration: 0805007 Instrument: VMS4

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5275222	6.47	5354239	6.47	
Chlorobenzene-d5	4376447	11.85	4408358	11.85	
1,4-Dichlorobenzene-D4	2340741	16.28	2408300	16.27	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

8260B

SB917

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805113-04</u>
		File ID:	<u>M424067.D</u>
Sampled:	<u>05/08/08 16:05</u>	Prepared:	<u>05/09/08 07:00</u>
		Analyzed:	<u>05/09/08 17:09</u>
Solids:	<u>97.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>19.1 g / 15 ml</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	0.0841	U
71-55-6	1,1,1-Trichloroethane	1	0.0353	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.0420	U
79-00-5	1,1,2-Trichloroethane	1	0.0420	U
75-34-3	1,1-Dichloroethane	1	0.0420	U
75-35-4	1,1-Dichloroethene	1	0.0420	U
563-58-6	1,1-Dichloropropene	1	0.0420	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0420	U
96-18-4	1,2,3-Trichloropropane	1	0.0420	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0420	U
95-63-6	1,2,4-Trimethylbenzene	1	0.0420	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	0.252	U
106-93-4	1,2-Dibromoethane	1	0.0420	U
95-50-1	1,2-Dichlorobenzene	1	0.0420	U
107-06-2	1,2-Dichloroethane	1	0.0420	U
78-87-5	1,2-Dichloropropane	1	0.0420	U
108-67-8	1,3,5-Trimethylbenzene	1	0.0420	U
541-73-1	1,3-Dichlorobenzene	1	0.0420	U
142-28-9	1,3-Dichloropropane	1	0.0420	U
106-46-7	1,4-Dichlorobenzene	1	0.0420	U
123-91-1	1,4-Dioxane - Screen	1	4.20	U
544-10-5	1-Chlorohexane	1	0.0420	U
594-20-7	2,2-Dichloropropane	1	0.0841	U
78-93-3	2-Butanone	1	1.05	U
95-49-8	2-Chlorotoluene	1	0.0420	U
591-78-6	2-Hexanone	1	0.420	U
106-43-4	4-Chlorotoluene	1	0.0420	U
99-87-6	4-Isopropyltoluene	1	0.0420	U
108-10-1	4-Methyl-2-Pentanone	1	0.420	U
67-64-1	Acetone	1	1.05	U
71-43-2	Benzene	1	0.0420	U
108-86-1	Bromobenzene	1	0.0420	U
74-97-5	Bromochloromethane	1	0.0420	U
75-27-4	Bromodichloromethane	1	0.0420	U
75-25-2	Bromoform	1	0.0420	U
74-83-9	Bromomethane	1	0.0841	U
75-15-0	Carbon Disulfide	1	0.0420	U
56-23-5	Carbon Tetrachloride	1	0.0420	U
108-90-7	Chlorobenzene	1	0.0420	U
75-00-3	Chloroethane	1	0.0841	U

ORGANIC ANALYSIS DATA SHEET

8260B

SB917

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805113-04</u>
Sampled:	<u>05/08/08 16:05</u>	Prepared:	<u>05/09/08 07:00</u>
Solids:	<u>97.00</u>	Preparation:	<u>5035</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>
		File ID:	<u>M424067.D</u>
		Analyzed:	<u>05/09/08 17:09</u>
		Initial/Final:	<u>19.1 g / 15 ml</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0420	U
74-87-3	Chloromethane	1	0.0841	U
156-59-2	cis-1,2-Dichloroethene	1	0.0420	U
10061-01-5	cis-1,3-Dichloropropene	1	0.0420	U
124-48-1	Dibromochloromethane	1	0.0420	U
74-95-3	Dibromomethane	1	0.0420	U
75-71-8	Dichlorodifluoromethane	1	0.0420	U
60-29-7	Diethyl Ether	1	0.0420	U
108-20-3	Di-isopropyl ether	1	0.0420	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0420	U
100-41-4	Ethylbenzene	1	0.0420	U
87-68-3	Hexachlorobutadiene	1	0.0420	U
98-82-8	Isopropylbenzene	1	0.0420	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0420	U
75-09-2	Methylene Chloride	1	0.210	U
91-20-3	Naphthalene	1	0.0420	U
104-51-8	n-Butylbenzene	1	0.0420	U
103-65-1	n-Propylbenzene	1	0.0420	U
135-98-8	sec-Butylbenzene	1	0.0420	U
100-42-5	Styrene	1	0.0420	U
98-06-6	tert-Butylbenzene	1	0.0420	U
994-05-8	Tertiary-amyl methyl ether	1	0.0420	U
127-18-4	Tetrachloroethene	1	0.0420	U
109-99-9	Tetrahydrofuran	1	0.420	U
108-88-3	Toluene	1	0.0420	U
156-60-5	trans-1,2-Dichloroethene	1	0.0420	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0420	U
79-01-6	Trichloroethene	1	0.0160	J
75-69-4	Trichlorofluoromethane	1	0.0420	U
108-05-4	Vinyl Acetate	1	0.210	U
75-01-4	Vinyl Chloride	1	0.0420	U
95-47-6	Xylene O	1	0.0420	U
1330-20-7	Xylene P,M	1	0.0841	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.024	2.00	99	70 - 130	D
4-Bromofluorobenzene	2.024	2.03	100	70 - 130	D
Dibromofluoromethane	2.024	2.09	103	70 - 130	D
Toluene-d8	2.024	2.08	103	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB917

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805113</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Soil</u>	Laboratory ID: <u>0805113-04</u>	File ID: <u>M424067.D</u>
Sampled: <u>05/08/08 16:05</u>	Prepared: <u>05/09/08 07:00</u>	Analyzed: <u>05/09/08 17:09</u>
Solids: <u>97.00</u>	Preparation: <u>5035</u>	Initial/Final: <u>19.1 g / 15 ml</u>
Batch: <u>BE80914</u>	Sequence: <u>BRE0111</u>	Calibration: <u>0805007</u>
		Instrument: <u>VMS4</u>

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5294625	6.48	5354239	6.47	
Chlorobenzene-d5	4375242	11.84	4408358	11.85	
1,4-Dichlorobenzene-D4	2312966	16.27	2408300	16.27	

* Values outside of QC limits

VOA Quality Control Data

PREPARATION BATCH SUMMARY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Batch: BE80914 Batch Matrix: Solid

Preparation: 5035

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SB609	0805113-01	M424064.D	05/09/08 07:00	Data Package
SB713	0805113-02	M424065.D	05/09/08 07:00	Data Package
SB805	0805113-03	M424066.D	05/09/08 07:00	Data Package
SB917	0805113-04	M424067.D	05/09/08 07:00	Data Package
Blank	BE80914-BLK1	M424052.D	05/09/08 07:00	
LCS	BE80914-BS1	M424048.D	05/09/08 07:00	
LCS Dup	BE80914-BSD1	M424049.D	05/09/08 07:00	

METHOD BLANK DATA SHEET

8260B

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BE80914-BLK1</u>
Prepared:	<u>05/09/08 07:00</u>	Preparation:	<u>5035</u>
Analyzed:	<u>05/09/08 09:41</u>	Instrument:	<u>VMS4</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
630-20-6	1,1,1,2-Tetrachloroethane	0.100	U
71-55-6	1,1,1-Trichloroethane	0.0500	U
79-34-5	1,1,2,2-Tetrachloroethane	0.0500	U
79-00-5	1,1,2-Trichloroethane	0.0500	U
75-34-3	1,1-Dichloroethane	0.0500	U
75-35-4	1,1-Dichloroethene	0.0500	U
563-58-6	1,1-Dichloropropene	0.0500	U
87-61-6	1,2,3-Trichlorobenzene	0.0500	U
96-18-4	1,2,3-Trichloropropane	0.0500	U
120-82-1	1,2,4-Trichlorobenzene	0.0500	U
95-63-6	1,2,4-Trimethylbenzene	0.0500	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.300	U
106-93-4	1,2-Dibromoethane	0.0500	U
95-50-1	1,2-Dichlorobenzene	0.0500	U
107-06-2	1,2-Dichloroethane	0.0500	U
78-87-5	1,2-Dichloropropane	0.0500	U
108-67-8	1,3,5-Trimethylbenzene	0.0500	U
541-73-1	1,3-Dichlorobenzene	0.0500	U
142-28-9	1,3-Dichloropropane	0.0500	U
106-46-7	1,4-Dichlorobenzene	0.0500	U
123-91-1	1,4-Dioxane - Screen	5.00	U
544-10-5	1-Chlorohexane	0.0500	U
594-20-7	2,2-Dichloropropane	0.100	U
78-93-3	2-Butanone	1.25	U
95-49-8	2-Chlorotoluene	0.0500	U
591-78-6	2-Hexanone	0.500	U
106-43-4	4-Chlorotoluene	0.0500	U
99-87-6	4-Isopropyltoluene	0.0500	U
108-10-1	4-Methyl-2-Pentanone	0.500	U
67-64-1	Acetone	1.25	U

METHOD BLANK DATA SHEET

8260B

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805113</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BE80914-BLK1</u>
Prepared:	<u>05/09/08 07:00</u>	Preparation:	<u>5035</u>
Analyzed:	<u>05/09/08 09:41</u>	Instrument:	<u>VMS4</u>
Batch:	<u>BE80914</u>	Sequence:	<u>BRE0111</u>
		Calibration:	<u>0805007</u>

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
71-43-2	Benzene	0.0500	U
108-86-1	Bromobenzene	0.0500	U
74-97-5	Bromochloromethane	0.0500	U
75-27-4	Bromodichloromethane	0.0500	U
75-25-2	Bromoform	0.0500	U
74-83-9	Bromomethane	0.100	U
75-15-0	Carbon Disulfide	0.0500	U
56-23-5	Carbon Tetrachloride	0.0500	U
108-90-7	Chlorobenzene	0.0500	U
75-00-3	Chloroethane	0.100	U
67-66-3	Chloroform	0.0500	U
74-87-3	Chloromethane	0.100	U
156-59-2	cis-1,2-Dichloroethene	0.0500	U
10061-01-5	cis-1,3-Dichloropropene	0.0500	U
124-48-1	Dibromochloromethane	0.0500	U
74-95-3	Dibromomethane	0.0500	U
75-71-8	Dichlorodifluoromethane	0.0500	U
60-29-7	Diethyl Ether	0.0500	U
108-20-3	Di-isopropyl ether	0.0500	U
637-92-3	Ethyl tertiary-butyl ether	0.0500	U
100-41-4	Ethylbenzene	0.0500	U
87-68-3	Hexachlorobutadiene	0.0500	U
98-82-8	Isopropylbenzene	0.0500	U
1634-04-4	Methyl tert-Butyl Ether	0.0500	U
75-09-2	Methylene Chloride	0.250	U
91-20-3	Naphthalene	0.0500	U
104-51-8	n-Butylbenzene	0.0500	U
103-65-1	n-Propylbenzene	0.0500	U
135-98-8	sec-Butylbenzene	0.0500	U
100-42-5	Styrene	0.0500	U

METHOD BLANK DATA SHEET

8260B

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805113</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>BE80914-BLK1</u>	File ID: <u>M424052.D</u>
Prepared: <u>05/09/08 07:00</u>	Preparation: <u>5035</u>	Initial/Final: <u>15 g / 15 ml</u>
Analyzed: <u>05/09/08 09:41</u>	Instrument: <u>VMS4</u>	
Batch: <u>BE80914</u>	Sequence: <u>BRE0111</u>	Calibration: <u>0805007</u>

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
98-06-6	tert-Butylbenzene	0.0500	U
994-05-8	Tertiary-amyl methyl ether	0.0500	U
127-18-4	Tetrachloroethene	0.0500	U
109-99-9	Tetrahydrofuran	0.500	U
108-88-3	Toluene	0.0500	U
156-60-5	trans-1,2-Dichloroethene	0.0500	U
10061-02-6	trans-1,3-Dichloropropene	0.0500	U
79-01-6	Trichloroethene	0.0500	U
108-05-4	Vinyl Acetate	0.250	U
75-01-4	Vinyl Chloride	0.0500	U
95-47-6	Xylene O	0.0500	U
1330-20-7	Xylene P,M	0.100	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg wet)	CONC (mg/kg wet)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.500	2.35	94	70 - 130	D
4-Bromofluorobenzene	2.500	2.43	97	70 - 130	D
Dibromofluoromethane	2.500	2.49	100	70 - 130	D
Toluene-d8	2.500	2.50	100	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5268614	6.47	5354239	6.47	
Chlorobenzene-d5	4325315	11.83	4408358	11.85	
1,4-Dichlorobenzene-D4	2310537	16.27	2408300	16.27	

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE80914

Laboratory ID: BE80914-BS1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. #	QC LIMITS REC.
1,1,1,2-Tetrachloroethane	2.500	2.52	101	70 - 130
1,1,1-Trichloroethane	2.500	2.53	101	70 - 130
1,1,2,2-Tetrachloroethane	2.500	2.42	97	70 - 130
1,1,2-Trichloroethane	2.500	2.49	100	70 - 130
1,1-Dichloroethane	2.500	2.51	100	70 - 130
1,1-Dichloroethene	2.500	2.74	110	70 - 130
1,1-Dichloropropene	2.500	2.56	102	70 - 130
1,2,3-Trichlorobenzene	2.500	2.63	105	70 - 130
1,2,3-Trichloropropane	2.500	2.49	100	70 - 130
1,2,4-Trichlorobenzene	2.500	2.69	108	70 - 130
1,2,4-Trimethylbenzene	2.500	2.61	104	70 - 130
1,2-Dibromo-3-Chloropropane	2.500	2.50	100	70 - 130
1,2-Dibromoethane	2.500	2.52	101	70 - 130
1,2-Dichlorobenzene	2.500	2.55	102	70 - 130
1,2-Dichloroethane	2.500	2.56	103	70 - 130
1,2-Dichloropropane	2.500	2.54	102	70 - 130
1,3,5-Trimethylbenzene	2.500	2.54	101	70 - 130
1,3-Dichlorobenzene	2.500	2.50	100	70 - 130
1,3-Dichloropropane	2.500	2.53	101	70 - 130
1,4-Dichlorobenzene	2.500	2.50	100	70 - 130
1,4-Dioxane - Screen	50.00	60.2	120	44 - 241
1-Chlorohexane	2.500	2.50	100	70 - 130
2,2-Dichloropropane	2.500	2.85	114	70 - 130
2-Butanone	12.50	15.2	122	70 - 130
2-Chlorotoluene	2.500	2.57	103	70 - 130
2-Hexanone	12.50	13.7	109	70 - 130
4-Chlorotoluene	2.500	2.52	101	70 - 130
4-Isopropyltoluene	2.500	2.45	98	70 - 130
4-Methyl-2-Pentanone	12.50	13.2	106	70 - 130
Acetone	12.50	17.4	139 *	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE80914

Laboratory ID: BE80914-BS1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. #	QC LIMITS REC.
Benzene	2.500	2.52	101	70 - 130
Bromobenzene	2.500	2.55	102	70 - 130
Bromochloromethane	2.500	2.39	96	70 - 130
Bromodichloromethane	2.500	2.77	111	70 - 130
Bromoform	2.500	2.60	104	70 - 130
Bromomethane	2.500	2.79	112	70 - 130
Carbon Disulfide	2.500	2.91	116	70 - 130
Carbon Tetrachloride	2.500	2.57	103	70 - 130
Chlorobenzene	2.500	2.49	100	70 - 130
Chloroethane	2.500	2.56	103	70 - 130
Chloroform	2.500	2.49	100	70 - 130
Chloromethane	2.500	2.25	90	70 - 130
cis-1,2-Dichloroethene	2.500	2.73	109	70 - 130
cis-1,3-Dichloropropene	2.500	2.54	102	70 - 130
Dibromochloromethane	2.500	2.66	106	70 - 130
Dibromomethane	2.500	2.50	100	70 - 130
Dichlorodifluoromethane	2.500	2.11	84	70 - 130
Diethyl Ether	2.500	2.60	104	70 - 130
Di-isopropyl ether	2.500	2.58	103	70 - 130
Ethyl tertiary-butyl ether	2.500	2.51	100	70 - 130
Ethylbenzene	2.500	2.51	101	70 - 130
Hexachlorobutadiene	2.500	2.82	113	70 - 130
Isopropylbenzene	2.500	2.27	91	70 - 130
Methyl tert-Butyl Ether	2.500	2.59	104	70 - 130
Methylene Chloride	2.500	2.57	103	70 - 130
Naphthalene	2.500	2.59	104	70 - 130
n-Butylbenzene	2.500	2.59	104	70 - 130
n-Propylbenzene	2.500	2.54	102	70 - 130
sec-Butylbenzene	2.500	2.59	104	70 - 130
Styrene	2.500	2.49	100	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE80914

Laboratory ID: BE80914-BS1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. #	QC LIMITS REC.
tert-Butylbenzene	2.500	2.59	104	70 - 130
Tertiary-amyl methyl ether	2.500	2.57	103	70 - 130
Tetrachloroethene	2.500	2.50	100	70 - 130
Tetrahydrofuran	2.500	2.65	106	70 - 130
Toluene	2.500	2.45	98	70 - 130
trans-1,2-Dichloroethene	2.500	2.71	108	70 - 130
trans-1,3-Dichloropropene	2.500	2.32	93	70 - 130
Trichloroethene	2.500	2.56	103	70 - 130
Vinyl Acetate	2.500	2.34	94	70 - 130
Vinyl Chloride	2.500	2.99	120	70 - 130
Xylene O	2.500	2.56	102	70 - 130
Xylene P,M	5.000	5.06	101	70 - 130

COMPOUND	SPIKE ADDED (mg/kg wet)	LCSD CONCENTRATION (mg/kg wet)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
1,1,1,2-Tetrachloroethane	2.500	2.49	100	1	20	70 - 130
1,1,1-Trichloroethane	2.500	2.48	99	2	20	70 - 130
1,1,2,2-Tetrachloroethane	2.500	2.41	97	0.2	20	70 - 130
1,1,2-Trichloroethane	2.500	2.48	99	0.3	20	70 - 130
1,1-Dichloroethane	2.500	2.48	99	1	20	70 - 130
1,1-Dichloroethene	2.500	2.66	106	3	20	70 - 130
1,1-Dichloropropene	2.500	2.54	102	0.7	20	70 - 130
1,2,3-Trichlorobenzene	2.500	2.62	105	0.3	20	70 - 130
1,2,3-Trichloropropane	2.500	2.46	98	1	20	70 - 130
1,2,4-Trichlorobenzene	2.500	2.65	106	1	20	70 - 130
1,2,4-Trimethylbenzene	2.500	2.54	102	3	20	70 - 130
1,2-Dibromo-3-Chloropropane	2.500	2.48	99	1	20	70 - 130
1,2-Dibromoethane	2.500	2.52	101	0.04	20	70 - 130
1,2-Dichlorobenzene	2.500	2.49	100	2	20	70 - 130
1,2-Dichloroethane	2.500	2.54	101	1	20	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE80914

Laboratory ID: BE80914-BSD1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS D CONCENTRATION (mg/kg wet)	LCS D % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
1,2-Dichloropropane	2.500	2.50	100	2	20	70 - 130
1,3,5-Trimethylbenzene	2.500	2.49	100	2	20	70 - 130
1,3-Dichlorobenzene	2.500	2.47	99	1	20	70 - 130
1,3-Dichloropropane	2.500	2.52	101	0.6	20	70 - 130
1,4-Dichlorobenzene	2.500	2.45	98	2	20	70 - 130
1,4-Dioxane - Screen	50.00	64.2	128	6	200	44 - 241
1-Chlorohexane	2.500	2.44	98	2	20	70 - 130
2,2-Dichloropropane	2.500	2.96	118	4	20	70 - 130
2-Butanone	12.50	15.0	120	1	20	70 - 130
2-Chlorotoluene	2.500	2.50	100	2	20	70 - 130
2-Hexanone	12.50	13.3	106	3	20	70 - 130
4-Chlorotoluene	2.500	2.46	98	3	20	70 - 130
4-Isopropyltoluene	2.500	2.40	96	2	20	70 - 130
4-Methyl-2-Pentanone	12.50	13.0	104	2	20	70 - 130
Acetone	12.50	12.9	104	29 *	20	70 - 130
Benzene	2.500	2.49	100	1	20	70 - 130
Bromobenzene	2.500	2.50	100	2	20	70 - 130
Bromochloromethane	2.500	2.43	97	2	20	70 - 130
Bromodichloromethane	2.500	2.73	109	1	20	70 - 130
Bromoform	2.500	2.59	104	0.3	20	70 - 130
Bromomethane	2.500	2.85	114	2	20	70 - 130
Carbon Disulfide	2.500	2.53	101	14	20	70 - 130
Carbon Tetrachloride	2.500	2.53	101	1	20	70 - 130
Chlorobenzene	2.500	2.46	98	1	20	70 - 130
Chloroethane	2.500	2.51	100	2	20	70 - 130
Chloroform	2.500	2.46	98	1	20	70 - 130
Chloromethane	2.500	2.17	87	4	20	70 - 130
cis-1,2-Dichloroethene	2.500	2.70	108	1	20	70 - 130
cis-1,3-Dichloropropene	2.500	2.54	102	0.1	20	70 - 130
Dibromochloromethane	2.500	2.64	106	0.6	20	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE80914

Laboratory ID: BE80914-BSD1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCSD CONCENTRATION (mg/kg wet)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Dibromomethane	2.500	2.50	100	0	20	70 - 130
Dichlorodifluoromethane	2.500	2.03	81	4	20	70 - 130
Diethyl Ether	2.500	2.56	102	1	20	70 - 130
Di-isopropyl ether	2.500	2.54	102	1	20	70 - 130
Ethyl tertiary-butyl ether	2.500	2.48	99	1	20	70 - 130
Ethylbenzene	2.500	2.47	99	2	20	70 - 130
Hexachlorobutadiene	2.500	2.79	111	1	20	70 - 130
Isopropylbenzene	2.500	2.22	89	2	20	70 - 130
Methyl tert-Butyl Ether	2.500	2.57	103	1	20	70 - 130
Methylene Chloride	2.500	2.53	101	1	20	70 - 130
Naphthalene	2.500	2.58	103	0.3	20	70 - 130
n-Butylbenzene	2.500	2.53	101	2	20	70 - 130
n-Propylbenzene	2.500	2.51	100	1	20	70 - 130
sec-Butylbenzene	2.500	2.52	101	3	20	70 - 130
Styrene	2.500	2.48	99	0.6	20	70 - 130
tert-Butylbenzene	2.500	2.53	101	2	20	70 - 130
Tertiary-amyl methyl ether	2.500	2.52	101	2	20	70 - 130
Tetrachloroethene	2.500	2.45	98	2	20	70 - 130
Tetrahydrofuran	2.500	2.53	101	5	20	70 - 130
Toluene	2.500	2.39	96	3	20	70 - 130
trans-1,2-Dichloroethene	2.500	2.66	106	2	20	70 - 130
trans-1,3-Dichloropropene	2.500	2.31	92	0.4	20	70 - 130
Trichloroethene	2.500	2.52	101	2	20	70 - 130
Vinyl Acetate	2.500	2.28	91	3	20	70 - 130
Vinyl Chloride	2.500	2.94	118	2	20	70 - 130
Xylene O	2.500	2.48	99	3	20	70 - 130
Xylene P,M	5.000	5.00	100	1	20	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

VOA Calibration Data

ANALYSIS BATCH (SEQUENCE) SUMMARY

8260B

Laboratory: ESS Laboratory SDG: 0805113
Client: MACTEC Engineering & Consulting, Inc. Project: Providence Gorham Site
Sequence: BRE0091 Instrument: VMS4
Matrix: Solid Calibration: 0805007

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	BRE0091-TUN1	M424036.D	05/08/08 09:50
Cal Standard	BRE0091-CAL1	M424037.D	05/08/08 10:19
Cal Standard	BRE0091-CAL2	M424038.D	05/08/08 10:49
Cal Standard	BRE0091-CAL3	M424039.D	05/08/08 11:19
Cal Standard	BRE0091-CAL4	M424040.D	05/08/08 11:48
Cal Standard	BRE0091-CAL5	M424041.D	05/08/08 12:18
Cal Standard	BRE0091-CAL6	M424042.D	05/08/08 12:48
Secondary Cal Check	BRE0091-SCV1	M424045.D	05/08/08 14:16

ANALYSIS BATCH (SEQUENCE) SUMMARY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0111

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	BRE0111-TUN1	M424046.D	05/09/08 06:45
Calibration Check	BRE0111-CCV1	M424047.D	05/09/08 07:14
LCS	BE80914-BS1	M424048.D	05/09/08 07:43
LCS Dup	BE80914-BSD1	M424049.D	05/09/08 08:13
Blank	BE80914-BLK1	M424052.D	05/09/08 09:41
SB609	0805113-01	M424064.D	05/09/08 15:41
SB713	0805113-02	M424065.D	05/09/08 16:10
SB805	0805113-03	M424066.D	05/09/08 16:40
SB917	0805113-04	M424067.D	05/09/08 17:09

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Lab File ID: M424046.D

Injection Date: 05/09/08

Instrument ID: YMS4

Injection Time: 06:45

Sequence: BRE0111

Lab Sample ID: BRE0111-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	15.7	PASS
75	30 - 60% of 95	40.7	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.49	PASS
173	Less than 2% of 174	0	PASS
174	50 - 100% of 95	68.2	PASS
175	5 - 9% of 174	8.31	PASS
176	95 - 101% of 174	97.5	PASS
177	5 - 9% of 176	7.28	PASS

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424047.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0111

Injection Date: 05/09/08

Lab Sample ID: BRE0111-CCV1

Injection Time: 07:14

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,1,1,2-Tetrachloroethane	A	25.00	24.7	0.4740942	0.4691511		-1.0	30
1,1,1,2-Tetrachloroethane	A	25.00	24.7	0.4740942	0.4691511		-1.0	30
1,1,1-Trichloroethane	A	25.00	24.4	0.5044302	0.4922085		-2.4	30
1,1,1-Trichloroethane	A	25.00	24.4	0.5044302	0.4922085		-2.4	30
1,1,2,2-Tetrachloroethane	A	25.00	24.6	0.6545194	0.6427721	0.3	-1.8	30
1,1,2,2-Tetrachloroethane	A	25.00	24.6	0.6545194	0.6427721	0.3	-1.8	30
1,1,2-Trichloroethane	A	25.00	24.5	0.1974717	0.1932385		-2.1	30
1,1,2-Trichloroethane	A	25.00	24.5	0.1974717	0.1932385		-2.1	30
1,1-Dichloroethane	A	25.00	24.9	0.4258603	0.4238425	0.1	-0.5	30
1,1-Dichloroethane	A	25.00	24.9	0.4258603	0.4238425	0.1	-0.5	30
1,1-Dichloroethene	A	25.00	22.9	0.1907881	0.1747436		-8.4	20
1,1-Dichloroethene	A	25.00	22.9	0.1907881	0.1747436		-8.4	20
1,1-Dichloropropene	A	25.00	24.2	0.3574855	0.3455994		-3.3	30
1,1-Dichloropropene	A	25.00	24.2	0.3574855	0.3455994		-3.3	30
1,2,3-Trichlorobenzene	A	25.00	25.1	0.4172173	0.4188913		0.4	30
1,2,3-Trichlorobenzene	A	25.00	25.1	0.4172173	0.4188913		0.4	30
1,2,3-Trichloropropane	A	25.00	24.8	0.5171163	0.5124951		-0.9	30
1,2,3-Trichloropropane	A	25.00	24.8	0.5171163	0.5124951		-0.9	30
1,2,4-Trichlorobenzene	A	25.00	26.2	0.5677743	0.5946734		4.7	30
1,2,4-Trichlorobenzene	A	25.00	26.2	0.5677743	0.5946734		4.7	30
1,2,4-Trimethylbenzene	A	25.00	24.5	1.637434	1.604763		-2.0	30
1,2,4-Trimethylbenzene	A	25.00	24.5	1.637434	1.604763		-2.0	30
1,2-Dibromo-3-Chloropropane	A	25.00	25.4	9.459949E-02	9.600963E-02		1.5	30
1,2-Dibromo-3-Chloropropane	A	25.00	25.4	9.459949E-02	9.600963E-02		1.5	30
1,2-Dibromoethane	A	25.00	25.0	0.4624338	0.4614637		-0.2	30
1,2-Dibromoethane	A	25.00	25.0	0.4624338	0.4614637		-0.2	30
1,2-Dichlorobenzene	A	25.00	24.9	1.113651	1.111137		-0.2	30
1,2-Dichlorobenzene	A	25.00	24.9	1.113651	1.111137		-0.2	30
1,2-Dichloroethane	A	25.00	25.4	0.2394029	0.2431408		1.6	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424047.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0111

Injection Date: 05/09/08

Lab Sample ID: BRE0111-CCV1

Injection Time: 07:14

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2-Dichloroethane	A	25.00	25.4	0.2394029	0.2431408		1.6	30
1,2-Dichloropropane	A	25.00	24.7	0.2647406	0.2618127		-1.1	20
1,2-Dichloropropane	A	25.00	24.7	0.2647406	0.2618127		-1.1	20
1,3,5-Trimethylbenzene	A	25.00	24.8	1.613056	1.59865		-0.9	30
1,3,5-Trimethylbenzene	A	25.00	24.8	1.613056	1.59865		-0.9	30
1,3-Dichlorobenzene	A	25.00	24.6	1.257842	1.234982		-1.8	30
1,3-Dichlorobenzene	A	25.00	24.6	1.257842	1.234982		-1.8	30
1,3-Dichloropropane	A	25.00	24.7	0.3946809	0.3892998		-1.4	30
1,3-Dichloropropane	A	25.00	24.7	0.3946809	0.3892998		-1.4	30
1,4-Dichlorobenzene	A	25.00	25.0	1.336129	1.33769		0.1	30
1,4-Dichlorobenzene	A	25.00	25.0	1.336129	1.33769		0.1	30
1,4-Dioxane - Screen	L	500.0	574	7.231656E-04	8.588709E-04		14.9	30
1,4-Dioxane - Screen	L	500.0	574	7.231656E-04	8.588709E-04		14.9	30
1-Chlorohexane	A	25.00	23.2	0.3619195	0.3359562		-7.2	30
1-Chlorohexane	A	25.00	23.2	0.3619195	0.3359562		-7.2	30
2,2-Dichloropropane	L	25.00	28.9	0.3560044	0.3579261		15.6	30
2,2-Dichloropropane	L	25.00	28.9	0.3560044	0.3579261		15.6	30
2-Butanone	A	125.0	136	8.949624E-03	9.752124E-03		9.0	30
2-Butanone	A	125.0	136	8.949624E-03	9.752124E-03		9.0	30
2-Chlorotoluene	A	25.00	26.4	1.554985	1.642436		5.6	30
2-Chlorotoluene	A	25.00	26.4	1.554985	1.642436		5.6	30
2-Hexanone	A	125.0	118	8.219336E-02	7.759715E-02		-5.6	30
2-Hexanone	A	125.0	118	8.219336E-02	7.759715E-02		-5.6	30
4-Chlorotoluene	A	25.00	24.5	1.849632	1.813747		-1.9	30
4-Chlorotoluene	A	25.00	24.5	1.849632	1.813747		-1.9	30
4-Isopropyltoluene	A	25.00	24.5	1.684623	1.648207		-2.2	30
4-Isopropyltoluene	A	25.00	24.5	1.684623	1.648207		-2.2	30
4-Methyl-2-Pentanone	A	125.0	128	4.294088E-02	4.403068E-02		2.5	30
4-Methyl-2-Pentanone	A	125.0	128	4.294088E-02	4.403068E-02		2.5	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424047.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0111

Injection Date: 05/09/08

Lab Sample ID: BRE0111-CCV1

Injection Time: 07:14

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	125.0	106	5.166121E-03	4.374889E-03		-15.3	30
Acetone	A	125.0	106	5.166121E-03	4.374889E-03		-15.3	30
Benzene	A	25.00	24.6	0.6510805	0.6409794		-1.6	30
Benzene	A	25.00	24.6	0.6510805	0.6409794		-1.6	30
Bromobenzene	A	25.00	25.0	0.8532887	0.8535241		0.03	30
Bromobenzene	A	25.00	25.0	0.8532887	0.8535241		0.03	30
Bromochloromethane	A	25.00	24.8	0.1913585	0.1898888		-0.8	30
Bromochloromethane	A	25.00	24.8	0.1913585	0.1898888		-0.8	30
Bromodichloromethane	A	25.00	25.4	0.5526898	0.5611901		1.5	30
Bromodichloromethane	A	25.00	25.4	0.5526898	0.5611901		1.5	30
Bromoform	A	25.00	26.1	0.3830232	0.3994655	0.1	4.3	30
Bromoform	A	25.00	26.1	0.3830232	0.3994655	0.1	4.3	30
Bromomethane	L	25.00	27.8	0.3280627	0.2557506		11.4	30
Bromomethane	L	25.00	27.8	0.3280627	0.2557506		11.4	30
Carbon Disulfide	A	25.00	23.4	0.569692	0.533569		-6.3	30
Carbon Disulfide	A	25.00	23.4	0.569692	0.533569		-6.3	30
Carbon Tetrachloride	A	25.00	24.5	0.491772	0.481926		-2.0	30
Carbon Tetrachloride	A	25.00	24.5	0.491772	0.481926		-2.0	30
Chlorobenzene	A	25.00	24.5	0.8653665	0.8489823	0.3	-1.9	30
Chlorobenzene	A	25.00	24.5	0.8653665	0.8489823	0.3	-1.9	30
Chloroethane	L	25.00	25.0	7.176781E-02	0.0629546		-0.2	30
Chloroethane	L	25.00	25.0	7.176781E-02	0.0629546		-0.2	30
Chloroform	A	25.00	24.7	0.567439	0.561231		-1.1	20
Chloroform	A	25.00	24.7	0.567439	0.561231		-1.1	20
Chloromethane	L	25.00	23.0	0.1769892	0.1546995	0.1	-8.2	30
Chloromethane	L	25.00	23.0	0.1769892	0.1546995	0.1	-8.2	30
cis-1,2-Dichloroethene	A	25.00	25.0	0.3005727	0.3004124		-0.05	30
cis-1,2-Dichloroethene	A	25.00	25.0	0.3005727	0.3004124		-0.05	30
cis-1,3-Dichloropropene	A	25.00	25.5	0.384576	0.3918193		1.9	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424047.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0111

Injection Date: 05/09/08

Lab Sample ID: BRE0111-CCV1

Injection Time: 07:14

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
cis-1,3-Dichloropropene	A	25.00	25.5	0.384576	0.3918193		1.9	30
Dibromochloromethane	A	25.00	25.3	0.6442697	0.651779		1.2	30
Dibromochloromethane	A	25.00	25.3	0.6442697	0.651779		1.2	30
Dibromomethane	A	25.00	25.3	0.2598674	0.2630648		1.2	30
Dibromomethane	A	25.00	25.3	0.2598674	0.2630648		1.2	30
Dichlorodifluoromethane	A	25.00	23.3	0.4477393	0.4170804		-6.8	30
Dichlorodifluoromethane	A	25.00	23.3	0.4477393	0.4170804		-6.8	30
Diethyl Ether	A	25.00	23.7	7.355641E-02	6.975987E-02		-5.2	30
Diethyl Ether	A	25.00	23.7	7.355641E-02	6.975987E-02		-5.2	30
Di-isopropyl ether	A	25.00	24.9	0.6001818	0.598511		-0.3	30
Di-isopropyl ether	A	25.00	24.9	0.6001818	0.598511		-0.3	30
Ethyl tertiary-butyl ether	A	25.00	25.1	0.5581828	0.5609415		0.5	30
Ethyl tertiary-butyl ether	A	25.00	25.1	0.5581828	0.5609415		0.5	30
Ethylbenzene	A	25.00	24.1	1.141453	1.101978		-3.5	20
Ethylbenzene	A	25.00	24.1	1.141453	1.101978		-3.5	20
Hexachlorobutadiene	A	25.00	25.0	0.2965275	0.2965673		0.01	30
Hexachlorobutadiene	A	25.00	25.0	0.2965275	0.2965673		0.01	30
Isopropylbenzene	A	25.00	24.3	2.126836	2.065937		-2.9	30
Isopropylbenzene	A	25.00	24.3	2.126836	2.065937		-2.9	30
Methyl tert-Butyl Ether	A	25.00	24.9	0.3804802	0.3796162		-0.2	30
Methyl tert-Butyl Ether	A	25.00	24.9	0.3804802	0.3796162		-0.2	30
Methylene Chloride	A	25.00	23.8	0.248846	0.2368101		-4.8	30
Methylene Chloride	A	25.00	23.8	0.248846	0.2368101		-4.8	30
Naphthalene	A	25.00	24.7	0.6001227	0.5924225		-1.3	30
Naphthalene	A	25.00	24.7	0.6001227	0.5924225		-1.3	30
n-Butylbenzene	A	25.00	24.3	1.184746	1.152206		-2.7	30
n-Butylbenzene	A	25.00	24.3	1.184746	1.152206		-2.7	30
n-Propylbenzene	A	25.00	23.2	2.350935	2.18613		-7.0	30
n-Propylbenzene	A	25.00	23.2	2.350935	2.18613		-7.0	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424047.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0111

Injection Date: 05/09/08

Lab Sample ID: BRE0111-CCV1

Injection Time: 07:14

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
sec-Butylbenzene	A	25.00	24.4	1.899278	1.856106		-2.3	30
sec-Butylbenzene	A	25.00	24.4	1.899278	1.856106		-2.3	30
Styrene	A	25.00	24.5	0.7950481	0.7779733		-2.1	30
Styrene	A	25.00	24.5	0.7950481	0.7779733		-2.1	30
tert-Butylbenzene	A	25.00	24.9	2.21947	2.210249		-0.4	30
tert-Butylbenzene	A	25.00	24.9	2.21947	2.210249		-0.4	30
Tertiary-amyl methyl ether	A	25.00	24.9	0.4894161	0.4867489		-0.5	30
Tertiary-amyl methyl ether	A	25.00	24.9	0.4894161	0.4867489		-0.5	30
Tetrachloroethene	A	25.00	23.9	0.4202639	0.4016786		-4.4	30
Tetrachloroethene	A	25.00	23.9	0.4202639	0.4016786		-4.4	30
Tetrahydrofuran	A	25.00	25.3	0.0235423	2.380787E-02		1.1	30
Tetrahydrofuran	A	25.00	25.3	0.0235423	2.380787E-02		1.1	30
Toluene	A	25.00	24.0	0.4892481	0.46861		-4.2	20
Toluene	A	25.00	24.0	0.4892481	0.46861		-4.2	20
trans-1,2-Dichloroethene	A	25.00	24.7	0.2796968	0.2766868		-1.1	30
trans-1,2-Dichloroethene	A	25.00	24.7	0.2796968	0.2766868		-1.1	30
trans-1,3-Dichloropropene	A	25.00	25.7	0.3060155	0.3144987		2.8	30
trans-1,3-Dichloropropene	A	25.00	25.7	0.3060155	0.3144987		2.8	30
Trichloroethene	A	25.00	24.4	0.3681554	0.3591323		-2.5	30
Trichloroethene	A	25.00	24.4	0.3681554	0.3591323		-2.5	30
Vinyl Acetate	A	25.00	24.0	0.5435366	0.5212231		-4.1	30
Vinyl Acetate	A	25.00	24.0	0.5435366	0.5212231		-4.1	30
Vinyl Chloride	A	25.00	24.2	0.1718114	0.166631		-3.0	20
Vinyl Chloride	A	25.00	24.2	0.1718114	0.166631		-3.0	20
Xylene O	A	25.00	24.5	0.4408625	0.432089		-2.0	30
Xylene O	A	25.00	24.5	0.4408625	0.432089		-2.0	30
Xylene P,M	A	50.00	48.8	0.45698	0.4456571		-2.5	30
Xylene P,M	A	50.00	48.8	0.45698	0.4456571		-2.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0091

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (BRE0091-CAL1)				Lab File ID: M424037.D		Analyzed: 05/08/08 10:19		
1,2-Dichloroethane-d4	0.5000	78		5.93	5.913333	0.0167	+/-1.0	
4-Bromofluorobenzene	0.5000	196		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	0.5000	88		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	0.5000	100		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL2)				Lab File ID: M424038.D		Analyzed: 05/08/08 10:49		
1,2-Dichloroethane-d4	2.500	78		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	2.500	110		14.09	14.08333	0.0067	+/-1.0	
Dibromofluoromethane	2.500	91		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	2.500	104		9.25	9.258334	-0.0083	+/-1.0	
Cal Standard (BRE0091-CAL3)				Lab File ID: M424039.D		Analyzed: 05/08/08 11:19		
1,2-Dichloroethane-d4	10.00	73		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	10.00	90		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	10.00	85		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	10.00	98		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL4)				Lab File ID: M424040.D		Analyzed: 05/08/08 11:48		
1,2-Dichloroethane-d4	25.00	74		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	25.00	89		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	25.00	87		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	25.00	101		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL5)				Lab File ID: M424041.D		Analyzed: 05/08/08 12:18		
1,2-Dichloroethane-d4	50.00	76		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	50.00	89		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	50.00	89		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	50.00	102		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL6)				Lab File ID: M424042.D		Analyzed: 05/08/08 12:48		
1,2-Dichloroethane-d4	100.0	77		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	100.0	90		14.09	14.08333	0.0067	+/-1.0	
Dibromofluoromethane	100.0	91		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	100.0	104		9.26	9.258334	0.0017	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0111

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (BRE0111-CCV1)			Lab File ID: M424047.D		Analyzed: 05/09/08 07:14			
1,2-Dichloroethane-d4	25.00	100	0 - 200	5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	25.00	97	0 - 200	14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	25.00	99	0 - 200	5.38	5.39	-0.0100	+/-1.0	
Toluene-d8	25.00	98	0 - 200	9.24	9.258334	-0.0183	+/-1.0	
LCS (BE80914-BS1)			Lab File ID: M424048.D		Analyzed: 05/09/08 07:43			
1,2-Dichloroethane-d4	2.500	102	70 - 130	5.9	5.913333	-0.0133	+/-1.0	
4-Bromofluorobenzene	2.500	101	70 - 130	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	2.500	103	70 - 130	5.39	5.39	0.0000	+/-1.0	
Toluene-d8	2.500	103	70 - 130	9.25	9.258334	-0.0083	+/-1.0	
LCS Dup (BE80914-BS1)			Lab File ID: M424049.D		Analyzed: 05/09/08 08:13			
1,2-Dichloroethane-d4	2.500	103	70 - 130	5.9	5.913333	-0.0133	+/-1.0	
4-Bromofluorobenzene	2.500	100	70 - 130	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	2.500	101	70 - 130	5.39	5.39	0.0000	+/-1.0	
Toluene-d8	2.500	102	70 - 130	9.25	9.258334	-0.0083	+/-1.0	
Blank (BE80914-BLK1)			Lab File ID: M424052.D		Analyzed: 05/09/08 09:41			
1,2-Dichloroethane-d4	2.500	94	70 - 130	5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	2.500	97	70 - 130	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	2.500	100	70 - 130	5.39	5.39	0.0000	+/-1.0	
Toluene-d8	2.500	100	70 - 130	9.24	9.258334	-0.0183	+/-1.0	
SB609 (0805113-01)			Lab File ID: M424064.D		Analyzed: 05/09/08 15:41			
1,2-Dichloroethane-d4	2.525	104	70 - 130	5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	2.525	107	70 - 130	14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	2.525	109	70 - 130	5.39	5.39	0.0000	+/-1.0	
Toluene-d8	2.525	109	70 - 130	9.25	9.258334	-0.0083	+/-1.0	
SB713 (0805113-02)			Lab File ID: M424065.D		Analyzed: 05/09/08 16:10			
1,2-Dichloroethane-d4	2.228	91	70 - 130	5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	2.228	94	70 - 130	14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	2.228	95	70 - 130	5.38	5.39	-0.0100	+/-1.0	
Toluene-d8	2.228	95	70 - 130	9.24	9.258334	-0.0183	+/-1.0	
SB805 (0805113-03)			Lab File ID: M424066.D		Analyzed: 05/09/08 16:40			
1,2-Dichloroethane-d4	3.028	103	70 - 130	5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	3.028	106	70 - 130	14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	3.028	109	70 - 130	5.38	5.39	-0.0100	+/-1.0	
Toluene-d8	3.028	108	70 - 130	9.24	9.258334	-0.0183	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

8260B

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805113</u>
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>
Sequence: <u>BRE0111</u>	Instrument: <u>VMS4</u>
Matrix: <u>Solid</u>	Calibration: <u>0805007</u>

Surrogate Compound	Spike Level mg/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SB917 (0805113-04)		Lab File ID: M424067.D			Analyzed: 05/09/08 17:09			
1,2-Dichloroethane-d4	2.024	99	70 - 130	5.9	5.913333	-0.0133	+/-1.0	
4-Bromofluorobenzene	2.024	100	70 - 130	14.09	14.08333	0.0067	+/-1.0	
Dibromofluoromethane	2.024	103	70 - 130	5.39	5.39	0.0000	+/-1.0	
Toluene-d8	2.024	103	70 - 130	9.25	9.258334	-0.0083	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0091

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (BRE0091-CAL1)			Lab File ID: M424037.D			Analyzed: 05/08/08 10:19			
Fluorobenzene	5308253	6.48	5408306	6.47	98	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4320396	11.85	4411516	11.85	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2312699	16.29	2410151	16.29	96	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL2)			Lab File ID: M424038.D			Analyzed: 05/08/08 10:49			
Fluorobenzene	5336116	6.48	5408306	6.47	99	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4345921	11.85	4411516	11.85	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2346156	16.29	2410151	16.29	97	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL3)			Lab File ID: M424039.D			Analyzed: 05/08/08 11:19			
Fluorobenzene	5408306	6.47	5408306	6.47	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4411516	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2410151	16.29	2410151	16.29	100	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL4)			Lab File ID: M424040.D			Analyzed: 05/08/08 11:48			
Fluorobenzene	5426171	6.47	5408306	6.47	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4415414	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2446088	16.29	2410151	16.29	101	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL5)			Lab File ID: M424041.D			Analyzed: 05/08/08 12:18			
Fluorobenzene	5430804	6.49	5408306	6.47	100	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	4427747	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2455733	16.28	2410151	16.29	102	50 - 200	-0.0100	+/-0.50	
Cal Standard (BRE0091-CAL6)			Lab File ID: M424042.D			Analyzed: 05/08/08 12:48			
Fluorobenzene	5422884	6.49	5408306	6.47	100	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	4409899	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2464759	16.29	2410151	16.29	102	50 - 200	0.0000	+/-0.50	
Secondary Cal Check (BRE0091-SCV1)			Lab File ID: M424045.D			Analyzed: 05/08/08 14:16			
Fluorobenzene	5364374	6.48	5408306	6.47	99	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4358161	11.85	4411516	11.85	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2391509	16.29	2410151	16.29	99	50 - 200	0.0000	+/-0.50	

**INTERNAL STANDARD AREA AND RT SUMMARY
8260B**

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0111

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (BRE0111-CCV1)			Lab File ID: M424047.D			Analyzed: 05/09/08 07:14			
Fluorobenzene	5354239	6.47				50 - 200		+/-0.50	
Chlorobenzene-d5	4408358	11.85				50 - 200		+/-0.50	
1,4-Dichlorobenzene-D4	2408300	16.27				50 - 200		+/-0.50	
LCS (BE80914-BS1)			Lab File ID: M424048.D			Analyzed: 05/09/08 07:43			
Fluorobenzene	5371882	6.48	5354239	6.47	100	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4400465	11.84	4408358	11.85	100	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-D4	2418320	16.27	2408300	16.27	100	50 - 200	0.0000	+/-0.50	
LCS Dup (BE80914-BSD1)			Lab File ID: M424049.D			Analyzed: 05/09/08 08:13			
Fluorobenzene	5375903	6.48	5354239	6.47	100	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4360803	11.84	4408358	11.85	99	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-D4	2413819	16.27	2408300	16.27	100	50 - 200	0.0000	+/-0.50	
Blank (BE80914-BLK1)			Lab File ID: M424052.D			Analyzed: 05/09/08 09:41			
Fluorobenzene	5268614	6.47	5354239	6.47	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4325315	11.83	4408358	11.85	98	50 - 200	-0.0200	+/-0.50	
1,4-Dichlorobenzene-D4	2310537	16.27	2408300	16.27	96	50 - 200	0.0000	+/-0.50	
SB609 (0805113-01)			Lab File ID: M424064.D			Analyzed: 05/09/08 15:41			
Fluorobenzene	5294367	6.48	5354239	6.47	99	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4352447	11.84	4408358	11.85	99	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-D4	2323152	16.27	2408300	16.27	96	50 - 200	0.0000	+/-0.50	
SB713 (0805113-02)			Lab File ID: M424065.D			Analyzed: 05/09/08 16:10			
Fluorobenzene	5308031	6.47	5354239	6.47	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4368882	11.85	4408358	11.85	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2319249	16.28	2408300	16.27	96	50 - 200	0.0100	+/-0.50	
SB805 (0805113-03)			Lab File ID: M424066.D			Analyzed: 05/09/08 16:40			
Fluorobenzene	5275222	6.47	5354239	6.47	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4376447	11.85	4408358	11.85	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2340741	16.28	2408300	16.27	97	50 - 200	0.0100	+/-0.50	
SB917 (0805113-04)			Lab File ID: M424067.D			Analyzed: 05/09/08 17:09			
Fluorobenzene	5294625	6.48	5354239	6.47	99	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4375242	11.84	4408358	11.85	99	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-D4	2312966	16.27	2408300	16.27	96	50 - 200	0.0000	+/-0.50	

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Lab File ID: M424036.D

Injection Date: 05/08/08

Instrument ID: VMS4

Injection Time: 09:50

Sequence: BRE0091

Lab Sample ID: BRE0091-TUN1

Calibration: 0805007

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
96	5 - 9% of 95	7.04	PASS
95	Base peak, 100% relative abundance	100	PASS
75	30 - 60% of 95	40.9	PASS
50	15 - 40% of 95	17.3	PASS
177	5 - 9% of 176	6.24	PASS
176	95 - 101% of 174	97.9	PASS
175	5 - 9% of 174	7.37	PASS
174	50 - 100% of 95	63.7	PASS
173	Less than 2% of 174	0	PASS

INITIAL CALIBRATION DATA

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,1,1,2-Tetrachloroethane	0.5	0.4981025	2.5	0.4800593	10	0.4511471	25	0.4652003	50	0.4692298	100	0.4808264
1,1,1-Trichloroethane	0.5	0.517675	2.5	0.5127775	10	0.4786189	25	0.4954081	50	0.5072785	100	0.5148234
1,1,2,2-Tetrachloroethane	0.5	0.6785794	2.5	0.6749295	10	0.627552	25	0.6419189	50	0.6439983	100	0.6601385
1,1,2-Trichloroethane	0.5	0.2016859	2.5	0.209229	10	0.1910672	25	0.1927851	50	0.1935686	100	0.1964943
1,1-Dichloroethane	0.5	0.4386471	2.5	0.4382026	10	0.4099579	25	0.4194866	50	0.4213779	100	0.4274898
1,1-Dichloroethene	0.5	0.1806715	2.5	0.1894262	10	0.1823233	25	0.1906682	50	0.1962825	100	0.2053572
1,1-Dichloropropene	0.5	0.3587998	2.5	0.3556145	10	0.3426896	25	0.3625017	50	0.3598295	100	0.3654782
1,2,3-Trichlorobenzene	0.5	0.3496132	2.5	0.4317573	10	0.4164656	25	0.4224574	50	0.4343428	100	0.4486678
1,2,3-Trichloropropane	0.5	0.51161	2.5	0.5383615	10	0.4983194	25	0.5091162	50	0.5129133	100	0.5323774
1,2,4-Trichlorobenzene	0.5	0.4512909	2.5	0.5739942	10	0.5598	25	0.5953907	50	0.6031171	100	0.6230529
1,2,4-Trimethylbenzene	0.5	1.734316	2.5	1.685638	10	1.558663	25	1.591645	50	1.615117	100	1.639227
1,2-Dibromo-3-Chloropropane	0.5	1.602024E-02	2.5	0.0951727	10	9.019248E-02	25	9.511882E-02	50	9.430647E-02	100	9.820696E-02
1,2-Dibromoethane	0.5	0.4382932	2.5	0.4782968	10	0.4527758	25	0.4717589	50	0.4657325	100	0.4677453
1,2-Dichlorobenzene	0.5	1.095171	2.5	1.175459	10	1.085819	25	1.101258	50	1.107857	100	1.116342
1,2-Dichloroethane	0.5	0.2365373	2.5	0.2409243	10	0.2289645	25	0.2392505	50	0.2435274	100	0.2472133
1,2-Dichloropropane	0.5	0.2717938	2.5	0.2753707	10	0.2533853	25	0.2582858	50	0.2621067	100	0.2675013
1,3,5-Trimethylbenzene	0.5	1.658214	2.5	1.683741	10	1.543389	25	1.582692	50	1.599382	100	1.610916
1,3-Dichlorobenzene	0.5	1.291846	2.5	1.314252	10	1.213444	25	1.232954	50	1.237874	100	1.25668
1,3-Dichloropropane	0.5	0.389131	2.5	0.4095035	10	0.3787462	25	0.3914208	50	0.3950689	100	0.4042149
1,4-Dichlorobenzene	0.5	1.361915	2.5	1.392162	10	1.296206	25	1.315004	50	1.320806	100	1.330681
1,4-Dioxane - Screen	10		50	3.750855E-04	200	6.067519E-04	500	7.282023E-04	1000	7.595284E-04	2000	7.9818E-04
1-Chlorohexane	0.5	0.3996046	2.5	0.381307	10	0.3402623	25	0.3480333	50	0.3487087	100	0.3536012
2,2-Dichloropropane	0.5	0.4553193	2.5	0.3953456	10	0.3390373	25	0.3420745	50	0.3133131	100	0.2909368
2-Butanone	2.5	7.094613E-03	12.5	9.229934E-03	50	9.136502E-03	125	9.565419E-03	250	9.191162E-03	500	9.480112E-03
2-Chlorotoluene	0.5	1.678601	2.5	1.564841	10	1.486412	25	1.485584	50	1.577307	100	1.537162
2-Hexanone	2.5	0.0961972	12.5	8.440789E-02	50	7.430246E-02	125	0.0773489	250	7.837004E-02	500	8.253366E-02
4-Chlorotoluene	0.5	2.008865	2.5	1.862698	10	1.762393	25	1.800405	50	1.825507	100	1.837924
4-Isopropyltoluene	0.5	1.784149	2.5	1.727958	10	1.622062	25	1.637359	50	1.657246	100	1.678967
4-Methyl-2-Pentanone	2.5	3.932744E-02	12.5	4.366997E-02	50	4.172027E-02	125	4.343955E-02	250	4.419618E-02	500	4.529187E-02
Acetone	2.5	1.170442E-02	12.5	4.824483E-03	50	4.503166E-03	125	4.662514E-03	250	5.858267E-03	500	5.982177E-03
Benzene	0.5	0.6638625	2.5	0.6667228	10	0.6225295	25	0.6427426	50	0.6506007	100	0.6600252

INITIAL CALIBRATION DATA

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Bromobenzene	0.5	0.8634284	2.5	0.874554	10	0.8327901	25	0.8441176	50	0.8477628	100	0.857079
Bromochloromethane	0.5	0.1955069	2.5	0.2061537	10	0.1887398	25	0.1875188	50	0.1840713	100	0.1861604
Bromodichloromethane	0.5	0.5529126	2.5	0.5608592	10	0.5300014	25	0.5509642	50	0.5548844	100	0.5665168
Bromoform	0.5	0.3212321	2.5	0.369848	10	0.3736029	25	0.400136	50	0.4080384	100	0.425282
Bromomethane	0.5	0.6822018	2.5	0.370779	10	0.2378467	25	0.2292049	50	0.2242967	100	0.2240469
Carbon Disulfide	0.5	0.5900058	2.5	0.5764099	10	0.5360038	25	0.5516557	50	0.5733344	100	0.5907424
Carbon Tetrachloride	0.5	0.4849712	2.5	0.5005907	10	0.460561	25	0.486772	50	0.4964204	100	0.5213167
Chlorobenzene	0.5	0.8901383	2.5	0.8845743	10	0.8299545	25	0.8534482	50	0.8585004	100	0.8755835
Chloroethane	0.5	0.101069	2.5	7.681242E-02	10	6.300309E-02	25	6.541206E-02	50	6.331217E-02	100	6.099812E-02
Chloroform	0.5	0.5884799	2.5	0.5803997	10	0.5424268	25	0.5550822	50	0.5637115	100	0.5745338
Chloromethane	0.5	0.2320443	2.5	0.1759351	10	0.1533747	25	0.1549918	50	0.1668793	100	0.1787098
cis-1,2-Dichloroethene	0.5	0.2932321	2.5	0.3099277	10	0.2915173	25	0.2995772	50	0.3017171	100	0.3074646
cis-1,3-Dichloropropene	0.5	0.3716477	2.5	0.3973433	10	0.3724341	25	0.3861708	50	0.3881056	100	0.3917542
Dibromochloromethane	0.5	0.6131845	2.5	0.6429431	10	0.6176539	25	0.6531684	50	0.6588241	100	0.6798444
Dibromomethane	0.5	0.2475108	2.5	0.2750259	10	0.2588435	25	0.2637845	50	0.2570931	100	0.2569467
Dichlorodifluoromethane	0.5	0.4781705	2.5	0.4504662	10	0.4266257	25	0.4402421	50	0.444341	100	0.44659
Diethyl Ether	0.5	7.141709E-02	2.5	7.633642E-02	10	7.114797E-02	25	7.343466E-02	50	7.286822E-02	100	7.613407E-02
Di-isopropyl ether	0.5	0.6006873	2.5	0.6140796	10	0.5747992	25	0.5934446	50	0.6018474	100	0.616233
Ethyl tertiary-butyl ether	0.5	0.5501433	2.5	0.5758289	10	0.5374751	25	0.5557506	50	0.5606861	100	0.5692128
Ethylbenzene	0.5	1.236206	2.5	1.151972	10	1.070387	25	1.11095	50	1.124969	100	1.154231
Hexachlorobutadiene	0.5	0.2868078	2.5	0.3019578	10	0.2870028	25	0.2964104	50	0.3032186	100	0.3037674
Isopropylbenzene	0.5	2.254184	2.5	2.17717	10	2.045233	25	2.078889	50	2.093446	100	2.112091
Methyl tert-Butyl Ether	0.5	0.3781753	2.5	0.3986776	10	0.3737996	25	0.3810284	50	0.3780631	100	0.3731372
Methylene Chloride	0.5	0.2850373	2.5	0.2541905	10	0.2310992	25	0.236701	50	0.2390902	100	0.2469578
Naphthalene	0.5	0.4981625	2.5	0.5893768	10	0.5618165	25	0.6160755	50	0.6446269	100	0.6906777
n-Butylbenzene	0.5	1.225408	2.5	1.217698	10	1.130267	25	1.160686	50	1.180477	100	1.193938
n-Propylbenzene	0.5	2.399729	2.5	2.463566	10	2.242051	25	2.341541	50	2.282109	100	2.376613
sec-Butylbenzene	0.5	1.964717	2.5	1.969669	10	1.813179	25	1.868078	50	1.886924	100	1.8931
Styrene	0.5	0.8410456	2.5	0.7987237	10	0.7554948	25	0.7792896	50	0.7886007	100	0.8071341
tert-Butylbenzene	0.5	2.289814	2.5	2.287273	10	2.135024	25	2.181607	50	2.204301	100	2.218798
Tertiary-amyl methyl ether	0.5	0.5003624	2.5	0.4955121	10	0.4715904	25	0.4847009	50	0.4898943	100	0.4944366

INITIAL CALIBRATION DATA

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Tetrachloroethene	0.5	0.4100434	2.5	0.432486	10	0.4010911	25	0.4208178	50	0.4223261	100	0.4348188
Tetrahydrofuran	0.5	7.07389E-03	2.5	2.515313E-02	10	2.354573E-02	25	2.381993E-02	50	2.204904E-02	100	2.314368E-02
Toluene	0.5	0.5560963	2.5	0.5013178	10	0.4543451	25	0.4671591	50	0.4746306	100	0.4819396
trans-1,2-Dichloroethene	0.5	0.2694766	2.5	0.2844972	10	0.2702709	25	0.2804753	50	0.284518	100	0.2889427
trans-1,3-Dichloropropene	0.5	0.2883717	2.5	0.3086046	10	0.2954488	25	0.3103332	50	0.3129731	100	0.3203618
Trichloroethene	0.5	0.382753	2.5	0.3790941	10	0.3510642	25	0.3621395	50	0.3644809	100	0.3694006
Trichlorofluoromethane	0.5	0.5133892	2.5	0.5170933	10	0.4901174	25	0.5130476	50	0.518068	100	0.5274454
Vinyl Acetate	0.5	0.6375073	2.5	0.557323	10	0.5002615	25	0.5131178	50	0.519687	100	0.5333232
Vinyl Chloride	0.5	0.1702255	2.5	0.1769414	10	0.163554	25	0.1719411	50	0.172882	100	0.1753243
Xylene O	0.5	0.4419965	2.5	0.4587589	10	0.4264073	25	0.4368899	50	0.4371848	100	0.4439377
Xylene P,M	1	0.4651657	5	0.4705965	20	0.4387735	50	0.4475139	100	0.4550413	200	0.464789
1,2-Dichloroethane-d4	0.5	0.2366409	2.5	0.2377947	10	0.2205561	25	0.2254324	50	0.2302392	100	0.2329508
4-Bromofluorobenzene	0.5	0.7193206	2.5	0.6642251	10	0.6212048	25	0.6362629	50	0.6402736	100	0.6526465
Dibromofluoromethane	0.5	0.7015491	2.5	0.7258632	10	0.6764133	25	0.6956526	50	0.7099926	100	0.7278092
Toluene-d8	0.5	0.9923049	2.5	1.035286	10	0.9730567	25	1.008324	50	1.016519	100	1.039297

INITIAL CALIBRATION DATA (Continued)

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,1,2-Tetrachloroethane	0.4740942	3.383598	12.09	0.0140062			15	
1,1,1-Trichloroethane	0.5044302	2.952261	5.373333	9.583287E-02			15	
1,1,2,2-Tetrachloroethane	0.6545194	3.073776	14.45833	5.030347E-02			SPCC (0.3)	
1,1,2-Trichloroethane	0.1974717	3.472917	10.14167	4.424758E-02			15	
1,1-Dichloroethane	0.4258603	2.640203	3.736667	0.1385484			SPCC (0.1)	
1,1-Dichloroethene	0.1907881	4.794183	2.41	1.982149E-02			CCC (30)	
1,1-Dichloropropene	0.3574855	2.233256	5.648333	0.1743885			15	
1,2,3-Trichlorobenzene	0.4172173	8.366394	21.25833	1.928005E-02			15	
1,2,3-Trichloropropane	0.5171163	2.932233	14.485	3.697083E-02			15	
1,2,4-Trichlorobenzene	0.5677743	10.78209	20.48667	4.097622E-02			15	
1,2,4-Trimethylbenzene	1.637434	3.911663	15.68	4.126489E-02			15	
1,2-Dibromo-3-Chloropropane	9.459949E-02	3.041725	18.592	5.884738E-02			15	
1,2-Dibromoethane	0.4624338	3.139256	10.97	1.272075E-02			15	
1,2-Dichlorobenzene	1.113651	2.876478	17.02167	4.775146E-02			15	
1,2-Dichloroethane	0.2394029	2.625411	6.04	0.14634			15	
1,2-Dichloropropane	0.2647406	3.150857	7.478333	0.1314268			CCC (30)	
1,3,5-Trimethylbenzene	1.613056	3.161411	14.99	1.573673E-02			15	
1,3-Dichlorobenzene	1.257842	3.043726	16.14667	2.546458E-02			15	
1,3-Dichloropropane	0.3946809	2.789619	10.42	9.595757E-03			15	
1,4-Dichlorobenzene	1.336129	2.616125	16.32667	2.008305E-02			15	
1,4-Dioxane - Screen	7.231656E-04	11.43836	7.785	7.611467E-02	0.99992		0.99	
1-Chlorohexane	0.3619195	6.42265	11.97	2.480202E-02			15	
2,2-Dichloropropane	0.3560044	16.83004	4.585	0.1190424	0.99882		0.99	
2-Butanone	8.949624E-03	10.33007	4.691667	8.920557E-02			15	
2-Chlorotoluene	1.554985	4.611714	14.71167	2.079971E-02			15	
2-Hexanone	8.219336E-02	9.44729	10.67333	4.778258E-02			15	
4-Chlorotoluene	1.849632	4.605283	14.94833	1.963334E-02			15	
4-Isopropyltoluene	1.684623	3.631421	16.31667	2.457424E-02			15	
4-Methyl-2-Pentanone	4.294088E-02	4.932388	9.151666	8.229554E-02			15	
Acetone	5.166121E-03	13.53204	2.526	0.3541018			15	
Benzene	0.6510805	2.545136	5.981667	0.1241948			15	
Bromobenzene	0.8532887	1.741562	14.31667	3.596848E-02			15	

INITIAL CALIBRATION DATA (Continued)

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Bromochloromethane	0.1913585	4.295544	4.975	0.167204			15	
Bromodichloromethane	0.5526898	2.260653	8.006667	6.369683E-02			15	
Bromoform	0.3830232	9.61747	13.44167	0.0323759			SPCC (0.1)	
Bromomethane	0.3280627	55.66407	1.7	0.3717441	0.99995		0.99	
Carbon Disulfide	0.569692	3.825179	2.605	0.2097854			15	
Carbon Tetrachloride	0.491772	4.084834	5.625	0.186339			15	
Chlorobenzene	0.8653665	2.599473	11.89833	5.994122E-02			SPCC (0.3)	
Chloroethane	7.176781E-02	21.48439	1.77	1.603628E-02	0.99977		0.99	
Chloroform	0.567439	3.004463	5.135	0.1066456			CCC (30)	
Chloromethane	0.1769892	16.3342	1.43	2.304559E-02	0.99908		SPCC (0.1)	
cis-1,2-Dichloroethene	0.3005727	2.459279	4.603333	0.1782146			15	
cis-1,3-Dichloropropene	0.384576	2.712524	8.803334	5.637297E-02			15	
Dibromochloromethane	0.6442697	3.946872	10.81833	3.997496E-02			15	
Dibromomethane	0.2598674	3.506168	7.676667	6.799957E-02			15	
Dichlorodifluoromethane	0.4477393	3.801257	1.265	0.432829			15	
Diethyl Ether	7.355641E-02	3.054385	2.248333	0.1815963			15	
Di-isopropyl ether	0.6001818	2.519733	3.9	1.398662E-02			15	
Ethyl tertiary-butyl ether	0.5581828	2.454714	4.446667	0.115055			15	
Ethylbenzene	1.141453	4.8785	12.15833	3.886602E-02			CCC (30)	
Hexachlorobutadiene	0.2965275	2.663462	20.845	3.819197E-02			15	
Isopropylbenzene	2.126836	3.583365	13.835	5.813761E-02			15	
Methyl tert-Butyl Ether	0.3804802	2.468711	3.245	0.1680112			15	
Methylene Chloride	0.248846	7.832687	2.9	1.880959E-02			15	
Naphthalene	0.6001227	11.15668	20.90167	4.840566E-02			15	
n-Butylbenzene	1.184746	3.017147	17.10667	1.918909E-02			15	
n-Propylbenzene	2.350935	3.424446	14.62167	2.943128E-02			15	
sec-Butylbenzene	1.899278	3.142764	16.005	3.119664E-02			15	
Styrene	0.7950481	3.614749	13.14833	5.505024E-02			15	
tert-Butylbenzene	2.21947	2.728789	15.58167	6.546476E-02			15	
Tertiary-amyl methyl ether	0.4894161	2.088538	6.253333	0.1307228			15	
Tetrachloroethene	0.4202639	3.080196	10.32833	4.229326E-02			15	
Tetrahydrofuran	0.0235423	4.777738	5.064	0.1765352			15	

INITIAL CALIBRATION DATA (Continued)

8260B

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805113</u>
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>
Calibration: <u>0805007</u>	Instrument: <u>VMS4</u>
Matrix: <u>Solid</u>	Calibration Date: <u>05/08/08 00:00</u>

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Toluene	0.4892481	7.419066	9.366666	0.0886601			CCC (30)	
trans-1,2-Dichloroethene	0.2796968	2.885519	3.2	2.217517E-02			15	
trans-1,3-Dichloropropene	0.3060155	3.87352	9.838333	3.715059E-02			15	
Trichloroethene	0.3681554	3.158575	7.098333	0.0590722			15	
Trichlorofluoromethane	0.5131935	2.425397	1.973333	0.413948			15	
Vinyl Acetate	0.5435366	9.195957	3.87	5.126947E-03			15	
Vinyl Chloride	0.1718114	2.73643	1.47	1.329984E-02			CCC (30)	
Xylene O	0.4408625	2.420352	13.11667	3.919506E-02			15	
Xylene P,M	0.45698	2.659005	12.39	0.0551322			15	
1,2-Dichloroethane-d4	0.2306023	2.886233	5.913333	0.1365837			15	
4-Bromofluorobenzene	0.6556556	5.254844	14.08333	3.789554E-02			15	
Dibromofluoromethane	0.7062133	2.751662	5.39	1.660072E-02			15	
Toluene-d8	1.010798	2.509456	9.258334	4.426948E-02			15	

VOA Logbooks

HOLDING TIME SUMMARY

8260B

Laboratory: ESS Laboratory

SDG: 0805113

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SB609	05/08/08 10:10	05/08/08 17:02	05/09/08 07:00	0.87	14.00	05/09/08 15:41	1.23	14.00	
SB713	05/08/08 11:55	05/08/08 17:02	05/09/08 07:00	0.80	14.00	05/09/08 16:10	1.18	14.00	
SB805	05/08/08 14:15	05/08/08 17:02	05/09/08 07:00	0.70	14.00	05/09/08 16:40	1.10	14.00	
SB917	05/08/08 16:05	05/08/08 17:02	05/09/08 07:00	0.62	14.00	05/09/08 17:09	1.04	14.00	

ESS LABORATORY Percent Solids Logbook

Date/ Time	Lab ID	Pan WT. (g)	Wet WT. (g)	Dry WT. (g)	Percent Solid	Wet wt. Init.	Dry wt./1st Rvw Init.	2nd Rvw Init.
5/8/08	0805097-02	1.3	11.3	11.2	99	GM	KMB	MOR
	-03	1.3	11.3	11.2	99			
	0805096-01	1.3	11.3	10.4	91			
	-02	1.3	11.3	10.3	90			
5/8/08	-03	1.3	11.3	10.8	95	GM		
5/8/08	0805097-02	1.3	11.3	9.4	81			
	-03	1.3	11.3	8.9	76			
	-04	1.3	11.3	9.5	82			
	-05	1.3	11.3	8.8	75			
5/8/08	0805099-01	1.3	11.3	8.5	72	GM	KMB	
5/8/08	0805112-01	1.3	11.3	10.3	90	CA		
5/8/08	-02	1.3	11.3	10.4	91	CA		
5/8/08	-03	1.3	11.3	10.4	91	CA		
5/8/08	RELABEL OF 0805083-01 0805114-01	1.3	11.3	10.0	87	KMB	KMB	
5/8/08	Blank	1.3	1.3	1.3	100	KMB	KMB	
	0805113-01	1.3	11.3	10.3	90			
	-01 Dup	1.3	11.3	10.3	90			
	-02	1.3	11.3	11.2	99			
	-03	1.3	11.3	9.9	86			
	-04	1.3	11.3	11.0	97			
	0805098-04	1.3	11.3	8.4	71			
5/8/08	0805098-04	9%	Moisture		29	KMB	KMB	MOR

Criteria: Dup RPD ≤ 20%

Control #50.0006-0702A

Page _____

Sample and Cooler Receipt Checklist

Client: Mactec
 Client Project ID: _____
 Shipped/Delivered Via: Client

ESS Project ID: 08050113
 Date Project Due: 5/15/08
 Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present?

* No

10. Are the samples properly preserved?

Yes

Air No.:

11. Proper sample containers used?

Yes

2. Were Custody Seals Present?

No

12. Any air bubbles in the VOA vials?

N/A

3. Were Custody Seals Intact?

N/A

13. Holding times exceeded?

No

4. Is Radiation count < 100 CPM?

Yes

14. Sufficient sample volumes?

Yes

5. Is a cooler present?

Yes

15. Any Subcontracting needed?

No

Cooler Temp: 5.1

16. Are ESS labels on correct containers? Yes No

Iced With: Icepacks

17. Were samples received intact? Yes No

6. Was COC included with samples?

Yes

ESS Sample IDs: _____

7. Was COC signed and dated by client?

Yes

Sub Lab: _____

8. Does the COC match the sample

Yes

Analysis: _____

9. Is COC complete and correct?

Yes

TAT: _____

18. Was there need to call project manager to discuss status? If yes, please explain.

Who was called?: _____

By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	2 oz Soil Jar	1	NP
1	Yes	40 ml - VOA	1	MeOH
2	Yes	2 oz Soil Jar	1	NP
2	Yes	40 ml - VOA	1	MeOH
3	Yes	2 oz Soil Jar	1	NP
3	Yes	40 ml - VOA	1	MeOH
4	Yes	2 oz Soil Jar	1	NP
4	Yes	40 ml - VOA	1	MeOH

Completed By: JTD JTD
 Reviewed By: ED

Date/Time: 5-8-08
 Date/Time: 5/8/08

ESS Laboratory

Division of Thielsch Engineering, Inc.
 185 Frances Avenue, Cranston, RI 02910-2211
 Tel. (401) 461-7181 Fax (401) 461-4486
 www.esslaboratory.com

CHAIN OF CUSTODY

Reporting Limits
 Ind./Comm. 0805113
 Electronic Deliverable Yes No EGNS
 Format: Excel Access PDF Other EXCEL

Turn Time Standard Other
 If faster than 5 days, prior approval by laboratory is required # _____
 State where samples were collected from:
 MA RI CT NH NJ NY ME Other
 Is this project for any of the following: USACE Other
 MA-MCP Navy

Co. Name MACTEL Project # 3050050041.20 Project Name (20 Char. or less) Gorham
 Contact Person Dave Heislein Address 107 Audubon Rd
 City Wakefield State MA Zip 01080
 Telephone # 781 245 6606 Fax # _____ Email Address dheislein@mactel.com

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Type of Containers	Number of Containers	Type of Containers	8100 DRO	8101 TPH	8015 VPH	8021 MTE/BTEX GRO	8015 VPH	8021 MTE/BTEX GRO	8100 DRO	EPH	EPH w/PAHs	4 Diesel	8081 PCB	8082 PCB	8087 Pesticides	8270 PAH	SVOA 8270	RCRAS RCRAS PPI3 TAL23	TCLP-RCRA8	MCP-METALS (13)	MCP-METALS (13) w/Hg	% Solids	PID Headspace (µm)		
1	5-8-08	1010	X	S	S	SB609	6	2 1/4	X																								
2		1155	X	S	S	SB713	6	2 1/4	X																								
3		1415	X	S	S	SB805	6	2 1/4	X																								
4		1605	X	S	S	SB917	6	2 1/4	X																								

Container Type: P-Poly G-Glass S-Sterile V-VOA Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters
 Cooler Present Yes No Internal Use Only
 Seals Intact Yes No NA: [] Pickup [] Technicians _____
 Cooler Temp: 5.1
 Relinquished by: (Signature) [Signature] Date/Time 5-8-08 1702 Received by: (Signature) [Signature] Date/Time _____
 Relinquished by: (Signature) [Signature] Date/Time _____ Received by: (Signature) [Signature] Date/Time _____
 Sampled by: Phil Muller
 Comments: _____
 Preservation Code: 1- NP, 2- HCl, 3- H2SO4, 4- HNO3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____



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: 0805137

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: May 15, 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 May 09, 2008 for the analyses specified on the enclosed Chain of Custody Record.

Laboratory ID	Matrix	Client SampleID
0805137-01	Soil	SB1010
0805137-02	Soil	SB1107
0805137-03	Soil	SB1209
0805137-04	Soil	SB1314



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Methanol

BE81302-BSD1 **Blank Spike recovery is above upper control limit.**

Acetone

BE81302-BSD1 **Relative percent difference for duplicate is outside of criteria.**

Acetone, Tetrachloroethene

No other observations noted.

End of Project Narrative.



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB1010
 Date Sampled: 05/09/08 09:10
 Percent Solids: 90
 Initial Volume: 14.5
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805137
 ESS Laboratory Sample ID: 0805137-01
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte	Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.126	0.0416	220	1	05/13/08
1,1,1-Trichloroethane	J 0.0176	mg/kg dry	0.0630	0.0164	10000	1	05/13/08
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0630	0.0189	29	1	05/13/08
1,1,2-Trichloroethane	ND	mg/kg dry	0.0630	0.0202	100	1	05/13/08
1,1-Dichloroethane	ND	mg/kg dry	0.0630	0.0176	10000	1	05/13/08
1,1-Dichloroethene	ND	mg/kg dry	0.0630	0.0151	9.5	1	05/13/08
1,1-Dichloropropene	ND	mg/kg dry	0.0630	0.0164		1	05/13/08
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0630	0.0189		1	05/13/08
1,2,3-Trichloropropane	ND	mg/kg dry	0.0630	0.0189		1	05/13/08
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0630	0.0139	10000	1	05/13/08
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0630	0.0151		1	05/13/08
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.378	0.126	4.1	1	05/13/08
1,2-Dibromoethane	ND	mg/kg dry	0.0630	0.0139	0.07	1	05/13/08
1,2-Dichlorobenzene	ND	mg/kg dry	0.0630	0.0139	10000	1	05/13/08
1,2-Dichloroethane	ND	mg/kg dry	0.0630	0.0139	63	1	05/13/08
1,2-Dichloropropane	ND	mg/kg dry	0.0630	0.0176	84	1	05/13/08
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0630	0.0164		1	05/13/08
1,3-Dichlorobenzene	ND	mg/kg dry	0.0630	0.0151	10000	1	05/13/08
1,3-Dichloropropane	ND	mg/kg dry	0.0630	0.0126		1	05/13/08
1,4-Dichlorobenzene	ND	mg/kg dry	0.0630	0.0164	240	1	05/13/08
1,4-Dioxane - Screen	ND	mg/kg dry	6.30	3.15		1	05/13/08
1-Chlorohexane	ND	mg/kg dry	0.0630	0.0164		1	05/13/08
2,2-Dichloropropane	ND	mg/kg dry	0.126	0.0315		1	05/13/08
2-Butanone	ND	mg/kg dry	1.58	0.315	10000	1	05/13/08
2-Chlorotoluene	ND	mg/kg dry	0.0630	0.0189		1	05/13/08
2-Hexanone	ND	mg/kg dry	0.630	0.0882		1	05/13/08
4-Chlorotoluene	ND	mg/kg dry	0.0630	0.0151		1	05/13/08
4-Isopropyltoluene	ND	mg/kg dry	0.0630	0.0164		1	05/13/08
4-Methyl-2-Pentanone	ND	mg/kg dry	0.630	0.0882	10000	1	05/13/08
Acetone	ND	mg/kg dry	1.58	0.504	10000	1	05/13/08
Benzene	ND	mg/kg dry	0.0630	0.0189	200	1	05/13/08
Bromobenzene	ND	mg/kg dry	0.0630	0.0139		1	05/13/08
Bromochloromethane	ND	mg/kg dry	0.0630	0.0189		1	05/13/08
Bromodichloromethane	ND	mg/kg dry	0.0630	0.0176	92	1	05/13/08
Bromoform	ND	mg/kg dry	0.0630	0.0202	720	1	05/13/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB1010
Date Sampled: 05/09/08 09:10
Percent Solids: 90
Initial Volume: 14.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805137
ESS Laboratory Sample ID: 0805137-01
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.126	0.0315	2900	1	05/13/08	
Carbon Disulfide	ND	mg/kg dry	0.0630	0.0151		1	05/13/08	
Carbon Tetrachloride	ND	mg/kg dry	0.0630	0.0176	44	1	05/13/08	
Chlorobenzene	ND	mg/kg dry	0.0630	0.0139	10000	1	05/13/08	
Chloroethane	ND	mg/kg dry	0.126	0.0416		1	05/13/08	
Chloroform	ND	mg/kg dry	0.0630	0.0151	940	1	05/13/08	
Chloromethane	ND	mg/kg dry	0.126	0.0202		1	05/13/08	
cis-1,2-Dichloroethene	J	0.0466	mg/kg dry	0.0630	0.0189	10000	1	05/13/08
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0630	0.0139		1	05/13/08	
Dibromochloromethane	ND	mg/kg dry	0.0630	0.0126	68	1	05/13/08	
Dibromomethane	ND	mg/kg dry	0.0630	0.0189		1	05/13/08	
Dichlorodifluoromethane	ND	mg/kg dry	0.0630	0.0151		1	05/13/08	
Diethyl Ether	ND	mg/kg dry	0.0630	0.0189		1	05/13/08	
Di-isopropyl ether	ND	mg/kg dry	0.0630	0.0151		1	05/13/08	
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0630	0.0126		1	05/13/08	
Ethylbenzene	ND	mg/kg dry	0.0630	0.0151	10000	1	05/13/08	
Hexachlorobutadiene	ND	mg/kg dry	0.0630	0.0202	73	1	05/13/08	
Isopropylbenzene	ND	mg/kg dry	0.0630	0.0139	10000	1	05/13/08	
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0630	0.0151	10000	1	05/13/08	
Methylene Chloride	ND	mg/kg dry	0.315	0.0252	760	1	05/13/08	
Naphthalene	ND	mg/kg dry	0.0630	0.0189	10000	1	05/13/08	
n-Butylbenzene	ND	mg/kg dry	0.0630	0.0151		1	05/13/08	
n-Propylbenzene	ND	mg/kg dry	0.0630	0.0164		1	05/13/08	
sec-Butylbenzene	ND	mg/kg dry	0.0630	0.0164		1	05/13/08	
Styrene	ND	mg/kg dry	0.0630	0.0164	190	1	05/13/08	
tert-Butylbenzene	ND	mg/kg dry	0.0630	0.0151		1	05/13/08	
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0630	0.0189		1	05/13/08	
Tetrachloroethene	ND	mg/kg dry	0.0630	0.0202	110	1	05/13/08	
Tetrahydrofuran	ND	mg/kg dry	0.630	0.164		1	05/13/08	
Toluene	J	0.0240	mg/kg dry	0.0630	0.0176	10000	1	05/13/08
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0630	0.0202	10000	1	05/13/08	
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0630	0.0151		1	05/13/08	
Trichloroethene	J	0.0328	mg/kg dry	0.0630	0.0151	520	1	05/13/08
Trichlorofluoromethane	ND	mg/kg dry	0.0630	0.0176		1	05/13/08	
Vinyl Acetate	ND	mg/kg dry	0.315	0.0252		1	05/13/08	
Vinyl Chloride	ND	mg/kg dry	0.0630	0.0151	3	1	05/13/08	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB1010
Date Sampled: 05/09/08 09:10
Percent Solids: 90
Initial Volume: 14.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805137
ESS Laboratory Sample ID: 0805137-01
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0630	0.0126	10000	1	05/13/08
Xylene P,M	ND	mg/kg dry	0.126	0.0315	10000	1	05/13/08
Xylenes (Total)	ND	mg/kg dry	0.189		10000	1	05/13/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	91 %		70-130
Surrogate: 4-Bromofluorobenzene	93 %		70-130
Surrogate: Dibromofluoromethane	87 %		70-130
Surrogate: Toluene-d8	95 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB1107
 Date Sampled: 05/09/08 10:45
 Percent Solids: 91
 Initial Volume: 19.6
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805137
 ESS Laboratory Sample ID: 0805137-02
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte	Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0940	0.0310	220	1	05/13/08
1,1,1-Trichloroethane	ND	mg/kg dry	0.0470	0.0122	10000	1	05/13/08
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0470	0.0141	29	1	05/13/08
1,1,2-Trichloroethane	ND	mg/kg dry	0.0470	0.0150	100	1	05/13/08
1,1-Dichloroethane	ND	mg/kg dry	0.0470	0.0132	10000	1	05/13/08
1,1-Dichloroethene	ND	mg/kg dry	0.0470	0.0113	9.5	1	05/13/08
1,1-Dichloropropene	ND	mg/kg dry	0.0470	0.0122		1	05/13/08
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0470	0.0141		1	05/13/08
1,2,3-Trichloropropane	ND	mg/kg dry	0.0470	0.0141		1	05/13/08
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0470	0.0103	10000	1	05/13/08
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0470	0.0113		1	05/13/08
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.282	0.0940	4.1	1	05/13/08
1,2-Dibromoethane	ND	mg/kg dry	0.0470	0.0103	0.07	1	05/13/08
1,2-Dichlorobenzene	ND	mg/kg dry	0.0470	0.0103	10000	1	05/13/08
1,2-Dichloroethane	ND	mg/kg dry	0.0470	0.0103	63	1	05/13/08
1,2-Dichloropropane	ND	mg/kg dry	0.0470	0.0132	84	1	05/13/08
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0470	0.0122		1	05/13/08
1,3-Dichlorobenzene	ND	mg/kg dry	0.0470	0.0113	10000	1	05/13/08
1,3-Dichloropropane	ND	mg/kg dry	0.0470	0.0094		1	05/13/08
1,4-Dichlorobenzene	ND	mg/kg dry	0.0470	0.0122	240	1	05/13/08
1,4-Dioxane - Screen	ND	mg/kg dry	4.70	2.35		1	05/13/08
1-Chlorohexane	ND	mg/kg dry	0.0470	0.0122		1	05/13/08
2,2-Dichloropropane	ND	mg/kg dry	0.0940	0.0235		1	05/13/08
2-Butanone	ND	mg/kg dry	1.17	0.235	10000	1	05/13/08
2-Chlorotoluene	ND	mg/kg dry	0.0470	0.0141		1	05/13/08
2-Hexanone	ND	mg/kg dry	0.470	0.0658		1	05/13/08
4-Chlorotoluene	ND	mg/kg dry	0.0470	0.0113		1	05/13/08
4-Isopropyltoluene	ND	mg/kg dry	0.0470	0.0122		1	05/13/08
4-Methyl-2-Pentanone	ND	mg/kg dry	0.470	0.0658	10000	1	05/13/08
Acetone	ND	mg/kg dry	1.17	0.376	10000	1	05/13/08
Benzene	ND	mg/kg dry	0.0470	0.0141	200	1	05/13/08
Bromobenzene	ND	mg/kg dry	0.0470	0.0103		1	05/13/08
Bromochloromethane	ND	mg/kg dry	0.0470	0.0141		1	05/13/08
Bromodichloromethane	ND	mg/kg dry	0.0470	0.0132	92	1	05/13/08
Bromoform	ND	mg/kg dry	0.0470	0.0150	720	1	05/13/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB1107
 Date Sampled: 05/09/08 10:45
 Percent Solids: 91
 Initial Volume: 19.6
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805137
 ESS Laboratory Sample ID: 0805137-02
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.0940	0.0235	2900	1	05/13/08	
Carbon Disulfide	ND	mg/kg dry	0.0470	0.0113		1	05/13/08	
Carbon Tetrachloride	ND	mg/kg dry	0.0470	0.0132	44	1	05/13/08	
Chlorobenzene	ND	mg/kg dry	0.0470	0.0103	10000	1	05/13/08	
Chloroethane	ND	mg/kg dry	0.0940	0.0310		1	05/13/08	
Chloroform	ND	mg/kg dry	0.0470	0.0113	940	1	05/13/08	
Chloromethane	ND	mg/kg dry	0.0940	0.0150		1	05/13/08	
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0470	0.0141	10000	1	05/13/08	
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0470	0.0103		1	05/13/08	
Dibromochloromethane	ND	mg/kg dry	0.0470	0.0094	68	1	05/13/08	
Dibromomethane	ND	mg/kg dry	0.0470	0.0141		1	05/13/08	
Dichlorodifluoromethane	ND	mg/kg dry	0.0470	0.0113		1	05/13/08	
Diethyl Ether	ND	mg/kg dry	0.0470	0.0141		1	05/13/08	
Di-isopropyl ether	ND	mg/kg dry	0.0470	0.0113		1	05/13/08	
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0470	0.0094		1	05/13/08	
Ethylbenzene	ND	mg/kg dry	0.0470	0.0113	10000	1	05/13/08	
Hexachlorobutadiene	ND	mg/kg dry	0.0470	0.0150	73	1	05/13/08	
Isopropylbenzene	ND	mg/kg dry	0.0470	0.0103	10000	1	05/13/08	
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0470	0.0113	10000	1	05/13/08	
Methylene Chloride	ND	mg/kg dry	0.235	0.0188	760	1	05/13/08	
Naphthalene	ND	mg/kg dry	0.0470	0.0141	10000	1	05/13/08	
n-Butylbenzene	ND	mg/kg dry	0.0470	0.0113		1	05/13/08	
n-Propylbenzene	ND	mg/kg dry	0.0470	0.0122		1	05/13/08	
sec-Butylbenzene	ND	mg/kg dry	0.0470	0.0122		1	05/13/08	
Styrene	ND	mg/kg dry	0.0470	0.0122	190	1	05/13/08	
tert-Butylbenzene	ND	mg/kg dry	0.0470	0.0113		1	05/13/08	
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0470	0.0141		1	05/13/08	
Tetrachloroethene	ND	mg/kg dry	0.0470	0.0150	110	1	05/13/08	
Tetrahydrofuran	ND	mg/kg dry	0.470	0.122		1	05/13/08	
Toluene	J	0.0169	mg/kg dry	0.0470	0.0132	10000	1	05/13/08
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0470	0.0150	10000	1	05/13/08	
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0470	0.0113		1	05/13/08	
Trichloroethene	ND	mg/kg dry	0.0470	0.0113	520	1	05/13/08	
Trichlorofluoromethane	ND	mg/kg dry	0.0470	0.0132		1	05/13/08	
Vinyl Acetate	ND	mg/kg dry	0.235	0.0188		1	05/13/08	
Vinyl Chloride	ND	mg/kg dry	0.0470	0.0113	3	1	05/13/08	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB1107
Date Sampled: 05/09/08 10:45
Percent Solids: 91
Initial Volume: 19.6
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805137
ESS Laboratory Sample ID: 0805137-02
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0470	0.0094	10000	1	05/13/08
Xylene P,M	ND	mg/kg dry	0.0940	0.0235	10000	1	05/13/08
Xylenes (Total)	ND	mg/kg dry	0.141		10000	1	05/13/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	93 %		70-130
Surrogate: 4-Bromofluorobenzene	95 %		70-130
Surrogate: Dibromofluoromethane	97 %		70-130
Surrogate: Toluene-d8	97 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB1209
Date Sampled: 05/09/08 12:30
Percent Solids: 87
Initial Volume: 16.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805137
ESS Laboratory Sample ID: 0805137-03
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte		Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane		ND	mg/kg dry	0.121	0.0398	220	1	05/13/08
1,1,1-Trichloroethane	J	0.0567	mg/kg dry	0.0604	0.0157	10000	1	05/13/08
1,1,2,2-Tetrachloroethane		ND	mg/kg dry	0.0604	0.0181	29	1	05/13/08
1,1,2-Trichloroethane		ND	mg/kg dry	0.0604	0.0193	100	1	05/13/08
1,1-Dichloroethane		ND	mg/kg dry	0.0604	0.0169	10000	1	05/13/08
1,1-Dichloroethene		ND	mg/kg dry	0.0604	0.0145	9.5	1	05/13/08
1,1-Dichloropropene		ND	mg/kg dry	0.0604	0.0157		1	05/13/08
1,2,3-Trichlorobenzene		ND	mg/kg dry	0.0604	0.0181		1	05/13/08
1,2,3-Trichloropropane		ND	mg/kg dry	0.0604	0.0181		1	05/13/08
1,2,4-Trichlorobenzene		ND	mg/kg dry	0.0604	0.0133	10000	1	05/13/08
1,2,4-Trimethylbenzene		ND	mg/kg dry	0.0604	0.0145		1	05/13/08
1,2-Dibromo-3-Chloropropane		ND	mg/kg dry	0.362	0.121	4.1	1	05/13/08
1,2-Dibromoethane		ND	mg/kg dry	0.0604	0.0133	0.07	1	05/13/08
1,2-Dichlorobenzene		ND	mg/kg dry	0.0604	0.0133	10000	1	05/13/08
1,2-Dichloroethane		ND	mg/kg dry	0.0604	0.0133	63	1	05/13/08
1,2-Dichloropropane		ND	mg/kg dry	0.0604	0.0169	84	1	05/13/08
1,3,5-Trimethylbenzene		ND	mg/kg dry	0.0604	0.0157		1	05/13/08
1,3-Dichlorobenzene		ND	mg/kg dry	0.0604	0.0145	10000	1	05/13/08
1,3-Dichloropropane		ND	mg/kg dry	0.0604	0.0121		1	05/13/08
1,4-Dichlorobenzene		ND	mg/kg dry	0.0604	0.0157	240	1	05/13/08
1,4-Dioxane - Screen		ND	mg/kg dry	6.04	3.02		1	05/13/08
1-Chlorohexane		ND	mg/kg dry	0.0604	0.0157		1	05/13/08
2,2-Dichloropropane		ND	mg/kg dry	0.121	0.0302		1	05/13/08
2-Butanone		ND	mg/kg dry	1.51	0.302	10000	1	05/13/08
2-Chlorotoluene		ND	mg/kg dry	0.0604	0.0181		1	05/13/08
2-Hexanone		ND	mg/kg dry	0.604	0.0845		1	05/13/08
4-Chlorotoluene		ND	mg/kg dry	0.0604	0.0145		1	05/13/08
4-Isopropyltoluene		ND	mg/kg dry	0.0604	0.0157		1	05/13/08
4-Methyl-2-Pentanone		ND	mg/kg dry	0.604	0.0845	10000	1	05/13/08
Acetone		ND	mg/kg dry	1.51	0.483	10000	1	05/13/08
Benzene		ND	mg/kg dry	0.0604	0.0181	200	1	05/13/08
Bromobenzene		ND	mg/kg dry	0.0604	0.0133		1	05/13/08
Bromochloromethane		ND	mg/kg dry	0.0604	0.0181		1	05/13/08
Bromodichloromethane		ND	mg/kg dry	0.0604	0.0169	92	1	05/13/08
Bromoform		ND	mg/kg dry	0.0604	0.0193	720	1	05/13/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB1209
 Date Sampled: 05/09/08 12:30
 Percent Solids: 87
 Initial Volume: 16.3
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805137
 ESS Laboratory Sample ID: 0805137-03
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.121	0.0302	2900	1	05/13/08
Carbon Disulfide	ND	mg/kg dry	0.0604	0.0145		1	05/13/08
Carbon Tetrachloride	ND	mg/kg dry	0.0604	0.0169	44	1	05/13/08
Chlorobenzene	ND	mg/kg dry	0.0604	0.0133	10000	1	05/13/08
Chloroethane	ND	mg/kg dry	0.121	0.0398		1	05/13/08
Chloroform	ND	mg/kg dry	0.0604	0.0145	940	1	05/13/08
Chloromethane	ND	mg/kg dry	0.121	0.0193		1	05/13/08
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0604	0.0181	10000	1	05/13/08
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0604	0.0133		1	05/13/08
Dibromochloromethane	ND	mg/kg dry	0.0604	0.0121	68	1	05/13/08
Dibromomethane	ND	mg/kg dry	0.0604	0.0181		1	05/13/08
Dichlorodifluoromethane	ND	mg/kg dry	0.0604	0.0145		1	05/13/08
Diethyl Ether	ND	mg/kg dry	0.0604	0.0181		1	05/13/08
Di-isopropyl ether	ND	mg/kg dry	0.0604	0.0145		1	05/13/08
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0604	0.0121		1	05/13/08
Ethylbenzene	ND	mg/kg dry	0.0604	0.0145	10000	1	05/13/08
Hexachlorobutadiene	ND	mg/kg dry	0.0604	0.0193	73	1	05/13/08
Isopropylbenzene	ND	mg/kg dry	0.0604	0.0133	10000	1	05/13/08
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0604	0.0145	10000	1	05/13/08
Methylene Chloride	ND	mg/kg dry	0.302	0.0241	760	1	05/13/08
Naphthalene	ND	mg/kg dry	0.0604	0.0181	10000	1	05/13/08
n-Butylbenzene	ND	mg/kg dry	0.0604	0.0145		1	05/13/08
n-Propylbenzene	ND	mg/kg dry	0.0604	0.0157		1	05/13/08
sec-Butylbenzene	ND	mg/kg dry	0.0604	0.0157		1	05/13/08
Styrene	ND	mg/kg dry	0.0604	0.0157	190	1	05/13/08
tert-Butylbenzene	ND	mg/kg dry	0.0604	0.0145		1	05/13/08
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0604	0.0181		1	05/13/08
Tetrachloroethene	ND	mg/kg dry	0.0604	0.0193	110	1	05/13/08
Tetrahydrofuran	ND	mg/kg dry	0.604	0.157		1	05/13/08
Toluene	ND	mg/kg dry	0.0604	0.0169	10000	1	05/13/08
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0604	0.0193	10000	1	05/13/08
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0604	0.0145		1	05/13/08
Trichloroethene	0.142	mg/kg dry	0.0604	0.0145	520	1	05/13/08
Trichlorofluoromethane	ND	mg/kg dry	0.0604	0.0169		1	05/13/08
Vinyl Acetate	ND	mg/kg dry	0.302	0.0241		1	05/13/08
Vinyl Chloride	ND	mg/kg dry	0.0604	0.0145	3	1	05/13/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB1209
 Date Sampled: 05/09/08 12:30
 Percent Solids: 87
 Initial Volume: 16.3
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805137
 ESS Laboratory Sample ID: 0805137-03
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0604	0.0121	10000	1	05/13/08
Xylene P,M	ND	mg/kg dry	0.121	0.0302	10000	1	05/13/08
Xylenes (Total)	ND	mg/kg dry	0.181		10000	1	05/13/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	96 %		70-130
Surrogate: 4-Bromofluorobenzene	98 %		70-130
Surrogate: Dibromofluoromethane	84 %		70-130
Surrogate: Toluene-d8	101 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB1314
 Date Sampled: 05/09/08 14:45
 Percent Solids: 95
 Initial Volume: 16.6
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805137
 ESS Laboratory Sample ID: 0805137-04
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

RI - IC DEC

Analyte	Results	Units	MRL	MDL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.100	0.0331	220	1	05/13/08
1,1,1-Trichloroethane	J 0.0271	mg/kg dry	0.0502	0.0130	10000	1	05/13/08
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0502	0.0151	29	1	05/13/08
1,1,2-Trichloroethane	ND	mg/kg dry	0.0502	0.0161	100	1	05/13/08
1,1-Dichloroethane	ND	mg/kg dry	0.0502	0.0141	10000	1	05/13/08
1,1-Dichloroethene	ND	mg/kg dry	0.0502	0.0120	9.5	1	05/13/08
1,1-Dichloropropene	ND	mg/kg dry	0.0502	0.0130		1	05/13/08
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0502	0.0151		1	05/13/08
1,2,3-Trichloropropane	ND	mg/kg dry	0.0502	0.0151		1	05/13/08
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0502	0.0110	10000	1	05/13/08
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.301	0.100	4.1	1	05/13/08
1,2-Dibromoethane	ND	mg/kg dry	0.0502	0.0110	0.07	1	05/13/08
1,2-Dichlorobenzene	ND	mg/kg dry	0.0502	0.0110	10000	1	05/13/08
1,2-Dichloroethane	ND	mg/kg dry	0.0502	0.0110	63	1	05/13/08
1,2-Dichloropropane	ND	mg/kg dry	0.0502	0.0141	84	1	05/13/08
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0502	0.0130		1	05/13/08
1,3-Dichlorobenzene	ND	mg/kg dry	0.0502	0.0120	10000	1	05/13/08
1,3-Dichloropropane	ND	mg/kg dry	0.0502	0.0100		1	05/13/08
1,4-Dichlorobenzene	ND	mg/kg dry	0.0502	0.0130	240	1	05/13/08
1,4-Dioxane - Screen	ND	mg/kg dry	5.02	2.51		1	05/13/08
1-Chlorohexane	ND	mg/kg dry	0.0502	0.0130		1	05/13/08
2,2-Dichloropropane	ND	mg/kg dry	0.100	0.0251		1	05/13/08
2-Butanone	ND	mg/kg dry	1.25	0.251	10000	1	05/13/08
2-Chlorotoluene	ND	mg/kg dry	0.0502	0.0151		1	05/13/08
2-Hexanone	ND	mg/kg dry	0.502	0.0703		1	05/13/08
4-Chlorotoluene	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
4-Isopropyltoluene	ND	mg/kg dry	0.0502	0.0130		1	05/13/08
4-Methyl-2-Pentanone	ND	mg/kg dry	0.502	0.0703	10000	1	05/13/08
Acetone	ND	mg/kg dry	1.25	0.402	10000	1	05/13/08
Benzene	ND	mg/kg dry	0.0502	0.0151	200	1	05/13/08
Bromobenzene	ND	mg/kg dry	0.0502	0.0110		1	05/13/08
Bromochloromethane	ND	mg/kg dry	0.0502	0.0151		1	05/13/08
Bromodichloromethane	ND	mg/kg dry	0.0502	0.0141	92	1	05/13/08
Bromoform	ND	mg/kg dry	0.0502	0.0161	720	1	05/13/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
Client Project ID: Providence Gorham Site
Client Sample ID: SB1314
Date Sampled: 05/09/08 14:45
Percent Solids: 95
Initial Volume: 16.6
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 0805137
ESS Laboratory Sample ID: 0805137-04
Sample Matrix: Soil
Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	mg/kg dry	0.100	0.0251	2900	1	05/13/08
Carbon Disulfide	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
Carbon Tetrachloride	ND	mg/kg dry	0.0502	0.0141	44	1	05/13/08
Chlorobenzene	ND	mg/kg dry	0.0502	0.0110	10000	1	05/13/08
Chloroethane	ND	mg/kg dry	0.100	0.0331		1	05/13/08
Chloroform	ND	mg/kg dry	0.0502	0.0120	940	1	05/13/08
Chloromethane	ND	mg/kg dry	0.100	0.0161		1	05/13/08
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0502	0.0151	10000	1	05/13/08
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0502	0.0110		1	05/13/08
Dibromochloromethane	ND	mg/kg dry	0.0502	0.0100	68	1	05/13/08
Dibromomethane	ND	mg/kg dry	0.0502	0.0151		1	05/13/08
Dichlorodifluoromethane	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
Diethyl Ether	ND	mg/kg dry	0.0502	0.0151		1	05/13/08
Di-isopropyl ether	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0502	0.0100		1	05/13/08
Ethylbenzene	ND	mg/kg dry	0.0502	0.0120	10000	1	05/13/08
Hexachlorobutadiene	ND	mg/kg dry	0.0502	0.0161	73	1	05/13/08
Isopropylbenzene	ND	mg/kg dry	0.0502	0.0110	10000	1	05/13/08
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0502	0.0120	10000	1	05/13/08
Methylene Chloride	ND	mg/kg dry	0.251	0.0201	760	1	05/13/08
Naphthalene	ND	mg/kg dry	0.0502	0.0151	10000	1	05/13/08
n-Butylbenzene	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
n-Propylbenzene	ND	mg/kg dry	0.0502	0.0130		1	05/13/08
sec-Butylbenzene	ND	mg/kg dry	0.0502	0.0130		1	05/13/08
Styrene	ND	mg/kg dry	0.0502	0.0130	190	1	05/13/08
tert-Butylbenzene	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0502	0.0151		1	05/13/08
Tetrachloroethene	ND	mg/kg dry	0.0502	0.0161	110	1	05/13/08
Tetrahydrofuran	ND	mg/kg dry	0.502	0.130		1	05/13/08
Toluene	ND	mg/kg dry	0.0502	0.0141	10000	1	05/13/08
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0502	0.0161	10000	1	05/13/08
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0502	0.0120		1	05/13/08
Trichloroethene	0.146	mg/kg dry	0.0502	0.0120	520	1	05/13/08
Trichlorofluoromethane	ND	mg/kg dry	0.0502	0.0141		1	05/13/08
Vinyl Acetate	ND	mg/kg dry	0.251	0.0201		1	05/13/08
Vinyl Chloride	ND	mg/kg dry	0.0502	0.0120	3	1	05/13/08



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.
 Client Project ID: Providence Gorham Site
 Client Sample ID: SB1314
 Date Sampled: 05/09/08 14:45
 Percent Solids: 95
 Initial Volume: 16.6
 Final Volume: 15
 Extraction Method: 5035

ESS Laboratory Work Order: 0805137
 ESS Laboratory Sample ID: 0805137-04
 Sample Matrix: Soil
 Analyst: RES

5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	mg/kg dry	0.0502	0.0100	10000	1	05/13/08
Xylene P,M	ND	mg/kg dry	0.100	0.0251	10000	1	05/13/08
Xylenes (Total)	ND	mg/kg dry	0.151		10000	1	05/13/08

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	88 %		70-130
Surrogate: 4-Bromofluorobenzene	90 %		70-130
Surrogate: Dibromofluoromethane	89 %		70-130
Surrogate: Toluene-d8	92 %		70-130



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE81302 - 5035

Blank

1,1,1,2-Tetrachloroethane	ND	0.100	mg/kg wet
1,1,1-Trichloroethane	ND	0.0500	mg/kg wet
1,1,2,2-Tetrachloroethane	ND	0.0500	mg/kg wet
1,1,2-Trichloroethane	ND	0.0500	mg/kg wet
1,1-Dichloroethane	ND	0.0500	mg/kg wet
1,1-Dichloroethene	ND	0.0500	mg/kg wet
1,1-Dichloropropene	ND	0.0500	mg/kg wet
1,2,3-Trichlorobenzene	ND	0.0500	mg/kg wet
1,2,3-Trichloropropane	ND	0.0500	mg/kg wet
1,2,4-Trichlorobenzene	ND	0.0500	mg/kg wet
1,2,4-Trimethylbenzene	ND	0.0500	mg/kg wet
1,2-Dibromo-3-Chloropropane	ND	0.300	mg/kg wet
1,2-Dibromoethane	ND	0.0500	mg/kg wet
1,2-Dichlorobenzene	ND	0.0500	mg/kg wet
1,2-Dichloroethane	ND	0.0500	mg/kg wet
1,2-Dichloropropane	ND	0.0500	mg/kg wet
1,3,5-Trimethylbenzene	ND	0.0500	mg/kg wet
1,3-Dichlorobenzene	ND	0.0500	mg/kg wet
1,3-Dichloropropane	ND	0.0500	mg/kg wet
1,4-Dichlorobenzene	ND	0.0500	mg/kg wet
1,4-Dioxane - Screen	ND	5.00	mg/kg wet
1-Chlorohexane	ND	0.0500	mg/kg wet
2,2-Dichloropropane	ND	0.100	mg/kg wet
2-Butanone	ND	1.25	mg/kg wet
2-Chlorotoluene	ND	0.0500	mg/kg wet
2-Hexanone	ND	0.500	mg/kg wet
4-Chlorotoluene	ND	0.0500	mg/kg wet
4-Isopropyltoluene	ND	0.0500	mg/kg wet
4-Methyl-2-Pentanone	ND	0.500	mg/kg wet
Acetone	ND	1.25	mg/kg wet
Benzene	ND	0.0500	mg/kg wet
Bromobenzene	ND	0.0500	mg/kg wet
Bromochloromethane	ND	0.0500	mg/kg wet
Bromodichloromethane	ND	0.0500	mg/kg wet
Bromoform	ND	0.0500	mg/kg wet
Bromomethane	ND	0.100	mg/kg wet
Carbon Disulfide	ND	0.0500	mg/kg wet
Carbon Tetrachloride	ND	0.0500	mg/kg wet
Chlorobenzene	ND	0.0500	mg/kg wet
Chloroethane	ND	0.100	mg/kg wet
Chloroform	ND	0.0500	mg/kg wet
Chloromethane	ND	0.100	mg/kg wet
cis-1,2-Dichloroethene	ND	0.0500	mg/kg wet
cis-1,3-Dichloropropene	ND	0.0500	mg/kg wet
Dibromochloromethane	ND	0.0500	mg/kg wet



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE81302 - 5035

Dibromomethane	ND	0.0500	mg/kg wet							
Dichlorodifluoromethane	ND	0.0500	mg/kg wet							
Diethyl Ether	ND	0.0500	mg/kg wet							
Di-Isopropyl ether	ND	0.0500	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0500	mg/kg wet							
Ethylbenzene	ND	0.0500	mg/kg wet							
Hexachlorobutadiene	ND	0.0500	mg/kg wet							
Isopropylbenzene	ND	0.0500	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0500	mg/kg wet							
Methylene Chloride	ND	0.250	mg/kg wet							
Naphthalene	ND	0.0500	mg/kg wet							
n-Butylbenzene	ND	0.0500	mg/kg wet							
n-Propylbenzene	ND	0.0500	mg/kg wet							
sec-Butylbenzene	ND	0.0500	mg/kg wet							
Styrene	ND	0.0500	mg/kg wet							
tert-Butylbenzene	ND	0.0500	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0500	mg/kg wet							
Tetrachloroethene	ND	0.0500	mg/kg wet							
Tetrahydrofuran	ND	0.500	mg/kg wet							
Toluene	ND	0.0500	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0500	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0500	mg/kg wet							
Trichloroethene	ND	0.0500	mg/kg wet							
Vinyl Acetate	ND	0.250	mg/kg wet							
Vinyl Chloride	ND	0.0500	mg/kg wet							
Xylene O	ND	0.0500	mg/kg wet							
Xylene P,M	ND	0.100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	2.48		mg/kg wet	2.500		99	70-130			
Surrogate: 4-Bromofluorobenzene	2.58		mg/kg wet	2.500		103	70-130			
Surrogate: Dibromofluoromethane	2.65		mg/kg wet	2.500		106	70-130			
Surrogate: Toluene-d8	2.62		mg/kg wet	2.500		105	70-130			

LCS

1,1,1,2-Tetrachloroethane	2.50	0.100	mg/kg wet	2.500		100	70-130			
1,1,1-Trichloroethane	2.52	0.0500	mg/kg wet	2.500		101	70-130			
1,1,2,2-Tetrachloroethane	2.41	0.0500	mg/kg wet	2.500		96	70-130			
1,1,2-Trichloroethane	2.53	0.0500	mg/kg wet	2.500		101	70-130			
1,1-Dichloroethane	2.53	0.0500	mg/kg wet	2.500		101	70-130			
1,1-Dichloroethene	2.76	0.0500	mg/kg wet	2.500		110	70-130			
1,1-Dichloropropene	2.55	0.0500	mg/kg wet	2.500		102	70-130			
1,2,3-Trichlorobenzene	2.59	0.0500	mg/kg wet	2.500		103	70-130			
1,2,3-Trichloropropane	2.42	0.0500	mg/kg wet	2.500		97	70-130			
1,2,4-Trichlorobenzene	2.62	0.0500	mg/kg wet	2.500		105	70-130			
1,2,4-Trimethylbenzene	2.56	0.0500	mg/kg wet	2.500		103	70-130			
1,2-Dibromo-3-Chloropropane	2.44	0.300	mg/kg wet	2.500		98	70-130			
1,2-Dibromoethane	2.53	0.0500	mg/kg wet	2.500		101	70-130			
1,2-Dichlorobenzene	2.53	0.0500	mg/kg wet	2.500		101	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE81302 - 5035

1,2-Dichloroethane	2.52	0.0500	mg/kg wet	2.500		101	70-130			
1,2-Dichloropropane	2.55	0.0500	mg/kg wet	2.500		102	70-130			
1,3,5-Trimethylbenzene	2.52	0.0500	mg/kg wet	2.500		101	70-130			
1,3-Dichlorobenzene	2.51	0.0500	mg/kg wet	2.500		100	70-130			
1,3-Dichloropropane	2.56	0.0500	mg/kg wet	2.500		103	70-130			
1,4-Dichlorobenzene	2.47	0.0500	mg/kg wet	2.500		99	70-130			
1,4-Dioxane - Screen	59.9	5.00	mg/kg wet	50.00		120	44-241			
1-Chlorohexane	2.42	0.0500	mg/kg wet	2.500		97	70-130			
2,2-Dichloropropane	2.95	0.100	mg/kg wet	2.500		118	70-130			
2-Butanone	15.2	1.25	mg/kg wet	12.50		122	70-130			
2-Chlorotoluene	2.44	0.0500	mg/kg wet	2.500		98	70-130			
2-Hexanone	13.3	0.500	mg/kg wet	12.50		107	70-130			
4-Chlorotoluene	2.48	0.0500	mg/kg wet	2.500		99	70-130			
4-Isopropyltoluene	2.40	0.0500	mg/kg wet	2.500		96	70-130			
4-Methyl-2-Pentanone	13.0	0.500	mg/kg wet	12.50		104	70-130			
Acetone	13.2	1.25	mg/kg wet	12.50		106	70-130			
Benzene	2.56	0.0500	mg/kg wet	2.500		102	70-130			
Bromobenzene	2.53	0.0500	mg/kg wet	2.500		101	70-130			
Bromochloromethane	2.46	0.0500	mg/kg wet	2.500		98	70-130			
Bromodichloromethane	2.76	0.0500	mg/kg wet	2.500		111	70-130			
Bromoform	2.58	0.0500	mg/kg wet	2.500		103	70-130			
Bromomethane	2.85	0.100	mg/kg wet	2.500		114	70-130			
Carbon Disulfide	2.69	0.0500	mg/kg wet	2.500		108	70-130			
Carbon Tetrachloride	2.57	0.0500	mg/kg wet	2.500		103	70-130			
Chlorobenzene	2.52	0.0500	mg/kg wet	2.500		101	70-130			
Chloroethane	2.54	0.100	mg/kg wet	2.500		102	70-130			
Chloroform	2.50	0.0500	mg/kg wet	2.500		100	70-130			
Chloromethane	2.22	0.100	mg/kg wet	2.500		89	70-130			
cis-1,2-Dichloroethene	2.78	0.0500	mg/kg wet	2.500		111	70-130			
cis-1,3-Dichloropropene	2.56	0.0500	mg/kg wet	2.500		102	70-130			
Dibromochloromethane	2.66	0.0500	mg/kg wet	2.500		106	70-130			
Dibromomethane	2.53	0.0500	mg/kg wet	2.500		101	70-130			
Dichlorodifluoromethane	1.99	0.0500	mg/kg wet	2.500		80	70-130			
Diethyl Ether	2.67	0.0500	mg/kg wet	2.500		107	70-130			
DI-isopropyl ether	2.57	0.0500	mg/kg wet	2.500		103	70-130			
Ethyl tertiary-butyl ether	2.51	0.0500	mg/kg wet	2.500		100	70-130			
Ethylbenzene	2.56	0.0500	mg/kg wet	2.500		102	70-130			
Hexachlorobutadiene	2.75	0.0500	mg/kg wet	2.500		110	70-130			
Isopropylbenzene	2.25	0.0500	mg/kg wet	2.500		90	70-130			
Methyl tert-Butyl Ether	2.59	0.0500	mg/kg wet	2.500		104	70-130			
Methylene Chloride	2.60	0.250	mg/kg wet	2.500		104	70-130			
Naphthalene	2.57	0.0500	mg/kg wet	2.500		103	70-130			
n-Butylbenzene	2.54	0.0500	mg/kg wet	2.500		102	70-130			
n-Propylbenzene	2.61	0.0500	mg/kg wet	2.500		104	70-130			
sec-Butylbenzene	2.53	0.0500	mg/kg wet	2.500		101	70-130			
Styrene	2.52	0.0500	mg/kg wet	2.500		101	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE81302 - 5035

tert-Butylbenzene	2.53	0.0500	mg/kg wet	2.500		101	70-130			
Tertiary-amyl methyl ether	2.56	0.0500	mg/kg wet	2.500		102	70-130			
Tetrachloroethene	2.52	0.0500	mg/kg wet	2.500		101	70-130			
Tetrahydrofuran	2.56	0.500	mg/kg wet	2.500		102	70-130			
Toluene	2.48	0.0500	mg/kg wet	2.500		99	70-130			
trans-1,2-Dichloroethene	2.72	0.0500	mg/kg wet	2.500		109	70-130			
trans-1,3-Dichloropropene	2.31	0.0500	mg/kg wet	2.500		92	70-130			
Trichloroethene	2.56	0.0500	mg/kg wet	2.500		103	70-130			
Vinyl Acetate	2.28	0.250	mg/kg wet	2.500		91	70-130			
Vinyl Chloride	3.01	0.0500	mg/kg wet	2.500		120	70-130			
Xylene O	2.57	0.0500	mg/kg wet	2.500		103	70-130			
Xylene P,M	5.09	0.100	mg/kg wet	5.000		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	2.69		mg/kg wet	2.500		108	70-130			
Surrogate: 4-Bromofluorobenzene	2.70		mg/kg wet	2.500		108	70-130			
Surrogate: Dibromofluoromethane	2.75		mg/kg wet	2.500		110	70-130			
Surrogate: Toluene-d8	2.77		mg/kg wet	2.500		111	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	2.48	0.100	mg/kg wet	2.500		99	70-130	1	20	
1,1,1-Trichloroethane	2.52	0.0500	mg/kg wet	2.500		101	70-130	0.2	20	
1,1,2,2-Tetrachloroethane	2.43	0.0500	mg/kg wet	2.500		97	70-130	0.9	20	
1,1,2-Trichloroethane	2.56	0.0500	mg/kg wet	2.500		102	70-130	1	20	
1,1-Dichloroethane	2.52	0.0500	mg/kg wet	2.500		101	70-130	0.5	20	
1,1-Dichloroethene	2.83	0.0500	mg/kg wet	2.500		113	70-130	2	20	
1,1-Dichloropropene	2.58	0.0500	mg/kg wet	2.500		103	70-130	1	20	
1,2,3-Trichlorobenzene	2.41	0.0500	mg/kg wet	2.500		96	70-130	7	20	
1,2,3-Trichloropropane	2.48	0.0500	mg/kg wet	2.500		99	70-130	2	20	
1,2,4-Trichlorobenzene	2.47	0.0500	mg/kg wet	2.500		99	70-130	6	20	
1,2,4-Trimethylbenzene	2.50	0.0500	mg/kg wet	2.500		100	70-130	3	20	
1,2-Dibromo-3-Chloropropane	2.51	0.300	mg/kg wet	2.500		100	70-130	3	20	
1,2-Dibromoethane	2.57	0.0500	mg/kg wet	2.500		103	70-130	1	20	
1,2-Dichlorobenzene	2.49	0.0500	mg/kg wet	2.500		100	70-130	1	20	
1,2-Dichloroethane	2.57	0.0500	mg/kg wet	2.500		103	70-130	2	20	
1,2-Dichloropropane	2.56	0.0500	mg/kg wet	2.500		102	70-130	0.4	20	
1,3,5-Trimethylbenzene	2.46	0.0500	mg/kg wet	2.500		98	70-130	2	20	
1,3-Dichlorobenzene	2.44	0.0500	mg/kg wet	2.500		98	70-130	3	20	
1,3-Dichloropropane	2.59	0.0500	mg/kg wet	2.500		104	70-130	1	20	
1,4-Dichlorobenzene	2.46	0.0500	mg/kg wet	2.500		99	70-130	0.2	20	
1,4-Dioxane - Screen	58.7	5.00	mg/kg wet	50.00		117	44-241	2	200	
1-Chlorohexane	2.44	0.0500	mg/kg wet	2.500		98	70-130	0.7	20	
2,2-Dichloropropane	2.79	0.100	mg/kg wet	2.500		112	70-130	6	20	
2-Butanone	16.1	1.25	mg/kg wet	12.50		129	70-130	6	20	
2-Chlorotoluene	2.63	0.0500	mg/kg wet	2.500		105	70-130	7	20	
2-Hexanone	14.4	0.500	mg/kg wet	12.50		115	70-130	8	20	
4-Chlorotoluene	2.46	0.0500	mg/kg wet	2.500		99	70-130	0.8	20	
4-Isopropyltoluene	2.33	0.0500	mg/kg wet	2.500		93	70-130	3	20	
4-Methyl-2-Pentanone	13.9	0.500	mg/kg wet	12.50		111	70-130	7	20	



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: MACTEC Engineering & Consulting, Inc.

Client Project ID: Providence Gorham Site

ESS Laboratory Work Order: 0805137

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch BE81302 - 5035										
Acetone	18.5	1.25	mg/kg wet	12.50		148	70-130	34	20	B+, D+
Benzene	2.54	0.0500	mg/kg wet	2.500		102	70-130	0.9	20	
Bromobenzene	2.51	0.0500	mg/kg wet	2.500		100	70-130	0.8	20	
Bromochloromethane	2.42	0.0500	mg/kg wet	2.500		97	70-130	1	20	
Bromodichloromethane	2.74	0.0500	mg/kg wet	2.500		110	70-130	0.9	20	
Bromoform	2.63	0.0500	mg/kg wet	2.500		105	70-130	2	20	
Bromomethane	2.78	0.100	mg/kg wet	2.500		111	70-130	2	20	
Carbon Disulfide	2.90	0.0500	mg/kg wet	2.500		116	70-130	7	20	
Carbon Tetrachloride	2.53	0.0500	mg/kg wet	2.500		101	70-130	1	20	
Chlorobenzene	2.50	0.0500	mg/kg wet	2.500		100	70-130	0.9	20	
Chloroethane	2.56	0.100	mg/kg wet	2.500		102	70-130	0.5	20	
Chloroform	2.51	0.0500	mg/kg wet	2.500		100	70-130	0.2	20	
Chloromethane	2.23	0.100	mg/kg wet	2.500		89	70-130	0.6	20	
cis-1,2-Dichloroethene	2.75	0.0500	mg/kg wet	2.500		110	70-130	1	20	
cis-1,3-Dichloropropene	2.58	0.0500	mg/kg wet	2.500		103	70-130	1	20	
Dibromochloromethane	2.67	0.0500	mg/kg wet	2.500		107	70-130	0.5	20	
Dibromomethane	2.55	0.0500	mg/kg wet	2.500		102	70-130	0.8	20	
Dichlorodifluoromethane	2.02	0.0500	mg/kg wet	2.500		81	70-130	2	20	
Diethyl Ether	2.71	0.0500	mg/kg wet	2.500		108	70-130	2	20	
Di-Isopropyl ether	2.57	0.0500	mg/kg wet	2.500		103	70-130	0	20	
Ethyl tertiary-butyl ether	2.54	0.0500	mg/kg wet	2.500		102	70-130	1	20	
Ethylbenzene	2.50	0.0500	mg/kg wet	2.500		100	70-130	2	20	
Hexachlorobutadiene	2.59	0.0500	mg/kg wet	2.500		104	70-130	6	20	
Isopropylbenzene	2.22	0.0500	mg/kg wet	2.500		89	70-130	1	20	
Methyl tert-Butyl Ether	2.66	0.0500	mg/kg wet	2.500		106	70-130	3	20	
Methylene Chloride	2.63	0.250	mg/kg wet	2.500		105	70-130	1	20	
Naphthalene	2.46	0.0500	mg/kg wet	2.500		98	70-130	5	20	
n-Butylbenzene	2.43	0.0500	mg/kg wet	2.500		97	70-130	4	20	
n-Propylbenzene	2.41	0.0500	mg/kg wet	2.500		96	70-130	8	20	
sec-Butylbenzene	2.48	0.0500	mg/kg wet	2.500		99	70-130	2	20	
Styrene	2.49	0.0500	mg/kg wet	2.500		100	70-130	1	20	
tert-Butylbenzene	2.26	0.0500	mg/kg wet	2.500		90	70-130	11	20	
Tertiary-amyl methyl ether	2.61	0.0500	mg/kg wet	2.500		104	70-130	2	20	
Tetrachloroethene	3.22	0.0500	mg/kg wet	2.500		129	70-130	24	20	D+
Tetrahydrofuran	2.71	0.500	mg/kg wet	2.500		109	70-130	6	20	
Toluene	2.47	0.0500	mg/kg wet	2.500		99	70-130	0.5	20	
trans-1,2-Dichloroethene	2.72	0.0500	mg/kg wet	2.500		109	70-130	0.04	20	
trans-1,3-Dichloropropene	2.34	0.0500	mg/kg wet	2.500		94	70-130	1	20	
Trichloroethene	2.58	0.0500	mg/kg wet	2.500		103	70-130	0.7	20	
Vinyl Acetate	2.18	0.250	mg/kg wet	2.500		87	70-130	5	20	
Vinyl Chloride	2.99	0.0500	mg/kg wet	2.500		120	70-130	0.6	20	
Xylene O	2.50	0.0500	mg/kg wet	2.500		100	70-130	3	20	
Xylene P,M	5.04	0.100	mg/kg wet	5.000		101	70-130	1	20	
Surrogate: 1,2-Dichloroethane-d4	2.78		mg/kg wet	2.500		111	70-130			
Surrogate: 4-Bromofluorobenzene	2.70		mg/kg wet	2.500		108	70-130			
Surrogate: Dibromofluoromethane	2.76		mg/kg wet	2.500		110	70-130			



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Methanol

Batch BE81302 - 5035

Surrogate: Toluene-d8	2.75		mg/kg wet	2.500		110	70-130			
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ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

Notes and Definitions

- U Analyte included in the analysis, but not detected
- J Reported between MDL and MRL; Estimated value.
- D+ Relative percent difference for duplicate is outside of criteria.
- D Diluted.
- B+ Blank Spike recovery is above upper control limit.
- ND Analyte NOT DETECTED above the detection limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

ESS LABORATORY CERTIFICATIONS

U.S. Army Corps of Engineers
Soil and Water

Navy Installation Restoration QA Program
Soil and Water

Rhode Island: A-179

Connecticut: PH-0750

Maine: RI002

Massachusetts: M-RI002

New Hampshire (NELAP accredited): 242405
Potable Water
Non Potable Water

New York (NELAP accredited): 11313
Potable Water
Non Potable Water
Solid and Hazardous Waste

United States Department of Agriculture
Soil Permit: S-54210

New Jersey (NELAP accredited): RI002
Potable Water
Non Potable Water
Soil and Hazardous Waste

Maryland: 301
Potable Water

ESS Laboratory

Division of Thielsch Engineering, Inc.
 185 Frances Avenue, Cranston, RI 02910-2211
 Tel. (401) 461-7181 Fax (401) 461-4486
 www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time Standard Other _____
 If faster than 5 days, prior approval by laboratory is required # _____
 State where samples were collected from:
 MA (R) CT NH NJ NY ME Other _____
 Is this project for any of the following:
 MA-MCP Navy USACE Other _____

Reporting Limits Industrial/Commercial Direct Exposure
 Electronic Deliverable Yes No Other E-Data
 Format: Excel Access PDF Other E-Data
 ESS LAB PROJECT ID: 0805137

Co. Name: **MACTEC**
 Contact Person: **Dave Heislein**
 City: **Wakefield** State: **MA**
 Telephone #: **781 245 6606** Fax #: _____
 Project #: **3650050041.20** Project Name (20 Char. or less): **Gorham**
 Address: **107 Audubon Rd** PO#: _____
 Zip: **01880**
 Email Address: **dheislein@mactec.com**

ESS LAB Sample#	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Type of Containers	Number of Containers	Type of Containers	8269 8081 8015 VPH	8071 8015 MTEB/BTEX GRO	8100 TP1 DRO	EPH EPAHs w/PAHs 4 Diesel	8081 8082 608 PCB Pesticides PCB	8270 PAH SVOA 625	RCRAS RCRA8 PP13 TAL23	TCLP-RCRA8 NBC7	MCP- METALS (13) w/Hg	% Solids	TID HeadSpace (ppm)
	5-9-08	0910	X	S	S	SB1010	6	2 1/4	X											X 2.1	
	↓	1045	X	S	S	SB1107	6	2 1/4	X											X 0.5	
	↓	1230	X	S	S	SB1209	6	2 1/4	X											X 2.5	
	↓	1445	X	S	S	SB1314	6	2 1/4	X											X 0.9	

Container Type: P-Poly G-Glass S-Sterile V-VOA Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters
 Cooler Present Yes No Internal Use Only
 Seals Intact Yes No NA: [] Pickup [] Technicians []
 Cooler Temp: **37**
 Preservation Code: 1- NP, 2- HCl, 3- H₂SO₄, 4- HNO₃, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9-
 Sampled by: **Phil Muller**
 Comments:
 Relinquished by: (Signature) **Phil Muller** Date/Time **5-9-08 11:48** Received by: (Signature) _____ Date/Time _____
 Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____



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: 0805137

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: May 15, 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 May 09, 2008 for the analyses specified on the enclosed Chain of Custody Record.

Laboratory ID	Matrix	Client SampleID
0805137-01	Soil	SB1010
0805137-02	Soil	SB1107
0805137-03	Soil	SB1209
0805137-04	Soil	SB1314



ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 0805137

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Methanol

BE81302-BSD1 **Blank Spike recovery is above upper control limit.**

Acetone

BE81302-BSD1 **Relative percent difference for duplicate is outside of criteria.**

Acetone, Tetrachloroethene

No other observations noted.

End of Project Narrative.

VOA Data Package

VOA

Sample Data

ESS Laboratory

SDG: 0805137

CLASS: MSVOA

METHOD: 8260B

ANALYSES DATA PACKAGE COVER PAGE

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Client Sample Id:

Lab Sample Id:

SB1010

0805137-01

SB1107

0805137-02

SB1209

0805137-03

SB1314

0805137-04

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____

Name: _____

Date: _____

Title: _____

METHOD DETECTION AND REPORTING LIMITS

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Instrument: VMS4

Analyte	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	0.0330	0.100	mg/kg
1,1,1-Trichloroethane	0.0130	0.0500	mg/kg
1,1,2,2-Tetrachloroethane	0.0150	0.0500	mg/kg
1,1,2-Trichloroethane	0.0160	0.0500	mg/kg
1,1-Dichloroethane	0.0140	0.0500	mg/kg
1,1-Dichloroethene	0.0120	0.0500	mg/kg
1,1-Dichloropropene	0.0130	0.0500	mg/kg
1,2,3-Trichlorobenzene	0.0150	0.0500	mg/kg
1,2,3-Trichloropropane	0.0150	0.0500	mg/kg
1,2,4-Trichlorobenzene	0.0110	0.0500	mg/kg
1,2,4-Trimethylbenzene	0.0120	0.0500	mg/kg
1,2-Dibromo-3-Chloropropane	0.100	0.300	mg/kg
1,2-Dibromoethane	0.0110	0.0500	mg/kg
1,2-Dichlorobenzene	0.0110	0.0500	mg/kg
1,2-Dichloroethane	0.0110	0.0500	mg/kg
1,2-Dichloropropane	0.0140	0.0500	mg/kg
1,3,5-Trimethylbenzene	0.0130	0.0500	mg/kg
1,3-Dichlorobenzene	0.0120	0.0500	mg/kg
1,3-Dichloropropane	0.0100	0.0500	mg/kg
1,4-Dichlorobenzene	0.0130	0.0500	mg/kg
1,4-Dioxane - Screen	2.50	5.00	mg/kg
1-Chlorohexane	0.0130	0.0500	mg/kg
2,2-Dichloropropane	0.0250	0.100	mg/kg
2-Butanone	0.250	1.25	mg/kg
2-Chlorotoluene	0.0150	0.0500	mg/kg
2-Hexanone	0.0700	0.500	mg/kg
4-Chlorotoluene	0.0120	0.0500	mg/kg
4-Isopropyltoluene	0.0130	0.0500	mg/kg
4-Methyl-2-Pentanone	0.0700	0.500	mg/kg
Acetone	0.400	1.25	mg/kg
Benzene	0.0150	0.0500	mg/kg
Bromobenzene	0.0110	0.0500	mg/kg
Bromochloromethane	0.0150	0.0500	mg/kg
Bromodichloromethane	0.0140	0.0500	mg/kg
Bromoform	0.0160	0.0500	mg/kg
Bromomethane	0.0250	0.100	mg/kg
Carbon Disulfide	0.0120	0.0500	mg/kg

METHOD DETECTION AND REPORTING LIMITS

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Instrument: VMS4

Analyte	MDL	MRL	Units
Carbon Tetrachloride	0.0140	0.0500	mg/kg
Chlorobenzene	0.0110	0.0500	mg/kg
Chloroethane	0.0330	0.100	mg/kg
Chloroform	0.0120	0.0500	mg/kg
Chloromethane	0.0160	0.100	mg/kg
cis-1,2-Dichloroethene	0.0150	0.0500	mg/kg
cis-1,3-Dichloropropene	0.0110	0.0500	mg/kg
Dibromochloromethane	0.0100	0.0500	mg/kg
Dibromomethane	0.0150	0.0500	mg/kg
Dichlorodifluoromethane	0.0120	0.0500	mg/kg
Diethyl Ether	0.0150	0.0500	mg/kg
Di-isopropyl ether	0.0120	0.0500	mg/kg
Ethyl tertiary-butyl ether	0.0100	0.0500	mg/kg
Ethylbenzene	0.0120	0.0500	mg/kg
Hexachlorobutadiene	0.0160	0.0500	mg/kg
Isopropylbenzene	0.0110	0.0500	mg/kg
Methyl tert-Butyl Ether	0.0120	0.0500	mg/kg
Methylene Chloride	0.0200	0.250	mg/kg
Naphthalene	0.0150	0.0500	mg/kg
n-Butylbenzene	0.0120	0.0500	mg/kg
n-Propylbenzene	0.0130	0.0500	mg/kg
sec-Butylbenzene	0.0130	0.0500	mg/kg
Styrene	0.0130	0.0500	mg/kg
tert-Butylbenzene	0.0120	0.0500	mg/kg
Tertiary-amyl methyl ether	0.0150	0.0500	mg/kg
Tetrachloroethene	0.0160	0.0500	mg/kg
Tetrahydrofuran	0.130	0.500	mg/kg
Toluene	0.0140	0.0500	mg/kg
trans-1,2-Dichloroethene	0.0160	0.0500	mg/kg
trans-1,3-Dichloropropene	0.0120	0.0500	mg/kg
Trichloroethene	0.0120	0.0500	mg/kg
Trichlorofluoromethane	0.0140	0.0500	mg/kg
Vinyl Acetate	0.0200	0.250	mg/kg
Vinyl Chloride	0.0120	0.0500	mg/kg
Xylene O	0.0100	0.0500	mg/kg
Xylene P,M	0.0250	0.100	mg/kg

ORGANIC ANALYSIS DATA SHEET

8260B

SB1010

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805137-01</u>
		File ID:	<u>M424135.D</u>
Sampled:	<u>05/09/08 09:10</u>	Prepared:	<u>05/13/08 07:00</u>
		Analyzed:	<u>05/13/08 13:30</u>
Solids:	<u>90.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>14.5 g / 15 ml</u>
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	0.126	U
71-55-6	1,1,1-Trichloroethane	1	0.0176	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.0630	U
79-00-5	1,1,2-Trichloroethane	1	0.0630	U
75-34-3	1,1-Dichloroethane	1	0.0630	U
75-35-4	1,1-Dichloroethene	1	0.0630	U
563-58-6	1,1-Dichloropropene	1	0.0630	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0630	U
96-18-4	1,2,3-Trichloropropane	1	0.0630	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0630	U
95-63-6	1,2,4-Trimethylbenzene	1	0.0630	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	0.378	U
106-93-4	1,2-Dibromoethane	1	0.0630	U
95-50-1	1,2-Dichlorobenzene	1	0.0630	U
107-06-2	1,2-Dichloroethane	1	0.0630	U
78-87-5	1,2-Dichloropropane	1	0.0630	U
108-67-8	1,3,5-Trimethylbenzene	1	0.0630	U
541-73-1	1,3-Dichlorobenzene	1	0.0630	U
142-28-9	1,3-Dichloropropane	1	0.0630	U
106-46-7	1,4-Dichlorobenzene	1	0.0630	U
123-91-1	1,4-Dioxane - Screen	1	6.30	U
544-10-5	1-Chlorohexane	1	0.0630	U
594-20-7	2,2-Dichloropropane	1	0.126	U
78-93-3	2-Butanone	1	1.58	U
95-49-8	2-Chlorotoluene	1	0.0630	U
591-78-6	2-Hexanone	1	0.630	U
106-43-4	4-Chlorotoluene	1	0.0630	U
99-87-6	4-Isopropyltoluene	1	0.0630	U
108-10-1	4-Methyl-2-Pentanone	1	0.630	U
67-64-1	Acetone	1	1.58	U
71-43-2	Benzene	1	0.0630	U
108-86-1	Bromobenzene	1	0.0630	U
74-97-5	Bromochloromethane	1	0.0630	U
75-27-4	Bromodichloromethane	1	0.0630	U
75-25-2	Bromoform	1	0.0630	U
74-83-9	Bromomethane	1	0.126	U
75-15-0	Carbon Disulfide	1	0.0630	U
56-23-5	Carbon Tetrachloride	1	0.0630	U
108-90-7	Chlorobenzene	1	0.0630	U
75-00-3	Chloroethane	1	0.126	U

ORGANIC ANALYSIS DATA SHEET

8260B

SB1010

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805137</u>
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>
Matrix: <u>Soil</u>	Laboratory ID: <u>0805137-01</u>
	File ID: <u>M424135.D</u>
Sampled: <u>05/09/08 09:10</u>	Prepared: <u>05/13/08 07:00</u>
	Analyzed: <u>05/13/08 13:30</u>
Solids: <u>90.00</u>	Preparation: <u>5035</u>
	Initial/Final: <u>14.5 g / 15 ml</u>
Batch: <u>BE81302</u>	Sequence: <u>BRE0142</u>
	Calibration: <u>0805007</u>
	Instrument: <u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0630	U
74-87-3	Chloromethane	1	0.126	U
156-59-2	cis-1,2-Dichloroethene	1	0.0466	J
10061-01-5	cis-1,3-Dichloropropene	1	0.0630	U
124-48-1	Dibromochloromethane	1	0.0630	U
74-95-3	Dibromomethane	1	0.0630	U
75-71-8	Dichlorodifluoromethane	1	0.0630	U
60-29-7	Diethyl Ether	1	0.0630	U
108-20-3	Di-isopropyl ether	1	0.0630	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0630	U
100-41-4	Ethylbenzene	1	0.0630	U
87-68-3	Hexachlorobutadiene	1	0.0630	U
98-82-8	Isopropylbenzene	1	0.0630	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0630	U
75-09-2	Methylene Chloride	1	0.315	U
91-20-3	Naphthalene	1	0.0630	U
104-51-8	n-Butylbenzene	1	0.0630	U
103-65-1	n-Propylbenzene	1	0.0630	U
135-98-8	sec-Butylbenzene	1	0.0630	U
100-42-5	Styrene	1	0.0630	U
98-06-6	tert-Butylbenzene	1	0.0630	U
994-05-8	Tertiary-amyl methyl ether	1	0.0630	U
127-18-4	Tetrachloroethene	1	0.0630	U
109-99-9	Tetrahydrofuran	1	0.630	U
108-88-3	Toluene	1	0.0240	J
156-60-5	trans-1,2-Dichloroethene	1	0.0630	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0630	U
79-01-6	Trichloroethene	1	0.0328	J
75-69-4	Trichlorofluoromethane	1	0.0630	U
108-05-4	Vinyl Acetate	1	0.315	U
75-01-4	Vinyl Chloride	1	0.0630	U
95-47-6	Xylene O	1	0.0630	U
1330-20-7	Xylene P,M	1	0.126	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.874	2.61	91	70 - 130	D
4-Bromofluorobenzene	2.874	2.66	93	70 - 130	D
Dibromofluoromethane	2.874	2.49	87	70 - 130	D
Toluene-d8	2.874	2.74	95	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB1010

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805137-01</u>
		File ID:	<u>M424135.D</u>
Sampled:	<u>05/09/08 09:10</u>	Prepared:	<u>05/13/08 07:00</u>
		Analyzed:	<u>05/13/08 13:30</u>
Solids:	<u>90.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>14.5 g / 15 ml</u>
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5299538	6.46	5359420	6.46	
Chlorobenzene-d5	4417188	11.82	4407433	11.82	
1,4-Dichlorobenzene-D4	2345650	16.26	2433029	16.26	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

8260B

SB1107

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805137-02</u>
		File ID:	<u>M424136.D</u>
Sampled:	<u>05/09/08 10:45</u>	Prepared:	<u>05/13/08 07:00</u>
		Analyzed:	<u>05/13/08 14:00</u>
Solids:	<u>91.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>19.6 g / 15 ml</u>
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	0.0940	U
71-55-6	1,1,1-Trichloroethane	1	0.0470	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.0470	U
79-00-5	1,1,2-Trichloroethane	1	0.0470	U
75-34-3	1,1-Dichloroethane	1	0.0470	U
75-35-4	1,1-Dichloroethene	1	0.0470	U
563-58-6	1,1-Dichloropropene	1	0.0470	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0470	U
96-18-4	1,2,3-Trichloropropane	1	0.0470	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0470	U
95-63-6	1,2,4-Trimethylbenzene	1	0.0470	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	0.282	U
106-93-4	1,2-Dibromoethane	1	0.0470	U
95-50-1	1,2-Dichlorobenzene	1	0.0470	U
107-06-2	1,2-Dichloroethane	1	0.0470	U
78-87-5	1,2-Dichloropropane	1	0.0470	U
108-67-8	1,3,5-Trimethylbenzene	1	0.0470	U
541-73-1	1,3-Dichlorobenzene	1	0.0470	U
142-28-9	1,3-Dichloropropane	1	0.0470	U
106-46-7	1,4-Dichlorobenzene	1	0.0470	U
123-91-1	1,4-Dioxane - Screen	1	4.70	U
544-10-5	1-Chlorohexane	1	0.0470	U
594-20-7	2,2-Dichloropropane	1	0.0940	U
78-93-3	2-Butanone	1	1.17	U
95-49-8	2-Chlorotoluene	1	0.0470	U
591-78-6	2-Hexanone	1	0.470	U
106-43-4	4-Chlorotoluene	1	0.0470	U
99-87-6	4-Isopropyltoluene	1	0.0470	U
108-10-1	4-Methyl-2-Pentanone	1	0.470	U
67-64-1	Acetone	1	1.17	U
71-43-2	Benzene	1	0.0470	U
108-86-1	Bromobenzene	1	0.0470	U
74-97-5	Bromochloromethane	1	0.0470	U
75-27-4	Bromodichloromethane	1	0.0470	U
75-25-2	Bromoform	1	0.0470	U
74-83-9	Bromomethane	1	0.0940	U
75-15-0	Carbon Disulfide	1	0.0470	U
56-23-5	Carbon Tetrachloride	1	0.0470	U
108-90-7	Chlorobenzene	1	0.0470	U
75-00-3	Chloroethane	1	0.0940	U

ORGANIC ANALYSIS DATA SHEET

8260B

SB1107

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805137</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Soil</u>	Laboratory ID: <u>0805137-02</u>	File ID: <u>M424136.D</u>
Sampled: <u>05/09/08 10:45</u>	Prepared: <u>05/13/08 07:00</u>	Analyzed: <u>05/13/08 14:00</u>
Solids: <u>91.00</u>	Preparation: <u>5035</u>	Initial/Final: <u>19.6 g / 15 ml</u>
Batch: <u>BE81302</u>	Sequence: <u>BRE0142</u>	Calibration: <u>0805007</u> Instrument: <u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0470	U
74-87-3	Chloromethane	1	0.0940	U
156-59-2	cis-1,2-Dichloroethene	1	0.0470	U
10061-01-5	cis-1,3-Dichloropropene	1	0.0470	U
124-48-1	Dibromochloromethane	1	0.0470	U
74-95-3	Dibromomethane	1	0.0470	U
75-71-8	Dichlorodifluoromethane	1	0.0470	U
60-29-7	Diethyl Ether	1	0.0470	U
108-20-3	Di-isopropyl ether	1	0.0470	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0470	U
100-41-4	Ethylbenzene	1	0.0470	U
87-68-3	Hexachlorobutadiene	1	0.0470	U
98-82-8	Isopropylbenzene	1	0.0470	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0470	U
75-09-2	Methylene Chloride	1	0.235	U
91-20-3	Naphthalene	1	0.0470	U
104-51-8	n-Butylbenzene	1	0.0470	U
103-65-1	n-Propylbenzene	1	0.0470	U
135-98-8	sec-Butylbenzene	1	0.0470	U
100-42-5	Styrene	1	0.0470	U
98-06-6	tert-Butylbenzene	1	0.0470	U
994-05-8	Tertiary-amyl methyl ether	1	0.0470	U
127-18-4	Tetrachloroethene	1	0.0470	U
109-99-9	Tetrahydrofuran	1	0.470	U
108-88-3	Toluene	1	0.0169	J
156-60-5	trans-1,2-Dichloroethene	1	0.0470	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0470	U
79-01-6	Trichloroethene	1	0.0470	U
75-69-4	Trichlorofluoromethane	1	0.0470	U
108-05-4	Vinyl Acetate	1	0.235	U
75-01-4	Vinyl Chloride	1	0.0470	U
95-47-6	Xylene O	1	0.0470	U
1330-20-7	Xylene P,M	1	0.0940	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.102	1.96	93	70 - 130	D
4-Bromofluorobenzene	2.102	1.99	95	70 - 130	D
Dibromofluoromethane	2.102	2.04	97	70 - 130	D
Toluene-d8	2.102	2.04	97	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB1107

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>				
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>				
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805137-02</u>	File ID:	<u>M424136.D</u>		
Sampled:	<u>05/09/08 10:45</u>	Prepared:	<u>05/13/08 07:00</u>	Analyzed:	<u>05/13/08 14:00</u>		
Solids:	<u>91.00</u>	Preparation:	<u>5035</u>	Initial/Final:	<u>19.6 g / 15 ml</u>		
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>	Calibration:	<u>0805007</u>	Instrument:	<u>VMS4</u>

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5268728	6.46	5359420	6.46	
Chlorobenzene-d5	4380933	11.83	4407433	11.82	
1,4-Dichlorobenzene-D4	2324658	16.27	2433029	16.26	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

8260B

SB1209

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805137-03</u>
		File ID:	<u>M424137.D</u>
Sampled:	<u>05/09/08 12:30</u>	Prepared:	<u>05/13/08 07:00</u>
		Analyzed:	<u>05/13/08 14:29</u>
Solids:	<u>87.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>16.3 g / 15 ml</u>
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	0.121	U
71-55-6	1,1,1-Trichloroethane	1	0.0567	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.0604	U
79-00-5	1,1,2-Trichloroethane	1	0.0604	U
75-34-3	1,1-Dichloroethane	1	0.0604	U
75-35-4	1,1-Dichloroethene	1	0.0604	U
563-58-6	1,1-Dichloropropene	1	0.0604	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0604	U
96-18-4	1,2,3-Trichloropropane	1	0.0604	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0604	U
95-63-6	1,2,4-Trimethylbenzene	1	0.0604	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	0.362	U
106-93-4	1,2-Dibromoethane	1	0.0604	U
95-50-1	1,2-Dichlorobenzene	1	0.0604	U
107-06-2	1,2-Dichloroethane	1	0.0604	U
78-87-5	1,2-Dichloropropane	1	0.0604	U
108-67-8	1,3,5-Trimethylbenzene	1	0.0604	U
541-73-1	1,3-Dichlorobenzene	1	0.0604	U
142-28-9	1,3-Dichloropropane	1	0.0604	U
106-46-7	1,4-Dichlorobenzene	1	0.0604	U
123-91-1	1,4-Dioxane - Screen	1	6.04	U
544-10-5	1-Chlorohexane	1	0.0604	U
594-20-7	2,2-Dichloropropane	1	0.121	U
78-93-3	2-Butanone	1	1.51	U
95-49-8	2-Chlorotoluene	1	0.0604	U
591-78-6	2-Hexanone	1	0.604	U
106-43-4	4-Chlorotoluene	1	0.0604	U
99-87-6	4-Isopropyltoluene	1	0.0604	U
108-10-1	4-Methyl-2-Pentanone	1	0.604	U
67-64-1	Acetone	1	1.51	U
71-43-2	Benzene	1	0.0604	U
108-86-1	Bromobenzene	1	0.0604	U
74-97-5	Bromochloromethane	1	0.0604	U
75-27-4	Bromodichloromethane	1	0.0604	U
75-25-2	Bromoform	1	0.0604	U
74-83-9	Bromomethane	1	0.121	U
75-15-0	Carbon Disulfide	1	0.0604	U
56-23-5	Carbon Tetrachloride	1	0.0604	U
108-90-7	Chlorobenzene	1	0.0604	U
75-00-3	Chloroethane	1	0.121	U

ORGANIC ANALYSIS DATA SHEET

8260B

SB1209

Laboratory: ESS Laboratory SDG: 0805137
 Client: MACTEC Engineering & Consulting, Inc. Project: Providence Gorham Site
 Matrix: Soil Laboratory ID: 0805137-03 File ID: M424137.D
 Sampled: 05/09/08 12:30 Prepared: 05/13/08 07:00 Analyzed: 05/13/08 14:29
 Solids: 87.00 Preparation: 5035 Initial/Final: 16.3 g / 15 ml
 Batch: BE81302 Sequence: BRE0142 Calibration: 0805007 Instrument: VMS4

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0604	U
74-87-3	Chloromethane	1	0.121	U
156-59-2	cis-1,2-Dichloroethene	1	0.0604	U
10061-01-5	cis-1,3-Dichloropropene	1	0.0604	U
124-48-1	Dibromochloromethane	1	0.0604	U
74-95-3	Dibromomethane	1	0.0604	U
75-71-8	Dichlorodifluoromethane	1	0.0604	U
60-29-7	Diethyl Ether	1	0.0604	U
108-20-3	Di-isopropyl ether	1	0.0604	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0604	U
100-41-4	Ethylbenzene	1	0.0604	U
87-68-3	Hexachlorobutadiene	1	0.0604	U
98-82-8	Isopropylbenzene	1	0.0604	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0604	U
75-09-2	Methylene Chloride	1	0.302	U
91-20-3	Naphthalene	1	0.0604	U
104-51-8	n-Butylbenzene	1	0.0604	U
103-65-1	n-Propylbenzene	1	0.0604	U
135-98-8	sec-Butylbenzene	1	0.0604	U
100-42-5	Styrene	1	0.0604	U
98-06-6	tert-Butylbenzene	1	0.0604	U
994-05-8	Tertiary-amyl methyl ether	1	0.0604	U
127-18-4	Tetrachloroethene	1	0.0604	U
109-99-9	Tetrahydrofuran	1	0.604	U
108-88-3	Toluene	1	0.0604	U
156-60-5	trans-1,2-Dichloroethene	1	0.0604	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0604	U
79-01-6	Trichloroethene	1	0.142	
75-69-4	Trichlorofluoromethane	1	0.0604	U
108-05-4	Vinyl Acetate	1	0.302	U
75-01-4	Vinyl Chloride	1	0.0604	U
95-47-6	Xylene O	1	0.0604	U
1330-20-7	Xylene P,M	1	0.121	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.644	2.54	96	70 - 130	D
4-Bromofluorobenzene	2.644	2.59	98	70 - 130	D
Dibromofluoromethane	2.644	2.22	84	70 - 130	D
Toluene-d8	2.644	2.68	101	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB1209

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805137</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Soil</u>	Laboratory ID: <u>0805137-03</u>	File ID: <u>M424137.D</u>
Sampled: <u>05/09/08 12:30</u>	Prepared: <u>05/13/08 07:00</u>	Analyzed: <u>05/13/08 14:29</u>
Solids: <u>87.00</u>	Preparation: <u>5035</u>	Initial/Final: <u>16.3 g / 15 ml</u>
Batch: <u>BE81302</u>	Sequence: <u>BRE0142</u>	Calibration: <u>0805007</u>
		Instrument: <u>VMS4</u>

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5238911	6.46	5359420	6.46	
Chlorobenzene-d5	4347346	11.83	4407433	11.82	
1,4-Dichlorobenzene-D4	2313574	16.27	2433029	16.26	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

8260B

SB1314

Laboratory: ESS Laboratory SDG: 0805137
 Client: MACTEC Engineering & Consulting, Inc. Project: Providence Gorham Site
 Matrix: Soil Laboratory ID: 0805137-04 File ID: M424138.D
 Sampled: 05/09/08 14:45 Prepared: 05/13/08 07:00 Analyzed: 05/13/08 14:58
 Solids: 95.00 Preparation: 5035 Initial/Final: 16.6 g / 15 ml
 Batch: BE81302 Sequence: BRE0142 Calibration: 0805007 Instrument: VMS4

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
630-20-6	1,1,1,2-Tetrachloroethane	1	0.100	U
71-55-6	1,1,1-Trichloroethane	1	0.0271	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.0502	U
79-00-5	1,1,2-Trichloroethane	1	0.0502	U
75-34-3	1,1-Dichloroethane	1	0.0502	U
75-35-4	1,1-Dichloroethene	1	0.0502	U
563-58-6	1,1-Dichloropropene	1	0.0502	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0502	U
96-18-4	1,2,3-Trichloropropane	1	0.0502	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0502	U
95-63-6	1,2,4-Trimethylbenzene	1	0.0502	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	0.301	U
106-93-4	1,2-Dibromoethane	1	0.0502	U
95-50-1	1,2-Dichlorobenzene	1	0.0502	U
107-06-2	1,2-Dichloroethane	1	0.0502	U
78-87-5	1,2-Dichloropropane	1	0.0502	U
108-67-8	1,3,5-Trimethylbenzene	1	0.0502	U
541-73-1	1,3-Dichlorobenzene	1	0.0502	U
142-28-9	1,3-Dichloropropane	1	0.0502	U
106-46-7	1,4-Dichlorobenzene	1	0.0502	U
123-91-1	1,4-Dioxane - Screen	1	5.02	U
544-10-5	1-Chlorohexane	1	0.0502	U
594-20-7	2,2-Dichloropropane	1	0.100	U
78-93-3	2-Butanone	1	1.25	U
95-49-8	2-Chlorotoluene	1	0.0502	U
591-78-6	2-Hexanone	1	0.502	U
106-43-4	4-Chlorotoluene	1	0.0502	U
99-87-6	4-Isopropyltoluene	1	0.0502	U
108-10-1	4-Methyl-2-Pentanone	1	0.502	U
67-64-1	Acetone	1	1.25	U
71-43-2	Benzene	1	0.0502	U
108-86-1	Bromobenzene	1	0.0502	U
74-97-5	Bromochloromethane	1	0.0502	U
75-27-4	Bromodichloromethane	1	0.0502	U
75-25-2	Bromoform	1	0.0502	U
74-83-9	Bromomethane	1	0.100	U
75-15-0	Carbon Disulfide	1	0.0502	U
56-23-5	Carbon Tetrachloride	1	0.0502	U
108-90-7	Chlorobenzene	1	0.0502	U
75-00-3	Chloroethane	1	0.100	U

ORGANIC ANALYSIS DATA SHEET

8260B

SB1314

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>0805137-04</u>
		File ID:	<u>M424138.D</u>
Sampled:	<u>05/09/08 14:45</u>	Prepared:	<u>05/13/08 07:00</u>
		Analyzed:	<u>05/13/08 14:58</u>
Solids:	<u>95.00</u>	Preparation:	<u>5035</u>
		Initial/Final:	<u>16.6 g / 15 ml</u>
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>
		Calibration:	<u>0805007</u>
		Instrument:	<u>VMS4</u>

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
67-66-3	Chloroform	1	0.0502	U
74-87-3	Chloromethane	1	0.100	U
156-59-2	cis-1,2-Dichloroethene	1	0.0502	U
10061-01-5	cis-1,3-Dichloropropene	1	0.0502	U
124-48-1	Dibromochloromethane	1	0.0502	U
74-95-3	Dibromomethane	1	0.0502	U
75-71-8	Dichlorodifluoromethane	1	0.0502	U
60-29-7	Diethyl Ether	1	0.0502	U
108-20-3	Di-isopropyl ether	1	0.0502	U
637-92-3	Ethyl tertiary-butyl ether	1	0.0502	U
100-41-4	Ethylbenzene	1	0.0502	U
87-68-3	Hexachlorobutadiene	1	0.0502	U
98-82-8	Isopropylbenzene	1	0.0502	U
1634-04-4	Methyl tert-Butyl Ether	1	0.0502	U
75-09-2	Methylene Chloride	1	0.251	U
91-20-3	Naphthalene	1	0.0502	U
104-51-8	n-Butylbenzene	1	0.0502	U
103-65-1	n-Propylbenzene	1	0.0502	U
135-98-8	sec-Butylbenzene	1	0.0502	U
100-42-5	Styrene	1	0.0502	U
98-06-6	tert-Butylbenzene	1	0.0502	U
994-05-8	Tertiary-amyl methyl ether	1	0.0502	U
127-18-4	Tetrachloroethene	1	0.0502	U
109-99-9	Tetrahydrofuran	1	0.502	U
108-88-3	Toluene	1	0.0502	U
156-60-5	trans-1,2-Dichloroethene	1	0.0502	U
10061-02-6	trans-1,3-Dichloropropene	1	0.0502	U
79-01-6	Trichloroethene	1	0.146	
75-69-4	Trichlorofluoromethane	1	0.0502	U
108-05-4	Vinyl Acetate	1	0.251	U
75-01-4	Vinyl Chloride	1	0.0502	U
95-47-6	Xylene O	1	0.0502	U
1330-20-7	Xylene P,M	1	0.100	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.378	2.09	88	70 - 130	D
4-Bromofluorobenzene	2.378	2.14	90	70 - 130	D
Dibromofluoromethane	2.378	2.13	89	70 - 130	D
Toluene-d8	2.378	2.19	92	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
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ORGANIC ANALYSIS DATA SHEET

8260B

SB1314

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805137</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Soil</u>	Laboratory ID: <u>0805137-04</u>	File ID: <u>M424138.D</u>
Sampled: <u>05/09/08 14:45</u>	Prepared: <u>05/13/08 07:00</u>	Analyzed: <u>05/13/08 14:58</u>
Solids: <u>95.00</u>	Preparation: <u>5035</u>	Initial/Final: <u>16.6 g / 15 ml</u>
Batch: <u>BE81302</u>	Sequence: <u>BRE0142</u>	Calibration: <u>0805007</u>
		Instrument: <u>VMS4</u>

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5275562	6.46	5359420	6.46	
Chlorobenzene-d5	4353492	11.82	4407433	11.82	
1,4-Dichlorobenzene-D4	2335964	16.26	2433029	16.26	

* Values outside of QC limits

VOA Quality Control Data

PREPARATION BATCH SUMMARY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Batch: BE81302 Batch Matrix: Solid

Preparation: 5035

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SB1010	0805137-01	M424135.D	05/13/08 07:00	Data Package
SB1107	0805137-02	M424136.D	05/13/08 07:00	Data Package
SB1209	0805137-03	M424137.D	05/13/08 07:00	Data Package
SB1314	0805137-04	M424138.D	05/13/08 07:00	Data Package
Blank	BE81302-BLK1	M424130.D	05/13/08 07:00	
LCS	BE81302-BS1	M424126.D	05/13/08 07:00	
LCS Dup	BE81302-BSD1	M424127.D	05/13/08 07:00	

METHOD BLANK DATA SHEET

8260B

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BE81302-BLK1</u>
Prepared:	<u>05/13/08 07:00</u>	Preparation:	<u>5035</u>
Analyzed:	<u>05/13/08 11:03</u>	Instrument:	<u>VMS4</u>
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>
		Calibration:	<u>0805007</u>

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
630-20-6	1,1,1,2-Tetrachloroethane	0.100	U
71-55-6	1,1,1-Trichloroethane	0.0500	U
79-34-5	1,1,2,2-Tetrachloroethane	0.0500	U
79-00-5	1,1,2-Trichloroethane	0.0500	U
75-34-3	1,1-Dichloroethane	0.0500	U
75-35-4	1,1-Dichloroethene	0.0500	U
563-58-6	1,1-Dichloropropene	0.0500	U
87-61-6	1,2,3-Trichlorobenzene	0.0500	U
96-18-4	1,2,3-Trichloropropane	0.0500	U
120-82-1	1,2,4-Trichlorobenzene	0.0500	U
95-63-6	1,2,4-Trimethylbenzene	0.0500	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.300	U
106-93-4	1,2-Dibromoethane	0.0500	U
95-50-1	1,2-Dichlorobenzene	0.0500	U
107-06-2	1,2-Dichloroethane	0.0500	U
78-87-5	1,2-Dichloropropane	0.0500	U
108-67-8	1,3,5-Trimethylbenzene	0.0500	U
541-73-1	1,3-Dichlorobenzene	0.0500	U
142-28-9	1,3-Dichloropropane	0.0500	U
106-46-7	1,4-Dichlorobenzene	0.0500	U
123-91-1	1,4-Dioxane - Screen	5.00	U
544-10-5	1-Chlorohexane	0.0500	U
594-20-7	2,2-Dichloropropane	0.100	U
78-93-3	2-Butanone	1.25	U
95-49-8	2-Chlorotoluene	0.0500	U
591-78-6	2-Hexanone	0.500	U
106-43-4	4-Chlorotoluene	0.0500	U
99-87-6	4-Isopropyltoluene	0.0500	U
108-10-1	4-Methyl-2-Pentanone	0.500	U
67-64-1	Acetone	1.25	U

METHOD BLANK DATA SHEET

8260B

Laboratory:	<u>ESS Laboratory</u>	SDG:	<u>0805137</u>
Client:	<u>MACTEC Engineering & Consulting, Inc.</u>	Project:	<u>Providence Gorham Site</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BE81302-BLK1</u>
Prepared:	<u>05/13/08 07:00</u>	Preparation:	<u>5035</u>
Analyzed:	<u>05/13/08 11:03</u>	Instrument:	<u>VMS4</u>
Batch:	<u>BE81302</u>	Sequence:	<u>BRE0142</u>
		Calibration:	<u>0805007</u>

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
71-43-2	Benzene	0.0500	U
108-86-1	Bromobenzene	0.0500	U
74-97-5	Bromochloromethane	0.0500	U
75-27-4	Bromodichloromethane	0.0500	U
75-25-2	Bromoform	0.0500	U
74-83-9	Bromomethane	0.100	U
75-15-0	Carbon Disulfide	0.0500	U
56-23-5	Carbon Tetrachloride	0.0500	U
108-90-7	Chlorobenzene	0.0500	U
75-00-3	Chloroethane	0.100	U
67-66-3	Chloroform	0.0500	U
74-87-3	Chloromethane	0.100	U
156-59-2	cis-1,2-Dichloroethene	0.0500	U
10061-01-5	cis-1,3-Dichloropropene	0.0500	U
124-48-1	Dibromochloromethane	0.0500	U
74-95-3	Dibromomethane	0.0500	U
75-71-8	Dichlorodifluoromethane	0.0500	U
60-29-7	Diethyl Ether	0.0500	U
108-20-3	Di-isopropyl ether	0.0500	U
637-92-3	Ethyl tertiary-butyl ether	0.0500	U
100-41-4	Ethylbenzene	0.0500	U
87-68-3	Hexachlorobutadiene	0.0500	U
98-82-8	Isopropylbenzene	0.0500	U
1634-04-4	Methyl tert-Butyl Ether	0.0500	U
75-09-2	Methylene Chloride	0.250	U
91-20-3	Naphthalene	0.0500	U
104-51-8	n-Butylbenzene	0.0500	U
103-65-1	n-Propylbenzene	0.0500	U
135-98-8	sec-Butylbenzene	0.0500	U
100-42-5	Styrene	0.0500	U

METHOD BLANK DATA SHEET

8260B

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805137</u>	
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>BE81302-BLK1</u>	File ID: <u>M424130.D</u>
Prepared: <u>05/13/08 07:00</u>	Preparation: <u>5035</u>	Initial/Final: <u>15 g / 15 ml</u>
Analyzed: <u>05/13/08 11:03</u>	Instrument: <u>VMS4</u>	
Batch: <u>BE81302</u>	Sequence: <u>BRE0142</u>	Calibration: <u>0805007</u>

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
98-06-6	tert-Butylbenzene	0.0500	U
994-05-8	Tertiary-amyl methyl ether	0.0500	U
127-18-4	Tetrachloroethene	0.0500	U
109-99-9	Tetrahydrofuran	0.500	U
108-88-3	Toluene	0.0500	U
156-60-5	trans-1,2-Dichloroethene	0.0500	U
10061-02-6	trans-1,3-Dichloropropene	0.0500	U
79-01-6	Trichloroethene	0.0500	U
108-05-4	Vinyl Acetate	0.250	U
75-01-4	Vinyl Chloride	0.0500	U
95-47-6	Xylene O	0.0500	U
1330-20-7	Xylene P,M	0.100	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg wet)	CONC (mg/kg wet)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4	2.500	2.48	99	70 - 130	D
4-Bromofluorobenzene	2.500	2.58	103	70 - 130	D
Dibromofluoromethane	2.500	2.65	106	70 - 130	D
Toluene-d8	2.500	2.62	105	70 - 130	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Fluorobenzene	5235669	6.46	5359420	6.46	
Chlorobenzene-d5	4322485	11.82	4407433	11.82	
1,4-Dichlorobenzene-D4	2305900	16.26	2433029	16.26	

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE81302

Laboratory ID: BE81302-BS1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. #	QC LIMITS REC.
1,1,1,2-Tetrachloroethane	2.500	2.50	100	70 - 130
1,1,1-Trichloroethane	2.500	2.52	101	70 - 130
1,1,2,2-Tetrachloroethane	2.500	2.41	96	70 - 130
1,1,2-Trichloroethane	2.500	2.53	101	70 - 130
1,1-Dichloroethane	2.500	2.53	101	70 - 130
1,1-Dichloroethene	2.500	2.76	110	70 - 130
1,1-Dichloropropene	2.500	2.55	102	70 - 130
1,2,3-Trichlorobenzene	2.500	2.59	103	70 - 130
1,2,3-Trichloropropane	2.500	2.42	97	70 - 130
1,2,4-Trichlorobenzene	2.500	2.62	105	70 - 130
1,2,4-Trimethylbenzene	2.500	2.56	103	70 - 130
1,2-Dibromo-3-Chloropropane	2.500	2.44	98	70 - 130
1,2-Dibromoethane	2.500	2.53	101	70 - 130
1,2-Dichlorobenzene	2.500	2.53	101	70 - 130
1,2-Dichloroethane	2.500	2.52	101	70 - 130
1,2-Dichloropropane	2.500	2.55	102	70 - 130
1,3,5-Trimethylbenzene	2.500	2.52	101	70 - 130
1,3-Dichlorobenzene	2.500	2.51	100	70 - 130
1,3-Dichloropropane	2.500	2.56	103	70 - 130
1,4-Dichlorobenzene	2.500	2.47	99	70 - 130
1,4-Dioxane - Screen	50.00	59.9	120	44 - 241
1-Chlorohexane	2.500	2.42	97	70 - 130
2,2-Dichloropropane	2.500	2.95	118	70 - 130
2-Butanone	12.50	15.2	122	70 - 130
2-Chlorotoluene	2.500	2.44	98	70 - 130
2-Hexanone	12.50	13.3	107	70 - 130
4-Chlorotoluene	2.500	2.48	99	70 - 130
4-Isopropyltoluene	2.500	2.40	96	70 - 130
4-Methyl-2-Pentanone	12.50	13.0	104	70 - 130
Acetone	12.50	13.2	106	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE81302

Laboratory ID: BE81302-BS1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. #	QC LIMITS REC.
Benzene	2.500	2.56	102	70 - 130
Bromobenzene	2.500	2.53	101	70 - 130
Bromochloromethane	2.500	2.46	98	70 - 130
Bromodichloromethane	2.500	2.76	111	70 - 130
Bromoform	2.500	2.58	103	70 - 130
Bromomethane	2.500	2.85	114	70 - 130
Carbon Disulfide	2.500	2.69	108	70 - 130
Carbon Tetrachloride	2.500	2.57	103	70 - 130
Chlorobenzene	2.500	2.52	101	70 - 130
Chloroethane	2.500	2.54	102	70 - 130
Chloroform	2.500	2.50	100	70 - 130
Chloromethane	2.500	2.22	89	70 - 130
cis-1,2-Dichloroethene	2.500	2.78	111	70 - 130
cis-1,3-Dichloropropene	2.500	2.56	102	70 - 130
Dibromochloromethane	2.500	2.66	106	70 - 130
Dibromomethane	2.500	2.53	101	70 - 130
Dichlorodifluoromethane	2.500	1.99	80	70 - 130
Diethyl Ether	2.500	2.67	107	70 - 130
Di-isopropyl ether	2.500	2.57	103	70 - 130
Ethyl tertiary-butyl ether	2.500	2.51	100	70 - 130
Ethylbenzene	2.500	2.56	102	70 - 130
Hexachlorobutadiene	2.500	2.75	110	70 - 130
Isopropylbenzene	2.500	2.25	90	70 - 130
Methyl tert-Butyl Ether	2.500	2.59	104	70 - 130
Methylene Chloride	2.500	2.60	104	70 - 130
Naphthalene	2.500	2.57	103	70 - 130
n-Butylbenzene	2.500	2.54	102	70 - 130
n-Propylbenzene	2.500	2.61	104	70 - 130
sec-Butylbenzene	2.500	2.53	101	70 - 130
Styrene	2.500	2.52	101	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE81302

Laboratory ID: BE81302-BS1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. #	QC LIMITS REC.
tert-Butylbenzene	2.500	2.53	101	70 - 130
Tertiary-amyl methyl ether	2.500	2.56	102	70 - 130
Tetrachloroethene	2.500	2.52	101	70 - 130
Tetrahydrofuran	2.500	2.56	102	70 - 130
Toluene	2.500	2.48	99	70 - 130
trans-1,2-Dichloroethene	2.500	2.72	109	70 - 130
trans-1,3-Dichloropropene	2.500	2.31	92	70 - 130
Trichloroethene	2.500	2.56	103	70 - 130
Vinyl Acetate	2.500	2.28	91	70 - 130
Vinyl Chloride	2.500	3.01	120	70 - 130
Xylene O	2.500	2.57	103	70 - 130
Xylene P,M	5.000	5.09	102	70 - 130

COMPOUND	SPIKE ADDED (mg/kg wet)	LCSD CONCENTRATION (mg/kg wet)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
1,1,1,2-Tetrachloroethane	2.500	2.48	99	1	20	70 - 130
1,1,1-Trichloroethane	2.500	2.52	101	0.2	20	70 - 130
1,1,2,2-Tetrachloroethane	2.500	2.43	97	0.9	20	70 - 130
1,1,2-Trichloroethane	2.500	2.56	102	1	20	70 - 130
1,1-Dichloroethane	2.500	2.52	101	0.5	20	70 - 130
1,1-Dichloroethene	2.500	2.83	113	2	20	70 - 130
1,1-Dichloropropene	2.500	2.58	103	1	20	70 - 130
1,2,3-Trichlorobenzene	2.500	2.41	96	7	20	70 - 130
1,2,3-Trichloropropane	2.500	2.48	99	2	20	70 - 130
1,2,4-Trichlorobenzene	2.500	2.47	99	6	20	70 - 130
1,2,4-Trimethylbenzene	2.500	2.50	100	3	20	70 - 130
1,2-Dibromo-3-Chloropropane	2.500	2.51	100	3	20	70 - 130
1,2-Dibromoethane	2.500	2.57	103	1	20	70 - 130
1,2-Dichlorobenzene	2.500	2.49	100	1	20	70 - 130
1,2-Dichloroethane	2.500	2.57	103	2	20	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE81302

Laboratory ID: BE81302-BSD1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS D CONCENTRATION (mg/kg wet)	LCS D % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
1,2-Dichloropropane	2.500	2.56	102	0.4	20	70 - 130
1,3,5-Trimethylbenzene	2.500	2.46	98	2	20	70 - 130
1,3-Dichlorobenzene	2.500	2.44	98	3	20	70 - 130
1,3-Dichloropropane	2.500	2.59	104	1	20	70 - 130
1,4-Dichlorobenzene	2.500	2.46	99	0.2	20	70 - 130
1,4-Dioxane - Screen	50.00	58.7	117	2	200	44 - 241
1-Chlorohexane	2.500	2.44	98	0.7	20	70 - 130
2,2-Dichloropropane	2.500	2.79	112	6	20	70 - 130
2-Butanone	12.50	16.1	129	6	20	70 - 130
2-Chlorotoluene	2.500	2.63	105	7	20	70 - 130
2-Hexanone	12.50	14.4	115	8	20	70 - 130
4-Chlorotoluene	2.500	2.46	99	0.8	20	70 - 130
4-Isopropyltoluene	2.500	2.33	93	3	20	70 - 130
4-Methyl-2-Pentanone	12.50	13.9	111	7	20	70 - 130
Acetone	12.50	18.5	148 *	34 *	20	70 - 130
Benzene	2.500	2.54	102	0.9	20	70 - 130
Bromobenzene	2.500	2.51	100	0.8	20	70 - 130
Bromochloromethane	2.500	2.42	97	1	20	70 - 130
Bromodichloromethane	2.500	2.74	110	0.9	20	70 - 130
Bromoform	2.500	2.63	105	2	20	70 - 130
Bromomethane	2.500	2.78	111	2	20	70 - 130
Carbon Disulfide	2.500	2.90	116	7	20	70 - 130
Carbon Tetrachloride	2.500	2.53	101	1	20	70 - 130
Chlorobenzene	2.500	2.50	100	0.9	20	70 - 130
Chloroethane	2.500	2.56	102	0.5	20	70 - 130
Chloroform	2.500	2.51	100	0.2	20	70 - 130
Chloromethane	2.500	2.23	89	0.6	20	70 - 130
cis-1,2-Dichloroethene	2.500	2.75	110	1	20	70 - 130
cis-1,3-Dichloropropene	2.500	2.58	103	1	20	70 - 130
Dibromochloromethane	2.500	2.67	107	0.5	20	70 - 130

LCS / LCS DUPLICATE RECOVERY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Matrix: Solid

Batch: BE81302

Laboratory ID: BE81302-BSD1

Preparation: 5035

Initial/Final: 15 g / 15 ml

COMPOUND	SPIKE ADDED (mg/kg wet)	LCSD CONCENTRATION (mg/kg wet)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Dibromomethane	2.500	2.55	102	0.8	20	70 - 130
Dichlorodifluoromethane	2.500	2.02	81	2	20	70 - 130
Diethyl Ether	2.500	2.71	108	2	20	70 - 130
Di-isopropyl ether	2.500	2.57	103	0	20	70 - 130
Ethyl tertiary-butyl ether	2.500	2.54	102	1	20	70 - 130
Ethylbenzene	2.500	2.50	100	2	20	70 - 130
Hexachlorobutadiene	2.500	2.59	104	6	20	70 - 130
Isopropylbenzene	2.500	2.22	89	1	20	70 - 130
Methyl tert-Butyl Ether	2.500	2.66	106	3	20	70 - 130
Methylene Chloride	2.500	2.63	105	1	20	70 - 130
Naphthalene	2.500	2.46	98	5	20	70 - 130
n-Butylbenzene	2.500	2.43	97	4	20	70 - 130
n-Propylbenzene	2.500	2.41	96	8	20	70 - 130
sec-Butylbenzene	2.500	2.48	99	2	20	70 - 130
Styrene	2.500	2.49	100	1	20	70 - 130
tert-Butylbenzene	2.500	2.26	90	11	20	70 - 130
Tertiary-amyl methyl ether	2.500	2.61	104	2	20	70 - 130
Tetrachloroethene	2.500	3.22	129	24 *	20	70 - 130
Tetrahydrofuran	2.500	2.71	109	6	20	70 - 130
Toluene	2.500	2.47	99	0.5	20	70 - 130
trans-1,2-Dichloroethene	2.500	2.72	109	0.04	20	70 - 130
trans-1,3-Dichloropropene	2.500	2.34	94	1	20	70 - 130
Trichloroethene	2.500	2.58	103	0.7	20	70 - 130
Vinyl Acetate	2.500	2.18	87	5	20	70 - 130
Vinyl Chloride	2.500	2.99	120	0.6	20	70 - 130
Xylene O	2.500	2.50	100	3	20	70 - 130
Xylene P,M	5.000	5.04	101	1	20	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

VOA Calibration Data

ANALYSIS BATCH (SEQUENCE) SUMMARY

8260B

Laboratory: ESS Laboratory SDG: 0805137
Client: MACTEC Engineering & Consulting, Inc. Project: Providence Gorham Site
Sequence: BRE0091 Instrument: VMS4
Matrix: Solid Calibration: 0805007

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	BRE0091-TUN1	M424036.D	05/08/08 09:50
Cal Standard	BRE0091-CAL1	M424037.D	05/08/08 10:19
Cal Standard	BRE0091-CAL2	M424038.D	05/08/08 10:49
Cal Standard	BRE0091-CAL3	M424039.D	05/08/08 11:19
Cal Standard	BRE0091-CAL4	M424040.D	05/08/08 11:48
Cal Standard	BRE0091-CAL5	M424041.D	05/08/08 12:18
Cal Standard	BRE0091-CAL6	M424042.D	05/08/08 12:48
Secondary Cal Check	BRE0091-SCV1	M424045.D	05/08/08 14:16

ANALYSIS BATCH (SEQUENCE) SUMMARY

8260B

Laboratory: ESS Laboratory SDG: 0805137
Client: MACTEC Engineering & Consulting, Inc. Project: Providence Gorham Site
Sequence: BRE0142 Instrument: VMS4
Matrix: Solid Calibration: 0805007

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	BRE0142-TUN1	M424124.D	05/13/08 07:35
Calibration Check	BRE0142-CCV1	M424125.D	05/13/08 08:04
LCS	BE81302-BS1	M424126.D	05/13/08 09:03
LCS Dup	BE81302-BSD1	M424127.D	05/13/08 09:33
Blank	BE81302-BLK1	M424130.D	05/13/08 11:03
SB1010	0805137-01	M424135.D	05/13/08 13:30
SB1107	0805137-02	M424136.D	05/13/08 14:00
SB1209	0805137-03	M424137.D	05/13/08 14:29
SB1314	0805137-04	M424138.D	05/13/08 14:58

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Lab File ID: M424124.D

Injection Date: 05/13/08

Instrument ID: YMS4

Injection Time: 07:35

Sequence: BRE0142

Lab Sample ID: BRE0142-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	15.3	PASS
75	30 - 60% of 95	43	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.34	PASS
173	Less than 2% of 174	0	PASS
174	50 - 100% of 95	75.4	PASS
175	5 - 9% of 174	7.95	PASS
176	95 - 101% of 174	95.9	PASS
177	5 - 9% of 176	7.18	PASS

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424125.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0142

Injection Date: 05/13/08

Lab Sample ID: BRE0142-CCV1

Injection Time: 08:04

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,1,1,2-Tetrachloroethane	A	25.00	24.6	0.4740942	0.4659799		-1.7	30
1,1,1,2-Tetrachloroethane	A	25.00	24.6	0.4740942	0.4659799		-1.7	30
1,1,1-Trichloroethane	A	25.00	25.0	0.5044302	0.5041762		-0.05	30
1,1,1-Trichloroethane	A	25.00	25.0	0.5044302	0.5041762		-0.05	30
1,1,2,2-Tetrachloroethane	A	25.00	24.7	0.6545194	0.6456335	0.3	-1.4	30
1,1,2,2-Tetrachloroethane	A	25.00	24.7	0.6545194	0.6456335	0.3	-1.4	30
1,1,2-Trichloroethane	A	25.00	24.7	0.1974717	0.1951782		-1.2	30
1,1,2-Trichloroethane	A	25.00	24.7	0.1974717	0.1951782		-1.2	30
1,1-Dichloroethane	A	25.00	25.0	0.4258603	0.4252007	0.1	-0.2	30
1,1-Dichloroethane	A	25.00	25.0	0.4258603	0.4252007	0.1	-0.2	30
1,1-Dichloroethene	A	25.00	29.4	0.1907881	0.2246926		17.8	20
1,1-Dichloroethene	A	25.00	29.4	0.1907881	0.2246926		17.8	20
1,1-Dichloropropene	A	25.00	25.1	0.3574855	0.3585097		0.3	30
1,1-Dichloropropene	A	25.00	25.1	0.3574855	0.3585097		0.3	30
1,2,3-Trichlorobenzene	A	25.00	24.5	0.4172173	0.4084481		-2.1	30
1,2,3-Trichlorobenzene	A	25.00	24.5	0.4172173	0.4084481		-2.1	30
1,2,3-Trichloropropane	A	25.00	24.0	0.5171163	0.495685		-4.1	30
1,2,3-Trichloropropane	A	25.00	24.0	0.5171163	0.495685		-4.1	30
1,2,4-Trichlorobenzene	A	25.00	25.2	0.5677743	0.5722862		0.8	30
1,2,4-Trichlorobenzene	A	25.00	25.2	0.5677743	0.5722862		0.8	30
1,2,4-Trimethylbenzene	A	25.00	24.3	1.637434	1.590527		-2.9	30
1,2,4-Trimethylbenzene	A	25.00	24.3	1.637434	1.590527		-2.9	30
1,2-Dibromo-3-Chloropropane	A	25.00	24.8	9.459949E-02	9.390805E-02		-0.7	30
1,2-Dibromo-3-Chloropropane	A	25.00	24.8	9.459949E-02	9.390805E-02		-0.7	30
1,2-Dibromoethane	A	25.00	25.2	0.4624338	0.4667084		0.9	30
1,2-Dibromoethane	A	25.00	25.2	0.4624338	0.4667084		0.9	30
1,2-Dichlorobenzene	A	25.00	24.8	1.113651	1.106982		-0.6	30
1,2-Dichlorobenzene	A	25.00	24.8	1.113651	1.106982		-0.6	30
1,2-Dichloroethane	A	25.00	25.6	0.2394029	0.245006		2.3	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424125.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0142

Injection Date: 05/13/08

Lab Sample ID: BRE0142-CCV1

Injection Time: 08:04

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2-Dichloroethane	A	25.00	25.6	0.2394029	0.245006		2.3	30
1,2-Dichloropropane	A	25.00	24.9	0.2647406	0.2641073		-0.2	20
1,2-Dichloropropane	A	25.00	24.9	0.2647406	0.2641073		-0.2	20
1,3,5-Trimethylbenzene	A	25.00	24.6	1.613056	1.58657		-1.6	30
1,3,5-Trimethylbenzene	A	25.00	24.6	1.613056	1.58657		-1.6	30
1,3-Dichlorobenzene	A	25.00	24.8	1.257842	1.245876		-1.0	30
1,3-Dichlorobenzene	A	25.00	24.8	1.257842	1.245876		-1.0	30
1,3-Dichloropropane	A	25.00	24.9	0.3946809	0.3933653		-0.3	30
1,3-Dichloropropane	A	25.00	24.9	0.3946809	0.3933653		-0.3	30
1,4-Dichlorobenzene	A	25.00	24.4	1.336129	1.304566		-2.4	30
1,4-Dichlorobenzene	A	25.00	24.4	1.336129	1.304566		-2.4	30
1,4-Dioxane - Screen	L	500.0	375	7.231656E-04	5.346287E-04		-25.0	30
1,4-Dioxane - Screen	L	500.0	375	7.231656E-04	5.346287E-04		-25.0	30
1-Chlorohexane	A	25.00	23.8	0.3619195	0.3451762		-4.6	30
1-Chlorohexane	A	25.00	23.8	0.3619195	0.3451762		-4.6	30
2,2-Dichloropropane	L	25.00	25.6	0.3560044	0.3190541		2.2	30
2,2-Dichloropropane	L	25.00	25.6	0.3560044	0.3190541		2.2	30
2-Butanone	A	125.0	133	8.949624E-03	9.552302E-03		6.7	30
2-Butanone	A	125.0	133	8.949624E-03	9.552302E-03		6.7	30
2-Chlorotoluene	A	25.00	23.2	1.554985	1.444931		-7.1	30
2-Chlorotoluene	A	25.00	23.2	1.554985	1.444931		-7.1	30
2-Hexanone	A	125.0	117	8.219336E-02	7.706754E-02		-6.2	30
2-Hexanone	A	125.0	117	8.219336E-02	7.706754E-02		-6.2	30
4-Chlorotoluene	A	25.00	24.6	1.849632	1.818543		-1.7	30
4-Chlorotoluene	A	25.00	24.6	1.849632	1.818543		-1.7	30
4-Isopropyltoluene	A	25.00	24.3	1.684623	1.635526		-2.9	30
4-Isopropyltoluene	A	25.00	24.3	1.684623	1.635526		-2.9	30
4-Methyl-2-Pentanone	A	125.0	129	4.294088E-02	4.440787E-02		3.4	30
4-Methyl-2-Pentanone	A	125.0	129	4.294088E-02	4.440787E-02		3.4	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424125.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0142

Injection Date: 05/13/08

Lab Sample ID: BRE0142-CCV1

Injection Time: 08:04

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	125.0	142	5.166121E-03	5.860746E-03		13.4	30
Acetone	A	125.0	142	5.166121E-03	5.860746E-03		13.4	30
Benzene	A	25.00	24.9	0.6510805	0.6493443		-0.3	30
Benzene	A	25.00	24.9	0.6510805	0.6493443		-0.3	30
Bromobenzene	A	25.00	24.9	0.8532887	0.8501358		-0.4	30
Bromobenzene	A	25.00	24.9	0.8532887	0.8501358		-0.4	30
Bromochloromethane	A	25.00	24.5	0.1913585	0.1872326		-2.2	30
Bromochloromethane	A	25.00	24.5	0.1913585	0.1872326		-2.2	30
Bromodichloromethane	A	25.00	25.3	0.5526898	0.5593366		1.2	30
Bromodichloromethane	A	25.00	25.3	0.5526898	0.5593366		1.2	30
Bromoform	A	25.00	25.9	0.3830232	0.39661	0.1	3.5	30
Bromoform	A	25.00	25.9	0.3830232	0.39661	0.1	3.5	30
Bromomethane	L	25.00	25.1	0.3280627	0.2313681		0.4	30
Bromomethane	L	25.00	25.1	0.3280627	0.2313681		0.4	30
Carbon Disulfide	A	25.00	24.8	0.569692	0.5648107		-0.9	30
Carbon Disulfide	A	25.00	24.8	0.569692	0.5648107		-0.9	30
Carbon Tetrachloride	A	25.00	24.4	0.491772	0.480535		-2.3	30
Carbon Tetrachloride	A	25.00	24.4	0.491772	0.480535		-2.3	30
Chlorobenzene	A	25.00	24.7	0.8653665	0.8535631	0.3	-1.4	30
Chlorobenzene	A	25.00	24.7	0.8653665	0.8535631	0.3	-1.4	30
Chloroethane	L	25.00	26.1	7.176781E-02	6.579798E-02		4.5	30
Chloroethane	L	25.00	26.1	7.176781E-02	6.579798E-02		4.5	30
Chloroform	A	25.00	24.8	0.567439	0.5627734		-0.8	20
Chloroform	A	25.00	24.8	0.567439	0.5627734		-0.8	20
Chloromethane	L	25.00	22.2	0.1769892	0.1492986	0.1	-11.2	30
Chloromethane	L	25.00	22.2	0.1769892	0.1492986	0.1	-11.2	30
cis-1,2-Dichloroethene	A	25.00	25.2	0.3005727	0.3031384		0.9	30
cis-1,2-Dichloroethene	A	25.00	25.2	0.3005727	0.3031384		0.9	30
cis-1,3-Dichloropropene	A	25.00	25.3	0.384576	0.389138		1.2	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424125.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0142

Injection Date: 05/13/08

Lab Sample ID: BRE0142-CCV1

Injection Time: 08:04

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
cis-1,3-Dichloropropene	A	25.00	25.3	0.384576	0.389138		1.2	30
Dibromochloromethane	A	25.00	25.2	0.6442697	0.6484477		0.6	30
Dibromochloromethane	A	25.00	25.2	0.6442697	0.6484477		0.6	30
Dibromomethane	A	25.00	25.5	0.2598674	0.2649686		2.0	30
Dibromomethane	A	25.00	25.5	0.2598674	0.2649686		2.0	30
Dichlorodifluoromethane	A	25.00	22.2	0.4477393	0.3974809		-11.2	30
Dichlorodifluoromethane	A	25.00	22.2	0.4477393	0.3974809		-11.2	30
Diethyl Ether	A	25.00	24.7	7.355641E-02	7.255337E-02		-1.4	30
Diethyl Ether	A	25.00	24.7	7.355641E-02	7.255337E-02		-1.4	30
Di-isopropyl ether	A	25.00	25.1	0.6001818	0.6029787		0.5	30
Di-isopropyl ether	A	25.00	25.1	0.6001818	0.6029787		0.5	30
Ethyl tertiary-butyl ether	A	25.00	25.3	0.5581828	0.5653175		1.3	30
Ethyl tertiary-butyl ether	A	25.00	25.3	0.5581828	0.5653175		1.3	30
Ethylbenzene	A	25.00	24.7	1.141453	1.127057		-1.3	20
Ethylbenzene	A	25.00	24.7	1.141453	1.127057		-1.3	20
Hexachlorobutadiene	A	25.00	24.6	0.2965275	0.292163		-1.5	30
Hexachlorobutadiene	A	25.00	24.6	0.2965275	0.292163		-1.5	30
Isopropylbenzene	A	25.00	24.6	2.126836	2.088274		-1.8	30
Isopropylbenzene	A	25.00	24.6	2.126836	2.088274		-1.8	30
Methyl tert-Butyl Ether	A	25.00	25.5	0.3804802	0.3878879		1.9	30
Methyl tert-Butyl Ether	A	25.00	25.5	0.3804802	0.3878879		1.9	30
Methylene Chloride	A	25.00	24.1	0.248846	0.2399372		-3.6	30
Methylene Chloride	A	25.00	24.1	0.248846	0.2399372		-3.6	30
Naphthalene	A	25.00	24.1	0.6001227	0.5790531		-3.5	30
Naphthalene	A	25.00	24.1	0.6001227	0.5790531		-3.5	30
n-Butylbenzene	A	25.00	24.3	1.184746	1.151957		-2.8	30
n-Butylbenzene	A	25.00	24.3	1.184746	1.151957		-2.8	30
n-Propylbenzene	A	25.00	25.8	2.350935	2.431184		3.4	30
n-Propylbenzene	A	25.00	25.8	2.350935	2.431184		3.4	30

CONTINUING CALIBRATION CHECK

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Instrument ID: VMS4

Calibration: 0805007

Lab File ID: M424125.D

Calibration Date: 05/08/08 00:00

Sequence: BRE0142

Injection Date: 05/13/08

Lab Sample ID: BRE0142-CCV1

Injection Time: 08:04

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
sec-Butylbenzene	A	25.00	24.5	1.899278	1.861452		-2.0	30
sec-Butylbenzene	A	25.00	24.5	1.899278	1.861452		-2.0	30
Styrene	A	25.00	24.6	0.7950481	0.78367		-1.4	30
Styrene	A	25.00	24.6	0.7950481	0.78367		-1.4	30
tert-Butylbenzene	A	25.00	24.7	2.21947	2.195483		-1.1	30
tert-Butylbenzene	A	25.00	24.7	2.21947	2.195483		-1.1	30
Tertiary-amyl methyl ether	A	25.00	25.1	0.4894161	0.4912931		0.4	30
Tertiary-amyl methyl ether	A	25.00	25.1	0.4894161	0.4912931		0.4	30
Tetrachloroethene	A	25.00	24.6	0.4202639	0.4141116		-1.5	30
Tetrachloroethene	A	25.00	24.6	0.4202639	0.4141116		-1.5	30
Tetrahydrofuran	A	25.00	25.5	0.0235423	2.400987E-02		2.0	30
Tetrahydrofuran	A	25.00	25.5	0.0235423	2.400987E-02		2.0	30
Toluene	A	25.00	24.6	0.4892481	0.4809183		-1.7	20
Toluene	A	25.00	24.6	0.4892481	0.4809183		-1.7	20
trans-1,2-Dichloroethene	A	25.00	25.2	0.2796968	0.2820031		0.8	30
trans-1,2-Dichloroethene	A	25.00	25.2	0.2796968	0.2820031		0.8	30
trans-1,3-Dichloropropene	A	25.00	25.2	0.3060155	0.3086672		0.9	30
trans-1,3-Dichloropropene	A	25.00	25.2	0.3060155	0.3086672		0.9	30
Trichloroethene	A	25.00	24.9	0.3681554	0.367206		-0.3	30
Trichloroethene	A	25.00	24.9	0.3681554	0.367206		-0.3	30
Vinyl Acetate	A	25.00	23.5	0.5435366	0.5103414		-6.1	30
Vinyl Acetate	A	25.00	23.5	0.5435366	0.5103414		-6.1	30
Vinyl Chloride	A	25.00	24.6	0.1718114	0.1687009		-1.8	20
Vinyl Chloride	A	25.00	24.6	0.1718114	0.1687009		-1.8	20
Xylene O	A	25.00	24.7	0.4408625	0.4361684		-1.1	30
Xylene O	A	25.00	24.7	0.4408625	0.4361684		-1.1	30
Xylene P,M	A	50.00	49.3	0.45698	0.4505485		-1.4	30
Xylene P,M	A	50.00	49.3	0.45698	0.4505485		-1.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0091

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (BRE0091-CAL1)								
				Lab File ID: M424037.D		Analyzed: 05/08/08 10:19		
1,2-Dichloroethane-d4	0.5000	78		5.93	5.913333	0.0167	+/-1.0	
4-Bromofluorobenzene	0.5000	196		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	0.5000	88		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	0.5000	100		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL2)								
				Lab File ID: M424038.D		Analyzed: 05/08/08 10:49		
1,2-Dichloroethane-d4	2.500	78		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	2.500	110		14.09	14.08333	0.0067	+/-1.0	
Dibromofluoromethane	2.500	91		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	2.500	104		9.25	9.258334	-0.0083	+/-1.0	
Cal Standard (BRE0091-CAL3)								
				Lab File ID: M424039.D		Analyzed: 05/08/08 11:19		
1,2-Dichloroethane-d4	10.00	73		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	10.00	90		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	10.00	85		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	10.00	98		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL4)								
				Lab File ID: M424040.D		Analyzed: 05/08/08 11:48		
1,2-Dichloroethane-d4	25.00	74		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	25.00	89		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	25.00	87		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	25.00	101		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL5)								
				Lab File ID: M424041.D		Analyzed: 05/08/08 12:18		
1,2-Dichloroethane-d4	50.00	76		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	50.00	89		14.08	14.08333	-0.0033	+/-1.0	
Dibromofluoromethane	50.00	89		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	50.00	102		9.26	9.258334	0.0017	+/-1.0	
Cal Standard (BRE0091-CAL6)								
				Lab File ID: M424042.D		Analyzed: 05/08/08 12:48		
1,2-Dichloroethane-d4	100.0	77		5.91	5.913333	-0.0033	+/-1.0	
4-Bromofluorobenzene	100.0	90		14.09	14.08333	0.0067	+/-1.0	
Dibromofluoromethane	100.0	91		5.39	5.39	0.0000	+/-1.0	
Toluene-d8	100.0	104		9.26	9.258334	0.0017	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0142

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (BRE0142-CCV1)			Lab File ID: M424125.D		Analyzed: 05/13/08 08:04			
1,2-Dichloroethane-d4	25.00	101	0 - 200	5.9	5.913333	-0.0133	+/-1.0	
4-Bromofluorobenzene	25.00	98	0 - 200	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	25.00	100	0 - 200	5.38	5.39	-0.0100	+/-1.0	
Toluene-d8	25.00	100	0 - 200	9.23	9.258334	-0.0283	+/-1.0	
LCS (BE81302-BS1)			Lab File ID: M424126.D		Analyzed: 05/13/08 09:03			
1,2-Dichloroethane-d4	2.500	108	70 - 130	5.89	5.913333	-0.0233	+/-1.0	
4-Bromofluorobenzene	2.500	108	70 - 130	14.06	14.08333	-0.0233	+/-1.0	
Dibromofluoromethane	2.500	110	70 - 130	5.37	5.39	-0.0200	+/-1.0	
Toluene-d8	2.500	111	70 - 130	9.23	9.258334	-0.0283	+/-1.0	
LCS Dup (BE81302-BSD1)			Lab File ID: M424127.D		Analyzed: 05/13/08 09:33			
1,2-Dichloroethane-d4	2.500	111	70 - 130	5.9	5.913333	-0.0133	+/-1.0	
4-Bromofluorobenzene	2.500	108	70 - 130	14.06	14.08333	-0.0233	+/-1.0	
Dibromofluoromethane	2.500	110	70 - 130	5.38	5.39	-0.0100	+/-1.0	
Toluene-d8	2.500	110	70 - 130	9.23	9.258334	-0.0283	+/-1.0	
Blank (BE81302-BLK1)			Lab File ID: M424130.D		Analyzed: 05/13/08 11:03			
1,2-Dichloroethane-d4	2.500	99	70 - 130	5.9	5.913333	-0.0133	+/-1.0	
4-Bromofluorobenzene	2.500	103	70 - 130	14.05	14.08333	-0.0333	+/-1.0	
Dibromofluoromethane	2.500	106	70 - 130	5.37	5.39	-0.0200	+/-1.0	
Toluene-d8	2.500	105	70 - 130	9.23	9.258334	-0.0283	+/-1.0	
SB1010 (0805137-01)			Lab File ID: M424135.D		Analyzed: 05/13/08 13:30			
1,2-Dichloroethane-d4	2.874	91	70 - 130	5.89	5.913333	-0.0233	+/-1.0	
4-Bromofluorobenzene	2.874	93	70 - 130	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	2.874	87	70 - 130	5.37	5.39	-0.0200	+/-1.0	
Toluene-d8	2.874	95	70 - 130	9.23	9.258334	-0.0283	+/-1.0	
SB1107 (0805137-02)			Lab File ID: M424136.D		Analyzed: 05/13/08 14:00			
1,2-Dichloroethane-d4	2.102	93	70 - 130	5.89	5.913333	-0.0233	+/-1.0	
4-Bromofluorobenzene	2.102	95	70 - 130	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	2.102	97	70 - 130	5.37	5.39	-0.0200	+/-1.0	
Toluene-d8	2.102	97	70 - 130	9.23	9.258334	-0.0283	+/-1.0	
SB1209 (0805137-03)			Lab File ID: M424137.D		Analyzed: 05/13/08 14:29			
1,2-Dichloroethane-d4	2.644	96	70 - 130	5.89	5.913333	-0.0233	+/-1.0	
4-Bromofluorobenzene	2.644	98	70 - 130	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	2.644	84	70 - 130	5.37	5.39	-0.0200	+/-1.0	
Toluene-d8	2.644	101	70 - 130	9.23	9.258334	-0.0283	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

8260B

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805137</u>
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>
Sequence: <u>BRE0142</u>	Instrument: <u>VMS4</u>
Matrix: <u>Solid</u>	Calibration: <u>0805007</u>

Surrogate Compound	Spike Level mg/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SB1314 (0805137-04)		Lab File ID: M424138.D			Analyzed: 05/13/08 14:58			
1,2-Dichloroethane-d4	2.378	88	70 - 130	5.9	5.913333	-0.0133	+/-1.0	
4-Bromofluorobenzene	2.378	90	70 - 130	14.07	14.08333	-0.0133	+/-1.0	
Dibromofluoromethane	2.378	89	70 - 130	5.37	5.39	-0.0200	+/-1.0	
Toluene-d8	2.378	92	70 - 130	9.23	9.258334	-0.0283	+/-1.0	

**INTERNAL STANDARD AREA AND RT SUMMARY
8260B**

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0091

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (BRE0091-CAL1)		Lab File ID: M424037.D			Analyzed: 05/08/08 10:19				
Fluorobenzene	5308253	6.48	5408306	6.47	98	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4320396	11.85	4411516	11.85	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2312699	16.29	2410151	16.29	96	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL2)		Lab File ID: M424038.D			Analyzed: 05/08/08 10:49				
Fluorobenzene	5336116	6.48	5408306	6.47	99	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4345921	11.85	4411516	11.85	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2346156	16.29	2410151	16.29	97	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL3)		Lab File ID: M424039.D			Analyzed: 05/08/08 11:19				
Fluorobenzene	5408306	6.47	5408306	6.47	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4411516	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2410151	16.29	2410151	16.29	100	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL4)		Lab File ID: M424040.D			Analyzed: 05/08/08 11:48				
Fluorobenzene	5426171	6.47	5408306	6.47	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4415414	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2446088	16.29	2410151	16.29	101	50 - 200	0.0000	+/-0.50	
Cal Standard (BRE0091-CAL5)		Lab File ID: M424041.D			Analyzed: 05/08/08 12:18				
Fluorobenzene	5430804	6.49	5408306	6.47	100	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	4427747	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2455733	16.28	2410151	16.29	102	50 - 200	-0.0100	+/-0.50	
Cal Standard (BRE0091-CAL6)		Lab File ID: M424042.D			Analyzed: 05/08/08 12:48				
Fluorobenzene	5422884	6.49	5408306	6.47	100	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	4409899	11.85	4411516	11.85	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2464759	16.29	2410151	16.29	102	50 - 200	0.0000	+/-0.50	
Secondary Cal Check (BRE0091-SCV1)		Lab File ID: M424045.D			Analyzed: 05/08/08 14:16				
Fluorobenzene	5364374	6.48	5408306	6.47	99	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4358161	11.85	4411516	11.85	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2391509	16.29	2410151	16.29	99	50 - 200	0.0000	+/-0.50	

**INTERNAL STANDARD AREA AND RT SUMMARY
8260B**

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sequence: BRE0142

Instrument: VMS4

Matrix: Solid

Calibration: 0805007

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (BRE0142-CCV1)			Lab File ID: M424125.D			Analyzed: 05/13/08 08:04			
Fluorobenzene	5359420	6.46				50 - 200		+/-0.50	
Chlorobenzene-d5	4407433	11.82				50 - 200		+/-0.50	
1,4-Dichlorobenzene-D4	2433029	16.26				50 - 200		+/-0.50	
LCS (BE81302-BS1)			Lab File ID: M424126.D			Analyzed: 05/13/08 09:03			
Fluorobenzene	5278718	6.47	5359420	6.46	98	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	4288262	11.83	4407433	11.82	97	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-D4	2379838	16.27	2433029	16.26	98	50 - 200	0.0100	+/-0.50	
LCS Dup (BE81302-BSD1)			Lab File ID: M424127.D			Analyzed: 05/13/08 09:33			
Fluorobenzene	5249909	6.46	5359420	6.46	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4312289	11.82	4407433	11.82	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2387603	16.26	2433029	16.26	98	50 - 200	0.0000	+/-0.50	
Blank (BE81302-BLK1)			Lab File ID: M424130.D			Analyzed: 05/13/08 11:03			
Fluorobenzene	5235669	6.46	5359420	6.46	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4322485	11.82	4407433	11.82	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2305900	16.26	2433029	16.26	95	50 - 200	0.0000	+/-0.50	
SB1010 (0805137-01)			Lab File ID: M424135.D			Analyzed: 05/13/08 13:30			
Fluorobenzene	5299538	6.46	5359420	6.46	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4417188	11.82	4407433	11.82	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2345650	16.26	2433029	16.26	96	50 - 200	0.0000	+/-0.50	
SB1107 (0805137-02)			Lab File ID: M424136.D			Analyzed: 05/13/08 14:00			
Fluorobenzene	5268728	6.46	5359420	6.46	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4380933	11.83	4407433	11.82	99	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-D4	2324658	16.27	2433029	16.26	96	50 - 200	0.0100	+/-0.50	
SB1209 (0805137-03)			Lab File ID: M424137.D			Analyzed: 05/13/08 14:29			
Fluorobenzene	5238911	6.46	5359420	6.46	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4347346	11.83	4407433	11.82	99	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-D4	2313574	16.27	2433029	16.26	95	50 - 200	0.0100	+/-0.50	
SB1314 (0805137-04)			Lab File ID: M424138.D			Analyzed: 05/13/08 14:58			
Fluorobenzene	5275562	6.46	5359420	6.46	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	4353492	11.82	4407433	11.82	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-D4	2335964	16.26	2433029	16.26	96	50 - 200	0.0000	+/-0.50	

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

8260B

Laboratory:	ESS Laboratory	SDG:	0805137
Client:	MACTEC Engineering & Consulting, Inc.	Project:	Providence Gorham Site
Lab File ID:	M424036.D	Injection Date:	05/08/08
Instrument ID:	VMS4	Injection Time:	09:50
Sequence:	BRE0091	Lab Sample ID:	BRE0091-TUN1
Calibration:	0805007		

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
96	5 - 9% of 95	7.04	PASS
95	Base peak, 100% relative abundance	100	PASS
75	30 - 60% of 95	40.9	PASS
50	15 - 40% of 95	17.3	PASS
177	5 - 9% of 176	6.24	PASS
176	95 - 101% of 174	97.9	PASS
175	5 - 9% of 174	7.37	PASS
174	50 - 100% of 95	63.7	PASS
173	Less than 2% of 174	0	PASS

INITIAL CALIBRATION DATA

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,1,1,2-Tetrachloroethane	0.5	0.4981025	2.5	0.4800593	10	0.4511471	25	0.4652003	50	0.4692298	100	0.4808264
1,1,1-Trichloroethane	0.5	0.517675	2.5	0.5127775	10	0.4786189	25	0.4954081	50	0.5072785	100	0.5148234
1,1,2,2-Tetrachloroethane	0.5	0.6785794	2.5	0.6749295	10	0.627552	25	0.6419189	50	0.6439983	100	0.6601385
1,1,2-Trichloroethane	0.5	0.2016859	2.5	0.209229	10	0.1910672	25	0.1927851	50	0.1935686	100	0.1964943
1,1-Dichloroethane	0.5	0.4386471	2.5	0.4382026	10	0.4099579	25	0.4194866	50	0.4213779	100	0.4274898
1,1-Dichloroethene	0.5	0.1806715	2.5	0.1894262	10	0.1823233	25	0.1906682	50	0.1962825	100	0.2053572
1,1-Dichloropropene	0.5	0.3587998	2.5	0.3556145	10	0.3426896	25	0.3625017	50	0.3598295	100	0.3654782
1,2,3-Trichlorobenzene	0.5	0.3496132	2.5	0.4317573	10	0.4164656	25	0.4224574	50	0.4343428	100	0.4486678
1,2,3-Trichloropropane	0.5	0.51161	2.5	0.5383615	10	0.4983194	25	0.5091162	50	0.5129133	100	0.5323774
1,2,4-Trichlorobenzene	0.5	0.4512909	2.5	0.5739942	10	0.5598	25	0.5953907	50	0.6031171	100	0.6230529
1,2,4-Trimethylbenzene	0.5	1.734316	2.5	1.685638	10	1.558663	25	1.591645	50	1.615117	100	1.639227
1,2-Dibromo-3-Chloropropane	0.5	1.602024E-02	2.5	0.0951727	10	9.019248E-02	25	9.511882E-02	50	9.430647E-02	100	9.820696E-02
1,2-Dibromoethane	0.5	0.4382932	2.5	0.4782968	10	0.4527758	25	0.4717589	50	0.4657325	100	0.4677453
1,2-Dichlorobenzene	0.5	1.095171	2.5	1.175459	10	1.085819	25	1.101258	50	1.107857	100	1.116342
1,2-Dichloroethane	0.5	0.2365373	2.5	0.2409243	10	0.2289645	25	0.2392505	50	0.2435274	100	0.2472133
1,2-Dichloropropane	0.5	0.2717938	2.5	0.2753707	10	0.2533853	25	0.2582858	50	0.2621067	100	0.2675013
1,3,5-Trimethylbenzene	0.5	1.658214	2.5	1.683741	10	1.543389	25	1.582692	50	1.599382	100	1.610916
1,3-Dichlorobenzene	0.5	1.291846	2.5	1.314252	10	1.213444	25	1.232954	50	1.237874	100	1.25668
1,3-Dichloropropane	0.5	0.389131	2.5	0.4095035	10	0.3787462	25	0.3914208	50	0.3950689	100	0.4042149
1,4-Dichlorobenzene	0.5	1.361915	2.5	1.392162	10	1.296206	25	1.315004	50	1.320806	100	1.330681
1,4-Dioxane - Screen	10		50	3.750855E-04	200	6.067519E-04	500	7.282023E-04	1000	7.595284E-04	2000	7.9818E-04
1-Chlorohexane	0.5	0.3996046	2.5	0.381307	10	0.3402623	25	0.3480333	50	0.3487087	100	0.3536012
2,2-Dichloropropane	0.5	0.4553193	2.5	0.3953456	10	0.3390373	25	0.3420745	50	0.3133131	100	0.2909368
2-Butanone	2.5	7.094613E-03	12.5	9.229934E-03	50	9.136502E-03	125	9.565419E-03	250	9.191162E-03	500	9.480112E-03
2-Chlorotoluene	0.5	1.678601	2.5	1.564841	10	1.486412	25	1.485584	50	1.577307	100	1.537162
2-Hexanone	2.5	0.0961972	12.5	8.440789E-02	50	7.430246E-02	125	0.0773489	250	7.837004E-02	500	8.253366E-02
4-Chlorotoluene	0.5	2.008865	2.5	1.862698	10	1.762393	25	1.800405	50	1.825507	100	1.837924
4-Isopropyltoluene	0.5	1.784149	2.5	1.727958	10	1.622062	25	1.637359	50	1.657246	100	1.678967
4-Methyl-2-Pentanone	2.5	3.932744E-02	12.5	4.366997E-02	50	4.172027E-02	125	4.343955E-02	250	4.419618E-02	500	4.529187E-02
Acetone	2.5	1.170442E-02	12.5	4.824483E-03	50	4.503166E-03	125	4.662514E-03	250	5.858267E-03	500	5.982177E-03
Benzene	0.5	0.6638625	2.5	0.6667228	10	0.6225295	25	0.6427426	50	0.6506007	100	0.6600252

INITIAL CALIBRATION DATA
8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Bromobenzene	0.5	0.8634284	2.5	0.874554	10	0.8327901	25	0.8441176	50	0.8477628	100	0.857079
Bromochloromethane	0.5	0.1955069	2.5	0.2061537	10	0.1887398	25	0.1875188	50	0.1840713	100	0.1861604
Bromodichloromethane	0.5	0.5529126	2.5	0.5608592	10	0.5300014	25	0.5509642	50	0.5548844	100	0.5665168
Bromoform	0.5	0.3212321	2.5	0.369848	10	0.3736029	25	0.400136	50	0.4080384	100	0.425282
Bromomethane	0.5	0.6822018	2.5	0.370779	10	0.2378467	25	0.2292049	50	0.2242967	100	0.2240469
Carbon Disulfide	0.5	0.5900058	2.5	0.5764099	10	0.5360038	25	0.5516557	50	0.5733344	100	0.5907424
Carbon Tetrachloride	0.5	0.4849712	2.5	0.5005907	10	0.460561	25	0.486772	50	0.4964204	100	0.5213167
Chlorobenzene	0.5	0.8901383	2.5	0.8845743	10	0.8299545	25	0.8534482	50	0.8585004	100	0.8755835
Chloroethane	0.5	0.101069	2.5	7.681242E-02	10	6.300309E-02	25	6.541206E-02	50	6.331217E-02	100	6.099812E-02
Chloroform	0.5	0.5884799	2.5	0.5803997	10	0.5424268	25	0.5550822	50	0.5637115	100	0.5745338
Chloromethane	0.5	0.2320443	2.5	0.1759351	10	0.1533747	25	0.1549918	50	0.1668793	100	0.1787098
cis-1,2-Dichloroethene	0.5	0.2932321	2.5	0.3099277	10	0.2915173	25	0.2995772	50	0.3017171	100	0.3074646
cis-1,3-Dichloropropene	0.5	0.3716477	2.5	0.3973433	10	0.3724341	25	0.3861708	50	0.3881056	100	0.3917542
Dibromochloromethane	0.5	0.6131845	2.5	0.6429431	10	0.6176539	25	0.6531684	50	0.6588241	100	0.6798444
Dibromomethane	0.5	0.2475108	2.5	0.2750259	10	0.2588435	25	0.2637845	50	0.2570931	100	0.2569467
Dichlorodifluoromethane	0.5	0.4781705	2.5	0.4504662	10	0.4266257	25	0.4402421	50	0.444341	100	0.44659
Diethyl Ether	0.5	7.141709E-02	2.5	7.633642E-02	10	7.114797E-02	25	7.343466E-02	50	7.286822E-02	100	7.613407E-02
Di-isopropyl ether	0.5	0.6006873	2.5	0.6140796	10	0.5747992	25	0.5934446	50	0.6018474	100	0.616233
Ethyl tertiary-butyl ether	0.5	0.5501433	2.5	0.5758289	10	0.5374751	25	0.5557506	50	0.5606861	100	0.5692128
Ethylbenzene	0.5	1.236206	2.5	1.151972	10	1.070387	25	1.11095	50	1.124969	100	1.154231
Hexachlorobutadiene	0.5	0.2868078	2.5	0.3019578	10	0.2870028	25	0.2964104	50	0.3032186	100	0.3037674
Isopropylbenzene	0.5	2.254184	2.5	2.17717	10	2.045233	25	2.078889	50	2.093446	100	2.112091
Methyl tert-Butyl Ether	0.5	0.3781753	2.5	0.3986776	10	0.3737996	25	0.3810284	50	0.3780631	100	0.3731372
Methylene Chloride	0.5	0.2850373	2.5	0.2541905	10	0.2310992	25	0.236701	50	0.2390902	100	0.2469578
Naphthalene	0.5	0.4981625	2.5	0.5893768	10	0.5618165	25	0.6160755	50	0.6446269	100	0.6906777
n-Butylbenzene	0.5	1.225408	2.5	1.217698	10	1.130267	25	1.160686	50	1.180477	100	1.193938
n-Propylbenzene	0.5	2.399729	2.5	2.463566	10	2.242051	25	2.341541	50	2.282109	100	2.376613
sec-Butylbenzene	0.5	1.964717	2.5	1.969669	10	1.813179	25	1.868078	50	1.886924	100	1.8931
Styrene	0.5	0.8410456	2.5	0.7987237	10	0.7554948	25	0.7792896	50	0.7886007	100	0.8071341
tert-Butylbenzene	0.5	2.289814	2.5	2.287273	10	2.135024	25	2.181607	50	2.204301	100	2.218798
Tertiary-amyl methyl ether	0.5	0.5003624	2.5	0.4955121	10	0.4715904	25	0.4847009	50	0.4898943	100	0.4944366

INITIAL CALIBRATION DATA

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Tetrachloroethene	0.5	0.4100434	2.5	0.432486	10	0.4010911	25	0.4208178	50	0.4223261	100	0.4348188
Tetrahydrofuran	0.5	7.07389E-03	2.5	2.515313E-02	10	2.354573E-02	25	2.381993E-02	50	2.204904E-02	100	2.314368E-02
Toluene	0.5	0.5560963	2.5	0.5013178	10	0.4543451	25	0.4671591	50	0.4746306	100	0.4819396
trans-1,2-Dichloroethene	0.5	0.2694766	2.5	0.2844972	10	0.2702709	25	0.2804753	50	0.284518	100	0.2889427
trans-1,3-Dichloropropene	0.5	0.2883717	2.5	0.3086046	10	0.2954488	25	0.3103332	50	0.3129731	100	0.3203618
Trichloroethene	0.5	0.382753	2.5	0.3790941	10	0.3510642	25	0.3621395	50	0.3644809	100	0.3694006
Trichlorofluoromethane	0.5	0.5133892	2.5	0.5170933	10	0.4901174	25	0.5130476	50	0.518068	100	0.5274454
Vinyl Acetate	0.5	0.6375073	2.5	0.557323	10	0.5002615	25	0.5131178	50	0.519687	100	0.5333232
Vinyl Chloride	0.5	0.1702255	2.5	0.1769414	10	0.163554	25	0.1719411	50	0.172882	100	0.1753243
Xylene O	0.5	0.4419965	2.5	0.4587589	10	0.4264073	25	0.4368899	50	0.4371848	100	0.4439377
Xylene P,M	1	0.4651657	5	0.4705965	20	0.4387735	50	0.4475139	100	0.4550413	200	0.464789
1,2-Dichloroethane-d4	0.5	0.2366409	2.5	0.2377947	10	0.2205561	25	0.2254324	50	0.2302392	100	0.2329508
4-Bromofluorobenzene	0.5	0.7193206	2.5	0.6642251	10	0.6212048	25	0.6362629	50	0.6402736	100	0.6526465
Dibromofluoromethane	0.5	0.7015491	2.5	0.7258632	10	0.6764133	25	0.6956526	50	0.7099926	100	0.7278092
Toluene-d8	0.5	0.9923049	2.5	1.035286	10	0.9730567	25	1.008324	50	1.016519	100	1.039297

INITIAL CALIBRATION DATA (Continued)

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,1,2-Tetrachloroethane	0.4740942	3.383598	12.09	0.0140062			15	
1,1,1-Trichloroethane	0.5044302	2.952261	5.373333	9.583287E-02			15	
1,1,2,2-Tetrachloroethane	0.6545194	3.073776	14.45833	5.030347E-02			SPCC (0.3)	
1,1,2-Trichloroethane	0.1974717	3.472917	10.14167	4.424758E-02			15	
1,1-Dichloroethane	0.4258603	2.640203	3.736667	0.1385484			SPCC (0.1)	
1,1-Dichloroethene	0.1907881	4.794183	2.41	1.982149E-02			CCC (30)	
1,1-Dichloropropene	0.3574855	2.233256	5.648333	0.1743885			15	
1,2,3-Trichlorobenzene	0.4172173	8.366394	21.25833	1.928005E-02			15	
1,2,3-Trichloropropane	0.5171163	2.932233	14.485	3.697083E-02			15	
1,2,4-Trichlorobenzene	0.5677743	10.78209	20.48667	4.097622E-02			15	
1,2,4-Trimethylbenzene	1.637434	3.911663	15.68	4.126489E-02			15	
1,2-Dibromo-3-Chloropropane	9.459949E-02	3.041725	18.592	5.884738E-02			15	
1,2-Dibromoethane	0.4624338	3.139256	10.97	1.272075E-02			15	
1,2-Dichlorobenzene	1.113651	2.876478	17.02167	4.775146E-02			15	
1,2-Dichloroethane	0.2394029	2.625411	6.04	0.14634			15	
1,2-Dichloropropane	0.2647406	3.150857	7.478333	0.1314268			CCC (30)	
1,3,5-Trimethylbenzene	1.613056	3.161411	14.99	1.573673E-02			15	
1,3-Dichlorobenzene	1.257842	3.043726	16.14667	2.546458E-02			15	
1,3-Dichloropropane	0.3946809	2.789619	10.42	9.595757E-03			15	
1,4-Dichlorobenzene	1.336129	2.616125	16.32667	2.008305E-02			15	
1,4-Dioxane - Screen	7.231656E-04	11.43836	7.785	7.611467E-02	0.99992		0.99	
1-Chlorohexane	0.3619195	6.42265	11.97	2.480202E-02			15	
2,2-Dichloropropane	0.3560044	16.83004	4.585	0.1190424	0.99882		0.99	
2-Butanone	8.949624E-03	10.33007	4.691667	8.920557E-02			15	
2-Chlorotoluene	1.554985	4.611714	14.71167	2.079971E-02			15	
2-Hexanone	8.219336E-02	9.44729	10.67333	4.778258E-02			15	
4-Chlorotoluene	1.849632	4.605283	14.94833	1.963334E-02			15	
4-Isopropyltoluene	1.684623	3.631421	16.31667	2.457424E-02			15	
4-Methyl-2-Pentanone	4.294088E-02	4.932388	9.151666	8.229554E-02			15	
Acetone	5.166121E-03	13.53204	2.526	0.3541018			15	
Benzene	0.6510805	2.545136	5.981667	0.1241948			15	
Bromobenzene	0.8532887	1.741562	14.31667	3.596848E-02			15	

INITIAL CALIBRATION DATA (Continued)

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Calibration: 0805007

Instrument: VMS4

Matrix: Solid

Calibration Date: 05/08/08 00:00

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Bromochloromethane	0.1913585	4.295544	4.975	0.167204			15	
Bromodichloromethane	0.5526898	2.260653	8.006667	6.369683E-02			15	
Bromoform	0.3830232	9.61747	13.44167	0.0323759			SPCC (0.1)	
Bromomethane	0.3280627	55.66407	1.7	0.3717441	0.99995		0.99	
Carbon Disulfide	0.569692	3.825179	2.605	0.2097854			15	
Carbon Tetrachloride	0.491772	4.084834	5.625	0.186339			15	
Chlorobenzene	0.8653665	2.599473	11.89833	5.994122E-02			SPCC (0.3)	
Chloroethane	7.176781E-02	21.48439	1.77	1.603628E-02	0.99977		0.99	
Chloroform	0.567439	3.004463	5.135	0.1066456			CCC (30)	
Chloromethane	0.1769892	16.3342	1.43	2.304559E-02	0.99908		SPCC (0.1)	
cis-1,2-Dichloroethene	0.3005727	2.459279	4.603333	0.1782146			15	
cis-1,3-Dichloropropene	0.384576	2.712524	8.803334	5.637297E-02			15	
Dibromochloromethane	0.6442697	3.946872	10.81833	3.997496E-02			15	
Dibromomethane	0.2598674	3.506168	7.676667	6.799957E-02			15	
Dichlorodifluoromethane	0.4477393	3.801257	1.265	0.432829			15	
Diethyl Ether	7.355641E-02	3.054385	2.248333	0.1815963			15	
Di-isopropyl ether	0.6001818	2.519733	3.9	1.398662E-02			15	
Ethyl tertiary-butyl ether	0.5581828	2.454714	4.446667	0.115055			15	
Ethylbenzene	1.141453	4.8785	12.15833	3.886602E-02			CCC (30)	
Hexachlorobutadiene	0.2965275	2.663462	20.845	3.819197E-02			15	
Isopropylbenzene	2.126836	3.583365	13.835	5.813761E-02			15	
Methyl tert-Butyl Ether	0.3804802	2.468711	3.245	0.1680112			15	
Methylene Chloride	0.248846	7.832687	2.9	1.880959E-02			15	
Naphthalene	0.6001227	11.15668	20.90167	4.840566E-02			15	
n-Butylbenzene	1.184746	3.017147	17.10667	1.918909E-02			15	
n-Propylbenzene	2.350935	3.424446	14.62167	2.943128E-02			15	
sec-Butylbenzene	1.899278	3.142764	16.005	3.119664E-02			15	
Styrene	0.7950481	3.614749	13.14833	5.505024E-02			15	
tert-Butylbenzene	2.21947	2.728789	15.58167	6.546476E-02			15	
Tertiary-amyl methyl ether	0.4894161	2.088538	6.253333	0.1307228			15	
Tetrachloroethene	0.4202639	3.080196	10.32833	4.229326E-02			15	
Tetrahydrofuran	0.0235423	4.777738	5.064	0.1765352			15	

INITIAL CALIBRATION DATA (Continued)

8260B

Laboratory: <u>ESS Laboratory</u>	SDG: <u>0805137</u>
Client: <u>MACTEC Engineering & Consulting, Inc.</u>	Project: <u>Providence Gorham Site</u>
Calibration: <u>0805007</u>	Instrument: <u>VMS4</u>
Matrix: <u>Solid</u>	Calibration Date: <u>05/08/08 00:00</u>

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Toluene	0.4892481	7.419066	9.366666	0.0886601			CCC (30)	
trans-1,2-Dichloroethene	0.2796968	2.885519	3.2	2.217517E-02			15	
trans-1,3-Dichloropropene	0.3060155	3.87352	9.838333	3.715059E-02			15	
Trichloroethene	0.3681554	3.158575	7.098333	0.0590722			15	
Trichlorofluoromethane	0.5131935	2.425397	1.973333	0.413948			15	
Vinyl Acetate	0.5435366	9.195957	3.87	5.126947E-03			15	
Vinyl Chloride	0.1718114	2.73643	1.47	1.329984E-02			CCC (30)	
Xylene O	0.4408625	2.420352	13.11667	3.919506E-02			15	
Xylene P,M	0.45698	2.659005	12.39	0.0551322			15	
1,2-Dichloroethane-d4	0.2306023	2.886233	5.913333	0.1365837			15	
4-Bromofluorobenzene	0.6556556	5.254844	14.08333	3.789554E-02			15	
Dibromofluoromethane	0.7062133	2.751662	5.39	1.660072E-02			15	
Toluene-d8	1.010798	2.509456	9.258334	4.426948E-02			15	

VOA Logbooks

HOLDING TIME SUMMARY

8260B

Laboratory: ESS Laboratory

SDG: 0805137

Client: MACTEC Engineering & Consulting, Inc.

Project: Providence Gorham Site

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SB1010	05/09/08 09:10	05/09/08 16:48	05/13/08 07:00	3.91	14.00	05/13/08 13:30	4.18	14.00	
SB1107	05/09/08 10:45	05/09/08 16:48	05/13/08 07:00	3.84	14.00	05/13/08 14:00	4.14	14.00	
SB1209	05/09/08 12:30	05/09/08 16:48	05/13/08 07:00	3.77	14.00	05/13/08 14:29	4.08	14.00	
SB1314	05/09/08 14:45	05/09/08 16:48	05/13/08 07:00	3.68	14.00	05/13/08 14:58	4.01	14.00	

ESS LABORATORY

Percent Solids Logbook

MPD

Date/ Time	Lab ID	Pan WT. (g)	Wet WT. (g)	Dry WT. (g)	Percent Solid	Wet wt. Init.	Dry wt./1st Rvw Init.	2nd Rvw Init.
5/9/08 ¹⁷⁰⁰	0805131-01	1.3	11.3	10.2	89	CA	<i>[Signature]</i>	<i>MPD</i>
5/9/08	0805132-01	1.3	11.3	10.1	88	CA		
5/9/08	0805133-01	1.3	11.3	9.9	86	CA		
5/9/08 ¹⁷³⁰	0805134-01	1.3	11.3	10.1	88			
	-02	1.3	11.3	10.2	89			
	-03	1.3	11.3	10.7	94			
	-04	1.3	11.3	10.5	92			
5/9/08	-05	1.3	11.3	10.5	92	CA	<i>[Signature]</i>	<i>MPD</i>
5/12/08 ¹³⁰⁰	Blanche BE8130B	1.3	11.3 ^{11.3}	1.3	100	CA	<i>[Signature]</i>	
5/12/08	0805138-01	1.3	11.3	10.7	94	✓ CA		
5/2/08	-01 Dup	1.3	11.3	10.7	94	✓ CA		
	0805137-01	1.3	11.3	10.3	90	✓ <i>[Signature]</i>		
	-02	1.3	11.3	10.4	91	✓		
	-03	1.3	11.3	10.0	87	✓		
	-04	1.3	11.3	10.8	95	✓		
	0805138-02	1.3	11.3	10.4	91	✓		
5/12/08	-03	1.3	11.3	10.6	93	✓		
5/12/08	0805126-01	Relog ^{1.5}	^{11.3}	0805099-01 85	72	<i>[Signature]</i>	<i>[Signature]</i>	
	0805146-01	1.3	11.3	9.7	84	✓ <i>[Signature]</i>	<i>[Signature]</i>	
	-02	1.3	11.3	9.0	77	✓ <i>[Signature]</i>		
5/12/08	-03	1.3	11.7	9.8	85	✓ <i>[Signature]</i>		
5/12/08 ¹⁸³⁰	0805148-01	1.3	11.3	9.8	85	✓ CA		
5/12/08	-02	1.3	11.3	10.6	93	✓ CA	<i>[Signature]</i>	<i>MPD</i>

Criteria: Dup RPD ≤ 20%

Control #50.0006-0702A

Page _____

[Signature] 5/12/08

④

MPD

Sample and Cooler Receipt Checklist

Client: Mactec
 Client Project ID: _____
 Shipped/Delivered Via: Client

ESS Project ID: 08050137
 Date Project Due: 5/16/08
 Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present?

* No

10. Are the samples properly preserved?

Yes

Air No.:

11. Proper sample containers used?

Yes

2. Were Custody Seals Present?

No

12. Any air bubbles in the VOA vials?

N/A

3. Were Custody Seals Intact?

N/A

13. Holding times exceeded?

No

4. Is Radiation count < 100 CPM?

Yes

14. Sufficient sample volumes?

Yes

5. Is a cooler present?

Yes

15. Any Subcontracting needed?

No

Cooler Temp: 3.7

16. Are ESS labels on correct containers?

Yes No

Iced With: Icepacks

17. Were samples received intact?

Yes No

6. Was COC included with samples?

Yes

ESS Sample IDs: _____

7. Was COC signed and dated by client?

Yes

Sub Lab: _____

8. Does the COC match the sample

Yes

Analysis: _____

9. Is COC complete and correct?

Yes

TAT: _____

18. Was there need to call project manager to discuss status? If yes, please explain.

Who was called?: _____

By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	2 oz Soil Jar	1	NP
1	Yes	40 ml - VOA	1	MeOH
2	Yes	2 oz Soil Jar	1	NP
2	Yes	40 ml - VOA	1	MeOH
3	Yes	2 oz Soil Jar	1	NP
3	Yes	40 ml - VOA	1	MeOH
4	Yes	2 oz Soil Jar	1	NP
4	Yes	40 ml - VOA	1	MeOH

Completed By: JTD JTD

Date/Time: 5-9-08

Reviewed By: ED

Date/Time: 5/9/08

ESS Laboratory

Division of Thielsch Engineering, Inc.
 185 Frances Avenue, Cranston, RI 02910-2211
 Tel. (401) 461-7181 Fax (401) 461-4486
 www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time Standard Other _____
 If faster than 5 days, prior approval by laboratory is required # _____
 State where samples were collected from:
 MA (R) CT NH NJ NY ME Other _____
 Is this project for any of the following:
 MA-MCP Navy USACE Other _____

Reporting Limits
 Industrial/Commercial
 Direct Exposure
 Electronic Deliverable Yes No
 Format: Excel PDF Other ~~Excel~~

ESS LAB PROJECT ID
 0805137

Co. Name **MACTEC**
 Contact Person **Dave Heislein**
 City **Wakefield** State **MA**
 Telephone # **781 245 6606** Fax # _____
 Project # **3650050041.20** Project Name (20 Char. or less) **Gorham**
 Address **107 Audubon Rd** Zip **01880**
 Email Address **dheislein@mactec.com**

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Type of Containers	Number of Containers	Type of Containers	8269 8081 8015 VPH	8071 8015 MTE/BTEX GRO	8100 8015 DRO	EPH EPAHs w/PAHs 4 Diesel	8081 8082 608 PCB Pesticides PCB	8270 625 PAH SVOA 8270	RCRAS RCRA8 PP13 TAL23	TCLP-RCRA8 NBC7	MCP- METALS (13) w/Hg	% Solids TID HeadSpace (ppm)	
	5-9-08	0910	X	S	S	SB1010	6	2 1/4	X												
	↓	1045	X	S	S	SB1107	6	2 1/4	X												
	↓	1230	X	S	S	SB1209	6	2 1/4	X												
	↓	1445	X	S	S	SB1314	6	2 1/4	X												

Container Type: P-Poly G-Glass S-Sterile V-VOA Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters
 Cooler Present Yes No Internal Use Only
 Seals Intact Yes No NA: [] Pickup [] Technicians _____
 Cooler Temp: **37**
 Comments: **Phil Muller**
 Preservation Code: 1- NP, 2- HCl, 3- H₂SO₄, 4- HNO₃, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9-
 Relinquished by: (Signature) **Phil Muller** Date/Time **5-9-08 11:48** Received by: (Signature) _____ Date/Time _____
 Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____