



**Site Investigation Report Addendum  
Former Gorham Manufacturing - Parcel B  
333 Adelaide Avenue, Providence, Rhode Island**

*Prepared for:*

Providence Department of Public Property  
400 Westminster Street  
Providence, Rhode Island 02903

*Prepared by:*

EA Engineering, Science, and Technology, Inc.  
Airport Professional Park  
2350 Post Road  
Warwick, Rhode Island 02886  
(401) 736-3440

April 2005  
Version: FINAL  
EA Project No. 61965.01.1001

**CONTENTS**

	<u>Page</u>
LIST OF FIGURES	
ACRONYMS AND ABBREVIATIONS	
SITE INVESTIGATION REPORT CHECKLIST	
1. INTRODUCTION AND BACKGROUND .....	1
2. SITE DESCRIPTION .....	2
3. PREVIOUS ENVIRONMENTAL INVESTIGATIONS .....	4
4. LIMITED DESIGN INVESTIGATION.....	6
4.1 SOIL VAPOR SURVEY .....	6
4.1.1 Soil Vapor Screening .....	6
4.1.2 Speciated Soil Vapor Sampling .....	7
4.2 SOIL AND GROUNDWATER INVESTIGATION.....	8
4.2.1 Soil Boring Installation and Soil Sampling.....	8
4.2.2 Monitoring Well Installation and Groundwater Sampling.....	10
4.2.3 Geotechnical Soil Borings .....	11
4.2.4 Geotechnical Test Pitting .....	11
5. REMEDIAL ALTERNATIVES.....	12
5.1 SOIL VAPOR .....	12
5.1.1 Remedial Alternative 1 – Active Site Soil Vapor Extraction System.....	12
5.1.2 Remedial Alternative 2 – Building Venting System.....	12
5.2 METAL AND PAH CONTAMINATED SOILS .....	13
5.2.1 Remedial Alternative 1 – Excavation and Offsite Disposal of Contaminated Soils.....	13
5.2.2 Remedial Alternative 2 – Engineered Controls and Environmental Land Usage Restriction .....	13
6. CERTIFICATIONS .....	15
APPENDIX A: SOIL VAPOR CERTIFICATES OF ANALYSIS	
APPENDIX B: BORING LOGS	

APPENDIX C: SOIL CERTIFICATES OF ANALYSIS  
APPENDIX D: WELL CONSTRUCTION DIAGRAMS  
APPENDIX E: GROUNDWATER CERTIFICATES OF ANALYSIS  
APPENDIX F: GEOTECHNICAL BORING LOGS  
APPENDIX G: GEOTECHNICAL TEST PIT LOGS

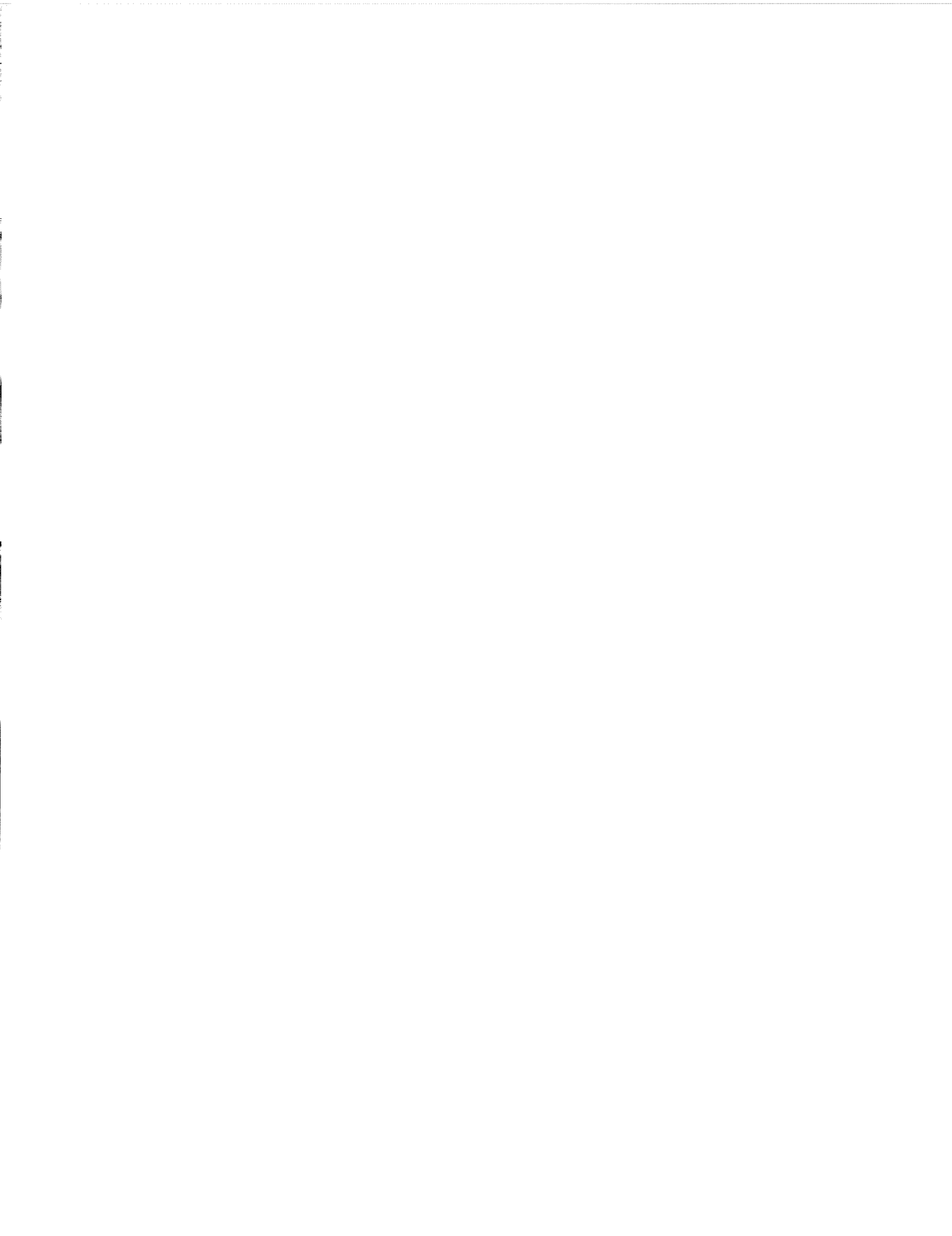
## LIST OF FIGURES

<u>Number</u>	<u>Title</u>
1	Site locus map.
2	Site plan.
3	Soil vapor monitoring point locations.
4	Soil vapor sampling point locations.
5	Soil boring and monitoring well locations.
6	Geotechnical soil boring and test pit location.



## ACRONYMS AND ABBREVIATIONS

AAAL	Acceptable ambient air levels
bgs	below ground surface
CTDEP	Connecticut Department of Environmental Protection
EA	EA Engineering, Science, and Technology, Inc.
EPA	U.S. Environmental Protection Agency
LDI	Limited design investigation
mg/m <sup>3</sup>	Milligrams per cubic meter
PAH	Polycyclic aromatic hydrocarbon
PID	Photo ionization detector
PP13	Priority Pollutant 13
ppm	Parts per million
PVC	Polyvinyl chloride
RAWP	Remedial action work plan
RCRA	Resource Conservation and Recovery Act
RDEC	Residential Direct Exposure Criteria
RIDEM	Rhode Island Department of Environmental Management
SIR	Site investigation report
SVE	Soil vapor extraction
TCE	Trichloroethene
TPH	Total petroleum hydrocarbons
UCL	Upper concentration limit
VOC	Volatile organic compound



## Section 7 of the "Remediation Regulations" Site Investigation Report (SIR) Checklist

Contact Name: Alan Sepe, Director, Providence Department of Public Property  
Contact Address: City Hall, 25 Dorrance Street, Providence, Rhode Island  
Contact Telephone: (401) 421-7740

Site Name: Former Gorham Manufacturing Facility, Parcel B  
Site Address: 333 Adelaide Avenue, Providence, Rhode Island

### OFFICE USE ONLY

SITE INVESTIGATION REPORT (SIR) SITE:  
PROJECT CODE:  
SIR SUBMITTAL DATE:  
CHECKLIST SUBMITTAL DATE:

**DIRECTIONS:** *The box to the left of each item listed below is for the administrative review of the SIR submission and is for **RIDEM USE ONLY**. Under each item listed below, cross-reference the specific sections and pages in the SIR that provide detailed information that addresses each stated requirement. Failure to include cross-references may delay review and approval. If an item is not applicable, simply state that it is not applicable and provide an explanation in the SIR.*

- 7.03.A. List specific objectives of the SIR related to characterization of the release, impacts of the release and remedy.

**Section 1.0, p.1 and Section 4.0, p. 6 of *Site Investigation Report (SIR) Addendum*, prepared by EA and dated March 2005.**

- 7.03.B. Include information reported in the Notification Of Release. A copy of the release notification form should be included in the SIR. Include information relating to short-term response, if applicable.

**Section 3.0, p. 4 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.C. Include documentation of any past incidents or releases.

**Section 3.0, p. 4 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.D. Include list of prior property owners and operators, as well as sequencing of property transfers and time periods of occupancy.

**Section 3.0, p. 4 of *SIR Addendum*, prepared by EA and dated March 2005.**



- 7.03.E. Include previously existing environmental information which characterizes the contaminated-site and all information that led to the discovery of the contaminated-site.

**Section 3.0 , pp. 4-5 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.F. Include current uses and zoning of the contaminated site, including brief statements of operations, processes employed, waste generated, hazardous materials handled, and any residential activities on the site, if applicable. (This section should be linked to the specific objectives section demonstrating how the compounds of concern in the investigation are those that are used or may have been used on the site or are those that may have impacted the site from an off-site source.)

**Section 2.0, pp. 2-3 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.G. Include a locus map showing the location of the site using US Geological Survey 7.5-min quadrangle map or a copy of a section of that USGS map.

**Figure 1 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.H. Include a site plan, to scale, showing:
  - Buildings
  - Activities
  - Structures
  - North Arrow
  - Wells
  - UIC Systems, septic tanks, UST, piping and other underground structures
  - Outdoor hazardous materials storage and handling areas
  - Extent of paved areas
  - Location of environmental samples previously taken with analytical results
  - Waste management and disposal areas
  - Property Lines

**Figure 2 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.I. Include a general characterization of the property surrounding the area including, but not limited to:

- Location and distance to any surface water bodies within 500 ft of the site
- Location and distance to any environmentally sensitive areas within 500 ft of the site
- Actual sources of potable water for all properties immediately abutting the site
- Location and distance to all public water supplies, which have been active within the previous 2 years and within one mile of the site
- Determination as to whether the release impacts any off-site area utilized for residential or industrial/commercial property or both
- Determination of the underlying groundwater classification and if the classification is GB, the distance to the nearest GA area

**Section 2.0, p. 2 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.J. Include classifications of surface and groundwater at and surrounding the site that could be impacted by a release.

**Section 2.0, p. 2 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.K. Include a description of the contamination from the release, including:
  - Free liquids on the surface
  - LNAPL and DNAPL
  - Concentrations of hazardous substances which can be shown to present an actual or potential threat to human health and any concentrations in excess of any of the remedial objectives
  - Impact to environmentally sensitive areas
  - Contamination of man-made structures
  - Odors or stained soil
  - Stressed vegetation
  - Presence of excavated or stockpiled material and an estimate of its total volume
  - Environmental sampling locations, procedures and copies of the results of any analytical testing at the site
  - List of hazardous substances at the site

**Section 3.0, pp. 4-5 and Section 4.0, pp. 6-11 of *SIR Addendum*, prepared by EA and dated March 2005.**

- Discuss if the contamination falls outside of the jurisdiction of the Remediation Regulations, including but not limited to USTs, UICs, and wetlands

**Not applicable.**

- 7.03.L. Include the concentration gradients of hazardous substances throughout the site for each media impacted by the release.

**Figure 2 and Section 4.0, pp. 6-11 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.M. Include the methodology and results of any investigation conducted to determine background concentrations of hazardous substances identified at the contaminated site.

**Not applicable.**

- 7.03.N. Include a listing and evaluation of the site specific hydrogeological properties which could influence the migration of hazardous substances throughout and away from the site, including but not limited to, where appropriate:

- Depth to GW
- Presence and effects of both the natural and man-made barriers to and conduits for contaminant migration
- Characterization of bedrock
- Groundwater contours, flow rates and gradients throughout the site

**Section 2.0, p. 2 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.O. Include a characterization of the topography, surface water and run-off flow patterns, including the flooding potential, of the site

**Section 2.0, p. 2 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.P. Include the potential for hazardous substances from the site to volatilize and any and all potential impacts of the volatilization to structures within the site.

**Section 4.0, pp. 6-11 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.Q. Include the potential for entrainment of hazardous substances from the site by wind or erosion actions.

**Section 5.2, pp. 13-14 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.R. Include detailed protocols for all fate and transport models used in the Site Investigation.

**Not applicable.**

- 7.03.S. Include a complete list of all samples taken, the location of all samples, parameters tested for and analytical methods used during the Site Investigation. (Be sure to include the samples locations and analytical results on a site figure).

**Figures 3-5 and Section 4.0, pp. 6-11 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.T. Include construction plans and development procedures for all monitoring wells. Well construction must be consistent with the requirements of Appendix I of the Groundwater Quality Regulations.

**Section 4.2.2 and Appendix D of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.U. Include procedures for the handling, storage and disposal of wastes derived from and during the investigation.

**IDW was returned to point of generation.**

- 7.03.V. Include a quality assurance and quality control evaluation summary report for sample handling and analytical procedures, including, but not limited to, chain-of-custody procedures and sample preservation techniques.

**Sections 4.2.1 and 4.2.2 and Appendices A, C, and E of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.03.W. Include any other site-specific factor, that the Director believes, is necessary to make an accurate decision as to the appropriate remedial action to be taken at the site.

**Not applicable.**

- 7.04 Include Remedial Alternatives. The Site Investigation Report **must** contain a minimum of 2 remedial alternatives other than no action/natural attenuation alternative, unless this requirement is waived by the Department. It should be clear which of these alternatives is most preferable. All alternatives must be supported by relevant data contained in the Site Investigation Report and consistent with the current and reasonably foreseeable land usage, and documentation of the following:

- Compliance with Section 8 (RISK MANGEMENT);
- Technical feasibility of the preferred remedial alternative;
- Compliance with Federal, State and local laws or other public concerns; and
- The ability of the performing party to perform the preferred remedial alternative

**Section 5.0, pp. 12-14 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.05 Certification Requirements:** The Site Investigation Report and all associated progress reports must include the following statements signed by an authorized representative of the party specified:
  - A statement signed by an authorized representative of the person who prepared the Site Investigation Report certifying the completeness and accuracy of the information contained in that report to the best of their knowledge; and
  - A statement signed by the performing party responsible for the submittal of the Site Investigation Report certifying that the report is a complete and accurate representation of the site and the release and contains all known facts surrounding the release to the best of their knowledge

**Section 6.0, p. 15 of *SIR Addendum*, prepared by EA and dated March 2005.**

- 7.06 Progress Reports:** If the Site Investigation is not complete, include a schedule for the submission of periodic progress reports on the status of the investigation and interim reports on any milestones achieved in the project

**Not applicable.**

- 7.07 Public Notice:** Be prepared to implement public notice requirements per Section 7.07 and 7.09 of the Remediation Regulations when the Department deems the Site Investigation Report to be complete.

**Agreed.**

## 1. INTRODUCTION AND BACKGROUND

On behalf of the Site owner, EA Engineering, Science, and Technology, Inc. (EA) is submitting this Site Investigation Report (SIR) Addendum for Parcel B of the former Gorham Manufacturing property located at 333 Adelaide Avenue, Providence, Rhode Island (hereafter, "the Site") in accordance with the Rhode Island Department of Environmental Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (short title: Remediation Regulations), March 1993, as amended August 1996. This report is intended to supplement previous investigations of this parcel as well as propose remedial alternatives to support residential redevelopment at the Site.

Figure 1 is a site location map of the Site. Figure 2 is a site plan, showing current Site conditions and the locations of areas of concern previously investigated and remediated. Figure 3 is a plan showing the locations of soil vapor monitoring points, and Figure 4 is a plan showing the locations of soil vapor sampling points. Figure 5 shows the locations of soil borings and monitoring wells installed by EA. Figure 6 includes the locations of the geotechnical soil borings and test pits conducted at the Site.



## 2. SITE DESCRIPTION

The Site is currently undeveloped and lightly vegetated. There has been some surficial disposal of white goods in the northwestern corner of the Site. No hazardous materials are handled or generated at the Site. To the east of the Site is the Parcel A area of the former Gorham Manufacturing facility, which is currently developed with a commercial retail facility and associated fueling station and parking area. To the west of the Site is the Parcel C portion of the former Gorham Manufacturing facility, which is also currently undeveloped. Parcels A, B and C are currently owned by the City of Providence. Mashapaug Pond is located to the north of the Site (approximately 120 ft to the north), and Adelaide Avenue and its associated residences are located to the south. The Providence Water Supply Board provides potable water for the residences along Adelaide Avenue and the adjacent retail complex. No public water supplies are located within 1 mi of the Site. A site locus map is included as Figure 1.

Several previous environmental investigations have been conducted at the former Gorham Manufacturing site, including remedial actions. These investigations and remedial actions include activities conducted both prior to and following the demolition of the former buildings and subdivision of the Site into three separate parcels. Figure 2 depicts the locations of previous remedial actions that have been performed at the former Gorham Manufacturing site.

The adjacent Mashapaug Pond is classified by RIDEM as a Class B Surface Water Body. This designation indicates that the pond is primarily used for fish and wildlife habitat and primary and secondary recreational activities, and is suitable for industrial, navigational, and irrigation processes. Mashapaug Pond received water from Spectacle Pond to the west, via natural open channels and pipes underlying Route 10 and Route 1. Water flows from Mashapaug Pond to the south into the pond system at Roger Williams Park to the south. Groundwater at the Site is classified as GB, indicating that it is not suitable for consumption without treatment. The direction of groundwater flow is presumed to be towards the north and Mashapaug Pond. Site investigations have encountered groundwater at approximately 25 ft below ground surface (bgs).

Topography over the Site is generally flat, with a slight slope towards the north and Mashapaug Pond. According to the U.S. Geological Survey topographic map (Figure 1), the Site is located at an elevation of approximately 70 ft above mean sea level, with an elevation of approximately 45 ft above mean sea level along the shoreline of the pond. Bedrock at the Site is characterized as a meta-sedimentary sequence of the Rhode Island Formation. The bedrock surface was not encountered during any environmental investigations conducted at the Site. Non-native fill material was encountered to approximately 15 ft bgs. Native soils observed during drilling activities were predominantly sand deposits.

The former Gorham Manufacturing facility was once the country's largest producer of silverware, and was also renowned for its statues, memorials, and architectural bronze work. The facility at the Site reportedly began operations in 1890. Site activities included milling, forging, heat treating, plating, lacquering, polishing, and degreasing. Gorham Manufacturing operated at the Site until 1967, at which time the facility was purchased by Textron. Operations



ceased at the facility in 1986, and the facility was demolished in 2001. The current retail operations to the east of Parcel B began in 2002.

### 3. PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Several environmental investigations have been conducted at the Site and the adjacent Parcels A and C since the first assessment in 1988. In addition, the Site has been the subject of remedial activities described under the Remedial Action Work Plan (RAWP), prepared by Harding ESE on behalf of Textron, Inc. in April 2001. The standards established in this RAWP were intended for industrial/commercial redevelopment at Parcel B.

Beginning in December 2001, an excavation and asphalt batching remedial action was conducted in the northeastern portion of Parcel B to address petroleum contamination, designated as the "TPH Treatment Area" on Figure 2, and in the northwestern portion of Parcel B to address copper contamination. These activities included the excavation of soils contaminated above the Upper Concentration Limit (UCL) for the contaminant of concern (30,000 ppm for petroleum and 10,000 ppm for copper), confirmatory soil sampling, asphalt batching of the excavated material, and backfilling. Confirmatory soil samples collected following remedial activities indicated the compliance of the excavations with the appropriate standards.

As part of this RAWP, surface soil samples were collected and analyzed for the Resource Conservation and Recovery Act (RCRA) Metals in October 1994 or the Priority Pollutant (PP13) Metals in March 2001, and polycyclic aromatic hydrocarbons (PAHs). According to the site plan for this investigation, five surface soil samples were collected at Parcel B. Results are summarized in the table below.

#### SURFACE SOIL SAMPLING RESULTS, 13 OCTOBER 1994 AND 1 MARCH 2001

Analyte Detected	SD-004 (0-1 ft) 10/13/94	SS-405S (0-0.5 ft) 3/1/01	SS-406S (0-0.5 ft) 3/1/01	SS-407S (0-0.5 ft) 3/1/01	SS-407D (1.5-2 ft) 3/1/01	SS-408S (0-0.5 ft) 3/1/01	RIDEM RDEC
<b>PP13 Metals</b>							
Arsenic	<5	2.54	4.26	1.91	1.92	<1.5	7
Barium	--	158	29.8	24.6	15.1	<15	5,500
Beryllium	--	<0.072	0.274	0.149	0.121	0.105	0.4
Chromium	34	27.7	5.93	<3.54	<3.37	<3.75	390
Copper	300	57.3	155	40.6	69.3	1340	3,100
Lead	29	50.5	71.2	56.4	39.7	73.6	150
Nickel	13	7.73	6.81	3.77	4.53	3.13	1,000
Silver	<1	1.38	2.17	1.39	1.8	4.8	200
Zinc	291	56.4	190	62.6	41.9	567	6,000
Note: <b>Bold</b> indicates an exceedance of the RIDEM RDEC. -- = Not sampled.							
<b>PAHs</b>							
Anthracene	ND	1.080	<0.392	<0.361	<0.353	<0.372	35
Benzo(a)anthracene	<3.30	<b>1.440</b>	<b>0.915</b>	<b>1.090</b>	0.555	<0.372	0.9
Benzo(a)pyrene	<3.30	<b>1.210</b>	<b>1.130</b>	<b>1.180</b>	<b>0.954</b>	0.399	0.4
Benzo(b)fluoranthene	<3.30	<b>1.240</b>	<b>1.100</b>	<b>1.050</b>	<b>0.930</b>	0.385	0.9
Benzo(g,h,i)perylene	<3.30	0.457	0.727	0.582	0.563	<0.372	0.8

Analyte Detected	SD-004 (0-1 ft) 10/13/94	SS-405S (0-0.5 ft) 3/1/01	SS-406S (0-0.5 ft) 3/1/01	SS-407S (0-0.5 ft) 3/1/01	SS-407D (1.5-2 ft) 3/1/01	SS-408S (0-0.5 ft) 3/1/01	RIDEM RDEC
Benzo(k)fluoranthene	<3.30	<b>1.540</b>	<b>1.390</b>	<b>1.230</b>	<b>1.060</b>	<0.372	0.9
Chrysene	<3.30	<b>1.250</b>	<b>0.931</b>	<b>0.965</b>	<b>0.592</b>	<0.372	0.4
Fluoranthene	<3.30	3.420	2.070	2.130	1.090	0.562	20
Fluorene	<3.30	0.435	<0.392	0.361	<0.353	<0.372	28
Indeno(1,2,3-cd)pyrene	<3.30	0.515	0.708	0.601	0.557	<0.372	0.9
Phenanthrene	4.070	3.970	1.020	1.250	0.427	<0.372	40
Pyrene	5.690	2.160	1.600	1.670	0.918	<0.372	13

#### 4. LIMITED DESIGN INVESTIGATION

During January and February 2005, a Limited Design Investigation was conducted on Parcel B to determine the Site conditions and the suitability for the intended redevelopment as a public school. This investigation included soil vapor monitoring events on 19 January and 18 February 2005 and soil investigation and subsequent groundwater monitoring well installation on 21 January 2005. Groundwater samples were collected on 31 January 2005. All investigation activities were conducted in accordance with Sections 7.02 and 9.05 of the RIDEM Remediation Regulations.

#### 4.1 SOIL VAPOR SURVEY

##### 4.1.1 Soil Vapor Screening

Using a Geoprobe 6600, a total of 33 temporary soil vapor monitoring points were installed throughout Parcel B on 19 January 2005. A grid was established with 60-ft squares in order to concentrate on the proposed building footprint area. In addition to the 25 points in the grid, 8 additional points were installed to assess and delineate potential areas of concern, such as the historic fill area. All monitoring points are depicted on Figure 3. Following the installation of each polyvinyl chloride (PVC) point to 5 ft bgs, the annular space was filled with No. 1 sand and the point was capped. A hose was attached to the cap fitting to allow for gas measurement. Prior to recording concentrations, each point was purged for at least 1 minute to remove residual vapor from previous points or ambient air in the PVC. Concentrations of volatile organic compounds (VOCs) were measured using a field photo ionization detector (PID). Concentrations of oxygen (O<sub>2</sub>), methane (CH<sub>4</sub>), carbon dioxide (CO<sub>2</sub>), and hydrogen sulfide (H<sub>2</sub>S) were measured using a portable landfill gas meter.

#### SOIL VAPOR SURVEY RESULTS, 19 JANUARY 2005

Monitoring Point	% CH <sub>4</sub>	% O <sub>2</sub>	% CO <sub>2</sub>	H <sub>2</sub> S (ppm)	VOC (ppm <sub>v</sub> )
A-0	0.1	9.4	5.4	0.0	8.6
B-0	0.1	13.8	4.5	0.0	3.4
A-0.5	0.1	9.4	14.0	0.0	4.7
E--0.5	0.1	19.6	0.1	0.0	34.9
A-1	0.1	17.2	2.5	0.0	1.7
B-1	0.1	18.0	2.0	0.0	1.4
C-1	0.0	19.4	1.0	0.0	1.7
D-1	0.0	13.3	1.3	0.0	2.2
E-1	0.1	18.6	0.0	0.0	9.4
D/E-1.5	0.1	8.4	1.7	0.0	8.1
E-1.5	0.3	13.1	0.1	0.0	32.6
A-2	0.1	18.8	1.6	0.0	1.1
B-2	0.1	18.9	1.9	0.0	1.5
C-2	0.1	16.4	2.8	0.0	1.1

Monitoring Point	% CH <sub>4</sub>	% O <sub>2</sub>	% CO <sub>2</sub>	H <sub>2</sub> S (ppm)	VOC (ppm <sub>v</sub> )
D-2	0.1	14.8	3.5	0.0	1.0
E-2	0.1	9.8	0.2	0.0	10.3
E-2.5	0.1	12.2	3.2	0.0	6.3
A-3	0.0	17.6	3.1	0.0	2.1
B-3	0.1	18.7	1.1	0.0	1.9
C-3	0.0	17.1	3.9	0.0	2.1
D-3	0.1	16.9	2.7	0.0	2.6
E-3	0.1	15.0	2.9	0.0	5.5
A-4	0.1	18.4	1.7	0.0	1.9
B-4	0.1	18.2	0.4	0.0	4.2
C-4	0.1	17.1	2.5	0.0	2.6
D-4	0.1	15.5	2.8	0.0	1.8
E-4	0.1	12.8	3.1	0.0	1.6
A-5	0.1	16.4	4.0	0.0	3.2
B-5	0.1	18.4	2.5	0.0	1.6
C-5	0.1	18.0	1.7	0.0	3.4
D-5	0.1	16.5	2.9	0.0	1.6
E-5	0.1	18.4	1.6	0.0	0.9
E-6	0.1	19.4	0.7	0.0	0.8

The results of the soil vapor screening indicate the presence of VOCs in subsurface soils. The locations exhibiting the highest VOCs correspond to the area in which petroleum-contaminated soils were removed, asphalt batched, and used to backfill the excavation.

#### 4.1.2 Speciated Soil Vapor Sampling

On 18 February 2005, six soil vapor extraction points were installed in the proposed building footprint at the Site. These 1-in. diameter PVC points were screened from 4 to 5 ft bgs with 0.010-in. screen. The annular space was filled with sand to 3 ft below ground surface, and each point was sealed with bentonite to the ground surface. On 19 February 2005, each point was purged for 5 minutes prior to the measurement of landfill gas and collection of a vapor sample. Each soil vapor sample was collected in a Tedlar bag for analysis of VOCs by U.S. Environmental Protection Agency (EPA) Method TO-14. Locations of the soil vapor extraction points are depicted on Figure 4. Certificates of Analysis for the speciated soil vapor samples are included as Appendix A.

Trichloroethene (TCE) was the only VOC detected above the Method Detection Limits of 0.5 milligrams per cubic meter (mg/m<sup>3</sup>). For the purposes of this SIR, soil vapor analytical results are compared to Connecticut Department of Environmental Protection (CTDEP) proposed Indoor Target Air Concentrations (TACs). Concentrations of TCE detected in these soil vapor samples are summarized in the table below.

SOIL VAPOR SAMPLING RESULTS, 18-21 FEBRUARY 2005

VOC Detected (mg/m <sup>3</sup> )	SVE-1	SVE-2	SVE-3	SVE-4	SVE-5	SVE-6	CTDEP TAC
Trichloroethene	< 0.5	< 0.5	<b>0.5</b>	<b>1.0</b>	<b>2.0</b>	< 0.5	0.001
Note: <b>Bold</b> indicates an exceedance of the applicable standards. mg/m <sup>3</sup> = Milligrams per cubic meter.							

These standards are intended to establish acceptable levels of VOCs in residential indoor air. These soil vapor samples were collected from a depth of 4-5 ft below ground surface at six locations throughout the Site. The TCE is expected to attenuate through the surface soils and into ambient air, resulting in decreased concentrations of TCE. Applying the CTDEP Indoor TACs to these subsurface soil vapor concentrations indicates that soil vapor has the potential to impact indoor air in the building proposed for the Site.

**4.2 SOIL AND GROUNDWATER INVESTIGATION**

**4.2.1 Soil Boring Installation and Soil Sampling**

On 21 January 2005, five soil borings were installed at the Site. Locations were chosen based upon the areas of concern depicted on Figure 2 as well as potential areas of concern identified during the soil vapor investigation. The locations of the soil borings are included on Figure 5. Soil borings were advanced with a Geoprobe 6600 by New England Geotech. Soils were logged and inspected for visual and olfactory evidence of contamination. In addition, soil headspace readings were taken using a field flame ionization detector. Boring logs are included as Appendix B. Based upon observations and screening results, soil samples were collected from intervals of concern and submitted for laboratory analysis of VOCs by EPA Method 8260B/5035 and total petroleum hydrocarbons (TPH) by EPA Method 8100M.

At SB-1, advanced adjacent to the area with the highest VOC levels measured with the PID during the soil vapor survey, soils were collected from a perched water table below the asphalt batching material associated with the TPH Treatment Area. A soil sample was collected from 1 to 2 ft bgs at SB-2 in order to assess whether the historic fill material observed in the boring has the potential to adversely impact the environment. In addition, a soil sample was collected at SB-2 from soils in the vicinity of the groundwater interface zone in order to determine whether any potential contamination from the fill had leached downward in the soil column. Soil vapor points in the vicinity of SB-2 did exhibit slightly elevated VOC concentrations. Two soil samples were collected at SB-4, which was installed in an asphalt batched area to the north of the proposed building footprint. The soil sample from the 9- to 10-ft interval was collected to provide representative data of the asphalt batched backfill material, which exhibited strong petroleum odors and often corresponded to soil vapor VOC areas of concern. Heavy grade petroleum, presumably No. 6 fuel oil, was observed in the soils from the groundwater fluctuation zone (23-24 ft below ground surface). The soil sample from SB-5 was also collected from the groundwater fluctuation zone. No evidence of contamination was observed. This sample was meant to represent general Site conditions, those not associated with former fill areas or the TPH

Treatment Area. Certificates of Analysis are included as Appendix C, and concentrations of detected analytes are summarized in the table below.

SOIL SAMPLING RESULTS, 21 JANUARY 2005

Analyte Detected (ppm)	SB-1 (14-15')	SB-2 (1-2')	SB-2 (22-23')	SB-4 (9-10')	SB-4 (23-24')	SB-5 (25-26')	RIDEM GB LC	RIDEM RDEC	CTDEP Soil Vaporization Criteria
TPH	329	35.4	ND	<b>17,000</b>	<b>44,600</b>	119	2,500	500	--
1,2,4-Trimethylbenzene	0.0294 J	ND	ND	<b>2.760</b>	0.0575	ND	--	--	1.4
1,2-Dichlorobenzene	ND	ND	ND	1.090	ND	ND	--	--	9.2
1,3,5-Trimethylbenzene	ND	ND	ND	0.692	ND	ND	--	--	1.4
1,3-Dichlorobenzene	ND	ND	ND	0.0822	ND	ND	--	--	9.2
1,4-Dichlorobenzene	ND	ND	ND	0.371	ND	ND	--	--	3.0
4-Isopropyltoluene	0.0180 J	ND	ND	ND	170	ND	--	--	9.3
Benzene	ND	ND	ND	0.0332 J	0.0186 J	ND	4.3	2.5	0.78
Ethylbenzene	0.0101 J	ND	ND	0.833	ND	ND	62	71	9.3
Isopropylbenzene	ND	ND	ND	0.441	0.0893	ND	--	27	19
Methyl tert-Butyl Ether	0.0302 J	ND	0.0175 J	ND	ND	ND	100	390	34
Naphthalene	0.0998	ND	ND	4.250	ND	0.816	--	54	--
n-Butylbenzene	0.0115 J	ND	ND	1.080	0.430	ND	--	--	10
n-Propylbenzene	ND	ND	ND	0.903	0.178	ND	--	--	--
Sec-Butylbenzene	ND	ND	ND	0.731	0.304	ND	--	--	10
Tetrachloroethene	0.0259 J	0.481	ND	0.0618	0.0601 J	ND	4.2	12	0.56
Trichloroethene	0.0144 J	<b>0.245</b>	ND	0.0347 J	ND	ND	20	13	0.14
Xylenes	0.0251 J	ND	ND	1.370	ND	ND	--	110	38

Note: ND = Not detected above the Method Detection Limit.  
 J = Not detected above the Method Reporting Limit; estimated value.  
 -- = No standard established for this analyte.  
**Bold** indicates an exceedance of the applicable standard.

Analytical results from the soil samples indicate that the Site is generally in compliance with both the RIDEM RDEC and GB Leachability Criteria for VOCs and TPH. The notable exception is associated with the TPH Treatment Area. The sample collected of the asphalt batched backfill material indicates that TPH is present at a concentration of 17,000 ppm. This level exceeds the RIDEM criteria, but for the former Gorham Manufacturing facility, the site-specific standard was approved to be the UCL for petroleum (30,000 ppm) for industrial/commercial reuse. However, petroleum at concentrations exceeding the UCL was discovered at the groundwater interface at SB-4. This location is north of the proposed building footprint and the impacted soil was noted at a depth of approximately 23-24 ft bgs (Figure 5). This petroleum contamination, presumed to be No. 6 fuel oil, is not impacting soil vapor, is located beneath a proposed parking area, and is suitably isolated from direct exposure risks. Therefore, no remedial alternatives are proposed for this residual contamination.

At two locations north of the proposed building footprint, SB-2 and SB-4, concentrations of VOCs in soil exceeded the CTDEP proposed Soil Vaporization Criteria for Residential Use.

Figure 5 shows the locations of these soil boring locations relative to the proposed building footprint.

#### 4.2.2 Monitoring Well Installation and Groundwater Sampling

Monitoring wells were installed at SB-1, SB-2, SB-3, and SB-5 on 21 January 2005. No monitoring well could be installed at SB-4 due to the cohesive nature of the asphalt batching material. Monitoring wells were completed as 2-in. diameter Schedule 40 PVC. Ten feet of 0.010-in. screen was used at each monitoring well, with the exception of MW-1, in which a perched water table was encountered that cast doubt on the location of the true groundwater table. Fifteen feet of screen was used at MW-1. Well construction diagrams are included as Appendix D. Annular space was filled with No. 1 sand, and each well was sealed with 3 ft of bentonite and grouted at the surface.

On 28 January 2005, each well was developed using dedicated polyethylene bailers to purge five times the standing well volume. The water table was gauged using an oil/water interface probe. On 31 January 2005, groundwater samples were collected after using a peristaltic pump to withdraw three times the standing well volume through dedicated polyethylene tubing. Five groundwater samples were collected: one from each monitoring well, and an additional sample to serve as the blind duplicate at MW-2. Groundwater samples were submitted for laboratory analysis of VOCs by EPA Method 8260B. Certificates of Analysis are included as Appendix E. The concentrations of detected analytes are summarized in the table below.

GROUNDWATER SAMPLE RESULTS, 31 JANUARY 2005

VOC Detected (µg/L)	MW-1	MW-2	DUP (MW-2)	MW-3	MW-4	RIDEM GB Groundwater Objectives	CTDEP GW Volatilization Criteria
1,1,1-Trichloroethane	0.7 J	ND	ND	ND	0.4 J	3,100	6,500
Tetrachloroethene	10.5	10.7	10.3	0.8 J	0.9 J	150	340
Trichloroethene	6.9	9.0	8.7	24.8	122	540	27
Trichlorofluoromethane	5.6	4.4	4.5	10.3	15.4	--	--

Note: ND = Not detected above the Method Detection Limit.  
 J = Not detected above the Method Reporting Limit; Estimated value.  
 -- = No standard established for this analyte.  
**Bold indicates an exceedance of the applicable standard.**

Analytical results indicate that groundwater at the Site is in compliance with the applicable RIDEM standards. The distribution of detected VOCs reflects those currently undergoing remediation through permanganate injection to the east, in the southern portion of Parcel A. However, when the groundwater concentrations are compared to the CTDEP proposed Groundwater Vaporization Criteria for Residential Use, the concentration of TCE at MW-4 is above standards. These numbers are intended to model the potential effects of VOCs in groundwater at less than 30 ft bgs on indoor air. Therefore, it is presumed that Site groundwater in the vicinity of MW-4 has the potential to impact future indoor air quality.



### **4.2.3 Geotechnical Soil Borings**

On 1 through 4 February 2005, a total of 12 geotechnical soil borings were advanced throughout the proposed building footprint on behalf of the Providence Department of Public Property by Geisser Engineering. These borings were advanced using a hollow-stem auger. Boring locations are included on Figure 6, and boring logs are included as Appendix F. Results indicated the presence of a fill layer at the surface of the Site in all borings, ranging from depths of less than 1 ft in the eastern portion of the proposed building footprint (B-5) to approximately 10 ft of fill in the northeastern corner of the proposed building footprint (B-3).

### **4.2.4 Geotechnical Test Pitting**

On 21 February 2005, a total of 15 test pits were advanced throughout the proposed building footprint, also by Geisser Engineering. Test pit locations are shown on Figure 6 and correspond to boring locations, with the exception of three test pits advanced 20 ft north of the northern side of the proposed building. Test pit logs are included as Appendix G. Proportions of fill material, including wood, concrete, and brick, were discovered in test pits primarily in the western portion of the property, particularly in the northwestern corner. There was also an area of fill material located in proximity to the eastern property boundary, in the vicinity of EA's MW-1. Test pitting allowed for the further identification of the historic fill material, which included miscellaneous metal materials and reinforced concrete. This material is presumed to have been used as fill during the previous Site operations. There is no evidence that the Site operated as a municipal or private landfill during operations.

## 5. REMEDIAL ALTERNATIVES

Based upon the environmental investigations conducted at the Site, including the January 2005 investigation conducted by EA, the contaminants of concern at Parcel B of the Gorham Manufacturing site can be grouped into two categories, PAHs in surficial soils and VOCs in soil vapor. Remedial alternatives are discussed for each category in the following sections.

### 5.1 SOIL VAPOR

Based on the VOC levels detected in some locations at the Site and the proposed redevelopment as a public school, EA is proposing two remedial alternatives for the soil vapor throughout the proposed building footprint.

#### 5.1.1 Remedial Alternative 1 – Active Soil Vapor Extraction System

For this remedial alternative, a system of permanent soil vapor extraction (SVE) points would be installed around the proposed building and throughout the Site. These points would consist of a predetermined length of PVC screen in the subsurface connected to solid PVC riser pipe. These SVE points would be connected to a centralized mechanical vacuum system. This system would be separate from the proposed building to protect the equipment and prevent risks from the gas venting.

This system would provide for the active extraction of soil vapor from the Site, but would not address the concern raised from previous soil vapor sampling, that indoor air may be impacted by this contamination. Therefore, this remedial alternative is not recommended.

#### 5.1.2 Remedial Alternative 2 – Building Venting System

Given the low levels of VOCs detected in subsurface soil gas in the location of the proposed building footprint, EA recommends that a sub-slab ventilation system be installed beneath the building slab, consisting of perforated piping within a pea-stone bed with a geotextile lining. Soil gas monitoring points will be installed within the sub-slab area, and prior to the commencement of building operations, soil vapor samples in the sub-slab area will be collected. If results indicate acceptable indoor air levels of VOCs, the ventilation system will serve as passive ventilation. However, active venting will be required if indoor air levels are determined to be unsafe.

If it is determined that active venting is necessary, the system will allow for the addition of blowers that will provide a negative pressure beneath the slab of the proposed Site building. A stone layer with a perforated piping network will be installed placed beneath the building. Solid piping will extend from the stone layer piping to a surface-mounted blower capable of creating an appropriate air exchange rate. The building slab and utility piping will be sealed during construction to prevent future infiltration of soil vapor.

On a monthly schedule during the first year of building occupancy, and quarterly thereafter, representative soil vapor samples will be collected from beneath the building within the stone layer. VOC levels will be measured in the field using a PID. If VOC levels are measured above 5 ppm, speciated VOC samples will be collected and the results compared to the CTDEP Indoor TACs or 1/100<sup>th</sup> of the most restrictive occupational standard (Occupational Safety and Health Administration Permissible Exposure Limits, American Conference of Governmental Industrial Hygienists Threshold Limit Values, or National Institute of Occupational Safety and Health Recommended Exposure Limits). The results of this monitoring will be forwarded to RIDEM within 45 days of the collection of the test results with a recommendation regarding the need for system start-up.

Should the testing provide air concentrations of target compounds at concentrations above these criteria, the system's operation will be initiated and continued until completion of the next sampling round when air quality will be re-evaluated. The findings from the air quality surveys will be included in periodic monitoring reports to RIDEM.

## **5.2 PAH CONTAMINATED SOILS**

### **5.2.1 Remedial Alternative 1 – Excavation and Offsite Disposal of Contaminated Soils**

This remedy would require the removal of all contaminated soils at the Site, the disposal of these soils at a licensed facility, and the backfill of excavated areas with clean fill. Based upon elevated PAH concentrations, this would require the removal of soils throughout the surface of the Site to a currently unknown depth due to the widespread nature of the surface fill contaminated above RIDEM RDEC. The risk of direct exposure would be eliminated at the Site with the exception of potential exposure during excavation activities.

This remedy would require an extensive field effort and present more chances for exposure to contaminated soils for Site workers and the environment. Also, the nature of these types of contaminated soils at the Site is widespread but not likely to potentially impact the environment in the future.

### **5.2.2 Remedial Alternative 2 – Engineered Controls and Environmental Land Usage Restriction**

This preferred remedial alternative would remove the potential for future direct exposure to the contaminated soils by Site students, faculty, or visitors. Based upon the analytical results of the previously conducted site investigation, this remedy would require the construction of an engineered cap throughout the Site. This cap would consist of roadways, walkways, paved parking areas, building footprints, or a minimum of 12 in. of certified clean fill over a fabric filter for the landscaped areas of the Site. An Environmental Land Usage Restriction would be established to describe requirements for future inspections and maintenance of this engineered cap and subsequent reports to RIDEM. There would also be a Soil Management Plan prepared for the Site to provide instruction for any future Site development that would affect the engineered cap.

This preferred remedy is more appropriate for this type of soil contamination, where direct exposure is the main concern. Semivolatile organic compounds and metals are less mobile in the environment than petroleum products, so the potential for future environmental degradation from leaving soils in place is unlikely. This is particularly appropriate considering these soils are in compliance with the RIDEM GB Leachability Criteria.



EA Project No.: 61965.01  
Version: FINAL  
Page 15 of 15  
March 2005

EA Engineering, Science, and Technology, Inc.

### 6. CERTIFICATIONS

The undersigned certify that this Site Investigation Report Addendum is a complete and accurate representation of the contaminated Site and the release of hazardous materials and contains all known facts surrounding the Site Investigation to the best of their knowledge.

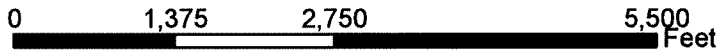
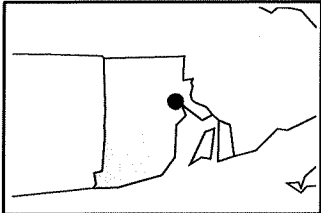
Timothy Regan, P.E., M.B.A.  
EA Engineering, Science, and Technology, Inc.  
Senior Engineer/Client Manager

  
\_\_\_\_\_  
Signature 4/1/05  
Date

Alan Sepe, Director  
Providence Department of Public Property  
Site Operator

  
\_\_\_\_\_  
Signature 4-1-05  
Date





FORMER GORHAM MANUFACTURING SITE, PARCEL B  
 333 ADELAIDE AVENUE  
 PROVIDENCE, RHODE ISLAND

FIGURE 1  
 SITE LOCATION MAP

PROJECT MGR:  
 TR

DESIGNED BY:  
 DC

CREATED BY:  
 DC

CHECKED BY:  
 JP

SCALE:  
 AS SHOWN

DATE:  
 FEBRUARY 2005

PROJECT NO:  
 6196501

FILE NO:  
 I:\RIFIG1  
 333 ADELAIDE\_PROV.MXD



PARCEL B  
PROPERTY BOUNDARY

PROPOSED  
BUILDING FOOTPRINT

PARKING AREA

PARCEL A

PARCEL C

PARKING AREA

ADELAIDE AVENUE

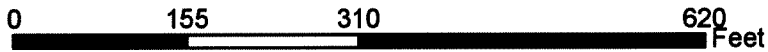
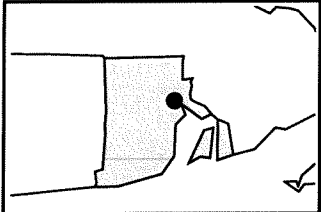
LEGEND:



FILL AREA

TPH TREATMENT AREA

PCE GROUNDWATER PLUME



FORMER GORHAM MANUFACTURING SITE, PARCEL B  
333 ADELAIDE AVENUE  
PROVIDENCE, RHODE ISLAND

FIGURE 2  
SITE PLAN AND  
AREAS OF CONCERN

PROJECT MGR:  
TR

DESIGNED BY:  
DC

CREATED BY:  
DC

CHECKED BY:  
JP

SCALE:  
AS SHOWN

DATE:  
MARCH 2005

PROJECT NO:  
6196501

FILE NO:  
I:\RIFIG2- AERIAL  
333 ADELAIDE\_PROV.MXD

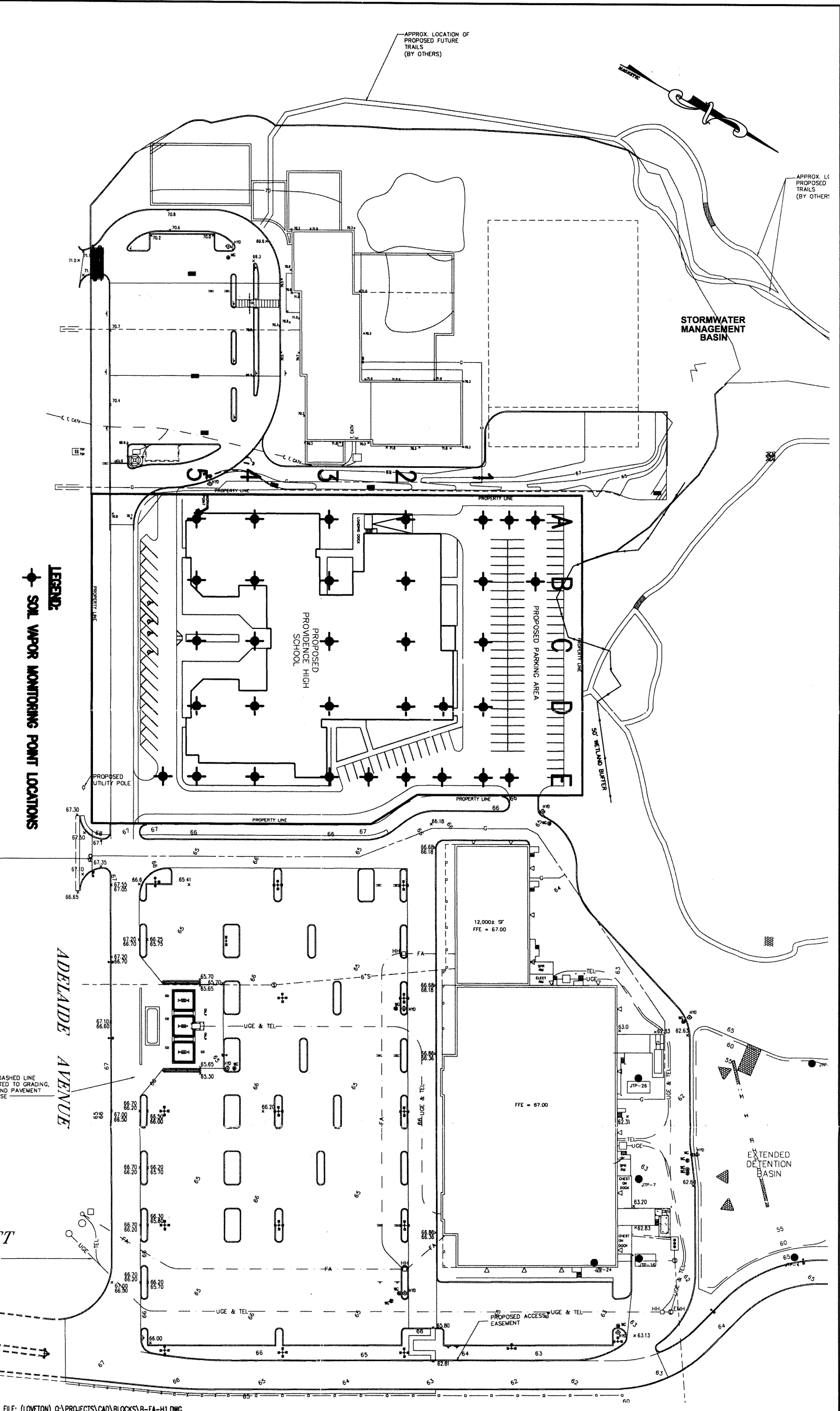


EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY

SITE INVESTIGATION REPORT ADDENDUM  
FORMER GORHAM MANUFACTURING FACILITY PROPERTY, PARCEL B  
PROVIDENCE, RHODE ISLAND

FIGURE 3  
SOIL VAPOR  
MONITORING POINTS

DESIGNED BY <b>WWW</b>	DRAWN BY <b>WEL</b>	DATE <b>3-22-05</b>	PROJECT NO. <b>61965.01</b>	FILE NAME <b>B-EA-H1</b>
CHECKED BY <b>JAP</b>	PROJECT MGR <b>TR</b>	SCALE <b>1" = 100'</b>	DRAWING NO. <b>-</b>	FIGURE <b>FIGURE 3</b>



**LEGEND**  
◆ SOIL VAPOR MONITORING POINT LOCATIONS

DASHED LINE  
LIMITED TO GRADING,  
AND PAVEMENT  
RSF

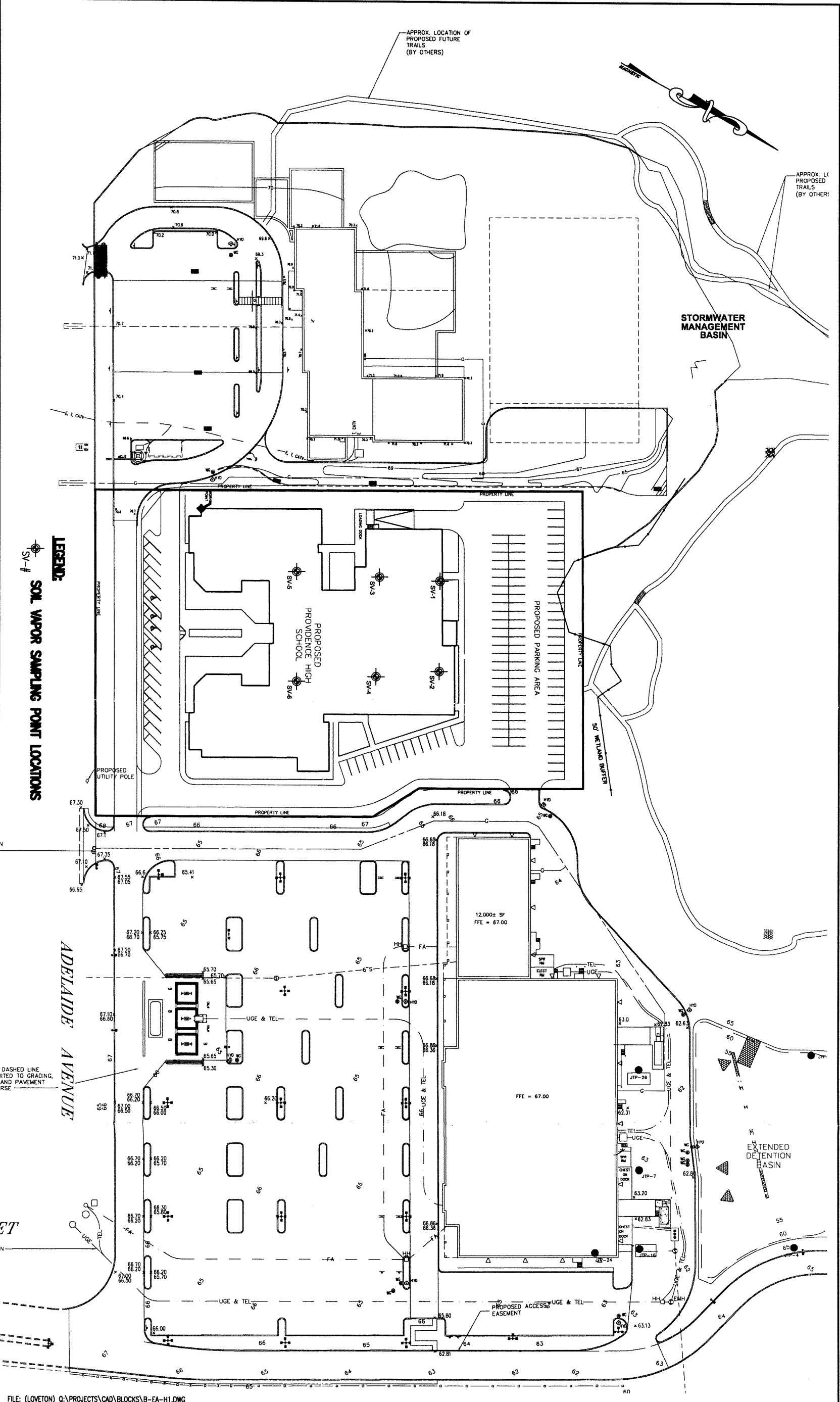


EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY

SITE INVESTIGATION REPORT ADDENDUM  
FORMER GORHAM MANUFACTURING FACILITY PROPERTY, PARCEL B  
PROVIDENCE, RHODE ISLAND

FIGURE 4  
SOIL VAPOR  
SAMPLING POINTS

DESIGNED BY <b>WWW</b>	DRAWN BY <b>WEL</b>	DATE <b>3-22-05</b>	PROJECT NO. <b>61965.01</b>	FILE NAME <b>B-EA-H1</b>
CHECKED BY <b>JAP</b>	PROJECT MGR. <b>TR</b>	SCALE <b>1" = 100'</b>	DRAWING NO. <b>-</b>	FIGURE <b>FIGURE 4</b>

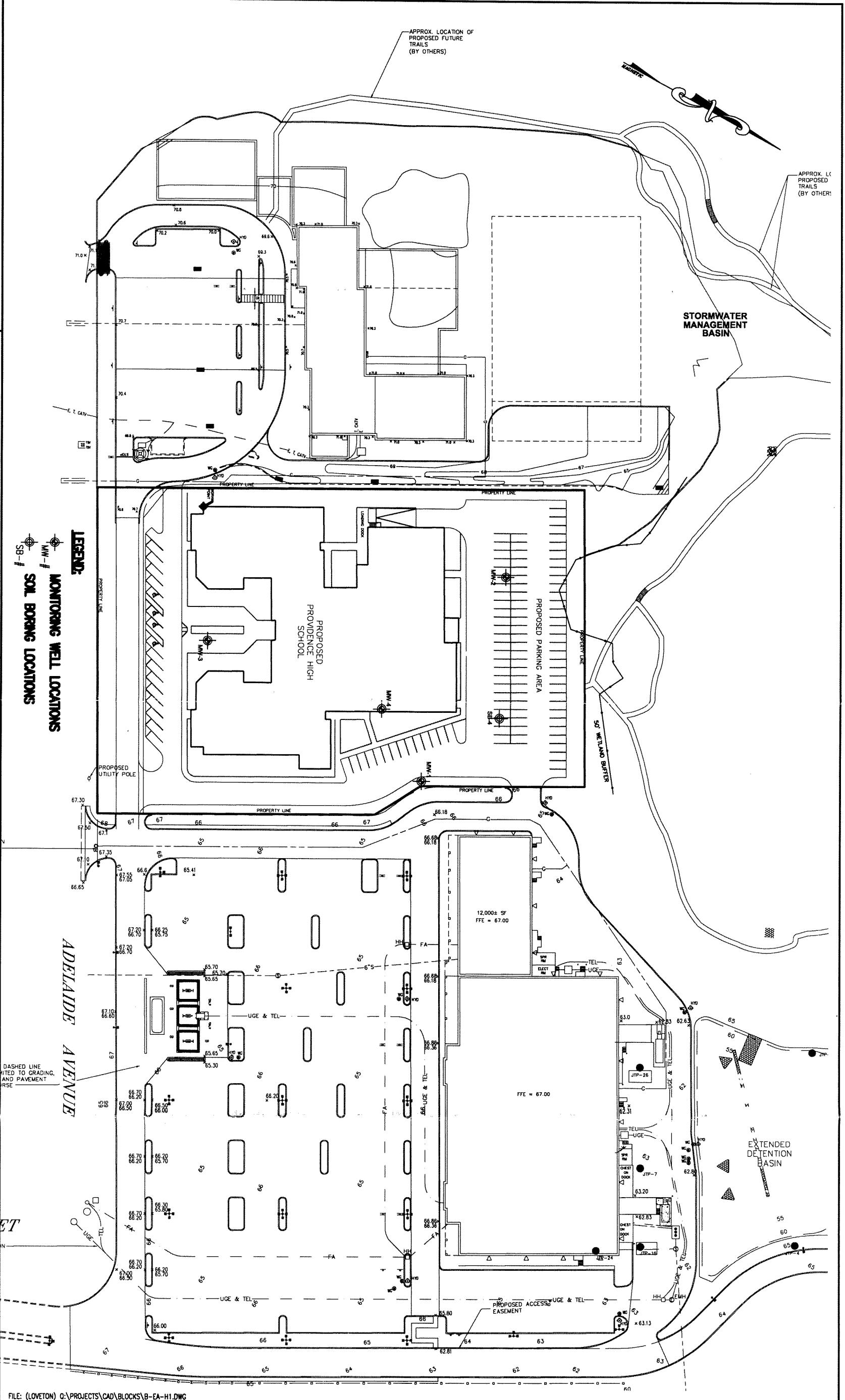


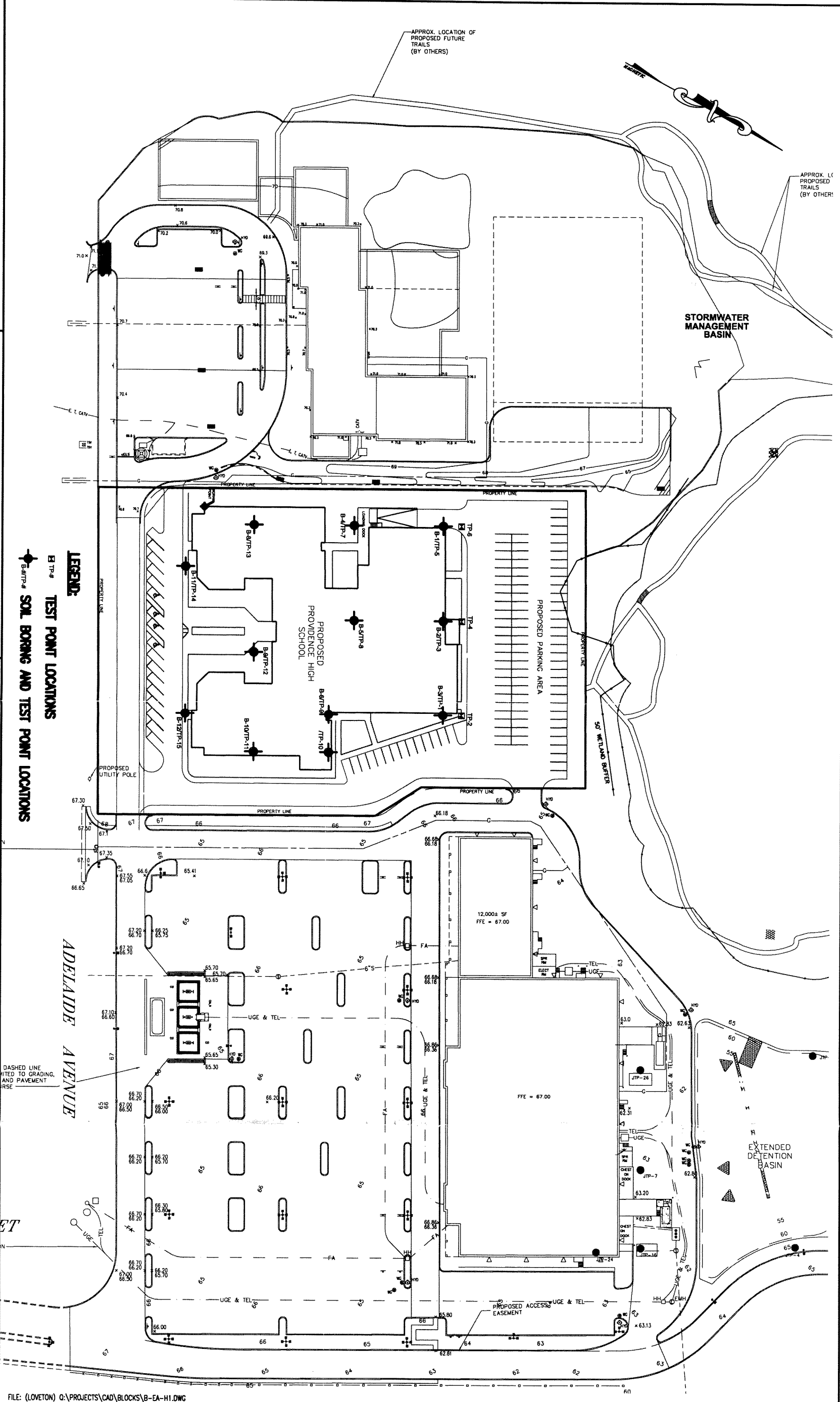


SITE INVESTIGATION REPORT ADDENDUM  
FORMER GORHAM MANUFACTURING FACILITY PROPERTY, PARCEL B  
PROVIDENCE, RHODE ISLAND

FIGURE 5  
SOIL BORING  
MONITORING WELL LOCATIONS

DESIGNED BY <b>WMM</b>	DRAWN BY <b>WEL</b>	DATE <b>3-22-05</b>	PROJECT NO. <b>61965.01</b>	FILE NAME <b>B-EA-H1</b>
CHECKED BY <b>JAP</b>	PROJECT MGR. <b>TR</b>	SCALE <b>1" = 100'</b>	DRAWING NO. <b>-</b>	FIGURE <b>FIGURE 5</b>





**EA ENGINEERING, SCIENCE, AND TECHNOLOGY**

SITE INVESTIGATION REPORT ADDENDUM  
FORMER GORHAM MANUFACTURING FACILITY PROPERTY, PARCEL B  
PROVIDENCE, RHODE ISLAND

FIGURE 6  
GEOTECHNICAL SOIL BORING  
AND TEST PIT LOCATIONS

DESIGNED BY W.W.W.	DRAWN BY W.E.L.	DATE 3-22-05	PROJECT NO. 61965.01	FILE NAME B-EA-H1
CHECKED BY J.A.P.	PROJECT MGR. TR	SCALE 1" = 100'	DRAWING NO. -	FIGURE FIGURE 6

FILE: (LOVETON) Q:\PROJECTS\CAD\BLOCKS\B-EA-H1.DWG



EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY

SITE INVESTIGATION REPORT ADDENDUM  
FORMER GORHAM MANUFACTURING FACILITY PROPERTY, PARCEL B  
PROVIDENCE, RHODE ISLAND

FIGURE 6  
GEOTECHNICAL SOIL BORING  
AND TEST PIT LOCATIONS

DESIGNED BY W.W.W.	DRAWN BY W.E.L.	DATE 3-22-05	PROJECT NO. 61965.01	FILE NAME B-EA-H1
CHECKED BY J.A.P.	PROJECT MGR. TR	SCALE 1" = 100'	DRAWING NO. -	FIGURE FIGURE 6

**APPENDIX A**

**SOIL VAPOR CERTIFICATES OF ANALYSIS**

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

### PROJECT NARRATIVE

**CLIENT: EA Engineering, Science and Technology**  
**CLIENT PROJECT ID: Dept. of Public Property**  
**ESS PROJECT ID: 0502229**

#### Sample Receipt

6 Air samples were received on February 22, 2005 for the analysis specified on the enclosed Chain of Custody Record. The sampling for this project was performed by a representative of ESS Laboratory.

#### Analytical Summary

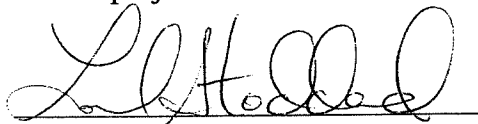
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, 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.

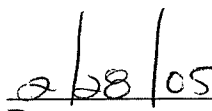
ESS Laboratory certifies that the test results meet the requirement of NELAC, except where noted within this project narrative.

No unusual observations noted.

This signed Certificate of Analysis is our approved release of your analytical results. Beginning with this Project Narrative, the entire report has been paginated. The Chain of Custody is the final report page. This report should not be copied except in full without the approval of the laboratory.

End of project narrative.

  
\_\_\_\_\_  
Laurel Stoddard/Eric Baanante  
Laboratory Director/Operations Manager

  
\_\_\_\_\_  
Date

jdm



March 2, 2005

Client: ESS Laboratory  
Division of Thielsch Engineering, Inc.  
185 Frances Avenue  
Cranston, RI 02910-2211

Attention: Mr. Kevin Braga

EAS Project Number: 05020300  
Location Collected: Air Samples

\* Revised report for units.

Copies of this report and the supporting computer stored data are retained in our files in the event they are required for future reference.

Any sample submitted to our laboratory will be retained for a maximum of thirty (30) days from receipt of the sample.

All analytical data, unless otherwise specified, is reported on a wet weight (as received) basis.

Our laboratory is a multi-state Certified Public Health Laboratory, offering a full range of analytical services which include:

Drinking Water Analysis  
Water and Wastewater Analysis  
Hazardous Waste Analysis (RCRA)  
Full Priority Pollutant Analysis  
Field Sampling

Gregory C. Lawrence  
Laboratory Director

encl.





ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-5  
EAS Sample Number: 05020300-01  
LIMS ID Number: AG01963  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
Volatile Organic Compounds, Air				
Dichlorodifluoromethane	BDL	0.50	mg/m3	02/21/05
Chloromethane	BDL	0.50	mg/m3	02/21/05
Vinyl Chloride	BDL	0.50	mg/m3	02/21/05
Bromomethane	BDL	0.50	mg/m3	02/21/05
Chloroethane	BDL	0.50	mg/m3	02/21/05
Trichlorofluoromethane	BDL	50	mg/m3	02/21/05
Acetone	BDL	5.0	mg/m3	02/21/05
1,1-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methylene Chloride	BDL	0.50	mg/m3	02/21/05
trans-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methyl-tert-butyl-ether	BDL	0.50	mg/m3	02/21/05
1,1-Dichloroethane	BDL	0.50	mg/m3	02/21/05
2-Butanone	BDL	5.0	mg/m3	02/21/05
cis-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
2,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Chloroform	BDL	0.50	mg/m3	02/21/05
Bromochloromethane	BDL	0.50	mg/m3	02/21/05
1,1,1-Trichloroethane	BDL	0.50	mg/m3	02/21/05
1,1-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,2-Dichloroethane	BDL	0.50	mg/m3	02/21/05
Carbon Tetrachloride	BDL	0.50	mg/m3	02/21/05
Benzene	BDL	0.50	mg/m3	02/21/05
Trichloroethene	2.0	0.50	mg/m3	02/21/05
1,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromomethane	BDL	0.50	mg/m3	02/21/05
Bromodichloromethane	BDL	0.50	mg/m3	02/21/05
4-Methyl-2-Pentanone	BDL	5.0	mg/m3	02/21/05
cis-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
Toluene	BDL	0.50	mg/m3	02/21/05
trans-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,1,2-Trichloroethane	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-5  
EAS Sample Number: 05020300-01  
LIMS ID Number: AG01963  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
2-Hexanone	BDL	5.0	mg/m3	02/21/05
1,3-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromochloromethane	BDL	0.50	mg/m3	02/21/05
Tetrachloroethylene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromoethane	BDL	0.50	mg/m3	02/21/05
Chlorobenzene	BDL	0.50	mg/m3	02/21/05
1,1,1,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Ethylbenzene	BDL	0.50	mg/m3	02/21/05
m/p-Xylene	BDL	0.50	mg/m3	02/21/05
Styrene	BDL	0.50	mg/m3	02/21/05
o-Xylene	BDL	0.50	mg/m3	02/21/05
Bromoform	BDL	0.50	mg/m3	02/21/05
1,1,2,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Isopropylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,3-Trichloropropane	BDL	0.50	mg/m3	02/21/05
Bromobenzene	BDL	0.50	mg/m3	02/21/05
n-Propylbenzene	BDL	0.50	mg/m3	02/21/05
2-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
4-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
1,3,5-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
tert-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,4-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
sec-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,3-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
1,4-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
p-Isopropyltoluene	BDL	0.50	mg/m3	02/21/05
1,2-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
n-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/m3	02/21/05
1,2,4-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05
Naphthalene	BDL	0.50	mg/m3	02/21/05
Hexachlorobutadiene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-5  
EAS Sample Number: 05020300-01  
LIMS ID Number: AG01963  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
1,2,3-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



## ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-3  
EAS Sample Number: 05020300-02  
LIMS ID Number: AG01964  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
Volatile Organic Compounds, Air				
Dichlorodifluoromethane	BDL	0.50	mg/m3	02/21/05
Chloromethane	BDL	0.50	mg/m3	02/21/05
Vinyl Chloride	BDL	0.50	mg/m3	02/21/05
Bromomethane	BDL	0.50	mg/m3	02/21/05
Chloroethane	BDL	0.50	mg/m3	02/21/05
Trichlorofluoromethane	BDL	50	mg/m3	02/21/05
Acetone	BDL	5.0	mg/m3	02/21/05
1,1-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methylene Chloride	BDL	0.50	mg/m3	02/21/05
trans-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methyl-tert-butyl-ether	BDL	0.50	mg/m3	02/21/05
1,1-Dichloroethane	BDL	0.50	mg/m3	02/21/05
2-Butanone	BDL	5.0	mg/m3	02/21/05
cis-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
2,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Chloroform	BDL	0.50	mg/m3	02/21/05
Bromochloromethane	BDL	0.50	mg/m3	02/21/05
1,1,1-Trichloroethane	BDL	0.50	mg/m3	02/21/05
1,1-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,2-Dichloroethane	BDL	0.50	mg/m3	02/21/05
Carbon Tetrachloride	BDL	0.50	mg/m3	02/21/05
Benzene	BDL	0.50	mg/m3	02/21/05
Trichloroethene	0.50	0.50	mg/m3	02/21/05
1,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromomethane	BDL	0.50	mg/m3	02/21/05
Bromodichloromethane	BDL	0.50	mg/m3	02/21/05
4-Methyl-2-Pentanone	BDL	5.0	mg/m3	02/21/05
cis-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
Toluene	BDL	0.50	mg/m3	02/21/05
trans-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,1,2-Trichloroethane	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



## ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-3  
EAS Sample Number: 05020300-02  
LIMS ID Number: AG01964  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
2-Hexanone	BDL	5.0	mg/m3	02/21/05
1,3-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromochloromethane	BDL	0.50	mg/m3	02/21/05
Tetrachloroethylene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromoethane	BDL	0.50	mg/m3	02/21/05
Chlorobenzene	BDL	0.50	mg/m3	02/21/05
1,1,1,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Ethylbenzene	BDL	0.50	mg/m3	02/21/05
m/p-Xylene	BDL	0.50	mg/m3	02/21/05
Styrene	BDL	0.50	mg/m3	02/21/05
o-Xylene	BDL	0.50	mg/m3	02/21/05
Bromoform	BDL	0.50	mg/m3	02/21/05
1,1,2,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Isopropylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,3-Trichloropropane	BDL	0.50	mg/m3	02/21/05
Bromobenzene	BDL	0.50	mg/m3	02/21/05
n-Propylbenzene	BDL	0.50	mg/m3	02/21/05
2-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
4-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
1,3,5-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
tert-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,4-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
sec-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,3-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
1,4-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
p-Isopropyltoluene	BDL	0.50	mg/m3	02/21/05
1,2-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
n-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/m3	02/21/05
1,2,4-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05
Naphthalene	BDL	0.50	mg/m3	02/21/05
Hexachlorobutadiene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-3  
EAS Sample Number: 05020300-02  
LIMS ID Number: AG01964  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
1,2,3-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



## ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-1  
EAS Sample Number: 05020300-03  
LIMS ID Number: AG01965  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
Volatile Organic Compounds, Air				
Dichlorodifluoromethane	BDL	0.50	mg/m3	02/21/05
Chloromethane	BDL	0.50	mg/m3	02/21/05
Vinyl Chloride	BDL	0.50	mg/m3	02/21/05
Bromomethane	BDL	0.50	mg/m3	02/21/05
Chloroethane	BDL	0.50	mg/m3	02/21/05
Trichlorofluoromethane	BDL	50	mg/m3	02/21/05
Acetone	BDL	5.0	mg/m3	02/21/05
1,1-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methylene Chloride	BDL	0.50	mg/m3	02/21/05
trans-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methyl-tert-butyl-ether	BDL	0.50	mg/m3	02/21/05
1,1-Dichloroethane	BDL	0.50	mg/m3	02/21/05
2-Butanone	BDL	5.0	mg/m3	02/21/05
cis-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
2,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Chloroform	BDL	0.50	mg/m3	02/21/05
Bromochloromethane	BDL	0.50	mg/m3	02/21/05
1,1,1-Trichloroethane	BDL	0.50	mg/m3	02/21/05
1,1-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,2-Dichloroethane	BDL	0.50	mg/m3	02/21/05
Carbon Tetrachloride	BDL	0.50	mg/m3	02/21/05
Benzene	BDL	0.50	mg/m3	02/21/05
Trichloroethene	BDL	0.50	mg/m3	02/21/05
1,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromomethane	BDL	0.50	mg/m3	02/21/05
Bromodichloromethane	BDL	0.50	mg/m3	02/21/05
4-Methyl-2-Pentanone	BDL	5.0	mg/m3	02/21/05
cis-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
Toluene	BDL	0.50	mg/m3	02/21/05
trans-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,1,2-Trichloroethane	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



## ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-1  
EAS Sample Number: 05020300-03  
LIMS ID Number: AG01965  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
2-Hexanone	BDL	5.0	mg/m <sup>3</sup>	02/21/05
1,3-Dichloropropane	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Dibromochloromethane	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Tetrachloroethylene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,2-Dibromoethane	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Chlorobenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,1,1,2-Tetrachloroethane	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Ethylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
m/p-Xylene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Styrene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
o-Xylene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Bromoform	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,1,2,2-Tetrachloroethane	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Isopropylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,2,3-Trichloropropane	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Bromobenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
n-Propylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
2-Chlorotoluene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
4-Chlorotoluene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,3,5-Trimethylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
tert-Butylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,2,4-Trimethylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
sec-Butylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,3-Dichlorobenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,4-Dichlorobenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
p-Isopropyltoluene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,2-Dichlorobenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
n-Butylbenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/m <sup>3</sup>	02/21/05
1,2,4-Trichlorobenzene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Naphthalene	BDL	0.50	mg/m <sup>3</sup>	02/21/05
Hexachlorobutadiene	BDL	0.50	mg/m <sup>3</sup>	02/21/05

BDL = Below Detection Limit





ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/18/05  
Sample Description: SVE-1  
EAS Sample Number: 05020300-03  
LIMS ID Number: AG01965  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
1,2,3-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/21/05  
Sample Description: SVE-2  
EAS Sample Number: 05020300-04  
LIMS ID Number: AG01966  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
Volatile Organic Compounds, Air				
Dichlorodifluoromethane	BDL	0.50	mg/m3	02/23/05
Chloromethane	BDL	0.50	mg/m3	02/23/05
Vinyl Chloride	BDL	0.50	mg/m3	02/23/05
Bromomethane	BDL	0.50	mg/m3	02/23/05
Chloroethane	BDL	0.50	mg/m3	02/23/05
Trichlorofluoromethane	BDL	50	mg/m3	02/23/05
Acetone	BDL	5.0	mg/m3	02/23/05
1,1-Dichloroethene	BDL	0.50	mg/m3	02/23/05
Methylene Chloride	BDL	0.50	mg/m3	02/23/05
trans-1,2-Dichloroethene	BDL	0.50	mg/m3	02/23/05
Methyl-tert-butyl-ether	BDL	0.50	mg/m3	02/23/05
1,1-Dichloroethane	BDL	0.50	mg/m3	02/23/05
2-Butanone	BDL	5.0	mg/m3	02/23/05
cis-1,2-Dichloroethene	BDL	0.50	mg/m3	02/23/05
2,2-Dichloropropane	BDL	0.50	mg/m3	02/23/05
Chloroform	BDL	0.50	mg/m3	02/23/05
Bromochloromethane	BDL	0.50	mg/m3	02/23/05
1,1,1-Trichloroethane	BDL	0.50	mg/m3	02/23/05
1,1-Dichloropropene	BDL	0.50	mg/m3	02/23/05
1,2-Dichloroethane	BDL	0.50	mg/m3	02/23/05
Carbon Tetrachloride	BDL	0.50	mg/m3	02/23/05
Benzene	BDL	0.50	mg/m3	02/23/05
Trichloroethene	BDL	0.50	mg/m3	02/23/05
1,2-Dichloropropane	BDL	0.50	mg/m3	02/23/05
Dibromomethane	BDL	0.50	mg/m3	02/23/05
Bromodichloromethane	BDL	0.50	mg/m3	02/23/05
4-Methyl-2-Pentanone	BDL	5.0	mg/m3	02/23/05
cis-1,3-Dichloropropene	BDL	0.50	mg/m3	02/23/05
Toluene	BDL	0.50	mg/m3	02/23/05
trans-1,3-Dichloropropene	BDL	0.50	mg/m3	02/23/05
1,1,2-Trichloroethane	BDL	0.50	mg/m3	02/23/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/21/05  
Sample Description: SVE-2  
EAS Sample Number: 05020300-04  
LIMS ID Number: AG01966  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
2-Hexanone	BDL	5.0	mg/m3	02/23/05
1,3-Dichloropropane	BDL	0.50	mg/m3	02/23/05
Dibromochloromethane	BDL	0.50	mg/m3	02/23/05
Tetrachloroethylene	BDL	0.50	mg/m3	02/23/05
1,2-Dibromoethane	BDL	0.50	mg/m3	02/23/05
Chlorobenzene	BDL	0.50	mg/m3	02/23/05
1,1,1,2-Tetrachloroethane	BDL	0.50	mg/m3	02/23/05
Ethylbenzene	BDL	0.50	mg/m3	02/23/05
m/p-Xylene	BDL	0.50	mg/m3	02/23/05
Styrene	BDL	0.50	mg/m3	02/23/05
o-Xylene	BDL	0.50	mg/m3	02/23/05
Bromoform	BDL	0.50	mg/m3	02/23/05
1,1,2,2-Tetrachloroethane	BDL	0.50	mg/m3	02/23/05
Isopropylbenzene	BDL	0.50	mg/m3	02/23/05
1,2,3-Trichloropropane	BDL	0.50	mg/m3	02/23/05
Bromobenzene	BDL	0.50	mg/m3	02/23/05
n-Propylbenzene	BDL	0.50	mg/m3	02/23/05
2-Chlorotoluene	BDL	0.50	mg/m3	02/23/05
4-Chlorotoluene	BDL	0.50	mg/m3	02/23/05
1,3,5-Trimethylbenzene	BDL	0.50	mg/m3	02/23/05
tert-Butylbenzene	BDL	0.50	mg/m3	02/23/05
1,2,4-Trimethylbenzene	BDL	0.50	mg/m3	02/23/05
sec-Butylbenzene	BDL	0.50	mg/m3	02/23/05
1,3-Dichlorobenzene	BDL	0.50	mg/m3	02/23/05
1,4-Dichlorobenzene	BDL	0.50	mg/m3	02/23/05
p-Isopropyltoluene	BDL	0.50	mg/m3	02/23/05
1,2-Dichlorobenzene	BDL	0.50	mg/m3	02/23/05
n-Butylbenzene	BDL	0.50	mg/m3	02/23/05
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/m3	02/23/05
1,2,4-Trichlorobenzene	BDL	0.50	mg/m3	02/23/05
Naphthalene	BDL	0.50	mg/m3	02/23/05
Hexachlorobutadiene	BDL	0.50	mg/m3	02/23/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/21/05  
Sample Description: SVE-2  
EAS Sample Number: 05020300-04  
LIMS ID Number: AG01966  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
1,2,3-Trichlorobenzene	BDL	0.50	mg/m3	02/23/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/19/05  
Sample Description: SVE-4  
EAS Sample Number: 05020300-05  
LIMS ID Number: AG01967  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
Volatile Organic Compounds, Air				
Dichlorodifluoromethane	BDL	0.50	mg/m3	02/21/05
Chloromethane	BDL	0.50	mg/m3	02/21/05
Vinyl Chloride	BDL	0.50	mg/m3	02/21/05
Bromomethane	BDL	0.50	mg/m3	02/21/05
Chloroethane	BDL	0.50	mg/m3	02/21/05
Trichlorofluoromethane	BDL	50	mg/m3	02/21/05
Acetone	BDL	5.0	mg/m3	02/21/05
1,1-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methylene Chloride	BDL	0.50	mg/m3	02/21/05
trans-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methyl-tert-butyl-ether	BDL	0.50	mg/m3	02/21/05
1,1-Dichloroethane	BDL	0.50	mg/m3	02/21/05
2-Butanone	BDL	5.0	mg/m3	02/21/05
cis-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
2,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Chloroform	BDL	0.50	mg/m3	02/21/05
Bromochloromethane	BDL	0.50	mg/m3	02/21/05
1,1,1-Trichloroethane	BDL	0.50	mg/m3	02/21/05
1,1-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,2-Dichloroethane	BDL	0.50	mg/m3	02/21/05
Carbon Tetrachloride	BDL	0.50	mg/m3	02/21/05
Benzene	BDL	0.50	mg/m3	02/21/05
Trichloroethene	1.0	0.50	mg/m3	02/21/05
1,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromomethane	BDL	0.50	mg/m3	02/21/05
Bromodichloromethane	BDL	0.50	mg/m3	02/21/05
4-Methyl-2-Pentanone	BDL	5.0	mg/m3	02/21/05
cis-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
Toluene	BDL	0.50	mg/m3	02/21/05
trans-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,1,2-Trichloroethane	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/19/05  
Sample Description: SVE-4  
EAS Sample Number: 05020300-05  
LIMS ID Number: AG01967  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
2-Hexanone	BDL	5.0	mg/m3	02/21/05
1,3-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromochloromethane	BDL	0.50	mg/m3	02/21/05
Tetrachloroethylene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromoethane	BDL	0.50	mg/m3	02/21/05
Chlorobenzene	BDL	0.50	mg/m3	02/21/05
1,1,1,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Ethylbenzene	BDL	0.50	mg/m3	02/21/05
m/p-Xylene	BDL	0.50	mg/m3	02/21/05
Styrene	BDL	0.50	mg/m3	02/21/05
o-Xylene	BDL	0.50	mg/m3	02/21/05
Bromoform	BDL	0.50	mg/m3	02/21/05
1,1,2,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Isopropylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,3-Trichloropropane	BDL	0.50	mg/m3	02/21/05
Bromobenzene	BDL	0.50	mg/m3	02/21/05
n-Propylbenzene	BDL	0.50	mg/m3	02/21/05
2-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
4-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
1,3,5-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
tert-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,4-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
sec-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,3-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
1,4-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
p-Isopropyltoluene	BDL	0.50	mg/m3	02/21/05
1,2-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
n-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/m3	02/21/05
1,2,4-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05
Naphthalene	BDL	0.50	mg/m3	02/21/05
Hexachlorobutadiene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/19/05  
Sample Description: SVE-4  
EAS Sample Number: 05020300-05  
LIMS ID Number: AG01967  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
1,2,3-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



## ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/19/05  
Sample Description: SVE-6  
EAS Sample Number: 05020300-06  
LIMS ID Number: AG01968  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
Volatile Organic Compounds, Air				
Dichlorodifluoromethane	BDL	0.50	mg/m3	02/21/05
Chloromethane	BDL	0.50	mg/m3	02/21/05
Vinyl Chloride	BDL	0.50	mg/m3	02/21/05
Bromomethane	BDL	0.50	mg/m3	02/21/05
Chloroethane	BDL	0.50	mg/m3	02/21/05
Trichlorofluoromethane	BDL	50	mg/m3	02/21/05
Acetone	BDL	5.0	mg/m3	02/21/05
1,1-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methylene Chloride	BDL	0.50	mg/m3	02/21/05
trans-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
Methyl-tert-butyl-ether	BDL	0.50	mg/m3	02/21/05
1,1-Dichloroethane	BDL	0.50	mg/m3	02/21/05
2-Butanone	BDL	5.0	mg/m3	02/21/05
cis-1,2-Dichloroethene	BDL	0.50	mg/m3	02/21/05
2,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Chloroform	BDL	0.50	mg/m3	02/21/05
Bromochloromethane	BDL	0.50	mg/m3	02/21/05
1,1,1-Trichloroethane	BDL	0.50	mg/m3	02/21/05
1,1-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,2-Dichloroethane	BDL	0.50	mg/m3	02/21/05
Carbon Tetrachloride	BDL	0.50	mg/m3	02/21/05
Benzene	BDL	0.50	mg/m3	02/21/05
Trichloroethene	BDL	0.50	mg/m3	02/21/05
1,2-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromomethane	BDL	0.50	mg/m3	02/21/05
Bromodichloromethane	BDL	0.50	mg/m3	02/21/05
4-Methyl-2-Pentanone	BDL	5.0	mg/m3	02/21/05
cis-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
Toluene	BDL	0.50	mg/m3	02/21/05
trans-1,3-Dichloropropene	BDL	0.50	mg/m3	02/21/05
1,1,2-Trichloroethane	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit





ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/19/05  
Sample Description: SVE-6  
EAS Sample Number: 05020300-06  
LIMS ID Number: AG01968  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
2-Hexanone	BDL	5.0	mg/m3	02/21/05
1,3-Dichloropropane	BDL	0.50	mg/m3	02/21/05
Dibromochloromethane	BDL	0.50	mg/m3	02/21/05
Tetrachloroethylene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromoethane	BDL	0.50	mg/m3	02/21/05
Chlorobenzene	BDL	0.50	mg/m3	02/21/05
1,1,1,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Ethylbenzene	BDL	0.50	mg/m3	02/21/05
m/p-Xylene	BDL	0.50	mg/m3	02/21/05
Styrene	BDL	0.50	mg/m3	02/21/05
o-Xylene	BDL	0.50	mg/m3	02/21/05
Bromoform	BDL	0.50	mg/m3	02/21/05
1,1,2,2-Tetrachloroethane	BDL	0.50	mg/m3	02/21/05
Isopropylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,3-Trichloropropane	BDL	0.50	mg/m3	02/21/05
Bromobenzene	BDL	0.50	mg/m3	02/21/05
n-Propylbenzene	BDL	0.50	mg/m3	02/21/05
2-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
4-Chlorotoluene	BDL	0.50	mg/m3	02/21/05
1,3,5-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
tert-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2,4-Trimethylbenzene	BDL	0.50	mg/m3	02/21/05
sec-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,3-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
1,4-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
p-Isopropyltoluene	BDL	0.50	mg/m3	02/21/05
1,2-Dichlorobenzene	BDL	0.50	mg/m3	02/21/05
n-Butylbenzene	BDL	0.50	mg/m3	02/21/05
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/m3	02/21/05
1,2,4-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05
Naphthalene	BDL	0.50	mg/m3	02/21/05
Hexachlorobutadiene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit



ESS LABORATORY

Location Collected: Air Samples  
Date Sample Collected: 02/19/05  
Sample Description: SVE-6  
EAS Sample Number: 05020300-06  
LIMS ID Number: AG01968  
Date Sample Received: 02/21/05  
Client Project Number: 0502229

Parameter	Data	Detection Limit	Units	Analysis Date
1,2,3-Trichlorobenzene	BDL	0.50	mg/m3	02/21/05

BDL = Below Detection Limit

EAS Project Number: 05020300  
Location Collected: Air Samples

## **EAS Certifications**

Connecticut Certified Laboratory Number: PH 0558

Massachusetts Certified Laboratory Number: M-CT020

Maine Certified Laboratory Number: CT 020

New York Certified Laboratory Number: 10916

Rhode Island Certified Number: 139

## **The enclosed analyses were conducted in accordance with:**

1. APHA Standard Methods for the Examination of Water and Wastewater, 20th Edition.
2. Lloyd Kahn Procedure for Total Organic Carbon in Sediment and Solids.
3. Clean Water Act, List of Approved Test Procedures, 40 CFR.
4. EPA Test Methods for the Evaluation of Solid Waste, SW-846, 3rd Edition, January, 1998.

## Volatile System Monitoring Compound Recovery

Lab Name: EAS Laboratories

EAS Project No. 05020300

Lab File ID (Standard): 0221VSD3

	CLIENT SAMPLE No.	SMC1 (DCE) #	SMC2 (EB) #	SMC3 (DCB) #	OTHER	TOTAL OUT
1	LFB01	94	94	84		
2	VBLK01	109	103	94		
3	SVE-5	101	107	94		
4	SVE-3	106	103	92		
5	SVE-1	103	103	91		
6	SVE-6	107	106	93		
7	SVE-4	105	102	94		
8	SVE-3 Dil	99	108	92		
9	SVE-1 Dil	113	106	94		
10	SVE-4 Dil	110	106	93		
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

**QC LIMITS**

SMC1 (DCE) = 1,2-Dichloroethane-d4

(78-122)

SMC2 (EB) = Ethylbenzene-d5

(70-130)

SMC3 (DCB) = 1,2-Dichlorobenzene-d4

(65-134)

- # Column to be used to flag recovery values
- \* Values outside of contract required QC limits
- D System Monitoring Compound diluted out

### Volatile System Monitoring Compound Recovery

Lab Name: EAS Laboratories

EAS Project No. 05020300

Lab File ID (Standard): 0223AS3

	CLIENT SAMPLE No.	SMC1 (DCE) #	SMC2 (EB) #	SMC3 (DCB) #	OTHER	TOTAL OUT
1	LFB02	117	105	107		
2	VBLK02	107	100	98		
3	SVE-2	118	101	101		
4	SVE-2 MS	114	114	119		
5	SVE-2 MSD	115	113	120		
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

**QC LIMITS**

SMC1 (DCE) = 1,2-Dichloroethane-d4

(78-122)

SMC2 (EB) = Ethylbenzene-d5

(70-130)

SMC3 (DCB) = 1,2-Dichlorobenzene-d4

(65-134)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Matrix Spike/Spike Duplicate Recoveries

Lab Name: EAS Laboratories

Lab Code: ENV RTE

Matrix : Air

Instrument ID: MSD

EAS Project No. 05020300

EPA Sample Number: SVE-2 MS/MSD

EAS Sample Number: AG01966 MS/MS

CAS NO.		Spike Added ug/L	Unspiked Results ug/l	Matrix Spike ug/l	% Recovery	Matrix Spik Dup. ug/l	% Recovery	% RPD	
75-71-8	Dichlorodifluoromethane	10	U	9.8	98	10.4	104	5.4	
74-87-3	Chloromethane	10	U	9.6	96	10.4	104	8.1	
75-01-4	Vinyl Chloride	10	U	10.0	100	10.0	100	0.5	*
74-83-9	Bromomethane	10	U	10.2	102	9.4	94	7.4	
75-00-3	Chloroethane	10	U	11.1	111	11.4	114	2.5	
75-69-4	Trichlorofluoromethane	10	5.6	15.9	103	12.7	72	22.1	
67-64-1	Acetone	10	U	12.2	122	14.9	149	19.8	
75-35-4	1,1-Dichloroethene	10	U	9.9	99	10.4	104	4.7	
75-09-2	Methylene Chloride	10	U	10.6	106	10.6	106	0.2	
75-15-0	Carbon Disulfide	10	U	9.9	99	10.4	104	4.6	
156-60-5	Trans-1,2-Dichloroethene	10	U	10.0	100	10.4	104	4.4	
75-34-3	1,1-Dichloroethane	10	U	9.9	99	10.5	105	6.1	
78-93-3	2-Butanone	10	U	13.5	135	14.5	145	7.4	
156-59-2	Cis-1,2-Dichloroethene	10	U	9.6	96	10.1	101	5.3	
594-20-7	2,2-Dichloropropane	10	U	9.3	93	10.0	100	7.7	
67-66-3	Chloroform	10	U	9.7	97	10.3	103	5.8	
74-97-5	Bromochloromethane	10	U	10.2	102	10.2	102	0.3	
109-99-9	Tetrahydrofuran	10	U	32.4	324	36.0	360	10.5	*
71-55-6	1,1,1-Trichloroethane	10	U	10.0	100	10.5	105	4.7	
563-58-6	1,1-Dichloropropene	10	U	10.2	102	10.5	105	3.3	
107-06-2	1,2-Dichloroethane	10	U	10.3	103	10.4	104	1.7	*
56-23-5	Carbon Tetrachloride	10	U	9.4	94	10.2	102	7.9	*
71-43-2	Benzene	10	U	10.8	108	10.7	107	1.3	*
79-01-6	Trichloroethene	10	U	9.8	98	10.5	105	6.6	*
78-87-5	1,2-Dichloropropane	10	U	9.8	98	10.5	105	6.9	*
74-95-3	Dibromomethane	10	U	10.5	105	10.5	105	0.2	
75-27-4	Bromodichloromethane	10	U	9.7	97	10.2	102	5.2	
108-10-1	4-Methyl-2-Pentanone	10	U	12.7	127	12.2	122	3.9	
10061-01-5	Cis-1,3-Dichloropropene	10	U	10.0	100	10.3	103	2.2	*
108-88-3	Toluene	10	U	9.9	99	10.5	105	6.2	
10061-02-6	Trans-1,3-Dichloropropene	10	U	10.3	103	10.6	106	2.5	
79-00-5	1,1,2-Trichloroethane	10	U	10.5	105	10.3	103	1.3	*
591-78-6	2-Hexanone	10	U	12.3	123	12.5	125	1.0	*
142-28-9	1,3-Dichloropropane	10	U	10.5	105	10.5	105	0.1	
124-48-1	Dibromochloromethane	10	U	10.4	104	10.5	105	1.5	
127-18-4	Tetrachloroethene	10	U	10.2	102	10.7	107	4.2	*
106-93-4	1,2-Dibromoethane	10	U	10.7	107	10.5	105	2.2	*
108-90-7	Chlorobenzene	10	U	9.6	96	9.6	96	0.5	
630-20-6	1,1,1,2-Tetrachloroethane	10	U	9.6	96	9.3	93	3.0	
100-41-4	Ethyl benzene	10	U	9.3	93	9.3	93	0.1	
108-38-3/106-42-3	m/p-Xylene	20	U	19.3	96	18.9	95	1.9	
100-42-5	Styrene	10	U	9.8	98	9.5	95	2.6	
95-47-6	O-xylene	10	U	9.7	97	9.6	96	0.5	
75-25-2	Bromoform	10	U	10.6	106	9.8	98	7.8	*
79-34-5	1,1,2,2-Tetrachloroethane	10	U	11.4	114	10.1	101	11.9	
98-82-8	Isopropylbenzene	10	U	9.8	98	9.8	98	0.2	
96-18-4	1,2,3-Trichloropropane	10	U	11.4	114	10.8	108	5.3	
108-86-1	Bromobenzene	10	U	9.3	93	9.7	97	3.5	
103-65-1	n-Propylbenzene	10	U	9.5	95	9.8	98	2.7	
95-49-8	2-Chlorotoluene	10	U	9.7	97	10.0	100	3.2	
106-43-4	4-Chlorotoluene	10	U	9.5	95	9.8	98	2.8	
108-67-8	1,3,5-Trimethylbenzene	10	U	9.7	97	9.8	98	1.6	
98-06-6	tert-Butylbenzene	10	U	9.5	95	9.8	98	3.5	
95-63-6	1,2,4-Trimethylbenzene	10	U	9.7	97	9.9	99	2.7	
135-98-8	sec-Butylbenzene	10	U	9.4	94	9.9	99	4.5	
541-73-1	1,3-Dichlorobenzene	10	U	9.3	93	9.4	94	1.3	
106-46-7	1,4-Dichlorobenzene	10	U	9.3	93	9.5	95	1.7	*
99-87-6	p-Isopropyltoluene	10	U	9.4	94	9.7	97	3.3	
95-50-1	1,2-Dichlorobenzene	10	U	9.7	97	9.8	98	0.9	
104-51-8	n-Butylbenzene	10	U	9.5	95	9.9	99	4.3	
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	11.7	117	13.0	130	10.5	
120-82-1	1,2,4-Trichlorobenzene	10	U	9.6	96	9.9	99	3.9	
91-20-3	Naphthalene	10	U	10.6	106	11.1	111	5.2	
87-68-3	Hexachlorobutadiene	10	U	8.7	87	9.5	95	9.1	
87-61-6	1,2,3-Trichlorobenzene	10	U	9.7	97	10.3	103	6.4	

**Volatile Organic Instrument Performance Check  
Bromofluorobenzene (BFB)**

Lab Name: EAS Laboratories  
 Lab Code ENVRTE  
 Lab File ID: 0221BFD  
 Instrument ID: MSD  
 Column: 0.18(mm) RTXVMS 20m

EAS Project No. 05020300  
 BFB Injection Date: 02-21-05  
 BFB Injection Time: 6:37  
 Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% Relative Abundance
50	15 - 40.0 % of mass 95	36.5
75	30.0 -80.0 % of mass 95	53.3
95	Base peak, 100 % relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.6
173	Less than 2.0 % of mass 174	0.0 ( 0.0 )1
174	50.0 - 120.0 % of mass 95	58.6
175	5.0 - 9.0 % of mass 174	3.0 ( 5.1 )1
176	95.0 - 101.0 % of mass 174	57.0 (97.4 )1
177	5.0 - 9.0 % of mass 176	3.8 ( 6.7 )2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES , MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD5	5 ppb std	0221VSD2	02/21/05	7:16
2	VSTD30	30ppb std	0221VSD5	02/21/05	7:40
3	VSTD20	20 ppb std	0221VSD4	02/21/05	8:05
4	VSTD10	10 ppb std	0221VSD3	02/21/05	8:29
5	VSTD2	2 ppb std	0221VS1	02/21/05	8:52
6	LFB01	LFB	0221LFB1	02/21/05	9:18
7	VBLK01	Method Blank	0221VWB	02/21/05	9:44
8	SVE-5	05020300-01	AG01963	02/21/05	10:11
9	SVE-3	05020300-02	AG01964	02/21/05	10:36
10	SVE-1	05020300-03	AG01965	02/21/05	10:59
11	SVE-6	05020300-06	AG01968	02/21/05	11:23
12	SVE-4	05020300-05	AG01967	02/21/05	11:47
13	SVE-3 Dil	05020300-02	AG01964D	02/21/05	12:11
14	SVE-1 Dil	05020300-03	AG01965D	02/21/05	12:34
15	SVE-4 Dil	05020300-05	AG01967D	02/21/05	12:58
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

**Volatile Organic Instrument Performance Check  
Bromofluorobenzene (BFB)**

Lab Name: EAS Laboratories  
 Lab Code ENVRTE  
 Lab File ID: 0223BFD3  
 Instrument ID: MSD  
 Column: 0.18(mm) RTXVMS 20m

EAS Project No. 05020300  
 BFB Injection Date: 02-23-05  
 BFB Injection Time: 6:03  
 Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% Relative Abundance
50	15 - 40.0 % of mass 95	30.9
75	30.0 -80.0 % of mass 95	59.9
95	Base peak, 100 % relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.2
173	Less than 2.0 % of mass 174	0.0 ( 0.0 )1
174	50.0 - 120.0 % of mass 95	95.0
175	5.0 - 9.0 % of mass 174	6.4 ( 6.7 )1
176	95.0 - 101.0 % of mass 174	92.1 (97.0 )1
177	5.0 - 9.0 % of mass 176	6.7 ( 7.3 )2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES , MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD30	30 ppb std	0223ASD5	02/23/05	6:39
2	VSTD20	20 ppb std	0223ASD4	02/23/05	7:03
3	VSTD5	5 ppb std	0223ASD2	02/23/05	7:28
4	VSTD2	2 ppb std	0223ASD1	02/23/05	7:56
5	VSTD10	10 ppb std	0223AS3	02/23/05	8:27
6	LFB02	LFB	0223ALFB1	02/23/05	8:53
7	VBLK02	Method Blank	0223AWB	02/23/05	9:21
8	SVE-2	05020300-04	AG01966	02/23/05	9:49
9	SVE-2 MS	05020300-04	AG01966M	02/23/05	10:16
10	SVE-2 MSD	05020300-04	AG01966S	02/23/05	10:42
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					



### Volatile Internal Standard Area And RT Summary

Lab Name: EAS Laboratories  
 Lab Code: ENVRTE  
 Lab File ID (Standard): 0221VSD3  
 Instrument ID: MSD  
 Column: 0.18(mm) RTXVMS 20m

EAS Project No. 05020300  
 Date Analyzed: 02-21-05  
 Time Analyzed: 8:29  
 Heated Purge: (Y/N) Y

	IS1 (FLB) AREA #	RT #	IS2 (CLB) AREA #	RT #	IS3 (BFB) AREA #	RT #
12 HOUR STD	290764	4.22	154580	9.20	74978	11.26
UPPER LIMIT	581528	4.52	309160	9.50	149956	11.56
LOWER LIMIT	145382	3.52	77290	8.50	37489	10.56
EPA SAMPLE No.						
1 LFB01	297656	4.21	166469	9.20	80871	11.26
2 VBLK01	258230	4.23	138327	9.21	69670	11.26
3 SVE-5	293944	4.23	156526	9.21	77364	11.26
4 SVE-3	301468	4.23	156673	9.21	75558	11.26
5 SVE-1	293306	4.23	155087	9.21	73377	11.26
6 SVE-6	285073	4.22	146317	9.21	74076	11.27
7 SVE-4	287884	4.23	150547	9.21	72644	11.26
8 SVE-3 Dil	283301	4.22	151559	9.21	70998	11.26
9 SVE-1 Dil	269913	4.23	138885	9.20	69135	11.27
10 SVE-4 Dil	275250	4.23	139917	9.21	69488	11.27
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						

IS1 (FLB) = Fluorobenzene  
 IS2 (CLB) = Chlorobenzene-d5  
 IS3 (BFB) = 4-Bromofluorobenzene

Area Upper Limit = +100% of internal standard area  
 Area Lower Limit = - 50% of internal standard area  
 RT Upper Limit = +0.50 Minutes of internal standard RT  
 RT Lower Limit = -0.50 Minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

Volatile Internal Standard Area And RT Summary

Lab Name: EAS Laboratories  
 Lab Code: ENVRTE  
 Lab File ID (Standard): 0223AS3  
 Instrument ID: MSD  
 Column: 0.18(mm) RTXVMS 20m

EAS Project No. 05020300  
 Date Analyzed: 02-23-05  
 Time Analyzed: 8:27  
 Heated Purge: (Y/N) Y

	IS1 (FLB) AREA #	RT #	IS2 (CLB) AREA #	RT #	IS3 (BFB) AREA #	RT #
12 HOUR STD	465779	4.16	246031	9.16	132848	11.22
UPPER LIMIT	931558	4.46	492062	9.46	265696	11.52
LOWER LIMIT	232890	3.46	123016	8.46	66424	10.52
EPA SAMPLE No.						
1 LFB02	406180	4.19	215912	9.17	118465	11.23
2 VBLK02	430988	4.18	223072	9.17	118520	11.23
3 SVE-2	478265	4.18	256345	9.17	135976	11.23
4 SVE-2 MS	459476	4.18	244169	9.17	135628	11.22
5 SVE-2 MSD	434589	4.19	248524	9.17	132359	11.23
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						

IS1 (FLB) = Fluorobenzene  
 IS2 (CLB) = Chlorobenzene-d5  
 IS3 (BFB) = 4-Bromofluorobenzene

Area Upper Limit = +100% of internal standard area  
 Area Lower Limit = - 50% of internal standard area  
 RT Upper Limit = +0.50 Minutes of internal standard RT  
 RT Lower Limit = -0.50 Minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

Lab Name: EAS Laboratories

Matrix: Air

EAS Project No. 05020300

File ID: 0221VWB

Lab Sample ID: Blank

Date Received:

Date Analyzed: 02-21-05

Column: 0.18(mm) RTXVMS 20m

Instrument ID: MSD

CAS No.	Compound	Concentration ug/L	
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl Chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
67-64-1	Acetone	5.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-09-2	Methylene Chloride	1.0	U
75-15-0	Carbon Disulfide	1.0	U
156-60-5	Trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	Cis-1,2-Dichloroethene	1.0	U
594-20-7	2,2-Dichloropropane	1.0	U
67-66-3	Chloroform	1.0	U
74-97-5	Bromochloromethane	1.0	U
109-99-9	Tetrahydrofuran	5.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
74-95-3	Dibromomethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
10061-01-5	Cis-1,3-Dichloropropene	1.0	U
108-88-3	Toluene	1.0	U
10061-02-6	Trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
142-28-9	1,3-Dichloropropane	1.0	U
124-48-1	Dibromochloromethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethyl benzene	1.0	U
108-38-3/106-42-3	m/p-Xylene	1.0	U
100-42-5	Styrene	1.0	U
95-47-6	o-Xylene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
98-82-8	Isopropylbenzene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-86-1	Bromobenzene	1.0	U
103-65-1	n-Propylbenzene	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
99-87-6	p-Isopropyltoluene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
104-51-8	n-Butylbenzene	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
91-20-3	Naphthalene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

Form 1 VOA-TIC

Sample No: VBLK01

Lab Name: EAS Laboratories

Matrix: Air

EAS Project No. 05020300

File ID: 0221VWB

Column: 0.18(mm) RTXVMS 20m

Lab Sample ID: Blank

Instrument ID: MSD

Date Received:

Number TIC's found: 0

Date Analyzed: 02-21-05

CAS NO.	Compound	RT	EST. CONC.	Q

Lab Name: EAS Laboratories

Matrix: Air

EAS Project No. 05020300

File ID: 0223AWB

Column: 0.18(mm) RTXVMS 20m

Lab Sample ID: Blank

Instrument ID: MSD

Date Received:

Date Analyzed: 02-23-05

CAS No.	Compound	Concentration ug/L	
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl Chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
67-64-1	Acetone	4.1	J
75-35-4	1,1-Dichloroethene	1.0	U
75-09-2	Methylene Chloride	1.0	U
75-15-0	Carbon Disulfide	1.0	U
156-60-5	Trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	Cis-1,2-Dichloroethene	1.0	U
594-20-7	2,2-Dichloropropane	1.0	U
67-66-3	Chloroform	1.0	U
74-97-5	Bromochloromethane	1.0	U
109-99-9	Tetrahydrofuran	3.1	J
71-55-6	1,1,1-Trichloroethane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
74-95-3	Dibromomethane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
10061-01-5	Cis-1,3-Dichloropropene	1.0	U
108-88-3	Toluene	1.0	U
10061-02-6	Trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
142-28-9	1,3-Dichloropropane	1.0	U
124-48-1	Dibromochloromethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethyl benzene	1.0	U
108-38-3/106-42-3	m/p-Xylene	1.0	U
100-42-5	Styrene	1.0	U
95-47-6	o-Xylene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
98-82-8	Isopropylbenzene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-86-1	Bromobenzene	1.0	U
103-65-1	n-Propylbenzene	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
99-87-6	p-Isopropyltoluene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
104-51-8	n-Butylbenzene	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
91-20-3	Naphthalene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U



## LFB Recoveries

LFB 01

Lab Name: EAS Laboratories

Instrument ID: MSD

Matrix :Air

Lab File ID: 0221LFB1

EAS Project No. 05020300

CAS No.	Compound	SpikeAdded ug/L	Concentration ug/L	% Rec.	Outside QC Limits
75-71-8	Dichlorodifluoromethane	1.0	0.65	65	
74-87-3	Chloromethane	1.0	0.93	93	
75-01-4	Vinyl Chloride	1.0	1.06	106	
74-83-9	Bromomethane	1.0	1.09	109	
75-00-3	Chloroethane	1.0	1.03	103	
75-69-4	Trichlorofluoromethane	1.0	1.21	121	
67-64-1	Acetone	5.0	3.60	72	
75-35-4	1,1-Dichloroethene	1.0	0.90	90	
75-09-2	Methylene Chloride	1.0	1.07	107	
75-15-0	Carbon Disulfide	1.0	0.82	82	
156-60-5	Trans-1,2-Dichloroethene	1.0	0.98	98	
75-34-3	1,1-Dichloroethane	1.0	1.04	104	
78-93-3	2-Butanone	5.0	3.66	73	
156-59-2	Cis-1,2-Dichloroethene	1.0	0.94	94	
594-20-7	2,2-Dichloropropane	1.0	1.09	109	
67-66-3	Chloroform	1.0	1.03	103	
74-97-5	Bromochloromethane	1.0	0.85	85	
109-99-9	Tetrahydrofuran	5.0	8.76	175	*
71-55-6	1,1,1-Trichloroethane	1.0	0.94	94	
563-58-6	1,1-Dichloropropene	1.0	0.99	99	
107-06-2	1,2-Dichloroethane	1.0	0.92	92	
56-23-5	Carbon Tetrachloride	1.0	0.95	95	
71-43-2	Benzene	1.0	1.08	108	
79-01-6	Trichloroethene	1.0	1.00	100	
78-87-5	1,2-Dichloropropane	1.0	1.00	100	
74-95-3	Dibromomethane	1.0	0.94	94	
75-27-4	Bromodichloromethane	1.0	0.84	84	
108-10-1	4-Methyl-2-Pentanone	5.0	3.27	65	
10061-01-5	Cis-1,3-Dichloropropene	1.0	0.94	94	
108-88-3	Toluene	1.0	1.01	101	
10061-02-6	Trans-1,3-Dichloropropene	1.0	0.94	94	
79-00-5	1,1,2-Trichloroethane	1.0	0.92	92	
591-78-6	2-Hexanone	5.0	3.36	67	
142-28-9	1,3-Dichloropropane	1.0	0.94	94	
124-48-1	Dibromochloromethane	1.0	0.81	81	
127-18-4	Tetrachloroethene	1.0	0.92	92	
106-93-4	1,2-Dibromoethane	1.0	0.95	95	
108-90-7	Chlorobenzene	1.0	1.00	100	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	0.91	91	
100-41-4	Ethyl benzene	1.0	1.09	109	
108-38-3/106-42-3	m/p-Xylene	2.0	1.99	100	
100-42-5	Styrene	1.0	0.95	95	
95-47-6	o-Xylene	1.0	0.80	80	
75-25-2	Bromoform	1.0	0.67	67	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	0.90	90	
98-82-8	Isopropylbenzene	1.0	0.99	99	
96-18-4	1,2,3-Trichloropropane	1.0	0.91	91	
108-86-1	Bromobenzene	1.0	0.98	98	
103-65-1	n-Propylbenzene	1.0	0.97	97	
95-49-8	2-Chlorotoluene	1.0	0.97	97	
106-43-4	4-Chlorotoluene	1.0	0.98	98	
108-67-8	1,3,5-Trimethylbenzene	1.0	0.94	94	
98-06-6	tert-Butylbenzene	1.0	0.98	98	
95-63-6	1,2,4-Trimethylbenzene	1.0	1.00	100	
135-98-8	sec-Butylbenzene	1.0	1.00	100	
541-73-1	1,3-Dichlorobenzene	1.0	1.01	101	
106-46-7	1,4-Dichlorobenzene	1.0	0.96	96	
99-87-6	p-Isopropyltoluene	1.0	0.99	99	
95-50-1	1,2-Dichlorobenzene	1.0	0.95	95	
104-51-8	n-Butylbenzene	1.0	0.96	96	
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	0.85	85	
120-82-1	1,2,4-Trichlorobenzene	1.0	1.06	106	
91-20-3	Naphthalene	1.0	1.02	102	
87-68-3	Hexachlorobutadiene	1.0	1.41	141	*
87-61-6	1,2,3-Trichlorobenzene	1.0	1.15	115	

## LFB Recoveries

LFB 02

Lab Name: EAS Laboratories

Instrument ID: MSD

Matrix: Air

Lab File ID: 0223ALFB

EAS Project No. 05020300

CAS No.	Compound	SpikeAdded ug/L	Concentration ug/L	% Rec.	Outside QC Limits
75-71-8	Dichlorodifluoromethane	1.0	1.02	102	
74-87-3	Chloromethane	1.0	1.15	115	
75-01-4	Vinyl Chloride	1.0	1.25	125	
74-83-9	Bromomethane	1.0	1.18	118	
75-00-3	Chloroethane	1.0	1.40	140	
75-69-4	Trichlorofluoromethane	1.0	1.23	123	
67-64-1	Acetone	5.0	6.40	128	
75-35-4	1,1-Dichloroethene	1.0	1.18	118	
75-09-2	Methylene Chloride	1.0	1.30	130	
75-15-0	Carbon Disulfide	1.0	1.06	106	
156-60-5	Trans-1,2-Dichloroethene	1.0	1.21	121	
75-34-3	1,1-Dichloroethane	1.0	1.31	131	
78-93-3	2-Butanone	5.0	7.62	152	
156-59-2	Cis-1,2-Dichloroethene	1.0	1.21	121	
594-20-7	2,2-Dichloropropane	1.0	1.21	121	
67-66-3	Chloroform	1.0	1.22	122	
74-97-5	Bromochloromethane	1.0	1.16	116	
109-99-9	Tetrahydrofuran	5.0	16.75	335	*
71-55-6	1,1,1-Trichloroethane	1.0	1.27	127	
563-58-6	1,1-Dichloropropene	1.0	1.39	139	
107-06-2	1,2-Dichloroethane	1.0	1.29	129	
56-23-5	Carbon Tetrachloride	1.0	1.15	115	
71-43-2	Benzene	1.0	1.46	146	
79-01-6	Trichloroethene	1.0	1.23	123	
78-87-5	1,2-Dichloropropane	1.0	1.22	122	
74-95-3	Dibromomethane	1.0	1.30	130	
75-27-4	Bromodichloromethane	1.0	1.04	104	
108-10-1	4-Methyl-2-Pentanone	5.0	4.77	95	
10061-01-5	Cis-1,3-Dichloropropene	1.0	1.18	118	
108-88-3	Toluene	1.0	1.26	126	
10061-02-6	Trans-1,3-Dichloropropene	1.0	1.28	128	
79-00-5	1,1,2-Trichloroethane	1.0	1.26	126	
591-78-6	2-Hexanone	5.0	5.00	100	
142-28-9	1,3-Dichloropropane	1.0	1.29	129	
124-48-1	Dibromochloromethane	1.0	1.13	113	
127-18-4	Tetrachloroethene	1.0	1.31	131	
106-93-4	1,2-Dibromoethane	1.0	1.29	129	
108-90-7	Chlorobenzene	1.0	1.25	125	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	1.18	118	
100-41-4	Ethyl benzene	1.0	1.31	131	
108-38-3/106-42-3	m/p-Xylene	2.0	2.43	122	
100-42-5	Styrene	1.0	1.16	116	
95-47-6	o-Xylene	1.0	1.23	123	
75-25-2	Bromoform	1.0	1.17	117	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	1.42	142	
98-82-8	Isopropylbenzene	1.0	1.22	122	
96-18-4	1,2,3-Trichloropropane	1.0	1.40	140	
108-86-1	Bromobenzene	1.0	1.23	123	
103-65-1	n-Propylbenzene	1.0	1.17	117	
95-49-8	2-Chlorotoluene	1.0	1.25	125	
106-43-4	4-Chlorotoluene	1.0	1.26	126	
108-67-8	1,3,5-Trimethylbenzene	1.0	1.14	114	
98-06-6	tert-Butylbenzene	1.0	1.20	120	
95-63-6	1,2,4-Trimethylbenzene	1.0	1.23	123	
135-98-8	sec-Butylbenzene	1.0	1.30	130	
541-73-1	1,3-Dichlorobenzene	1.0	1.24	124	
106-46-7	1,4-Dichlorobenzene	1.0	1.29	129	
99-87-6	p-Isopropyltoluene	1.0	1.21	121	
95-50-1	1,2-Dichlorobenzene	1.0	1.36	136	
104-51-8	n-Butylbenzene	1.0	1.32	132	
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	2.20	220	*
120-82-1	1,2,4-Trichlorobenzene	1.0	1.63	163	*
91-20-3	Naphthalene	1.0	2.33	233	*
87-68-3	Hexachlorobutadiene	1.0	1.68	168	*
87-61-6	1,2,3-Trichlorobenzene	1.0	1.97	197	*



# 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

Page      of     

Turn Time \_\_\_\_\_ Standard \_\_\_\_\_ Other 24hr As per  
 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 USACE Other \_\_\_\_\_  
 Electronic Deliverable Yes \_\_\_ No \_\_\_  
 Format: Excel \_\_\_ Access \_\_\_ PDF \_\_\_ Other \_\_\_\_\_

Reporting Limits  
 MCP-METALS (13) \_\_\_\_\_  
 PCBs \_\_\_\_\_  
 Pesticides \_\_\_\_\_  
 PAHs \_\_\_\_\_  
 SVOA \_\_\_\_\_  
 RCRA8 \_\_\_\_\_  
 RCRA5 \_\_\_\_\_  
 TCLP-RCRA8 \_\_\_\_\_  
 NBC7 \_\_\_\_\_  
 METALS (13) w/Hg \_\_\_\_\_  
70-11

Project # 6196501  
 Address 2350 Post Rd  
 City Warwick State RI  
 Zip 02886  
 PO# \_\_\_\_\_  
 Project Name (20 Char. or less) Dept of Public Prop  
 Email Address \_\_\_\_\_  
 Telephone # 401-736-3440 Fax # 401-401-401  
 FSS LAB Sample# \_\_\_\_\_  
 Date \_\_\_\_\_  
 Collection Time \_\_\_\_\_  
 COMP \_\_\_\_\_  
 GRAB \_\_\_\_\_  
 MATRIX \_\_\_\_\_  
 Sample Identification (20 Char. or less) \_\_\_\_\_  
 Pres Code \_\_\_\_\_  
 Number of Containers \_\_\_\_\_  
 Type of Containers \_\_\_\_\_

ESS LAB Sample#	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8260 PDA	8015 VPH	8015 GRO	8100 TPH	EPH w/PAHs	8082 PCB	8082 Pesticides	8270 PAH	8270 SVOA	RCRA8 PP13 TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13) w/Hg
1	2/15/05	1605		X		SVE-5	1	1	0	8260 PDA	8015 VPH	8015 GRO	8100 TPH	EPH w/PAHs	8082 PCB	8082 Pesticides	8270 PAH	8270 SVOA	RCRA8 PP13 TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13) w/Hg
2	2/15/05	1620		X		SVE-3	1	1	0	8260 PDA	8015 VPH	8015 GRO	8100 TPH	EPH w/PAHs	8082 PCB	8082 Pesticides	8270 PAH	8270 SVOA	RCRA8 PP13 TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13) w/Hg
3	2/15/05	1628		X		SVE-1	1	1	0	8260 PDA	8015 VPH	8015 GRO	8100 TPH	EPH w/PAHs	8082 PCB	8082 Pesticides	8270 PAH	8270 SVOA	RCRA8 PP13 TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13) w/Hg
4	2/19/05	1640		X		SVE-4	1	1	0	8260 PDA	8015 VPH	8015 GRO	8100 TPH	EPH w/PAHs	8082 PCB	8082 Pesticides	8270 PAH	8270 SVOA	RCRA8 PP13 TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13) w/Hg
5	2/22/05	1705		X		SVE-6	1	1	0	8260 PDA	8015 VPH	8015 GRO	8100 TPH	EPH w/PAHs	8082 PCB	8082 Pesticides	8270 PAH	8270 SVOA	RCRA8 PP13 TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13) w/Hg
6	2/21/05	1615		X		SVE-2	1	1	0	8260 PDA	8015 VPH	8015 GRO	8100 TPH	EPH w/PAHs	8082 PCB	8082 Pesticides	8270 PAH	8270 SVOA	RCRA8 PP13 TAL23	TCLP-RCRA8	NBC7	MCP-METALS (13) w/Hg

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 \_\_\_  
 Seals Intact Yes \_\_\_ No NA: \_\_\_  
 Cooler Temp: 7/17 Internal Use Only  Technicians 3  
 Preservation Code: 1- NP, 2- HCl, 3- H<sub>2</sub>SO<sub>4</sub>, 4- HNO<sub>3</sub>, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAc<sub>2</sub>, 9- \_\_\_\_\_  
 Sampled by: K BRAGA  
 Comments: Include equipped Rept. 1

Relinquished by: (Signature) <u>[Signature]</u>	Date/Time <u>2/23/05</u>	Received by: (Signature) <u>[Signature]</u>	Date/Time <u>2/23/05</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date/Time <u>2/25/05</u>	Received by: (Signature) <u>[Signature]</u>	Date/Time <u>2/25/05</u>

\*By circling MA-MCP, client acknowledges samples were collected

**ESS Laboratory**  
**Guide to Sample Handling and Preparation**  
 Revised 08/31/04

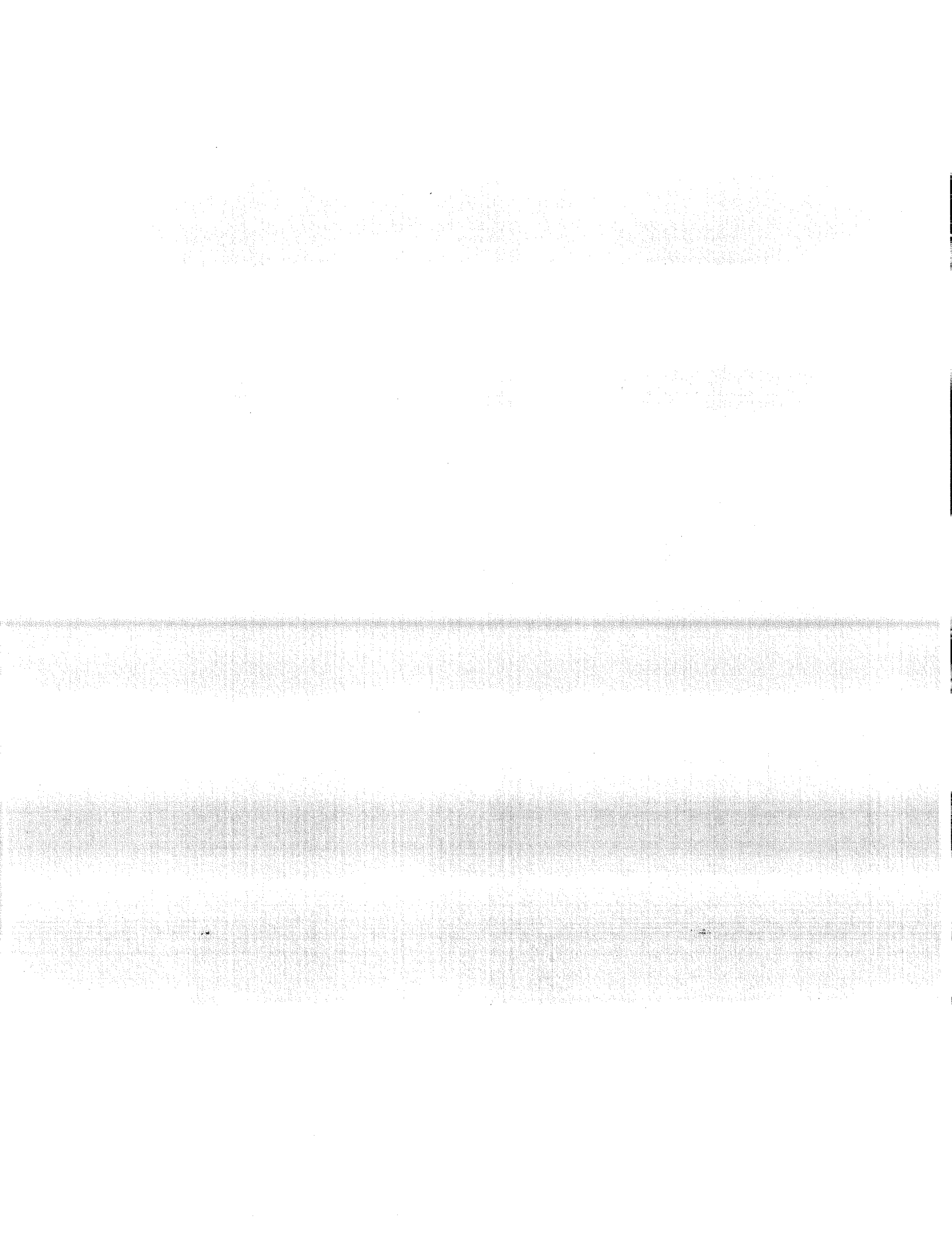
**All Samples Should Be Cooled to 4° C**

P=Poly  
 G=Glass  
 V=Vial  
 S = Sterile Container  
 NP = No Preservative  
 NA = Not Applicable

H<sub>2</sub>SO<sub>4</sub>=Sulfuric Acid to < 2 pH  
 1:1 HCl=Hydrochloric Acid to < 2 pH  
 HNO<sub>3</sub>=Nitric Acid to < 2 pH  
 NaOH=Sodium Hydroxide to > 12 pH  
 MeOH=15mL Methanol  
 Zn Acetate=4 drops zinc acetate/100mL

Analysis	Method Number	Standard Volume		Preservative		Water Hold Time	Soil Hold Time	pH check Required	Direct Delivery Required	Notes
		Aqueous	Soil	Aqueous	Soil					
Acidity	305.1	250 mL, P,G	8 oz G	NP	NP	14 days				
Alkalinity	301.1	250 mL, P,G	8 oz G	NP	NP	14 days				
Ammonia	350.2/350.3	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Asbestos	NA	NA	8 oz G	NP	NP	28 days				Subcontracted
Base Neutrals	8270/625	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
BOD - 5 day	405.1	1000 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
Bromide	320.1	250 mL, P,G	8 oz G	NP	NP	28 days				
Chloride	325.2/300.0	250 mL, P,G	8 oz G	NP	NP	28 days				
Chlorine (TRC)	330.1/330.5	250 mL, P,G	8 oz G	NP	NP	Immediate			Yes	
Chromium (VI)	7196A/3500	250 mL, P,G	NA	NP	NP	24 hours	1 month		Yes	4 day hold after extraction
COD	410.4	250 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Coliform	9221B	sterile cup	sterile cup	NP	NP	24 hours	24 hours		Yes	
Color	110.2	250 mL, P,G	NA	NP	NP	48 hours			Yes	
Conductance	120.1/2510B	250 mL, P,G	8 oz G	NP	NP	28 days				
Cyanide (Amenable)	335.1	1000 mL, P,G	8 oz G	NaOH	NP	14 days	14 days	Yes		
Cyanide (Total)	9010/335.2	1000 mL, P,G	8 oz G	NaOH	NP	14 days	14 days	Yes		
Dissolved Oxygen	360.1	500 mL, G*	NA	NP	NP	Immediate			Yes	* Glass only
EDB & DBCP	504/8011	3x40 mL, V	NA	NP/HCL	NP	28 days	28 days			No head space/air bubbles
EPH	MASS EPH	1000 mL, G	8 oz G	HCl	NP	14 days	14 days	Yes		40 day hold after extraction
Flash Point	1010	40 mL	2 oz G	NP	NP	7 days	7 days			
Fluoride	300.0	1000 mL, P,G	8 oz G	NP	NP	28 days				
Grain Size	NA	NA	8 oz G	NA	NP	NA				
GRO	8015/ME	3x40 mL, V	40 ml V	HCl	MeOH	14 days	14 days	Yes		No head space/air bubbles
Haloacetic Acids	552.2	3x40 mL, V	NA	NH4Cl	NA	14 days				7 day hold after extraction
Hardness	200.7/6010B	250 mL, P,G	8 oz G	HNO3	NP	6 months		Yes		
Herbicides	8151	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
Iodide	345.1	250 mL, P,G	8 oz G	NP	NP	24 hours				
Kjeldahl Nitrogen (Total)	351.3	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Mercury (Dissolved)	7471/245.1	250 mL, P,G	8 oz G	NP	NP	28 days		Yes	Yes*	Filtered in Field, * if not filtered in field
Mercury (Total)	7471/245.1	250 mL, P,G	8 oz G	HNO <sub>3</sub>	NP	28 days	28 days	Yes		
Metals (Dissolved)	6010/200.7/200.9	250 mL, P,G	8 oz G	NP	NP	6 months		Yes	Yes*	Filtered in Field, * if not filtered in field
Metals (Total)	6010/200.7/200.9	250 mL, P,G	8 oz G	HNO <sub>3</sub>	NP	6 months	6 months	Yes		
Nitrate	353.2	250 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
Nitrate-Nitrite	353.2	250 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Nitrite	353.2	250 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
Odor	140.1	250 mL, G*	8 oz G	NP	NP	24 hours			Yes	* Glass only
Oil & Grease	1664	1000 mL, G*	NA	H2S04	NP	28 days	28 days	Yes		* Glass only
Orthophosphate	365.1	1000 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
PAH	8270	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
Paint Filter	9095	NA	8 oz G	NP	NP	28 days				
PCB	8082/608	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
PCB (Oil)	8082	NA	2 oz G	NP	NP	14 days				40 day hold after extraction
PCB (Wipe)	8082	NA	wipe kit	Hexane	NA	14 days				10 cm <sup>2</sup> template/gauze
PCB/Pesticides	608	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
Pesticides	8081/608	2000 mL, G	8 oz G	NP	NP	7 days	14 days	Yes		pH 5-9 required
pH	9040/150.1/9045	250 mL, P,G	8 oz G	NP	NP	Immediate	ASAP		Yes	Done in the field
Phenol	5530/9085/420.1	1000 mL, G*	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		* Glass only
Phosphorous (Hydrolyz)	365.1	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Phosphorous (Total)	365.1	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Salinity	2520	250 mL, G	8 oz G	NP	NP	28 days				
Settleable Solids	160.5	1000 mL, P,G	NA	NP	NP	48 hours			Yes	
Silica	370.1	250 mL, P*	8 oz G	NP	NP	28 days				* Plastic only
Siloxane	NA	50 mL, P	NA	MeOH	NP	21 days		Yes		Done on air samples only
SPLP	1312	4000 mL, G	16 oz G	NP	NP	14 days	14 day			
Sulfide	376.2	500 mL, P	8 oz G	Zn Ace*, NaOH	NP	7 days	7 days	Yes		NaOH pH >9
Sulfite	377.1	250 mL, P,G	8 oz G	NP	NP	Immediate			Yes	Done in the field
Sulfate	375.4/9038	250 mL, P	8 oz G	NP	NP	28 days				
Surfactants (MBAS)	425.1	250 mL, P,G	NA	NP	NP	48 hours			Yes	
SVOA	8270/625	2000 mL, G	8 oz G	NP	NP	7 days	14 days			40 day hold after extraction
TCLP (Full)	1311	4000 mL, G	16 oz G	NP	NP	14 days	14 days			SVOA hold 7 days after spin
TDS	160.1	250 mL, P,G	NA	NP	NP	7 days	NA			
THM	524.2	3x40 mL, V	NA	Na2S2O3	NA	14 days	NA			
TOC	415.2	2x40 mL, V	2 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days				Subcontracted
TOX	450.1	2x40 mL, V	NA	H <sub>2</sub> SO <sub>4</sub>	NP	7 days				Subcontracted
TPH :GC FID	8100M	1000 mL, G	8 oz G	NP/HCL/H <sub>2</sub> SO <sub>4</sub>	NP	7 days	14 days	Yes		Glass only
TPH :Method	1664	1000 mL, G	8 oz G	HCL/H <sub>2</sub> SO <sub>4</sub>	NP	28 days	28 days	Yes		Glass only
TS	160.3	250 mL, P	NA	NP	NP	7 days				
TSS	160.2	250 mL, P	NA	NP	NP	7 days				
Turbidity	180.1	250mL, P,G	NA	NP	NP	48 hr			Yes	
TVS	160.4	250 mL, P	NA	NP	NP	7 days				
TX Total Halogens	9076	2 oz G	2 oz G	NP	NP	28 days	28 days			
Volatile Organics	8260/8021/624	3x40 mL, V	2 oz G	HCL	NP	14 days	14 days		Yes*	No hs/air bubbles, * Unpreserved VOC only
VPH	Mass VPH	3x40 mL, V	40 mL V	HCL	MeOH	14 days	28 days			Aq-No hs/air bubbles, Soil-Include NP %solids
5035/8260	5035/8260	NA	40 mL V	NA	MeOH	NA	14 days			Must include NP %solids VOA

**APPENDIX B**  
**BORING LOGS**





**EA Engineering, Science,  
and Technology, Inc.**

**LOG OF SOIL BORING**

Job No. 61965.01	Client: Providence Dept. of Public Property	Location: <b>Former Gorham Site Providence, RI</b>
Drilling Method: Geoprobe 6600		Boring No. <b>SB-1 (MW-1)</b>
Sampling Method: 5-ft, 2-in diameter acetate sleeves		Sheet 1 of 2
Drilling Water Level	Date 01/21/05	Start 01/21/05
Water Level 24.0		Drilling Date/Times
Surface Conditions: soil		Finish 01/21/05

Sample Type	Feet Driven/Ft Recvrd	Dpth Csg.	Samp # / depth (ft)	HS PID (ppm) Above bk.	PID per 1'	Ft bgs	SOIL DESCRIPTION
AS	5/4.7	NA	SB-1 (4-5')	5.8	NA	0	Dark brown F-C SAND, some f-m gravel, little silt, trace brick, concrete (very tight texture, expected product of previously conducted asphalt batching)
						1	Slight petroleum odor
						2	
						3	
						4	
AS	5/5.0	NA	NS	12.1	NA	5	Same as above (SAA)
						6	
						7	
						8	
						9	
AS	5/2.6	NA	NS	25.6	NA	10	Brown to gray M-C SAND, trace f sand, little f-m gravel
						11	
						12	
						13	
						14	
AS	5/2.8	NA	SB-1 (15-16')	23.7	NA	15	SAA
						16	Wood layer at 15.5'
						17	Wet - perched water table?
						18	
						19	

Logged by: Jill Ann Parrett Date: 01/21/05

Drilling Contractor: New England Geotech Driller: Hayes





**EA Engineering, Science,  
and Technology, Inc.**

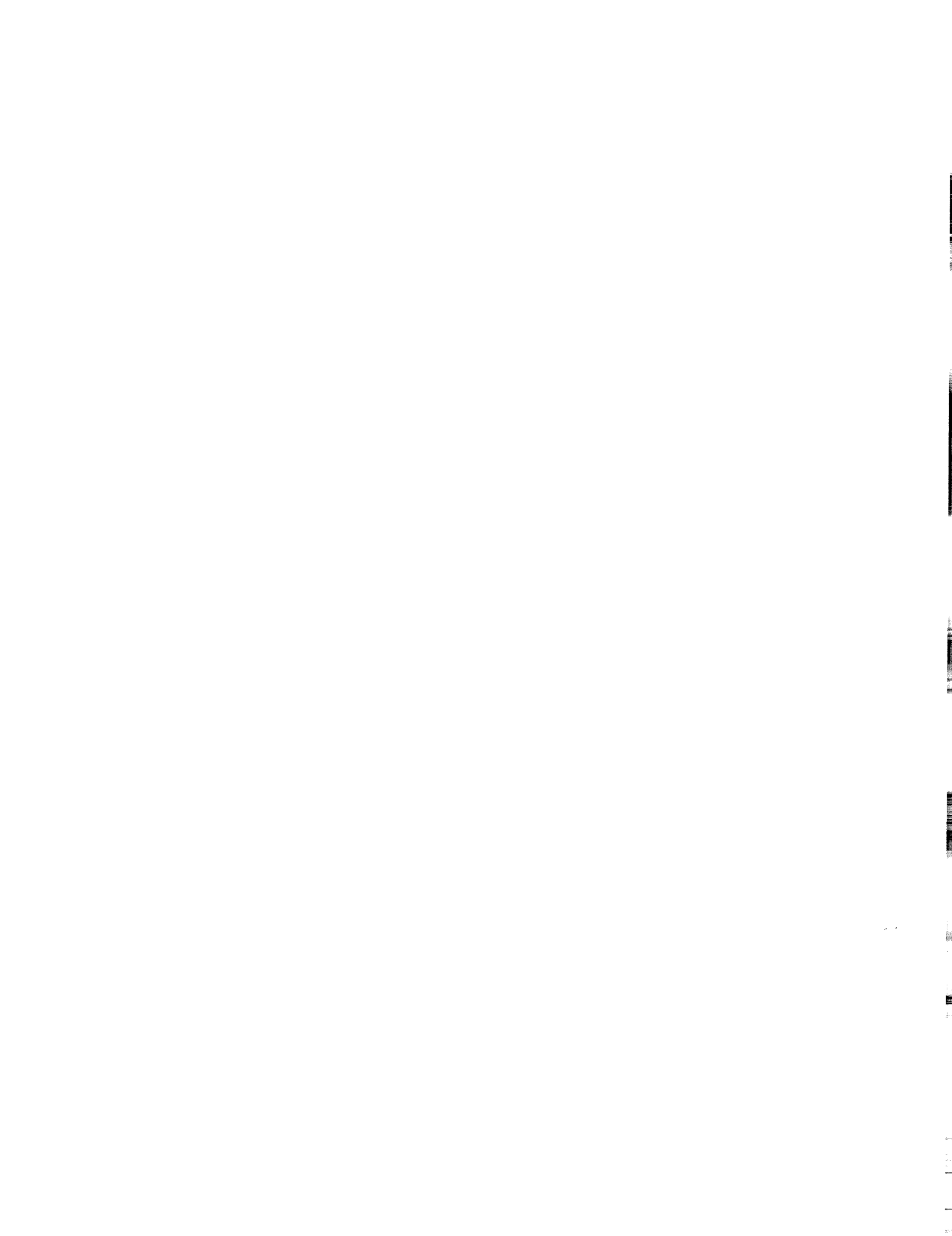
**LOG OF SOIL BORING**

Job No. 61965.01	Client: Providence Dept. of Public Property	Location: <b>Former Gorham Site Providence, RI</b>
Drilling Method: Geoprobe 6600		Boring No. <b>SB-2 (MW-2)</b>
Sampling Method: 5-ft, 2-in diameter acetate sleeves		Sheet <b>1</b> of <b>2</b>
Drilling Water Level Date 01/21/05		Start 01/21/05
Water Level 23.0		Drilling Date/Times
Surface Conditions: broken asphalt		Finish 01/21/05 1130

Sample Type	Feet Driven/Ft Recvrd	Dpth Csg.	Samp # / depth (ft)	HS PID (ppm) Above bk.	PID per 1'	Ft bgs	SOIL DESCRIPTION
AS	5/2.5	NA	SB-2 (1-2')	2.2	NA	0	0-0.4' Asphalt/sand
						1	0.4-1.0' Brown F-C SAND, some f-m gravel, trace silt, trace concrete
						2	1-2.5' Brown to red/brown F-M SAND, some c sand and f gravel, little silt, trace white ash
						3	
						4	
AS	5/2.3	NA	NS	0.8	NA	5	5.5-6.0' SAA, trace wood
						6	6.0-7.3' Brown M-C SAND, little f gravel, trace f sand and silt
						7	
						8	
						9	
AS	5/2.9	NA	NS	0.0	NA	10	Light brown to tan M-C SAND, little f sand, trace f gravel
						11	
						12	
						13	
						14	
AS	5/3.3	NA	NS	0.0	NA	15	15-16.8 SAA
						16	16.8-18.3' Brown C SAND and F GRAVEL, some m sand, little m gravel, trace f sand
						17	
						18	
						19	

Logged by: Jill Ann Parrett Date: 01/21/05

Drilling Contractor: New England Geotech Driller: Hayes







**EA Engineering, Science,  
and Technology, Inc.**

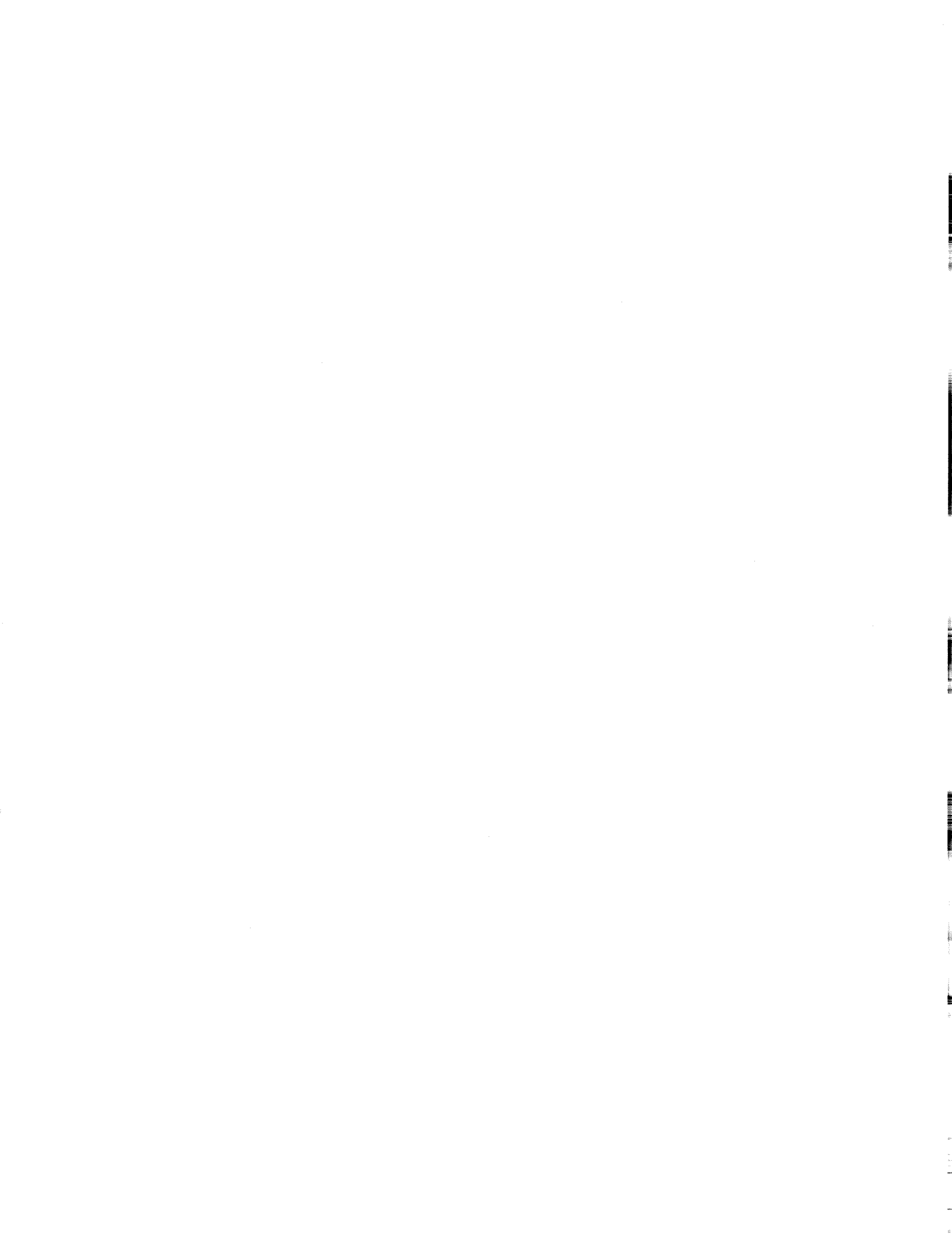
**LOG OF SOIL BORING**

Job. No. 61965.01	Client: Providence Dept. of Public Property	Location: <b>Former Gorham Site Providence, RI</b>
Drilling Method: Geoprobe 6600		Boring No. <b>SB-3 (MW-3)</b>
Sampling Method: 5-ft, 2-in diameter acetate sleeves		Sheet 1 of 2
Drilling Water Level Date	01/21/05	Start 01/21/05
Water Level	25.0	Drilling Date/Times 1145
Surface Conditions: soil		Finish 01/21/05 1315

Sample Type	Feet Driven/Ft Recvrd	Dpth Csg.	Samp # / depth (ft)	HS PID (ppm) Above bk.	PID per 1'	Ft bgs	SOIL DESCRIPTION
AS	5/3.3	NA	NS	0.8	NA	0	Light brown M-C SAND, little f sand, trace f gravel
						1	
						2	
						3	
						4	
AS	5/3.0	NA	NS	0.2	NA	5	SAA
						6	
						7	
						8	
						9	
AS	5/4.3	NA	NS	0.0	NA	10	Brown/gray F-M SAND, trace c sand
						11	
						12	
						13	
						14	
AS	5/4.3	NA	NS	0.0	NA	15	Gray F SAND, some m sand, trace silt
						16	
						17	
						18	
						19	

Logged by: Jill Ann Parrett Date: 01/21/05

Drilling Contractor: New England Geotech Driller: Hayes





EA Engineering, Science,  
and Technology, Inc.

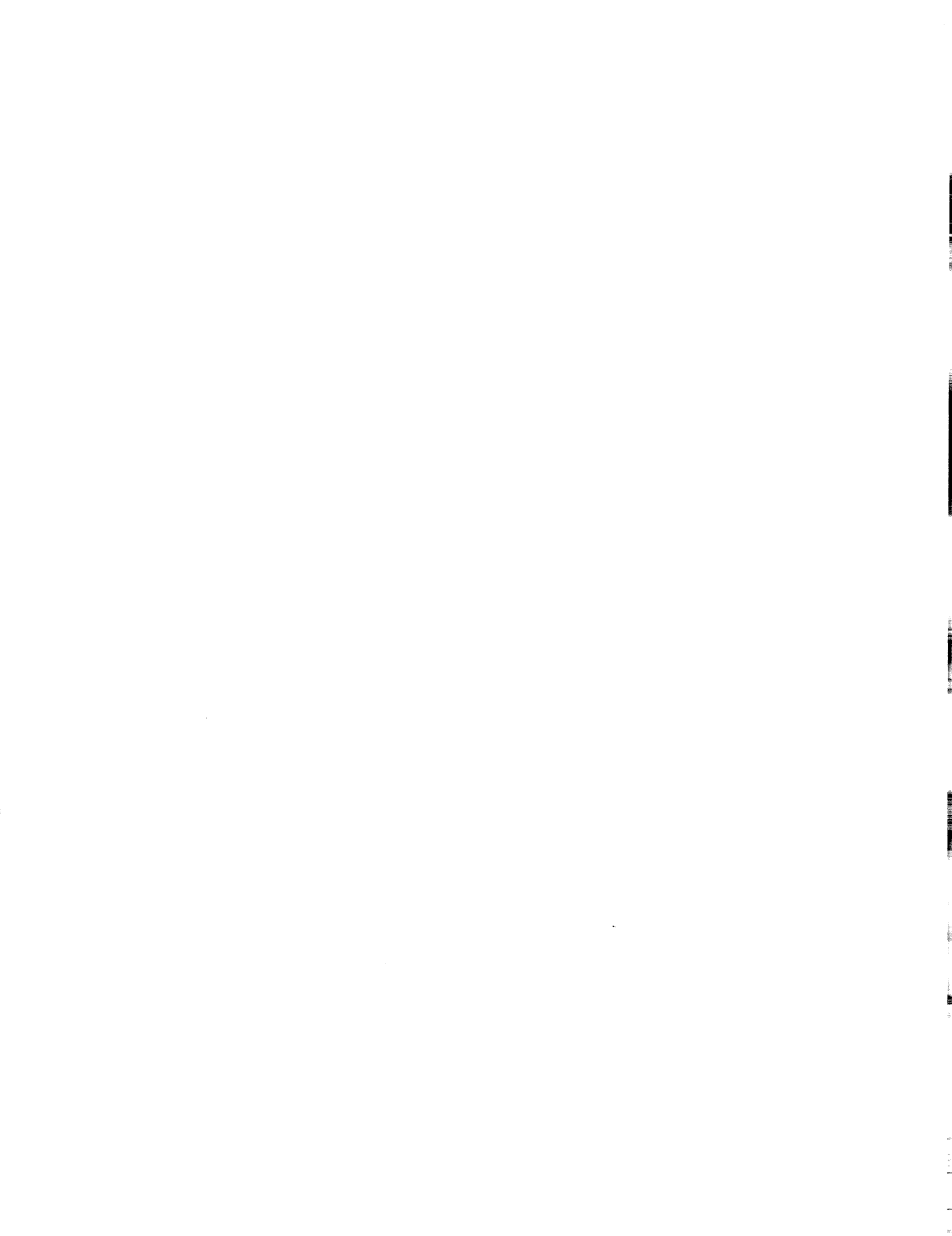
LOG OF SOIL BORING

Job. No. 61965.01	Client: Providence Dept. of Public Property	Location: <b>Former Gorham Site Providence, RI</b>
Drilling Method: Geoprobe 6600		Boring No. <b>SB-4</b>
Sampling Method: 5-ft, 2-in diameter acetate sleeves		Sheet 1 of 2
Drilling Water Level Date	01/21/05	Start 01/21/05
Water Level	24.0	Drilling Date/Times
Surface Conditions:	soil	Finish 01/21/05 1400 1515

Sample Type	Feet Driven/Ft Recvrd	Dpth Csg.	Samp # / depth (ft)	HS PID (ppm) Above bk.	PID per 1'	Ft bgs	SOIL DESCRIPTION
AS	5/5.0	NA	NS	33.9	NA	0	Dark brown/black F-C SAND, some f-m gravel, little silt, trace asphalt, concrete Slight petroleum odor - suspected asphalt batching material
						1	
						2	
						3	
						4	
AS	5/5.0	NA	NS	39.7	NA	5	SAA
						6	
						7	
						8	
						9	
AS	5/5.0	NA	NS	25.9	NA	10	10-13.5' SAA
						11	
						12	
						13	
						14	13.5-15.0' Brown/gray M SAND, some f sand, little c sand
AS	5/2.8	NA	NS	2.0	NA	15	SAA, Asphalt layer at 17-17.4'
						16	
						17	
						18	
						19	

Logged by: Jill Ann Parrett Date: 01/21/05

Drilling Contractor: New England Geotech Driller: Hayes





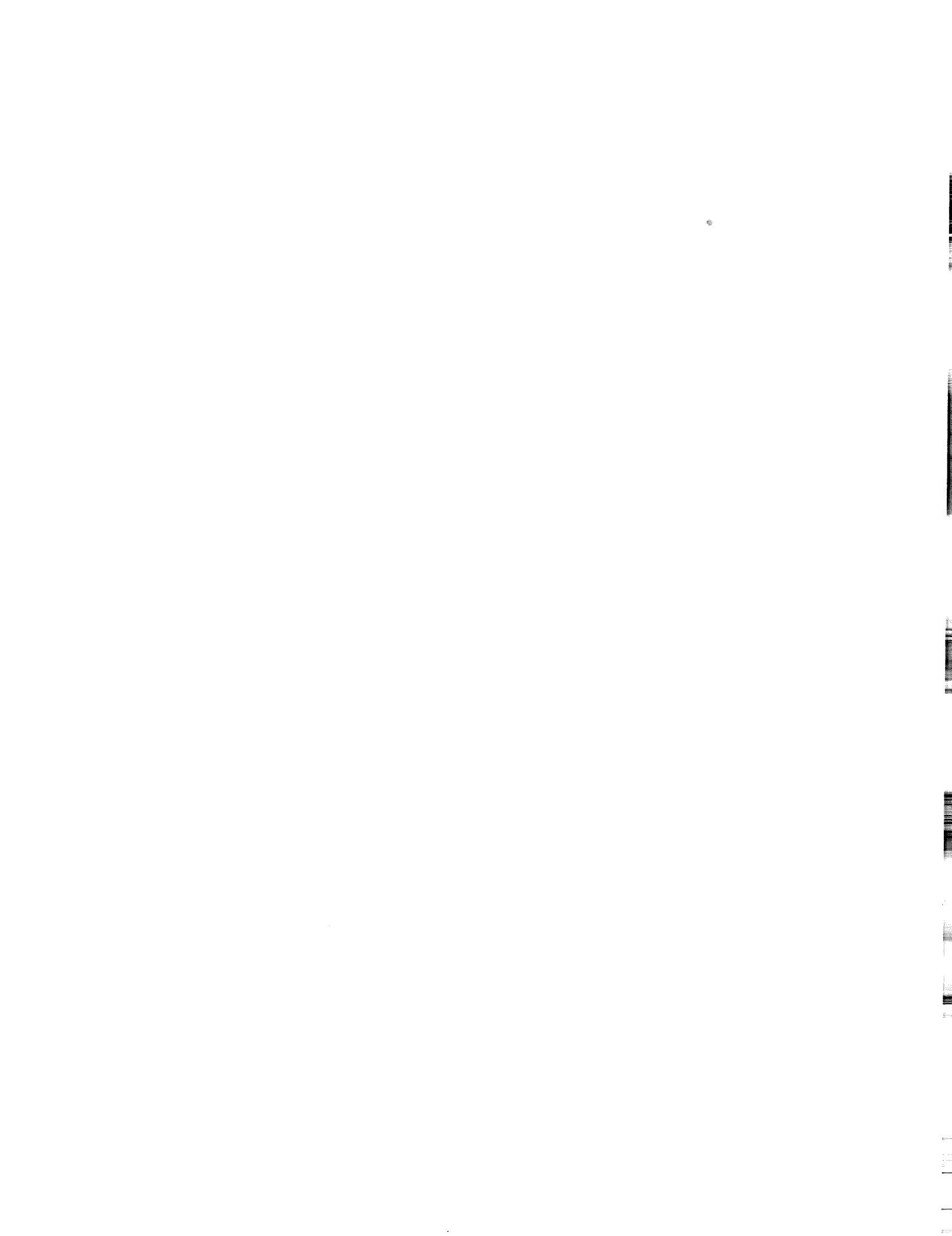
**EA Engineering, Science,  
and Technology, Inc.**

**LOG OF SOIL BORING**

Job No. 61965.01	Client: Providence Dept. of Public Property	Location: <b>Former Gorham Site Providence, RI</b>
Drilling Method: Geoprobe 6600		Boring No. <b>SB-5 (MW-4)</b>
Sampling Method: 5-ft, 2-in diameter acetate sleeves		Sheet 1 of 2
Drilling Water Level	Date: 01/21/05	Start Date/Times: 01/21/05 1520
Water Level: 26.0		Finish Date/Times: 01/21/05 1700
Surface Conditions: soil		

Sample Type	Feet Driven/Ft Recvrd	Dpth Csg.	Samp # / depth (ft)	HS PID (ppm) Above bk.	PID per 1'	Ft bgs	SOIL DESCRIPTION
AS	5/2.0	NA	NS	0.0	NA	0	Dark brown F-C SAND, some f-m gravel, trace silt
						1	
						2	
						3	
						4	
AS	5/0.0	NA	NS	0.2	NA	5	No recovery
						6	
						7	
						8	
						9	
AS	5/2.5	NA	NS	0.0	NA	10	Red/brown F-M SAND, some c sand, trace silt, trace f gravel
						11	
						12	
						13	
						14	
AS	5/2.1	NA	NS	0.0	NA	15	Brown/gray C SAND and F GRAVEL, some m sand, trace f sand
						16	
						17	
						18	
						19	

Logged by: Jill Ann Parrett Date: 01/21/05  
 Drilling Contractor: New England Geotech Driller: Hayes



**APPENDIX C**

**SOIL CERTIFICATES OF ANALYSIS**

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## *CERTIFICATE OF ANALYSIS*

### **PROJECT NARRATIVE**

#### **Page One of Two**

**CLIENT: EA Engineering, Science and Technology**

**CLIENT PROJECT ID: Gorham**

**ESS PROJECT ID: 0501232**

#### **Sample Receipt**

6 Soil samples and 1 Trip Blank were received on January 24, 2005 for the analysis specified on the enclosed Chain of Custody Record.

#### **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.

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

#### **Volatile Organics Analysis**

The Method Blank associated with samples 0501232-02, 0501232-03, 0501232-04, 0501232-05, 0501232-06, and 0501232-07 for Ethylbenzene, Tetrachloroethene, Xylene O, and Xylene P,M was present at a level of 16.0 ug/Kg, 31.0 ug/Kg, 15.0 ug/Kg, 65.0 ug/Kg, respectively.

Blank Spike associated with samples 0501232-02, 0501232-03, 0501232-04, 0501232-05, 0501232-06, and 0501232-07 was outside of the recommended range for 1,4-Dioxane - Screen. This analyte was biased low.

The Method Blank associated with sample 0501232-01 for 1,4-Dioxane - Screen and n-Butylbenzene was present at a level of 5010 ug/Kg and 17.0 ug/Kg, respectively.

Blank Spike associated with sample 0501232-01 was outside of the recommended range for Chloroethane and Trichlorofluoromethane. These analytes were biased high, however, samples were non detect for these analytes.

Blank Spike associated with sample 0501232-01 was outside of the recommended range for 1,4-Dioxane - Screen. This analyte was biased low.

The Relative Percent Difference for the Blank Spike/Blank Spike Duplicate associated with sample 0501232-01 was outside of the recommended range for Acetone.

*Continued*



# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

### PROJECT NARRATIVE

Page Two of Two

**CLIENT: EA Engineering, Science and Technology**

**CLIENT PROJECT ID: Gorham**

**ESS PROJECT ID: 0501232**

#### **Volatile Organics Analysis (Continued)**

The batch Matrix Spike/Matrix Spike Duplicate was outside of the recommended ranges for 1,4-Dioxane - Screen due to matrix interferences. This analyte was biased low.

The batch Matrix Spike/Matrix Spike Duplicate was outside of the recommended range for Chloroethane and Trichlorofluoromethane due to matrix interferences. These analytes were biased high.

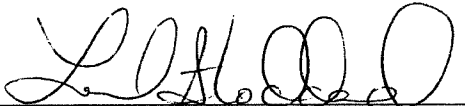
The Relative Percent Difference for the Matrix Spike/Matrix Spike Duplicate was outside of the recommended range for 1,4-Dioxane - Screen.

The relative intensity of the characteristic ion is outside of criteria for Trichloroethene on sample 0501232-01, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, n-Butylbenzene on sample 0501232-04, and 4-Isopropyltoluene on sample 0501232-05.

No other observations noted.

This signed Certificate of Analysis is our approved release of your analytical results. Beginning with this Project Narrative, the entire report has been paginated. The Chain of Custody is the final report page. This report should not be copied except in full without the approval of the laboratory.

End of project narrative.



Laurel Stoddard/Eric Baanante  
Laboratory Director/Operations Manager

2/1/05  
Date

mdp

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-1(14-15')  
Date Sampled: 01/21/05 09:30  
Percent Solids: 92  
Initial Volume: 22.7  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-01  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results	Units	MRL	2xMDL	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	ug/Kg dry	35.9	17.2000	1	01/26/05
1,1,1-Trichloroethane	ND	ug/Kg dry	35.9	7.2000	1	01/26/05
1,1,2,2-Tetrachloroethane	ND	ug/Kg dry	35.9	13.0000	1	01/26/05
1,1,2-Trichloroethane	ND	ug/Kg dry	35.9	18.6000	1	01/26/05
1,1-Dichloroethane	ND	ug/Kg dry	35.9	10.0000	1	01/26/05
1,1-Dichloroethene	ND	ug/Kg dry	35.9	10.0000	1	01/26/05
1,1-Dichloropropene	ND	ug/Kg dry	35.9	25.8000	1	01/26/05
1,2,3-Trichlorobenzene	ND	ug/Kg dry	35.9	20.2000	1	01/26/05
1,2,3-Trichloropropane	ND	ug/Kg dry	35.9	11.4000	1	01/26/05
1,2,4-Trichlorobenzene	ND	ug/Kg dry	35.9	11.4000	1	01/26/05
<b>1,2,4-Trimethylbenzene</b>	J <b>29.4</b>	ug/Kg dry	35.9	8.6000	1	01/26/05
1,2-Dibromo-3-Chloropropane	ND	ug/Kg dry	180	76.2000	1	01/26/05
1,2-Dibromoethane	ND	ug/Kg dry	35.9	11.4000	1	01/26/05
1,2-Dichlorobenzene	ND	ug/Kg dry	35.9	11.4000	1	01/26/05
1,2-Dichloroethane	ND	ug/Kg dry	35.9	15.8000	1	01/26/05
1,2-Dichloropropane	ND	ug/Kg dry	35.9	10.0000	1	01/26/05
1,3,5-Trimethylbenzene	ND	ug/Kg dry	35.9	7.2000	1	01/26/05
1,3-Dichlorobenzene	ND	ug/Kg dry	35.9	8.6000	1	01/26/05
1,3-Dichloropropane	ND	ug/Kg dry	35.9	25.8000	1	01/26/05
1,4-Dichlorobenzene	ND	ug/Kg dry	35.9	7.2000	1	01/26/05
1,4-Dioxane - Screen	ND	ug/Kg dry	18000	2880.0000	1	01/26/05
1-Chlorohexane	ND	ug/Kg dry	35.9	13.0000	1	01/26/05
2,2-Dichloropropane	ND	ug/Kg dry	71.8	50.2000	1	01/26/05
2-Butanone	ND	ug/Kg dry	898	162.4000	1	01/26/05
2-Chlorotoluene	ND	ug/Kg dry	35.9	14.4000	1	01/26/05
2-Hexanone	ND	ug/Kg dry	359	113.4000	1	01/26/05
4-Chlorotoluene	ND	ug/Kg dry	35.9	8.6000	1	01/26/05
<b>4-Isopropyltoluene</b>	J <b>18.0</b>	ug/Kg dry	35.9	7.2000	1	01/26/05
4-Methyl-2-Pentanone	ND	ug/Kg dry	359	53.2000	1	01/26/05
Acetone	ND	ug/Kg dry	898	812.0000	1	01/26/05
Benzene	ND	ug/Kg dry	35.9	5.8000	1	01/26/05
Bromobenzene	ND	ug/Kg dry	35.9	14.4000	1	01/26/05
Bromochloromethane	ND	ug/Kg dry	35.9	18.6000	1	01/26/05
Bromodichloromethane	ND	ug/Kg dry	35.9	14.4000	1	01/26/05
Bromoform	ND	ug/Kg dry	35.9	17.2000	1	01/26/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
 Client Project ID: Gorham  
 Client Sample ID: SB-1(14-15')  
 Date Sampled: 01/21/05 09:30  
 Percent Solids: 92  
 Initial Volume: 22.7  
 Final Volume: 15  
 Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
 ESS Laboratory Sample ID: 0501232-01  
 Sample Matrix: Soil  
 Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	ug/Kg dry	71.8	54.6000	1	01/26/05	
Carbon Disulfide	ND	ug/Kg dry	35.9	24.4000	1	01/26/05	
Carbon Tetrachloride	ND	ug/Kg dry	35.9	11.4000	1	01/26/05	
Chlorobenzene	ND	ug/Kg dry	35.9	5.8000	1	01/26/05	
Chloroethane	ND	ug/Kg dry	71.8	37.4000	1	01/26/05	
Chloroform	ND	ug/Kg dry	35.9	23.0000	1	01/26/05	
Chloromethane	ND	ug/Kg dry	71.8	28.8000	1	01/26/05	
cis-1,2-Dichloroethene	ND	ug/Kg dry	35.9	8.6000	1	01/26/05	
cis-1,3-Dichloropropene	ND	ug/Kg dry	35.9	8.6000	1	01/26/05	
Dibromochloromethane	ND	ug/Kg dry	35.9	5.8000	1	01/26/05	
Dibromomethane	ND	ug/Kg dry	35.9	14.4000	1	01/26/05	
Dichlorodifluoromethane	ND	ug/Kg dry	71.8	25.8000	1	01/26/05	
Diethyl Ether	ND	ug/Kg dry	35.9	28.8000	1	01/26/05	
Di-isopropyl ether	ND	ug/Kg dry	35.9	27.2000	1	01/26/05	
Ethyl tertiary-butyl ether	ND	ug/Kg dry	35.9	8.6000	1	01/26/05	
<b>Ethylbenzene</b>	J	<b>10.1</b>	ug/Kg dry	35.9	5.8000	1	01/26/05
Hexachlorobutadiene	ND	ug/Kg dry	35.9	51.8000	1	01/26/05	
Isopropylbenzene	ND	ug/Kg dry	35.9	4.4000	1	01/26/05	
<b>Methyl tert-Butyl Ether</b>	J	<b>30.2</b>	ug/Kg dry	35.9	10.0000	1	01/26/05
Methylene Chloride	ND	ug/Kg dry	180	23.0000	1	01/26/05	
<b>Naphthalene</b>		<b>99.8</b>	ug/Kg dry	35.9	10.0000	1	01/26/05
<b>n-Butylbenzene</b>	B, J	<b>11.5</b>	ug/Kg dry	35.9	8.6000	1	01/26/05
n-Propylbenzene	ND	ug/Kg dry	35.9	10.0000	1	01/26/05	
sec-Butylbenzene	ND	ug/Kg dry	35.9	7.2000	1	01/26/05	
Styrene	ND	ug/Kg dry	35.9	10.0000	1	01/26/05	
tert-Butylbenzene	ND	ug/Kg dry	35.9	8.6000	1	01/26/05	
Tertiary-amyl methyl ether	ND	ug/Kg dry	35.9	11.4000	1	01/26/05	
<b>Tetrachloroethene</b>	J	<b>25.9</b>	ug/Kg dry	35.9	11.4000	1	01/26/05
Tetrahydrofuran	ND	ug/Kg dry	180	179.6000	1	01/26/05	
Toluene	ND	ug/Kg dry	35.9	7.2000	1	01/26/05	
trans-1,2-Dichloroethene	ND	ug/Kg dry	35.9	25.8000	1	01/26/05	
trans-1,3-Dichloropropene	ND	ug/Kg dry	35.9	8.6000	1	01/26/05	
<b>Trichloroethene</b>	J	<b>14.4</b>	ug/Kg dry	35.9	11.4000	1	01/26/05
Trichlorofluoromethane	ND	ug/Kg dry	71.8	23.0000	1	01/26/05	
Vinyl Acetate	ND	ug/Kg dry	180	25.8000	1	01/26/05	
Vinyl Chloride	ND	ug/Kg dry	71.8	27.2000	1	01/26/05	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-1(14-15')  
Date Sampled: 01/21/05 09:30  
Percent Solids: 92  
Initial Volume: 22.7  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-01  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	ug/Kg dry	35.9	10.0000	1	01/26/05	
Xylene P,M	J	25.1	ug/Kg dry	71.8	14.4000	1	01/26/05
Xylenes (Total)	J	ND	ug/Kg	108			01/26/05

---

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	103 %		70-130
Surrogate: 4-Bromofluorobenzene	106 %		70-130
Surrogate: Toluene-d8	94 %		70-130

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-1(14-15')  
Date Sampled: 01/21/05 09:30  
Percent Solids: 92  
Initial Volume: 29.6  
Final Volume: 1  
Extraction Method: 3550B

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-01  
Sample Matrix: Soil  
Analyst: CLB  
Prepared: 01/25/05

### 8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	329	mg/kg dry	55.1	8.8200	2	01/26/05

---

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: O-Terphenyl	90 %		40-140

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(1-2')  
Date Sampled: 01/21/05 11:00  
Percent Solids: 86  
Initial Volume: 20.3  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-02  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/Kg dry	43.0	20.6000	1	01/25/05
1,1,1-Trichloroethane	ND	ug/Kg dry	43.0	8.6000	1	01/25/05
1,1,2,2-Tetrachloroethane	ND	ug/Kg dry	43.0	15.4000	1	01/25/05
1,1,2-Trichloroethane	ND	ug/Kg dry	43.0	22.4000	1	01/25/05
1,1-Dichloroethane	ND	ug/Kg dry	43.0	12.0000	1	01/25/05
1,1-Dichloroethene	ND	ug/Kg dry	43.0	12.0000	1	01/25/05
1,1-Dichloropropene	ND	ug/Kg dry	43.0	31.0000	1	01/25/05
1,2,3-Trichlorobenzene	ND	ug/Kg dry	43.0	24.0000	1	01/25/05
1,2,3-Trichloropropane	ND	ug/Kg dry	43.0	13.8000	1	01/25/05
1,2,4-Trichlorobenzene	ND	ug/Kg dry	43.0	13.8000	1	01/25/05
1,2,4-Trimethylbenzene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05
1,2-Dibromo-3-Chloropropane	ND	ug/Kg dry	215	91.0000	1	01/25/05
1,2-Dibromoethane	ND	ug/Kg dry	43.0	13.8000	1	01/25/05
1,2-Dichlorobenzene	ND	ug/Kg dry	43.0	13.8000	1	01/25/05
1,2-Dichloroethane	ND	ug/Kg dry	43.0	19.0000	1	01/25/05
1,2-Dichloropropane	ND	ug/Kg dry	43.0	12.0000	1	01/25/05
1,3,5-Trimethylbenzene	ND	ug/Kg dry	43.0	8.6000	1	01/25/05
1,3-Dichlorobenzene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05
1,3-Dichloropropane	ND	ug/Kg dry	43.0	31.0000	1	01/25/05
1,4-Dichlorobenzene	ND	ug/Kg dry	43.0	8.6000	1	01/25/05
1,4-Dioxane - Screen	ND	ug/Kg dry	21500	3440.0000	1	01/25/05
1-Chlorohexane	ND	ug/Kg dry	43.0	15.4000	1	01/25/05
2,2-Dichloropropane	ND	ug/Kg dry	85.9	60.2000	1	01/25/05
2-Butanone	ND	ug/Kg dry	1070	194.2000	1	01/25/05
2-Chlorotoluene	ND	ug/Kg dry	43.0	17.2000	1	01/25/05
2-Hexanone	ND	ug/Kg dry	430	135.8000	1	01/25/05
4-Chlorotoluene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05
4-Isopropyltoluene	ND	ug/Kg dry	43.0	8.6000	1	01/25/05
4-Methyl-2-Pentanone	ND	ug/Kg dry	430	63.6000	1	01/25/05
Acetone	ND	ug/Kg dry	1070	970.0000	1	01/25/05
Benzene	ND	ug/Kg dry	43.0	6.8000	1	01/25/05
Bromobenzene	ND	ug/Kg dry	43.0	17.2000	1	01/25/05
Bromochloromethane	ND	ug/Kg dry	43.0	22.4000	1	01/25/05
Bromodichloromethane	ND	ug/Kg dry	43.0	17.2000	1	01/25/05
Bromoform	ND	ug/Kg dry	43.0	20.6000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(1-2')  
Date Sampled: 01/21/05 11:00  
Percent Solids: 86  
Initial Volume: 20.3  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-02  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	ug/Kg dry	85.9	65.2000	1	01/25/05	
Carbon Disulfide	ND	ug/Kg dry	43.0	29.2000	1	01/25/05	
Carbon Tetrachloride	ND	ug/Kg dry	43.0	13.8000	1	01/25/05	
Chlorobenzene	ND	ug/Kg dry	43.0	6.8000	1	01/25/05	
Chloroethane	ND	ug/Kg dry	85.9	44.6000	1	01/25/05	
Chloroform	ND	ug/Kg dry	43.0	27.4000	1	01/25/05	
Chloromethane	ND	ug/Kg dry	85.9	34.4000	1	01/25/05	
cis-1,2-Dichloroethene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05	
cis-1,3-Dichloropropene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05	
Dibromochloromethane	ND	ug/Kg dry	43.0	6.8000	1	01/25/05	
Dibromomethane	ND	ug/Kg dry	43.0	17.2000	1	01/25/05	
Dichlorodifluoromethane	ND	ug/Kg dry	85.9	31.0000	1	01/25/05	
Diethyl Ether	ND	ug/Kg dry	43.0	34.4000	1	01/25/05	
Di-isopropyl ether	ND	ug/Kg dry	43.0	32.6000	1	01/25/05	
Ethyl tertiary-butyl ether	ND	ug/Kg dry	43.0	10.4000	1	01/25/05	
Ethylbenzene	ND	ug/Kg dry	43.0	6.8000	1	01/25/05	
Hexachlorobutadiene	ND	ug/Kg dry	43.0	61.8000	1	01/25/05	
Isopropylbenzene	ND	ug/Kg dry	43.0	5.2000	1	01/25/05	
Methyl tert-Butyl Ether	ND	ug/Kg dry	43.0	12.0000	1	01/25/05	
Methylene Chloride	ND	ug/Kg dry	215	27.4000	1	01/25/05	
Naphthalene	ND	ug/Kg dry	43.0	12.0000	1	01/25/05	
n-Butylbenzene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05	
n-Propylbenzene	ND	ug/Kg dry	43.0	12.0000	1	01/25/05	
sec-Butylbenzene	ND	ug/Kg dry	43.0	8.6000	1	01/25/05	
Styrene	ND	ug/Kg dry	43.0	12.0000	1	01/25/05	
tert-Butylbenzene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05	
Tertiary-amyl methyl ether	ND	ug/Kg dry	43.0	13.8000	1	01/25/05	
<b>Tetrachloroethene</b>	B	<b>481</b>	ug/Kg dry	43.0	13.8000	1	01/25/05
Tetrahydrofuran	ND	ug/Kg dry	215	214.0000	1	01/25/05	
Toluene	ND	ug/Kg dry	43.0	8.6000	1	01/25/05	
trans-1,2-Dichloroethene	ND	ug/Kg dry	43.0	31.0000	1	01/25/05	
trans-1,3-Dichloropropene	ND	ug/Kg dry	43.0	10.4000	1	01/25/05	
<b>Trichloroethene</b>		<b>245</b>	ug/Kg dry	43.0	13.8000	1	01/25/05
Trichlorofluoromethane	ND	ug/Kg dry	85.9	27.4000	1	01/25/05	
Vinyl Acetate	ND	ug/Kg dry	215	31.0000	1	01/25/05	
Vinyl Chloride	ND	ug/Kg dry	85.9	32.6000	1	01/25/05	

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(1-2')  
Date Sampled: 01/21/05 11:00  
Percent Solids: 86  
Initial Volume: 20.3  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-02  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	ug/Kg dry	43.0	12.0000	1	01/25/05
Xylene P,M	ND	ug/Kg dry	85.9	17.2000	1	01/25/05
Xylenes (Total)	ND	ug/Kg	129			01/25/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>95 %</i>		<i>70-130</i>



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(1-2')  
Date Sampled: 01/21/05 11:00  
Percent Solids: 86  
Initial Volume: 31  
Final Volume: 1  
Extraction Method: 3550B

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-02  
Sample Matrix: Soil  
Analyst: CLB  
Prepared: 01/25/05

### 8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	35.4	mg/kg dry	28.1	4.5000	1	01/26/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: O-Terphenyl</i>	91 %		40-140

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(22-23')  
Date Sampled: 01/21/05 11:15  
Percent Solids: 82  
Initial Volume: 19.9  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-03  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/Kg dry	46.0	22.0000	1	01/25/05
1,1,1-Trichloroethane	ND	ug/Kg dry	46.0	9.2000	1	01/25/05
1,1,2,2-Tetrachloroethane	ND	ug/Kg dry	46.0	16.6000	1	01/25/05
1,1,2-Trichloroethane	ND	ug/Kg dry	46.0	23.8000	1	01/25/05
1,1-Dichloroethane	ND	ug/Kg dry	46.0	12.8000	1	01/25/05
1,1-Dichloroethene	ND	ug/Kg dry	46.0	12.8000	1	01/25/05
1,1-Dichloropropene	ND	ug/Kg dry	46.0	33.0000	1	01/25/05
1,2,3-Trichlorobenzene	ND	ug/Kg dry	46.0	25.8000	1	01/25/05
1,2,3-Trichloropropane	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
1,2,4-Trichlorobenzene	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
1,2,4-Trimethylbenzene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
1,2-Dibromo-3-Chloropropane	ND	ug/Kg dry	230	97.4000	1	01/25/05
1,2-Dibromoethane	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
1,2-Dichlorobenzene	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
1,2-Dichloroethane	ND	ug/Kg dry	46.0	20.2000	1	01/25/05
1,2-Dichloropropane	ND	ug/Kg dry	46.0	12.8000	1	01/25/05
1,3,5-Trimethylbenzene	ND	ug/Kg dry	46.0	9.2000	1	01/25/05
1,3-Dichlorobenzene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
1,3-Dichloropropane	ND	ug/Kg dry	46.0	33.0000	1	01/25/05
1,4-Dichlorobenzene	ND	ug/Kg dry	46.0	9.2000	1	01/25/05
1,4-Dioxane - Screen	ND	ug/Kg dry	23000	3680.0000	1	01/25/05
1-Chlorohexane	ND	ug/Kg dry	46.0	16.6000	1	01/25/05
2,2-Dichloropropane	ND	ug/Kg dry	91.9	64.4000	1	01/25/05
2-Butanone	ND	ug/Kg dry	1150	208.0000	1	01/25/05
2-Chlorotoluene	ND	ug/Kg dry	46.0	18.4000	1	01/25/05
2-Hexanone	ND	ug/Kg dry	460	145.2000	1	01/25/05
4-Chlorotoluene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
4-Isopropyltoluene	ND	ug/Kg dry	46.0	9.2000	1	01/25/05
4-Methyl-2-Pentanone	ND	ug/Kg dry	460	68.0000	1	01/25/05
Acetone	ND	ug/Kg dry	1150	1038.0000	1	01/25/05
Benzene	ND	ug/Kg dry	46.0	7.4000	1	01/25/05
Bromobenzene	ND	ug/Kg dry	46.0	18.4000	1	01/25/05
Bromochloromethane	ND	ug/Kg dry	46.0	23.8000	1	01/25/05
Bromodichloromethane	ND	ug/Kg dry	46.0	18.4000	1	01/25/05
Bromoform	ND	ug/Kg dry	46.0	22.0000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(22-23')  
Date Sampled: 01/21/05 11:15  
Percent Solids: 82  
Initial Volume: 19.9  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-03  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	ug/Kg dry	91.9	69.8000	1	01/25/05
Carbon Disulfide	ND	ug/Kg dry	46.0	31.2000	1	01/25/05
Carbon Tetrachloride	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
Chlorobenzene	ND	ug/Kg dry	46.0	7.4000	1	01/25/05
Chloroethane	ND	ug/Kg dry	91.9	47.8000	1	01/25/05
Chloroform	ND	ug/Kg dry	46.0	29.4000	1	01/25/05
Chloromethane	ND	ug/Kg dry	91.9	36.8000	1	01/25/05
cis-1,2-Dichloroethene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
cis-1,3-Dichloropropene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
Dibromochloromethane	ND	ug/Kg dry	46.0	7.4000	1	01/25/05
Dibromomethane	ND	ug/Kg dry	46.0	18.4000	1	01/25/05
Dichlorodifluoromethane	ND	ug/Kg dry	91.9	33.0000	1	01/25/05
Diethyl Ether	ND	ug/Kg dry	46.0	36.8000	1	01/25/05
Di-isopropyl ether	ND	ug/Kg dry	46.0	35.0000	1	01/25/05
Ethyl tertiary-butyl ether	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
Ethylbenzene	ND	ug/Kg dry	46.0	7.4000	1	01/25/05
Hexachlorobutadiene	ND	ug/Kg dry	46.0	66.2000	1	01/25/05
Isopropylbenzene	ND	ug/Kg dry	46.0	5.6000	1	01/25/05
<b>Methyl tert-Butyl Ether</b>	J 17.5	ug/Kg dry	46.0	12.8000	1	01/25/05
Methylene Chloride	ND	ug/Kg dry	230	29.4000	1	01/25/05
Naphthalene	ND	ug/Kg dry	46.0	12.8000	1	01/25/05
n-Butylbenzene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
n-Propylbenzene	ND	ug/Kg dry	46.0	12.8000	1	01/25/05
sec-Butylbenzene	ND	ug/Kg dry	46.0	9.2000	1	01/25/05
Styrene	ND	ug/Kg dry	46.0	12.8000	1	01/25/05
tert-Butylbenzene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
Tertiary-amyl methyl ether	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
Tetrachloroethene	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
Tetrahydrofuran	ND	ug/Kg dry	230	230.0000	1	01/25/05
Toluene	ND	ug/Kg dry	46.0	9.2000	1	01/25/05
trans-1,2-Dichloroethene	ND	ug/Kg dry	46.0	33.0000	1	01/25/05
trans-1,3-Dichloropropene	ND	ug/Kg dry	46.0	11.0000	1	01/25/05
Trichloroethene	ND	ug/Kg dry	46.0	14.8000	1	01/25/05
Trichlorofluoromethane	ND	ug/Kg dry	91.9	29.4000	1	01/25/05
Vinyl Acetate	ND	ug/Kg dry	230	33.0000	1	01/25/05
Vinyl Chloride	ND	ug/Kg dry	91.9	35.0000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(22-23')  
Date Sampled: 01/21/05 11:15  
Percent Solids: 82  
Initial Volume: 19.9  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-03  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	ug/Kg dry	46.0	12.8000	1	01/25/05
Xylene P,M	ND	ug/Kg dry	91.9	18.4000	1	01/25/05
Xylenes (Total)	ND	ug/Kg	138			01/25/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	90 %		70-130
<i>Surrogate: Toluene-d8</i>	90 %		70-130

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-2(22-23')  
Date Sampled: 01/21/05 11:15  
Percent Solids: 82  
Initial Volume: 30.9  
Final Volume: 1  
Extraction Method: 3550B

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-03  
Sample Matrix: Soil  
Analyst: CLB  
Prepared: 01/25/05

### 8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	ND	mg/kg dry	29.6	4,7400	1	01/26/05

*%Recovery*

*Qualifier*

*Limits*

*Surrogate: O-Terphenyl*

*79 %*

*40-140*

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-4(9-10')  
Date Sampled: 01/21/05 14:45  
Percent Solids: 90  
Initial Volume: 22.1  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-04  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/Kg dry	37.7	18.0000	1	01/25/05
1,1,1-Trichloroethane	ND	ug/Kg dry	37.7	7.6000	1	01/25/05
1,1,2,2-Tetrachloroethane	ND	ug/Kg dry	37.7	13.6000	1	01/25/05
1,1,2-Trichloroethane	ND	ug/Kg dry	37.7	19.6000	1	01/25/05
1,1-Dichloroethane	ND	ug/Kg dry	37.7	10.6000	1	01/25/05
1,1-Dichloroethene	ND	ug/Kg dry	37.7	10.6000	1	01/25/05
1,1-Dichloropropene	ND	ug/Kg dry	37.7	27.2000	1	01/25/05
1,2,3-Trichlorobenzene	ND	ug/Kg dry	37.7	21.2000	1	01/25/05
1,2,3-Trichloropropane	ND	ug/Kg dry	37.7	12.0000	1	01/25/05
1,2,4-Trichlorobenzene	ND	ug/Kg dry	37.7	12.0000	1	01/25/05
<b>1,2,4-Trimethylbenzene</b>	<b>2760</b>	ug/Kg dry	37.7	9.0000	1	01/25/05
1,2-Dibromo-3-Chloropropane	ND	ug/Kg dry	189	80.0000	1	01/25/05
1,2-Dibromoethane	ND	ug/Kg dry	37.7	12.0000	1	01/25/05
<b>1,2-Dichlorobenzene</b>	<b>1090</b>	ug/Kg dry	37.7	12.0000	1	01/25/05
1,2-Dichloroethane	ND	ug/Kg dry	37.7	16.6000	1	01/25/05
1,2-Dichloropropane	ND	ug/Kg dry	37.7	10.6000	1	01/25/05
<b>1,3,5-Trimethylbenzene</b>	<b>692</b>	ug/Kg dry	37.7	7.6000	1	01/25/05
<b>1,3-Dichlorobenzene</b>	<b>82.2</b>	ug/Kg dry	37.7	9.0000	1	01/25/05
1,3-Dichloropropane	ND	ug/Kg dry	37.7	27.2000	1	01/25/05
<b>1,4-Dichlorobenzene</b>	<b>371</b>	ug/Kg dry	37.7	7.6000	1	01/25/05
1,4-Dioxane - Screen	ND	ug/Kg dry	18900	3020.0000	1	01/25/05
1-Chlorohexane	ND	ug/Kg dry	37.7	13.6000	1	01/25/05
2,2-Dichloropropane	ND	ug/Kg dry	75.4	52.8000	1	01/25/05
2-Butanone	ND	ug/Kg dry	943	170.4000	1	01/25/05
2-Chlorotoluene	ND	ug/Kg dry	37.7	15.0000	1	01/25/05
2-Hexanone	ND	ug/Kg dry	377	119.2000	1	01/25/05
4-Chlorotoluene	ND	ug/Kg dry	37.7	9.0000	1	01/25/05
<b>4-Isopropyltoluene</b>	<b>603</b>	ug/Kg dry	37.7	7.6000	1	01/25/05
4-Methyl-2-Pentanone	ND	ug/Kg dry	377	55.8000	1	01/25/05
Acetone	ND	ug/Kg dry	943	852.0000	1	01/25/05
<b>Benzene</b>	<b>J 33.2</b>	ug/Kg dry	37.7	6.0000	1	01/25/05
Bromobenzene	ND	ug/Kg dry	37.7	15.0000	1	01/25/05
Bromochloromethane	ND	ug/Kg dry	37.7	19.6000	1	01/25/05
Bromodichloromethane	ND	ug/Kg dry	37.7	15.0000	1	01/25/05
Bromoform	ND	ug/Kg dry	37.7	18.0000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-4(9-10')  
Date Sampled: 01/21/05 14:45  
Percent Solids: 90  
Initial Volume: 22.1  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-04  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	ug/Kg dry	75.4	57.4000	1	01/25/05	
Carbon Disulfide	ND	ug/Kg dry	37.7	25.6000	1	01/25/05	
Carbon Tetrachloride	ND	ug/Kg dry	37.7	12.0000	1	01/25/05	
Chlorobenzene	ND	ug/Kg dry	37.7	6.0000	1	01/25/05	
Chloroethane	ND	ug/Kg dry	75.4	39.2000	1	01/25/05	
Chloroform	ND	ug/Kg dry	37.7	24.2000	1	01/25/05	
Chloromethane	ND	ug/Kg dry	75.4	30.2000	1	01/25/05	
cis-1,2-Dichloroethene	ND	ug/Kg dry	37.7	9.0000	1	01/25/05	
cis-1,3-Dichloropropene	ND	ug/Kg dry	37.7	9.0000	1	01/25/05	
Dibromochloromethane	ND	ug/Kg dry	37.7	6.0000	1	01/25/05	
Dibromomethane	ND	ug/Kg dry	37.7	15.0000	1	01/25/05	
Dichlorodifluoromethane	ND	ug/Kg dry	75.4	27.2000	1	01/25/05	
Diethyl Ether	ND	ug/Kg dry	37.7	30.2000	1	01/25/05	
Di-isopropyl ether	ND	ug/Kg dry	37.7	28.6000	1	01/25/05	
Ethyl tertiary-butyl ether	ND	ug/Kg dry	37.7	9.0000	1	01/25/05	
<b>Ethylbenzene</b>	<b>B</b>	<b>833</b>	ug/Kg dry	37.7	6.0000	1	01/25/05
Hexachlorobutadiene	ND	ug/Kg dry	37.7	54.2000	1	01/25/05	
<b>Isopropylbenzene</b>		<b>441</b>	ug/Kg dry	37.7	4.6000	1	01/25/05
Methyl tert-Butyl Ether	ND	ug/Kg dry	37.7	10.6000	1	01/25/05	
Methylene Chloride	ND	ug/Kg dry	189	24.2000	1	01/25/05	
<b>Naphthalene</b>		<b>4250</b>	ug/Kg dry	37.7	10.6000	1	01/25/05
<b>n-Butylbenzene</b>		<b>1080</b>	ug/Kg dry	37.7	9.0000	1	01/25/05
<b>n-Propylbenzene</b>		<b>903</b>	ug/Kg dry	37.7	10.6000	1	01/25/05
<b>sec-Butylbenzene</b>		<b>731</b>	ug/Kg dry	37.7	7.6000	1	01/25/05
Styrene	ND	ug/Kg dry	37.7	10.6000	1	01/25/05	
tert-Butylbenzene	ND	ug/Kg dry	37.7	9.0000	1	01/25/05	
Tertiary-amyl methyl ether	ND	ug/Kg dry	37.7	12.0000	1	01/25/05	
<b>Tetrachloroethene</b>	<b>B</b>	<b>61.8</b>	ug/Kg dry	37.7	12.0000	1	01/25/05
Tetrahydrofuran	ND	ug/Kg dry	189	188.6000	1	01/25/05	
<b>Toluene</b>		<b>78.4</b>	ug/Kg dry	37.7	7.6000	1	01/25/05
trans-1,2-Dichloroethene	ND	ug/Kg dry	37.7	27.2000	1	01/25/05	
trans-1,3-Dichloropropene	ND	ug/Kg dry	37.7	9.0000	1	01/25/05	
<b>Trichloroethene</b>	<b>J</b>	<b>34.7</b>	ug/Kg dry	37.7	12.0000	1	01/25/05
Trichlorofluoromethane	ND	ug/Kg dry	75.4	24.2000	1	01/25/05	
Vinyl Acetate	ND	ug/Kg dry	189	27.2000	1	01/25/05	
Vinyl Chloride	ND	ug/Kg dry	75.4	28.6000	1	01/25/05	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-4(9-10')  
Date Sampled: 01/21/05 14:45  
Percent Solids: 90  
Initial Volume: 22.1  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-04  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Xylene O	B	543	ug/Kg dry	37.7	10.6000	1	01/25/05
Xylene P,M	B	824	ug/Kg dry	75.4	15.0000	1	01/25/05
Xylenes (Total)		1370	ug/Kg	113			01/25/05

---

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	101 %		70-130
Surrogate: 4-Bromofluorobenzene	80 %		70-130
Surrogate: Toluene-d8	92 %		70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-4(9-10')  
Date Sampled: 01/21/05 14:45  
Percent Solids: 90  
Initial Volume: 29.7  
Final Volume: 3  
Extraction Method: 3550B

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-04  
Sample Matrix: Soil  
Analyst: CLB  
Prepared: 01/25/05

### 8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	17000	mg/kg dry	842	134.6000	10	01/26/05
	<i>%Recovery</i>		<i>Qualifier</i>	<i>Limits</i>		
<i>Surrogate: O-Terphenyl</i>	82 %			40-140		

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-4(23-24')  
Date Sampled: 01/21/05 15:00  
Percent Solids: 87  
Initial Volume: 19.5  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-05  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/Kg dry	44.2	21.2000	1	01/25/05
1,1,1-Trichloroethane	ND	ug/Kg dry	44.2	8.8000	1	01/25/05
1,1,2,2-Tetrachloroethane	ND	ug/Kg dry	44.2	16.0000	1	01/25/05
1,1,2-Trichloroethane	ND	ug/Kg dry	44.2	23.0000	1	01/25/05
1,1-Dichloroethane	ND	ug/Kg dry	44.2	12.4000	1	01/25/05
1,1-Dichloroethene	ND	ug/Kg dry	44.2	12.4000	1	01/25/05
1,1-Dichloropropene	ND	ug/Kg dry	44.2	31.8000	1	01/25/05
1,2,3-Trichlorobenzene	ND	ug/Kg dry	44.2	24.8000	1	01/25/05
1,2,3-Trichloropropane	ND	ug/Kg dry	44.2	14.2000	1	01/25/05
1,2,4-Trichlorobenzene	ND	ug/Kg dry	44.2	14.2000	1	01/25/05
<b>1,2,4-Trimethylbenzene</b>	<b>57.5</b>	ug/Kg dry	44.2	10.6000	1	01/25/05
1,2-Dibromo-3-Chloropropane	ND	ug/Kg dry	221	93.8000	1	01/25/05
1,2-Dibromoethane	ND	ug/Kg dry	44.2	14.2000	1	01/25/05
1,2-Dichlorobenzene	ND	ug/Kg dry	44.2	14.2000	1	01/25/05
1,2-Dichloroethane	ND	ug/Kg dry	44.2	19.4000	1	01/25/05
1,2-Dichloropropane	ND	ug/Kg dry	44.2	12.4000	1	01/25/05
1,3,5-Trimethylbenzene	ND	ug/Kg dry	44.2	8.8000	1	01/25/05
1,3-Dichlorobenzene	ND	ug/Kg dry	44.2	10.6000	1	01/25/05
1,3-Dichloropropane	ND	ug/Kg dry	44.2	31.8000	1	01/25/05
1,4-Dichlorobenzene	ND	ug/Kg dry	44.2	8.8000	1	01/25/05
1,4-Dioxane - Screen	ND	ug/Kg dry	22100	3540.0000	1	01/25/05
1-Chlorohexane	ND	ug/Kg dry	44.2	16.0000	1	01/25/05
2,2-Dichloropropane	ND	ug/Kg dry	88.4	61.8000	1	01/25/05
2-Butanone	ND	ug/Kg dry	1110	199.8000	1	01/25/05
2-Chlorotoluene	ND	ug/Kg dry	44.2	17.6000	1	01/25/05
2-Hexanone	ND	ug/Kg dry	442	139.6000	1	01/25/05
4-Chlorotoluene	ND	ug/Kg dry	44.2	10.6000	1	01/25/05
<b>4-Isopropyltoluene</b>	<b>170</b>	ug/Kg dry	44.2	8.8000	1	01/25/05
4-Methyl-2-Pentanone	ND	ug/Kg dry	442	65.4000	1	01/25/05
Acetone	ND	ug/Kg dry	1110	1000.0000	1	01/25/05
Benzene	ND	ug/Kg dry	44.2	7.0000	1	01/25/05
Bromobenzene	ND	ug/Kg dry	44.2	17.6000	1	01/25/05
Bromochloromethane	ND	ug/Kg dry	44.2	23.0000	1	01/25/05
Bromodichloromethane	ND	ug/Kg dry	44.2	17.6000	1	01/25/05
Bromoform	ND	ug/Kg dry	44.2	21.2000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

Client Sample ID: SB-4(23-24')

Date Sampled: 01/21/05 15:00

Percent Solids: 87

Initial Volume: 19.5

Final Volume: 15

Extraction Method: 5035

ESS Laboratory Work Order: 0501232

ESS Laboratory Sample ID: 0501232-05

Sample Matrix: Soil

Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	ug/Kg dry	88.4	67.2000	1	01/25/05	
Carbon Disulfide	ND	ug/Kg dry	44.2	30.0000	1	01/25/05	
Carbon Tetrachloride	ND	ug/Kg dry	44.2	14.2000	1	01/25/05	
Chlorobenzene	ND	ug/Kg dry	44.2	7.0000	1	01/25/05	
Chloroethane	ND	ug/Kg dry	88.4	46.0000	1	01/25/05	
Chloroform	ND	ug/Kg dry	44.2	28.2000	1	01/25/05	
Chloromethane	ND	ug/Kg dry	88.4	35.4000	1	01/25/05	
cis-1,2-Dichloroethene	ND	ug/Kg dry	44.2	10.6000	1	01/25/05	
cis-1,3-Dichloropropene	ND	ug/Kg dry	44.2	10.6000	1	01/25/05	
Dibromochloromethane	ND	ug/Kg dry	44.2	7.0000	1	01/25/05	
Dibromomethane	ND	ug/Kg dry	44.2	17.6000	1	01/25/05	
Dichlorodifluoromethane	ND	ug/Kg dry	88.4	31.8000	1	01/25/05	
Diethyl Ether	ND	ug/Kg dry	44.2	35.4000	1	01/25/05	
Di-isopropyl ether	ND	ug/Kg dry	44.2	33.6000	1	01/25/05	
Ethyl tertiary-butyl ether	ND	ug/Kg dry	44.2	10.6000	1	01/25/05	
Ethylbenzene	B, J	18.6	ug/Kg dry	44.2	7.0000	1	01/25/05
Hexachlorobutadiene	ND	ug/Kg dry	44.2	63.6000	1	01/25/05	
Isopropylbenzene		89.3	ug/Kg dry	44.2	5.4000	1	01/25/05
Methyl tert-Butyl Ether	ND	ug/Kg dry	44.2	12.4000	1	01/25/05	
Methylene Chloride	ND	ug/Kg dry	221	28.2000	1	01/25/05	
Naphthalene	ND	ug/Kg dry	44.2	12.4000	1	01/25/05	
n-Butylbenzene		430	ug/Kg dry	44.2	10.6000	1	01/25/05
n-Propylbenzene		178	ug/Kg dry	44.2	12.4000	1	01/25/05
sec-Butylbenzene		304	ug/Kg dry	44.2	8.8000	1	01/25/05
Styrene	ND	ug/Kg dry	44.2	12.4000	1	01/25/05	
tert-Butylbenzene	ND	ug/Kg dry	44.2	10.6000	1	01/25/05	
Tertiary-amyl methyl ether	ND	ug/Kg dry	44.2	14.2000	1	01/25/05	
Tetrachloroethene	B	60.1	ug/Kg dry	44.2	14.2000	1	01/25/05
Tetrahydrofuran	ND	ug/Kg dry	221	222.0000	1	01/25/05	
Toluene	ND	ug/Kg dry	44.2	8.8000	1	01/25/05	
trans-1,2-Dichloroethene	ND	ug/Kg dry	44.2	31.8000	1	01/25/05	
trans-1,3-Dichloropropene	ND	ug/Kg dry	44.2	10.6000	1	01/25/05	
Trichloroethene	ND	ug/Kg dry	44.2	14.2000	1	01/25/05	
Trichlorofluoromethane	ND	ug/Kg dry	88.4	28.2000	1	01/25/05	
Vinyl Acetate	ND	ug/Kg dry	221	31.8000	1	01/25/05	
Vinyl Chloride	ND	ug/Kg dry	88.4	33.6000	1	01/25/05	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-4(23-24')  
Date Sampled: 01/21/05 15:00  
Percent Solids: 87  
Initial Volume: 19.5  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-05  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	ug/Kg dry	44.2	12.4000	1	01/25/05
Xylene P,M	ND	ug/Kg dry	88.4	17.6000	1	01/25/05
Xylenes (Total)	ND	ug/Kg	133			01/25/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	95 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	91 %		70-130
<i>Surrogate: Toluene-d8</i>	77 %		70-130

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-4(23-24')  
Date Sampled: 01/21/05 15:00  
Percent Solids: 87  
Initial Volume: 29.8  
Final Volume: 3  
Extraction Method: 3550B

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-05  
Sample Matrix: Soil  
Analyst: CLB  
Prepared: 01/25/05

### 8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	44600	mg/kg dry	434	69.4000	5	01/26/05
	<i>%Recovery</i>		<i>Qualifier</i>	<i>Limits</i>		
<i>Surrogate: O-Terphenyl</i>	<i>97 %</i>			<i>40-140</i>		

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-5(25-26')  
Date Sampled: 01/21/05 16:30  
Percent Solids: 93  
Initial Volume: 22.7  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-06  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/Kg dry	35.5	17.0000	1	01/25/05
1,1,1-Trichloroethane	ND	ug/Kg dry	35.5	7.2000	1	01/25/05
1,1,2,2-Tetrachloroethane	ND	ug/Kg dry	35.5	12.8000	1	01/25/05
1,1,2-Trichloroethane	ND	ug/Kg dry	35.5	18.4000	1	01/25/05
1,1-Dichloroethane	ND	ug/Kg dry	35.5	10.0000	1	01/25/05
1,1-Dichloroethene	ND	ug/Kg dry	35.5	10.0000	1	01/25/05
1,1-Dichloropropene	ND	ug/Kg dry	35.5	25.6000	1	01/25/05
1,2,3-Trichlorobenzene	ND	ug/Kg dry	35.5	19.8000	1	01/25/05
1,2,3-Trichloropropane	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
1,2,4-Trichlorobenzene	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
1,2,4-Trimethylbenzene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
1,2-Dibromo-3-Chloropropane	ND	ug/Kg dry	178	75.4000	1	01/25/05
1,2-Dibromoethane	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
1,2-Dichlorobenzene	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
1,2-Dichloroethane	ND	ug/Kg dry	35.5	15.6000	1	01/25/05
1,2-Dichloropropane	ND	ug/Kg dry	35.5	10.0000	1	01/25/05
1,3,5-Trimethylbenzene	ND	ug/Kg dry	35.5	7.2000	1	01/25/05
1,3-Dichlorobenzene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
1,3-Dichloropropane	ND	ug/Kg dry	35.5	25.6000	1	01/25/05
1,4-Dichlorobenzene	ND	ug/Kg dry	35.5	7.2000	1	01/25/05
1,4-Dioxane - Screen	ND	ug/Kg dry	17800	2840.0000	1	01/25/05
1-Chlorohexane	ND	ug/Kg dry	35.5	12.8000	1	01/25/05
2,2-Dichloropropane	ND	ug/Kg dry	71.1	49.8000	1	01/25/05
2-Butanone	ND	ug/Kg dry	888	160.6000	1	01/25/05
2-Chlorotoluene	ND	ug/Kg dry	35.5	14.2000	1	01/25/05
2-Hexanone	ND	ug/Kg dry	355	112.2000	1	01/25/05
4-Chlorotoluene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
4-Isopropyltoluene	ND	ug/Kg dry	35.5	7.2000	1	01/25/05
4-Methyl-2-Pentanone	ND	ug/Kg dry	355	52.6000	1	01/25/05
Acetone	ND	ug/Kg dry	888	802.0000	1	01/25/05
Benzene	ND	ug/Kg dry	35.5	5.6000	1	01/25/05
Bromobenzene	ND	ug/Kg dry	35.5	14.2000	1	01/25/05
Bromochloromethane	ND	ug/Kg dry	35.5	18.4000	1	01/25/05
Bromodichloromethane	ND	ug/Kg dry	35.5	14.2000	1	01/25/05
Bromoform	ND	ug/Kg dry	35.5	17.0000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-5(25-26')  
Date Sampled: 01/21/05 16:30  
Percent Solids: 93  
Initial Volume: 22.7  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-06  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	ug/Kg dry	71.1	54.0000	1	01/25/05
Carbon Disulfide	ND	ug/Kg dry	35.5	24.2000	1	01/25/05
Carbon Tetrachloride	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
Chlorobenzene	ND	ug/Kg dry	35.5	5.6000	1	01/25/05
Chloroethane	ND	ug/Kg dry	71.1	37.0000	1	01/25/05
Chloroform	ND	ug/Kg dry	35.5	22.8000	1	01/25/05
Chloromethane	ND	ug/Kg dry	71.1	28.4000	1	01/25/05
cis-1,2-Dichloroethene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
cis-1,3-Dichloropropene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
Dibromochloromethane	ND	ug/Kg dry	35.5	5.6000	1	01/25/05
Dibromomethane	ND	ug/Kg dry	35.5	14.2000	1	01/25/05
Dichlorodifluoromethane	ND	ug/Kg dry	71.1	25.6000	1	01/25/05
Diethyl Ether	ND	ug/Kg dry	35.5	28.4000	1	01/25/05
Di-isopropyl ether	ND	ug/Kg dry	35.5	27.0000	1	01/25/05
Ethyl tertiary-butyl ether	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
Ethylbenzene	ND	ug/Kg dry	35.5	5.6000	1	01/25/05
Hexachlorobutadiene	ND	ug/Kg dry	35.5	51.2000	1	01/25/05
Isopropylbenzene	ND	ug/Kg dry	35.5	4.2000	1	01/25/05
Methyl tert-Butyl Ether	ND	ug/Kg dry	35.5	10.0000	1	01/25/05
Methylene Chloride	ND	ug/Kg dry	178	22.8000	1	01/25/05
<b>Naphthalene</b>	<b>816</b>	ug/Kg dry	35.5	10.0000	1	01/25/05
n-Butylbenzene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
n-Propylbenzene	ND	ug/Kg dry	35.5	10.0000	1	01/25/05
sec-Butylbenzene	ND	ug/Kg dry	35.5	7.2000	1	01/25/05
Styrene	ND	ug/Kg dry	35.5	10.0000	1	01/25/05
tert-Butylbenzene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
Tertiary-amyl methyl ether	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
Tetrachloroethene	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
Tetrahydrofuran	ND	ug/Kg dry	178	177.6000	1	01/25/05
Toluene	ND	ug/Kg dry	35.5	7.2000	1	01/25/05
trans-1,2-Dichloroethene	ND	ug/Kg dry	35.5	25.6000	1	01/25/05
trans-1,3-Dichloropropene	ND	ug/Kg dry	35.5	8.6000	1	01/25/05
Trichloroethene	ND	ug/Kg dry	35.5	11.4000	1	01/25/05
Trichlorofluoromethane	ND	ug/Kg dry	71.1	22.8000	1	01/25/05
Vinyl Acetate	ND	ug/Kg dry	178	25.6000	1	01/25/05
Vinyl Chloride	ND	ug/Kg dry	71.1	27.0000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-5(25-26')  
Date Sampled: 01/21/05 16:30  
Percent Solids: 93  
Initial Volume: 22.7  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-06  
Sample Matrix: Soil  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	ug/Kg dry	35.5	10.0000	1	01/25/05
Xylene P,M	ND	ug/Kg dry	71.1	14.2000	1	01/25/05
Xylenes (Total)	ND	ug/Kg	107			01/25/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>87 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>88 %</i>		<i>70-130</i>



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: SB-5(25-26')  
Date Sampled: 01/21/05 16:30  
Percent Solids: 93  
Initial Volume: 30.3  
Final Volume: 1  
Extraction Method: 3550B

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-06  
Sample Matrix: Soil  
Analyst: CLB  
Prepared: 01/25/05

### 8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	119	mg/kg dry	53.2	8.5200	2	01/26/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: O-Terphenyl</i>	109 %		40-140

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: TripBlank  
Date Sampled: 01/21/05 00:00  
Percent Solids: N/A  
Initial Volume: 15  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-07  
Sample Matrix: Solid  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/Kg wet	50.0	24.0000	1	01/25/05
1,1,1-Trichloroethane	ND	ug/Kg wet	50.0	10.0000	1	01/25/05
1,1,2,2-Tetrachloroethane	ND	ug/Kg wet	50.0	18.0000	1	01/25/05
1,1,2-Trichloroethane	ND	ug/Kg wet	50.0	26.0000	1	01/25/05
1,1-Dichloroethane	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
1,1-Dichloroethene	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
1,1-Dichloropropene	ND	ug/Kg wet	50.0	36.0000	1	01/25/05
1,2,3-Trichlorobenzene	ND	ug/Kg wet	50.0	28.0000	1	01/25/05
1,2,3-Trichloropropane	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
1,2,4-Trichlorobenzene	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
1,2,4-Trimethylbenzene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
1,2-Dibromo-3-Chloropropane	ND	ug/Kg wet	250	106.0000	1	01/25/05
1,2-Dibromoethane	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
1,2-Dichlorobenzene	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
1,2-Dichloroethane	ND	ug/Kg wet	50.0	22.0000	1	01/25/05
1,2-Dichloropropane	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
1,3,5-Trimethylbenzene	ND	ug/Kg wet	50.0	10.0000	1	01/25/05
1,3-Dichlorobenzene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
1,3-Dichloropropane	ND	ug/Kg wet	50.0	36.0000	1	01/25/05
1,4-Dichlorobenzene	ND	ug/Kg wet	50.0	10.0000	1	01/25/05
1,4-Dioxane - Screen	ND	ug/Kg wet	25000	4000.0000	1	01/25/05
1-Chlorohexane	ND	ug/Kg wet	50.0	18.0000	1	01/25/05
2,2-Dichloropropane	ND	ug/Kg wet	100	70.0000	1	01/25/05
2-Butanone	ND	ug/Kg wet	1250	226.0000	1	01/25/05
2-Chlorotoluene	ND	ug/Kg wet	50.0	20.0000	1	01/25/05
2-Hexanone	ND	ug/Kg wet	500	158.0000	1	01/25/05
4-Chlorotoluene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
4-Isopropyltoluene	ND	ug/Kg wet	50.0	10.0000	1	01/25/05
4-Methyl-2-Pentanone	ND	ug/Kg wet	500	74.0000	1	01/25/05
Acetone	ND	ug/Kg wet	1250	1130.0000	1	01/25/05
Benzene	ND	ug/Kg wet	50.0	8.0000	1	01/25/05
Bromobenzene	ND	ug/Kg wet	50.0	20.0000	1	01/25/05
Bromochloromethane	ND	ug/Kg wet	50.0	26.0000	1	01/25/05
Bromodichloromethane	ND	ug/Kg wet	50.0	20.0000	1	01/25/05
Bromoform	ND	ug/Kg wet	50.0	24.0000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: TripBlank  
Date Sampled: 01/21/05 00:00  
Percent Solids: N/A  
Initial Volume: 15  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-07  
Sample Matrix: Solid  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Bromomethane	ND	ug/Kg wet	100	76.0000	1	01/25/05
Carbon Disulfide	ND	ug/Kg wet	50.0	34.0000	1	01/25/05
Carbon Tetrachloride	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
Chlorobenzene	ND	ug/Kg wet	50.0	8.0000	1	01/25/05
Chloroethane	ND	ug/Kg wet	100	52.0000	1	01/25/05
Chloroform	ND	ug/Kg wet	50.0	32.0000	1	01/25/05
Chloromethane	ND	ug/Kg wet	100	40.0000	1	01/25/05
cis-1,2-Dichloroethene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
cis-1,3-Dichloropropene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
Dibromochloromethane	ND	ug/Kg wet	50.0	8.0000	1	01/25/05
Dibromomethane	ND	ug/Kg wet	50.0	20.0000	1	01/25/05
Dichlorodifluoromethane	ND	ug/Kg wet	100	36.0000	1	01/25/05
Diethyl Ether	ND	ug/Kg wet	50.0	40.0000	1	01/25/05
Di-isopropyl ether	ND	ug/Kg wet	50.0	38.0000	1	01/25/05
Ethyl tertiary-butyl ether	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
Ethylbenzene	ND	ug/Kg wet	50.0	8.0000	1	01/25/05
Hexachlorobutadiene	ND	ug/Kg wet	50.0	72.0000	1	01/25/05
Isopropylbenzene	ND	ug/Kg wet	50.0	6.0000	1	01/25/05
Methyl tert-Butyl Ether	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
Methylene Chloride	ND	ug/Kg wet	250	32.0000	1	01/25/05
Naphthalene	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
n-Butylbenzene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
n-Propylbenzene	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
sec-Butylbenzene	ND	ug/Kg wet	50.0	10.0000	1	01/25/05
Styrene	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
tert-Butylbenzene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
Tertiary-amyl methyl ether	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
Tetrachloroethene	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
Tetrahydrofuran	ND	ug/Kg wet	250	250.0000	1	01/25/05
Toluene	ND	ug/Kg wet	50.0	10.0000	1	01/25/05
trans-1,2-Dichloroethene	ND	ug/Kg wet	50.0	36.0000	1	01/25/05
trans-1,3-Dichloropropene	ND	ug/Kg wet	50.0	12.0000	1	01/25/05
Trichloroethene	ND	ug/Kg wet	50.0	16.0000	1	01/25/05
Trichlorofluoromethane	ND	ug/Kg wet	100	32.0000	1	01/25/05
Vinyl Acetate	ND	ug/Kg wet	250	36.0000	1	01/25/05
Vinyl Chloride	ND	ug/Kg wet	100	38.0000	1	01/25/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: TripBlank  
Date Sampled: 01/21/05 00:00  
Percent Solids: N/A  
Initial Volume: 15  
Final Volume: 15  
Extraction Method: 5035

ESS Laboratory Work Order: 0501232  
ESS Laboratory Sample ID: 0501232-07  
Sample Matrix: Solid  
Analyst: BML

### 5035/8260B Volatile Organic Compounds / Methanol

Xylene O	ND	ug/Kg wet	50.0	14.0000	1	01/25/05
Xylene P,M	ND	ug/Kg wet	100	20.0000	1	01/25/05
Xylenes (Total)	ND	ug/Kg wet	300	62.0000		01/25/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>109 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70-130</i>

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

## 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 BA52501 - 5035

Blank	Result	MRL	Units
1,1,1,2-Tetrachloroethane	ND	50.0	ug/Kg wet
1,1,1-Trichloroethane	ND	50.0	ug/Kg wet
1,1,2,2-Tetrachloroethane	ND	50.0	ug/Kg wet
1,1,2-Trichloroethane	ND	50.0	ug/Kg wet
1,1-Dichloroethane	ND	50.0	ug/Kg wet
1,1-Dichloroethene	ND	50.0	ug/Kg wet
1,1-Dichloropropene	ND	50.0	ug/Kg wet
1,2,3-Trichlorobenzene	ND	50.0	ug/Kg wet
1,2,3-Trichloropropane	ND	50.0	ug/Kg wet
1,2,4-Trichlorobenzene	ND	50.0	ug/Kg wet
1,2,4-Trimethylbenzene	ND	50.0	ug/Kg wet
1,2-Dibromo-3-Chloropropane	ND	250	ug/Kg wet
1,2-Dibromoethane	ND	50.0	ug/Kg wet
1,2-Dichlorobenzene	ND	50.0	ug/Kg wet
1,2-Dichloroethane	ND	50.0	ug/Kg wet
1,2-Dichloropropane	ND	50.0	ug/Kg wet
1,3,5-Trimethylbenzene	ND	50.0	ug/Kg wet
1,3-Dichlorobenzene	ND	50.0	ug/Kg wet
1,3-Dichloropropane	ND	50.0	ug/Kg wet
1,4-Dichlorobenzene	ND	50.0	ug/Kg wet
1,4-Dioxane - Screen	ND	25000	ug/Kg wet
1-Chlorohexane	ND	50.0	ug/Kg wet
2,2-Dichloropropane	ND	100	ug/Kg wet
2-Butanone	ND	1250	ug/Kg wet
2-Chlorotoluene	ND	50.0	ug/Kg wet
2-Hexanone	ND	500	ug/Kg wet
4-Chlorotoluene	ND	50.0	ug/Kg wet
4-Isopropyltoluene	ND	50.0	ug/Kg wet
4-Methyl-2-Pentanone	ND	500	ug/Kg wet
Acetone	ND	1250	ug/Kg wet
Benzene	ND	50.0	ug/Kg wet
Bromobenzene	ND	50.0	ug/Kg wet
Bromochloromethane	ND	50.0	ug/Kg wet
Bromodichloromethane	ND	50.0	ug/Kg wet
Bromoform	ND	50.0	ug/Kg wet
Bromomethane	ND	100	ug/Kg wet
Carbon Disulfide	ND	50.0	ug/Kg wet
Carbon Tetrachloride	ND	50.0	ug/Kg wet
Chlorobenzene	ND	50.0	ug/Kg wet
Chloroethane	ND	100	ug/Kg wet
Chloroform	ND	50.0	ug/Kg wet
Chloromethane	ND	100	ug/Kg wet
cis-1,2-Dichloroethene	ND	50.0	ug/Kg wet
cis-1,3-Dichloropropene	ND	50.0	ug/Kg wet
Dibromochloromethane	ND	50.0	ug/Kg wet

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### 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 BA52501 - 5035

Dibromomethane	ND	50.0	ug/Kg wet							
Dichlorodifluoromethane	ND	100	ug/Kg wet							
Diethyl Ether	ND	50.0	ug/Kg wet							
Di-isopropyl ether	ND	50.0	ug/Kg wet							
Ethyl tertiary-butyl ether	ND	50.0	ug/Kg wet							
Ethylbenzene	16.0	50.0	ug/Kg wet							J
Hexachlorobutadiene	ND	50.0	ug/Kg wet							
Isopropylbenzene	ND	50.0	ug/Kg wet							
Methyl tert-Butyl Ether	ND	50.0	ug/Kg wet							
Methylene Chloride	ND	250	ug/Kg wet							
Naphthalene	ND	50.0	ug/Kg wet							
n-Butylbenzene	ND	50.0	ug/Kg wet							
n-Propylbenzene	ND	50.0	ug/Kg wet							
sec-Butylbenzene	ND	50.0	ug/Kg wet							
Styrene	ND	50.0	ug/Kg wet							
tert-Butylbenzene	ND	50.0	ug/Kg wet							
Tertiary-amyl methyl ether	ND	50.0	ug/Kg wet							
Tetrachloroethene	31.0	50.0	ug/Kg wet							J
Tetrahydrofuran	ND	250	ug/Kg wet							
Toluene	ND	50.0	ug/Kg wet							
trans-1,2-Dichloroethene	ND	50.0	ug/Kg wet							
trans-1,3-Dichloropropene	ND	50.0	ug/Kg wet							
Trichloroethene	ND	50.0	ug/Kg wet							
Trichlorofluoromethane	ND	100	ug/Kg wet							
Vinyl Acetate	ND	250	ug/Kg wet							
Vinyl Chloride	ND	100	ug/Kg wet							
Xylene O	15.0	50.0	ug/Kg wet							J
Xylene P,M	65.0	100	ug/Kg wet							J
Surrogate: 1,2-Dichloroethane-d4	2720		ug/Kg wet	2500		109	70-130			
Surrogate: 4-Bromofluorobenzene	2590		ug/Kg wet	2500		104	70-130			
Surrogate: Toluene-d8	2590		ug/Kg wet	2500		104	70-130			

##### .CS

1,1,1,2-Tetrachloroethane	23.9		ug/L	25.0		96	70-130			
1,1,1-Trichloroethane	26.1		ug/L	25.0		104	70-130			
1,1,2,2-Tetrachloroethane	21.5		ug/L	25.0		86	70-130			
1,1,2-Trichloroethane	23.6		ug/L	25.0		94	70-130			
1,1-Dichloroethane	28.1		ug/L	25.0		112	70-130			
1,1-Dichloroethene	26.3		ug/L	25.0		105	70-130			
1,1-Dichloropropene	27.4		ug/L	25.0		110	70-130			
1,2,3-Trichlorobenzene	20.1		ug/L	25.0		80	70-130			
1,2,3-Trichloropropane	20.4		ug/L	25.0		82	70-130			
1,2,4-Trichlorobenzene	22.6		ug/L	25.0		90	70-130			
1,2,4-Trimethylbenzene	24.9		ug/L	25.0		100	70-130			
1,2-Dibromo-3-Chloropropane	19.3		ug/L	25.0		77	70-130			
1,2-Dibromoethane	22.7		ug/L	25.0		91	70-130			
1,2-Dichlorobenzene	22.4		ug/L	25.0		90	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52501 - 5035</b>										
1,2-Dichloroethane	26.1		ug/L	25.0		104	70-130			
1,2-Dichloropropane	27.4		ug/L	25.0		110	70-130			
1,3,5-Trimethylbenzene	25.5		ug/L	25.0		102	70-130			
1,3-Dichlorobenzene	23.5		ug/L	25.0		94	70-130			
1,3-Dichloropropane	22.4		ug/L	25.0		90	70-130			
1,4-Dichlorobenzene	22.6		ug/L	25.0		90	70-130			
1,4-Dioxane - Screen	322		ug/L	500		64	70-130			+
1-Chlorohexane	24.4		ug/L	25.0		98	70-130			
2,2-Dichloropropane	27.0		ug/L	25.0		108	70-130			
2-Butanone	28.2		ug/L	25.0		113	70-130			
2-Chlorotoluene	25.3		ug/L	25.0		101	70-130			
2-Hexanone	20.9		ug/L	25.0		84	70-130			
4-Chlorotoluene	23.5		ug/L	25.0		94	70-130			
4-Isopropyltoluene	26.1		ug/L	25.0		104	70-130			
4-Methyl-2-Pentanone	27.6		ug/L	25.0		110	70-130			
Acetone	25.6		ug/L	25.0		102	70-130			
Benzene	28.2		ug/L	25.0		113	70-130			
Bromobenzene	23.0		ug/L	25.0		92	70-130			
Bromochloromethane	25.9		ug/L	25.0		104	70-130			
Bromodichloromethane	27.2		ug/L	25.0		109	70-130			
Bromoform	19.7		ug/L	25.0		79	70-130			
Bromomethane	31.9		ug/L	25.0		128	70-130			
Carbon Disulfide	30.7		ug/L	25.0		123	70-130			
Carbon Tetrachloride	26.2		ug/L	25.0		105	70-130			
Chlorobenzene	23.6		ug/L	25.0		94	70-130			
Chloroethane	31.1		ug/L	25.0		124	70-130			
Chloroform	27.8		ug/L	25.0		111	70-130			
Chloromethane	30.6		ug/L	25.0		122	70-130			
cis-1,2-Dichloroethene	26.2		ug/L	25.0		105	70-130			
cis-1,3-Dichloropropene	28.6		ug/L	25.0		114	70-130			
Dibromochloromethane	20.7		ug/L	25.0		83	70-130			
Dibromomethane	26.9		ug/L	25.0		108	70-130			
Dichlorodifluoromethane	28.9		ug/L	25.0		116	70-130			
Diethyl Ether	26.7		ug/L	25.0		107	70-130			
Di-isopropyl ether	24.4		ug/L	25.0		98	70-130			
Ethyl tertiary-butyl ether	23.5		ug/L	25.0		94	70-130			
Ethylbenzene	24.2		ug/L	25.0		97	70-130			
Hexachlorobutadiene	28.6		ug/L	25.0		114	70-130			
Isopropylbenzene	26.9		ug/L	25.0		108	70-130			
Methyl tert-Butyl Ether	44.8		ug/L	50.0		90	70-130			
Methylene Chloride	26.2		ug/L	25.0		105	70-130			
Naphthalene	18.7		ug/L	25.0		75	70-130			
n-Butylbenzene	26.2		ug/L	25.0		105	70-130			
n-Propylbenzene	25.6		ug/L	25.0		102	70-130			
sec-Butylbenzene	26.0		ug/L	25.0		104	70-130			
Styrene	24.8		ug/L	25.0		99	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52501 - 5035</b>										
tert-Butylbenzene	24.9		ug/L	25.0		100	70-130			
Tertiary-amyl methyl ether	24.0		ug/L	25.0		96	70-130			
Tetrachloroethene	24.4		ug/L	25.0		98	70-130			
Tetrahydrofuran	23.5		ug/L	25.0		94	70-130			
Toluene	24.3		ug/L	25.0		97	70-130			
trans-1,2-Dichloroethene	27.9		ug/L	25.0		112	70-130			
trans-1,3-Dichloropropene	26.5		ug/L	25.0		106	70-130			
Trichloroethene	26.9		ug/L	25.0		108	70-130			
Trichlorofluoromethane	31.2		ug/L	25.0		125	70-130			
Vinyl Acetate	24.3		ug/L	25.0		97	70-130			
Vinyl Chloride	30.8		ug/L	25.0		123	70-130			
Xylene O	25.8		ug/L	25.0		103	70-130			
Xylene P,M	49.4		ug/L	50.0		99	70-130			
Surrogate: 1,2-Dichloroethane-d4	3020		ug/Kg wet	2500		121	70-130			
Surrogate: 4-Bromofluorobenzene	2760		ug/Kg wet	2500		110	70-130			
Surrogate: Toluene-d8	2770		ug/Kg wet	2500		111	70-130			
<b>LCS Dup</b>										
1,1,1,2-Tetrachloroethane	24.2		ug/L	25.0		97	70-130	1	20	
1,1,1-Trichloroethane	26.1		ug/L	25.0		104	70-130	0	20	
1,1,2,2-Tetrachloroethane	21.8		ug/L	25.0		87	70-130	1	20	
1,1,2-Trichloroethane	23.6		ug/L	25.0		94	70-130	0	20	
1,1-Dichloroethane	28.0		ug/L	25.0		112	70-130	0	20	
1,1-Dichloroethene	26.1		ug/L	25.0		104	70-130	1	20	
1,1-Dichloropropene	27.2		ug/L	25.0		109	70-130	0.9	20	
1,2,3-Trichlorobenzene	20.2		ug/L	25.0		81	70-130	1	20	
1,2,3-Trichloropropane	20.1		ug/L	25.0		80	70-130	2	20	
1,2,4-Trichlorobenzene	22.4		ug/L	25.0		90	70-130	0	20	
1,2,4-Trimethylbenzene	24.6		ug/L	25.0		98	70-130	2	20	
1,2-Dibromo-3-Chloropropane	18.9		ug/L	25.0		76	70-130	1	20	
1,2-Dibromoethane	23.0		ug/L	25.0		92	70-130	1	20	
1,2-Dichlorobenzene	22.4		ug/L	25.0		90	70-130	0	20	
1,2-Dichloroethane	26.4		ug/L	25.0		106	70-130	2	20	
1,2-Dichloropropane	27.4		ug/L	25.0		110	70-130	0	20	
1,3,5-Trimethylbenzene	25.3		ug/L	25.0		101	70-130	1	20	
1,3-Dichlorobenzene	23.4		ug/L	25.0		94	70-130	0	20	
1,3-Dichloropropane	22.8		ug/L	25.0		91	70-130	1	20	
1,4-Dichlorobenzene	23.2		ug/L	25.0		93	70-130	3	20	
1,4-Dioxane - Screen	313		ug/L	500		63	70-130	2	20	+
1-Chlorohexane	23.9		ug/L	25.0		96	70-130	2	20	
2,2-Dichloropropane	26.8		ug/L	25.0		107	70-130	0.9	20	
2-Butanone	27.6		ug/L	25.0		110	70-130	3	20	
2-Chlorotoluene	24.9		ug/L	25.0		100	70-130	1	20	
2-Hexanone	21.9		ug/L	25.0		88	70-130	5	20	
4-Chlorotoluene	23.7		ug/L	25.0		95	70-130	1	20	
4-Isopropyltoluene	25.8		ug/L	25.0		103	70-130	1	20	
4-Methyl-2-Pentanone	27.8		ug/L	25.0		111	70-130	0.9	20	



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52501 - 5035</b>										
Acetone	27.0		ug/L	25.0		108	70-130	6	20	
Benzene	28.2		ug/L	25.0		113	70-130	0	20	
Bromobenzene	23.1		ug/L	25.0		92	70-130	0	20	
Bromochloromethane	25.6		ug/L	25.0		102	70-130	2	20	
Bromodichloromethane	27.3		ug/L	25.0		109	70-130	0	20	
Bromoform	20.0		ug/L	25.0		80	70-130	1	20	
Bromomethane	31.7		ug/L	25.0		127	70-130	0.8	20	
Carbon Disulfide	30.1		ug/L	25.0		120	70-130	2	20	
Carbon Tetrachloride	25.9		ug/L	25.0		104	70-130	1	20	
Chlorobenzene	23.7		ug/L	25.0		95	70-130	1	20	
Chloroethane	30.0		ug/L	25.0		120	70-130	3	20	
Chloroform	27.6		ug/L	25.0		110	70-130	0.9	20	
Chloromethane	30.2		ug/L	25.0		121	70-130	0.8	20	
cis-1,2-Dichloroethene	26.5		ug/L	25.0		106	70-130	0.9	20	
cis-1,3-Dichloropropene	28.8		ug/L	25.0		115	70-130	0.9	20	
Dibromochloromethane	21.1		ug/L	25.0		84	70-130	1	20	
Dibromomethane	27.2		ug/L	25.0		109	70-130	0.9	20	
Dichlorodifluoromethane	28.3		ug/L	25.0		113	70-130	3	20	
Diethyl Ether	27.1		ug/L	25.0		108	70-130	0.9	20	
Di-isopropyl ether	24.5		ug/L	25.0		98	70-130	0	20	
Ethyl tertiary-butyl ether	23.4		ug/L	25.0		94	70-130	0	20	
Ethylbenzene	24.4		ug/L	25.0		98	70-130	1	20	
Hexachlorobutadiene	28.3		ug/L	25.0		113	70-130	0.9	20	
Isopropylbenzene	26.9		ug/L	25.0		108	70-130	0	20	
Methyl tert-Butyl Ether	45.2		ug/L	50.0		90	70-130	0	20	
Methylene Chloride	25.4		ug/L	25.0		102	70-130	3	20	
Naphthalene	18.6		ug/L	25.0		74	70-130	1	20	
n-Butylbenzene	25.7		ug/L	25.0		103	70-130	2	20	
n-Propylbenzene	24.6		ug/L	25.0		98	70-130	4	20	
sec-Butylbenzene	25.8		ug/L	25.0		103	70-130	1	20	
Styrene	25.1		ug/L	25.0		100	70-130	1	20	
tert-Butylbenzene	24.7		ug/L	25.0		99	70-130	1	20	
Tertiary-amyl methyl ether	24.2		ug/L	25.0		97	70-130	1	20	
Tetrachloroethene	24.2		ug/L	25.0		97	70-130	1	20	
Tetrahydrofuran	23.6		ug/L	25.0		94	70-130	0	20	
Toluene	24.3		ug/L	25.0		97	70-130	0	20	
trans-1,2-Dichloroethene	27.7		ug/L	25.0		111	70-130	0.9	20	
trans-1,3-Dichloropropene	26.6		ug/L	25.0		106	70-130	0	20	
Trichloroethene	26.6		ug/L	25.0		106	70-130	2	20	
Trichlorofluoromethane	31.3		ug/L	25.0		125	70-130	0	20	
Vinyl Acetate	24.2		ug/L	25.0		97	70-130	0	20	
Vinyl Chloride	30.3		ug/L	25.0		121	70-130	2	20	
Xylene O	25.0		ug/L	25.0		100	70-130	3	20	
Xylene P,M	50.1		ug/L	50.0		100	70-130	1	20	
Surrogate: 1,2-Dichloroethane-d4	3030		ug/Kg wet	2500		121	70-130			
Surrogate: 4-Bromofluorobenzene	2760		ug/Kg wet	2500		110	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

## 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 BA52501 - 5035

Surrogate: Toluene-d8      2810      ug/Kg wet      2500      112      70-130

#### Batch BA52609 - 5035

#### Blank

1,1,1,2-Tetrachloroethane	ND	50.0	ug/Kg wet
1,1,1-Trichloroethane	ND	50.0	ug/Kg wet
1,1,2,2-Tetrachloroethane	ND	50.0	ug/Kg wet
1,1,2-Trichloroethane	ND	50.0	ug/Kg wet
1,1-Dichloroethane	ND	50.0	ug/Kg wet
1,1-Dichloroethene	ND	50.0	ug/Kg wet
1,1-Dichloropropene	ND	50.0	ug/Kg wet
1,2,3-Trichlorobenzene	ND	50.0	ug/Kg wet
1,2,3-Trichloropropane	ND	50.0	ug/Kg wet
1,2,4-Trichlorobenzene	ND	50.0	ug/Kg wet
1,2,4-Trimethylbenzene	ND	50.0	ug/Kg wet
1,2-Dibromo-3-Chloropropane	ND	250	ug/Kg wet
1,2-Dibromoethane	ND	50.0	ug/Kg wet
1,2-Dichlorobenzene	ND	50.0	ug/Kg wet
1,2-Dichloroethane	ND	50.0	ug/Kg wet
1,2-Dichloropropane	ND	50.0	ug/Kg wet
1,3,5-Trimethylbenzene	ND	50.0	ug/Kg wet
1,3-Dichlorobenzene	ND	50.0	ug/Kg wet
1,3-Dichloropropane	ND	50.0	ug/Kg wet
1,4-Dichlorobenzene	ND	50.0	ug/Kg wet
1,4-Dioxane - Screen	5010	25000	ug/Kg wet
1-Chlorohexane	ND	50.0	ug/Kg wet
2,2-Dichloropropane	ND	100	ug/Kg wet
2-Butanone	ND	1250	ug/Kg wet
2-Chlorotoluene	ND	50.0	ug/Kg wet
2-Hexanone	ND	500	ug/Kg wet
4-Chlorotoluene	ND	50.0	ug/Kg wet
4-Isopropyltoluene	ND	50.0	ug/Kg wet
4-Methyl-2-Pentanone	ND	500	ug/Kg wet
Acetone	ND	1250	ug/Kg wet
Benzene	ND	50.0	ug/Kg wet
Bromobenzene	ND	50.0	ug/Kg wet
Bromochloromethane	ND	50.0	ug/Kg wet
Bromodichloromethane	ND	50.0	ug/Kg wet
Bromoform	ND	50.0	ug/Kg wet
Bromomethane	ND	100	ug/Kg wet
Carbon Disulfide	ND	50.0	ug/Kg wet
Carbon Tetrachloride	ND	50.0	ug/Kg wet
Chlorobenzene	ND	50.0	ug/Kg wet
Chloroethane	ND	100	ug/Kg wet
Chloroform	ND	50.0	ug/Kg wet

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### 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 BA52609 - 5035

Chloromethane	ND	100	ug/Kg wet							
cis-1,2-Dichloroethene	ND	50.0	ug/Kg wet							
cis-1,3-Dichloropropene	ND	50.0	ug/Kg wet							
Dibromochloromethane	ND	50.0	ug/Kg wet							
Dibromomethane	ND	50.0	ug/Kg wet							
Dichlorodifluoromethane	ND	100	ug/Kg wet							
Diethyl Ether	ND	50.0	ug/Kg wet							
Di-isopropyl ether	ND	50.0	ug/Kg wet							
Ethyl tertiary-butyl ether	ND	50.0	ug/Kg wet							
Ethylbenzene	ND	50.0	ug/Kg wet							
Hexachlorobutadiene	ND	50.0	ug/Kg wet							
Isopropylbenzene	ND	50.0	ug/Kg wet							
Methyl tert-Butyl Ether	ND	50.0	ug/Kg wet							
Methylene Chloride	ND	250	ug/Kg wet							
Naphthalene	ND	50.0	ug/Kg wet							
n-Butylbenzene	17.0	50.0	ug/Kg wet							J
n-Propylbenzene	ND	50.0	ug/Kg wet							
sec-Butylbenzene	ND	50.0	ug/Kg wet							
Styrene	ND	50.0	ug/Kg wet							
tert-Butylbenzene	ND	50.0	ug/Kg wet							
Tertiary-amyl methyl ether	ND	50.0	ug/Kg wet							
Tetrachloroethene	ND	50.0	ug/Kg wet							
Tetrahydrofuran	ND	250	ug/Kg wet							
Toluene	ND	50.0	ug/Kg wet							
trans-1,2-Dichloroethene	ND	50.0	ug/Kg wet							
trans-1,3-Dichloropropene	ND	50.0	ug/Kg wet							
Trichloroethene	ND	50.0	ug/Kg wet							
Trichlorofluoromethane	ND	100	ug/Kg wet							
Vinyl Acetate	ND	250	ug/Kg wet							
Vinyl Chloride	ND	100	ug/Kg wet							
Xylene O	ND	50.0	ug/Kg wet							
Xylene P,M	ND	100	ug/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	2910		ug/Kg wet	2500		116	70-130			
Surrogate: 4-Bromofluorobenzene	2610		ug/Kg wet	2500		104	70-130			
Surrogate: Toluene-d8	2540		ug/Kg wet	2500		102	70-130			

#### LCS

1,1,1,2-Tetrachloroethane	24.6		ug/L	25.0		98	70-130			
1,1,1-Trichloroethane	27.0		ug/L	25.0		108	70-130			
1,1,2,2-Tetrachloroethane	22.4		ug/L	25.0		90	70-130			
1,1,2-Trichloroethane	23.4		ug/L	25.0		94	70-130			
1,1-Dichloroethane	24.9		ug/L	25.0		100	70-130			
1,1-Dichloroethene	27.4		ug/L	25.0		110	70-130			
1,1-Dichloropropene	28.0		ug/L	25.0		112	70-130			
1,2,3-Trichlorobenzene	21.7		ug/L	25.0		87	70-130			
1,2,3-Trichloropropane	21.6		ug/L	25.0		86	70-130			
1,2,4-Trichlorobenzene	22.6		ug/L	25.0		90	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

## 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 BA52609 - 5035

1,2,4-Trimethylbenzene	24.2		ug/L	25.0		97	70-130			
1,2-Dibromo-3-Chloropropane	20.9		ug/L	25.0		84	70-130			
1,2-Dibromoethane	23.7		ug/L	25.0		95	70-130			
1,2-Dichlorobenzene	22.6		ug/L	25.0		90	70-130			
1,2-Dichloroethane	26.6		ug/L	25.0		106	70-130			
1,2-Dichloropropane	27.5		ug/L	25.0		110	70-130			
1,3,5-Trimethylbenzene	25.2		ug/L	25.0		101	70-130			
1,3-Dichlorobenzene	23.6		ug/L	25.0		94	70-130			
1,3-Dichloropropane	22.8		ug/L	25.0		91	70-130			
1,4-Dichlorobenzene	23.0		ug/L	25.0		92	70-130			
1,4-Dioxane - Screen	260		ug/L	500		52	70-130			+
1-Chlorohexane	23.1		ug/L	25.0		92	70-130			
2,2-Dichloropropane	25.5		ug/L	25.0		102	70-130			
2-Butanone	28.8		ug/L	25.0		115	70-130			
2-Chlorotoluene	24.8		ug/L	25.0		99	70-130			
2-Hexanone	25.0		ug/L	25.0		100	70-130			
4-Chlorotoluene	23.8		ug/L	25.0		95	70-130			
4-Isopropyltoluene	24.9		ug/L	25.0		100	70-130			
4-Methyl-2-Pentanone	30.1		ug/L	25.0		120	70-130			
Acetone	30.1		ug/L	25.0		120	70-130			
Benzene	27.0		ug/L	25.0		108	70-130			
Bromobenzene	23.8		ug/L	25.0		95	70-130			
Bromochloromethane	25.7		ug/L	25.0		103	70-130			
Bromodichloromethane	26.8		ug/L	25.0		107	70-130			
Bromoform	20.9		ug/L	25.0		84	70-130			
Bromomethane	30.6		ug/L	25.0		122	70-130			
Carbon Disulfide	29.6		ug/L	25.0		118	70-130			
Carbon Tetrachloride	27.6		ug/L	25.0		110	70-130			
Chlorobenzene	23.9		ug/L	25.0		96	70-130			
Chloroethane	33.7		ug/L	25.0		135	70-130			+
Chloroform	26.7		ug/L	25.0		107	70-130			
Chloromethane	27.2		ug/L	25.0		109	70-130			
cis-1,2-Dichloroethene	24.4		ug/L	25.0		98	70-130			
cis-1,3-Dichloropropene	29.0		ug/L	25.0		116	70-130			
Dibromochloromethane	22.0		ug/L	25.0		88	70-130			
Dibromomethane	26.5		ug/L	25.0		106	70-130			
Dichlorodifluoromethane	26.8		ug/L	25.0		107	70-130			
Diethyl Ether	25.7		ug/L	25.0		103	70-130			
Di-isopropyl ether	20.1		ug/L	25.0		80	70-130			
Ethyl tertiary-butyl ether	18.5		ug/L	25.0		74	70-130			
Ethylbenzene	24.7		ug/L	25.0		99	70-130			
Hexachlorobutadiene	27.0		ug/L	25.0		108	70-130			
Isopropylbenzene	26.3		ug/L	25.0		105	70-130			
Methyl tert-Butyl Ether	42.5		ug/L	50.0		85	70-130			
Methylene Chloride	24.0		ug/L	25.0		96	70-130			
Naphthalene	20.7		ug/L	25.0		83	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

## Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52609 - 5035</b>										
n-Butylbenzene	25.7		ug/L	25.0		103	70-130			
n-Propylbenzene	24.5		ug/L	25.0		98	70-130			
sec-Butylbenzene	24.8		ug/L	25.0		99	70-130			
Styrene	24.7		ug/L	25.0		99	70-130			
tert-Butylbenzene	23.6		ug/L	25.0		94	70-130			
Tertiary-amyl methyl ether	24.3		ug/L	25.0		97	70-130			
Tetrachloroethene	25.0		ug/L	25.0		100	70-130			
Tetrahydrofuran	24.0		ug/L	25.0		96	70-130			
Toluene	24.6		ug/L	25.0		98	70-130			
trans-1,2-Dichloroethene	27.6		ug/L	25.0		110	70-130			
trans-1,3-Dichloropropene	27.3		ug/L	25.0		109	70-130			
Trichloroethene	27.6		ug/L	25.0		110	70-130			
Trichlorofluoromethane	33.9		ug/L	25.0		136	70-130			+
Vinyl Acetate	20.2		ug/L	25.0		81	70-130			
Vinyl Chloride	29.4		ug/L	25.0		118	70-130			
Xylene O	25.0		ug/L	25.0		100	70-130			
Xylene P,M	49.3		ug/L	50.0		99	70-130			
Surrogate: 1,2-Dichloroethane-d4	2960		ug/Kg wet	2500		118	70-130			
Surrogate: 4-Bromofluorobenzene	2640		ug/Kg wet	2500		106	70-130			
Surrogate: Toluene-d8	2650		ug/Kg wet	2500		106	70-130			
<b>LCS Dup</b>										
1,1,1,2-Tetrachloroethane	24.1		ug/L	25.0		96	70-130	2	20	
1,1,1-Trichloroethane	26.0		ug/L	25.0		104	70-130	4	20	
1,1,2,2-Tetrachloroethane	22.5		ug/L	25.0		90	70-130	0	20	
1,1,2-Trichloroethane	23.1		ug/L	25.0		92	70-130	2	20	
1,1-Dichloroethane	25.1		ug/L	25.0		100	70-130	0	20	
1,1-Dichloroethene	27.0		ug/L	25.0		108	70-130	2	20	
1,1-Dichloropropene	26.7		ug/L	25.0		107	70-130	5	20	
1,2,3-Trichlorobenzene	22.2		ug/L	25.0		89	70-130	2	20	
1,2,3-Trichloropropane	21.8		ug/L	25.0		87	70-130	1	20	
1,2,4-Trichlorobenzene	22.1		ug/L	25.0		88	70-130	2	20	
1,2,4-Trimethylbenzene	23.6		ug/L	25.0		94	70-130	3	20	
1,2-Dibromo-3-Chloropropane	20.4		ug/L	25.0		82	70-130	2	20	
1,2-Dibromoethane	23.9		ug/L	25.0		96	70-130	1	20	
1,2-Dichlorobenzene	22.6		ug/L	25.0		90	70-130	0	20	
1,2-Dichloroethane	26.2		ug/L	25.0		105	70-130	0.9	20	
1,2-Dichloropropane	27.1		ug/L	25.0		108	70-130	2	20	
1,3,5-Trimethylbenzene	24.4		ug/L	25.0		98	70-130	3	20	
1,3-Dichlorobenzene	23.0		ug/L	25.0		92	70-130	2	20	
1,3-Dichloropropane	22.8		ug/L	25.0		91	70-130	0	20	
1,4-Dichlorobenzene	23.4		ug/L	25.0		94	70-130	2	20	
1,4-Dioxane - Screen	277		ug/L	500		55	70-130	6	20	+
1-Chlorohexane	22.5		ug/L	25.0		90	70-130	2	20	
2,2-Dichloropropane	25.3		ug/L	25.0		101	70-130	1	20	
2-Butanone	27.5		ug/L	25.0		110	70-130	4	20	
2-Chlorotoluene	25.0		ug/L	25.0		100	70-130	1	20	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
<b>Batch BA52609 - 5035</b>										
2-Hexanone	23.7		ug/L	25.0		95	70-130	5	20	
4-Chlorotoluene	23.1		ug/L	25.0		92	70-130	3	20	
4-Isopropyltoluene	24.0		ug/L	25.0		96	70-130	4	20	
4-Methyl-2-Pentanone	29.5		ug/L	25.0		118	70-130	2	20	
Acetone	19.1		ug/L	25.0		76	70-130	45	20	+
Benzene	26.2		ug/L	25.0		105	70-130	3	20	
Bromobenzene	23.3		ug/L	25.0		93	70-130	2	20	
Bromochloromethane	25.2		ug/L	25.0		101	70-130	2	20	
Bromodichloromethane	26.4		ug/L	25.0		106	70-130	0.9	20	
Bromoform	21.0		ug/L	25.0		84	70-130	0	20	
Bromomethane	31.4		ug/L	25.0		126	70-130	3	20	
Carbon Disulfide	29.4		ug/L	25.0		118	70-130	0	20	
Carbon Tetrachloride	26.7		ug/L	25.0		107	70-130	3	20	
Chlorobenzene	23.5		ug/L	25.0		94	70-130	2	20	
Chloroethane	31.8		ug/L	25.0		127	70-130	6	20	
Chloroform	25.7		ug/L	25.0		103	70-130	4	20	
Chloromethane	28.8		ug/L	25.0		115	70-130	5	20	
cis-1,2-Dichloroethene	24.2		ug/L	25.0		97	70-130	1	20	
cis-1,3-Dichloropropene	28.7		ug/L	25.0		115	70-130	0.9	20	
Dibromochloromethane	21.7		ug/L	25.0		87	70-130	1	20	
Dibromomethane	26.9		ug/L	25.0		108	70-130	2	20	
Dichlorodifluoromethane	27.5		ug/L	25.0		110	70-130	3	20	
Diethyl Ether	26.2		ug/L	25.0		105	70-130	2	20	
Di-isopropyl ether	21.4		ug/L	25.0		86	70-130	7	20	
Ethyl tertiary-butyl ether	20.8		ug/L	25.0		83	70-130	11	20	
Ethylbenzene	24.0		ug/L	25.0		96	70-130	3	20	
Hexachlorobutadiene	26.2		ug/L	25.0		105	70-130	3	20	
Isopropylbenzene	25.4		ug/L	25.0		102	70-130	3	20	
Methyl tert-Butyl Ether	43.0		ug/L	50.0		86	70-130	1	20	
Methylene Chloride	22.6		ug/L	25.0		90	70-130	6	20	
Naphthalene	20.7		ug/L	25.0		83	70-130	0	20	
n-Butylbenzene	24.8		ug/L	25.0		99	70-130	4	20	
n-Propylbenzene	24.3		ug/L	25.0		97	70-130	1	20	
sec-Butylbenzene	24.1		ug/L	25.0		96	70-130	3	20	
Styrene	24.2		ug/L	25.0		97	70-130	2	20	
tert-Butylbenzene	23.1		ug/L	25.0		92	70-130	2	20	
Tertiary-amyl methyl ether	24.2		ug/L	25.0		97	70-130	0	20	
Tetrachloroethene	24.4		ug/L	25.0		98	70-130	2	20	
Tetrahydrofuran	22.7		ug/L	25.0		91	70-130	5	20	
Toluene	24.0		ug/L	25.0		96	70-130	2	20	
trans-1,2-Dichloroethene	27.4		ug/L	25.0		110	70-130	0	20	
trans-1,3-Dichloropropene	26.9		ug/L	25.0		108	70-130	0.9	20	
Trichloroethene	27.2		ug/L	25.0		109	70-130	0.9	20	
Trichlorofluoromethane	34.0		ug/L	25.0		136	70-130	0	20	+
Vinyl Acetate	21.4		ug/L	25.0		86	70-130	6	20	
Vinyl Chloride	29.3		ug/L	25.0		117	70-130	0.9	20	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52609 - 5035</b>										
Xylene O	24.6		ug/L	25.0		98	70-130	2	20	
Xylene P,M	47.9		ug/L	50.0		96	70-130	3	20	
Surrogate: 1,2-Dichloroethane-d4	2840		ug/Kg wet	2500		114	70-130			
Surrogate: 4-Bromofluorobenzene	2560		ug/Kg wet	2500		102	70-130			
Surrogate: Toluene-d8	2610		ug/Kg wet	2500		104	70-130			
<b>Matrix Spike Source: 0501232-01</b>										
1,1,1,2-Tetrachloroethane	23.9		ug/L	25.0	ND	96	70-130			
1,1,1-Trichloroethane	25.5		ug/L	25.0	ND	102	70-130			
1,1,2,2-Tetrachloroethane	22.6		ug/L	25.0	ND	90	70-130			
1,1,2-Trichloroethane	24.1		ug/L	25.0	ND	96	70-130			
1,1-Dichloroethane	25.8		ug/L	25.0	ND	103	70-130			
1,1-Dichloroethene	26.2		ug/L	25.0	ND	105	70-130			
1,1-Dichloropropene	26.2		ug/L	25.0	ND	105	70-130			
1,2,3-Trichlorobenzene	19.3		ug/L	25.0	ND	77	70-130			
1,2,3-Trichloropropane	21.1		ug/L	25.0	ND	84	70-130			
1,2,4-Trichlorobenzene	20.5		ug/L	25.0	ND	82	70-130			
1,2,4-Trimethylbenzene	21.9		ug/L	25.0	0.409	86	70-130			
1,2-Dibromo-3-Chloropropane	19.9		ug/L	25.0	ND	80	70-130			
1,2-Dibromoethane	24.9		ug/L	25.0	ND	100	70-130			
1,2-Dichlorobenzene	21.4		ug/L	25.0	ND	86	70-130			
1,2-Dichloroethane	27.3		ug/L	25.0	ND	109	70-130			
1,2-Dichloropropane	27.0		ug/L	25.0	ND	108	70-130			
1,3,5-Trimethylbenzene	22.3		ug/L	25.0	ND	89	70-130			
1,3-Dichlorobenzene	21.5		ug/L	25.0	ND	86	70-130			
1,3-Dichloropropane	23.5		ug/L	25.0	ND	94	70-130			
1,4-Dichlorobenzene	21.3		ug/L	25.0	ND	85	70-130			
1,4-Dioxane - Screen	30.2		ug/L	500	ND	6	70-130			+
1-Chlorohexane	21.2		ug/L	25.0	ND	85	70-130			
2,2-Dichloropropane	24.1		ug/L	25.0	ND	96	70-130			
2-Butanone	28.1		ug/L	25.0	ND	112	70-130			
2-Chlorotoluene	22.7		ug/L	25.0	ND	91	70-130			
2-Hexanone	22.9		ug/L	25.0	ND	92	70-130			
4-Chlorotoluene	21.6		ug/L	25.0	ND	86	70-130			
4-Isopropyltoluene	21.9		ug/L	25.0	0.251	87	70-130			
4-Methyl-2-Pentanone	28.1		ug/L	25.0	ND	112	70-130			
Acetone	22.5		ug/L	25.0	ND	90	70-130			
Benzene	25.9		ug/L	25.0	ND	104	70-130			
Bromobenzene	22.1		ug/L	25.0	ND	88	70-130			
Bromochloromethane	27.4		ug/L	25.0	ND	110	70-130			
Bromodichloromethane	26.6		ug/L	25.0	ND	106	70-130			
Bromoform	21.4		ug/L	25.0	ND	86	70-130			
Bromomethane	27.3		ug/L	25.0	ND	109	70-130			
Carbon Disulfide	28.0		ug/L	25.0	ND	112	70-130			
Carbon Tetrachloride	26.1		ug/L	25.0	ND	104	70-130			
Chlorobenzene	22.9		ug/L	25.0	ND	92	70-130			
Chloroethane	34.4		ug/L	25.0	ND	138	70-130			+

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52609 - 5035</b>										
Chloroform	25.8		ug/L	25.0	ND	103	70-130			
Chloromethane	26.7		ug/L	25.0	ND	107	70-130			
cis-1,2-Dichloroethene	24.9		ug/L	25.0	ND	100	70-130			
cis-1,3-Dichloropropene	28.6		ug/L	25.0	ND	114	70-130			
Dibromochloromethane	22.2		ug/L	25.0	ND	89	70-130			
Dibromomethane	27.8		ug/L	25.0	ND	111	70-130			
Dichlorodifluoromethane	27.8		ug/L	25.0	ND	111	70-130			
Diethyl Ether	27.4		ug/L	25.0	ND	110	70-130			
Di-isopropyl ether	22.3		ug/L	25.0	ND	89	70-130			
Ethyl tertiary-butyl ether	22.8		ug/L	25.0	ND	91	70-130			
Ethylbenzene	23.4		ug/L	25.0	0.141	93	70-130			
Hexachlorobutadiene	25.8		ug/L	25.0	ND	103	70-130			
Isopropylbenzene	24.6		ug/L	25.0	ND	98	70-130			
Methyl tert-Butyl Ether	47.6		ug/L	50.0	0.420	94	70-130			
Methylene Chloride	24.9		ug/L	25.0	ND	100	70-130			
Naphthalene	21.1		ug/L	25.0	1.39	79	70-130			
n-Butylbenzene	22.4		ug/L	25.0	0.160	89	70-130			
n-Propylbenzene	22.4		ug/L	25.0	ND	90	70-130			
sec-Butylbenzene	21.6		ug/L	25.0	ND	86	70-130			
Styrene	23.9		ug/L	25.0	ND	96	70-130			
tert-Butylbenzene	21.2		ug/L	25.0	ND	85	70-130			
Tertiary-amyl methyl ether	25.3		ug/L	25.0	ND	101	70-130			
Tetrachloroethene	23.1		ug/L	25.0	0.361	91	70-130			
Tetrahydrofuran	23.1		ug/L	25.0	ND	92	70-130			
Toluene	23.4		ug/L	25.0	ND	94	70-130			
trans-1,2-Dichloroethene	27.0		ug/L	25.0	ND	108	70-130			
trans-1,3-Dichloropropene	27.2		ug/L	25.0	ND	109	70-130			
Trichloroethene	26.2		ug/L	25.0	0.200	104	70-130			
Trichlorofluoromethane	33.2		ug/L	25.0	0.310	132	70-130			+
Vinyl Acetate	22.6		ug/L	25.0	ND	90	70-130			
Vinyl Chloride	29.3		ug/L	25.0	ND	117	70-130			
Xylene O	23.5		ug/L	25.0	0.110	94	70-130			
Xylene P,M	45.8		ug/L	50.0	0.349	91	70-130			
Surrogate: 1,2-Dichloroethane-d4	3830		ug/Kg dry	4780		80	70-130			
Surrogate: 4-Bromofluorobenzene	3800		ug/Kg dry	4780		79	70-130			
Surrogate: Toluene-d8	3450		ug/Kg dry	4780		72	70-130			

<b>Matrix Spike Dup Source: 0501232-01</b>										
1,1,1,2-Tetrachloroethane	24.1		ug/L	25.0	ND	96	70-130	0	20	
1,1,1-Trichloroethane	26.6		ug/L	25.0	ND	106	70-130	4	20	
1,1,2,2-Tetrachloroethane	22.3		ug/L	25.0	ND	89	70-130	1	20	
1,1,2-Trichloroethane	23.8		ug/L	25.0	ND	95	70-130	1	20	
1,1-Dichloroethane	26.2		ug/L	25.0	ND	105	70-130	2	20	
1,1-Dichloroethene	26.9		ug/L	25.0	ND	108	70-130	3	20	
1,1-Dichloropropene	27.3		ug/L	25.0	ND	109	70-130	4	20	
1,2,3-Trichlorobenzene	20.2		ug/L	25.0	ND	81	70-130	5	20	
1,2,3-Trichloropropane	21.0		ug/L	25.0	ND	84	70-130	0	20	



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52609 - 5035</b>										
1,2,4-Trichlorobenzene	21.6		ug/L	25.0	ND	86	70-130	5	20	
1,2,4-Trimethylbenzene	22.7		ug/L	25.0	0.409	89	70-130	3	20	
1,2-Dibromo-3-Chloropropane	19.5		ug/L	25.0	ND	78	70-130	3	20	
1,2-Dibromoethane	24.3		ug/L	25.0	ND	97	70-130	3	20	
1,2-Dichlorobenzene	21.9		ug/L	25.0	ND	88	70-130	2	20	
1,2-Dichloroethane	27.3		ug/L	25.0	ND	109	70-130	0	20	
1,2-Dichloropropane	27.4		ug/L	25.0	ND	110	70-130	2	20	
1,3,5-Trimethylbenzene	23.2		ug/L	25.0	ND	93	70-130	4	20	
1,3-Dichlorobenzene	22.3		ug/L	25.0	ND	89	70-130	3	20	
1,3-Dichloropropane	23.3		ug/L	25.0	ND	93	70-130	1	20	
1,4-Dichlorobenzene	22.2		ug/L	25.0	ND	89	70-130	5	20	
1,4-Dioxane - Screen	217		ug/L	500	ND	43	70-130	151	20	+
1-Chlorohexane	21.7		ug/L	25.0	ND	87	70-130	2	20	
2,2-Dichloropropane	24.9		ug/L	25.0	ND	100	70-130	4	20	
2-Butanone	26.7		ug/L	25.0	ND	107	70-130	5	20	
2-Chlorotoluene	23.0		ug/L	25.0	ND	92	70-130	1	20	
2-Hexanone	24.0		ug/L	25.0	ND	96	70-130	4	20	
4-Chlorotoluene	21.9		ug/L	25.0	ND	88	70-130	2	20	
4-Isopropyltoluene	22.9		ug/L	25.0	0.251	91	70-130	4	20	
4-Methyl-2-Pentanone	27.3		ug/L	25.0	ND	109	70-130	3	20	
Acetone	20.3		ug/L	25.0	ND	81	70-130	11	20	
Benzene	26.6		ug/L	25.0	ND	106	70-130	2	20	
Bromobenzene	22.3		ug/L	25.0	ND	89	70-130	1	20	
Bromochloromethane	27.8		ug/L	25.0	ND	111	70-130	0.9	20	
Bromodichloromethane	26.8		ug/L	25.0	ND	107	70-130	0.9	20	
Bromoform	21.2		ug/L	25.0	ND	85	70-130	1	20	
Bromomethane	31.5		ug/L	25.0	ND	126	70-130	14	20	
Carbon Disulfide	29.2		ug/L	25.0	ND	117	70-130	4	20	
Carbon Tetrachloride	27.1		ug/L	25.0	ND	108	70-130	4	20	
Chlorobenzene	23.4		ug/L	25.0	ND	94	70-130	2	20	
Chloroethane	32.0		ug/L	25.0	ND	128	70-130	8	20	
Chloroform	26.6		ug/L	25.0	ND	106	70-130	3	20	
Chloromethane	28.8		ug/L	25.0	ND	115	70-130	7	20	
cis-1,2-Dichloroethene	25.8		ug/L	25.0	ND	103	70-130	3	20	
cis-1,3-Dichloropropene	28.8		ug/L	25.0	ND	115	70-130	0.9	20	
Dibromochloromethane	22.0		ug/L	25.0	ND	88	70-130	1	20	
Dibromomethane	27.2		ug/L	25.0	ND	109	70-130	2	20	
Dichlorodifluoromethane	29.6		ug/L	25.0	ND	118	70-130	6	20	
Diethyl Ether	27.5		ug/L	25.0	ND	110	70-130	0	20	
Diisopropyl ether	22.6		ug/L	25.0	ND	90	70-130	1	20	
Diethyl tertiary-butyl ether	22.8		ug/L	25.0	ND	91	70-130	0	20	
Diethylbenzene	23.7		ug/L	25.0	0.141	94	70-130	1	20	
Dodecachlorobutadiene	28.2		ug/L	25.0	ND	113	70-130	9	20	
Isopropylbenzene	25.1		ug/L	25.0	ND	100	70-130	2	20	
Methyl tert-Butyl Ether	44.7		ug/L	50.0	0.420	89	70-130	5	20	
Methylene Chloride	25.6		ug/L	25.0	ND	102	70-130	2	20	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Methanol</b>										
<b>Batch BA52609 - 5035</b>										
Naphthalene	21.1		ug/L	25.0	1.39	79	70-130	0	20	
n-Butylbenzene	23.6		ug/L	25.0	0.160	94	70-130	5	20	
n-Propylbenzene	22.9		ug/L	25.0	ND	92	70-130	2	20	
sec-Butylbenzene	22.7		ug/L	25.0	ND	91	70-130	6	20	
Styrene	24.4		ug/L	25.0	ND	98	70-130	2	20	
tert-Butylbenzene	22.0		ug/L	25.0	ND	88	70-130	3	20	
Tertiary-amyl methyl ether	25.2		ug/L	25.0	ND	101	70-130	0	20	
Tetrachloroethene	23.7		ug/L	25.0	0.361	93	70-130	2	20	
Tetrahydrofuran	22.2		ug/L	25.0	ND	89	70-130	3	20	
Toluene	24.0		ug/L	25.0	ND	96	70-130	2	20	
trans-1,2-Dichloroethene	26.6		ug/L	25.0	ND	106	70-130	2	20	
trans-1,3-Dichloropropene	26.7		ug/L	25.0	ND	107	70-130	2	20	
Trichloroethene	26.9		ug/L	25.0	0.200	107	70-130	3	20	
Trichlorofluoromethane	33.8		ug/L	25.0	0.310	134	70-130	2	20	+
Vinyl Acetate	22.8		ug/L	25.0	ND	91	70-130	1	20	
Vinyl Chloride	31.2		ug/L	25.0	ND	125	70-130	7	20	
Xylene O	24.2		ug/L	25.0	0.110	96	70-130	2	20	
Xylene P,M	46.8		ug/L	50.0	0.349	93	70-130	2	20	
Surrogate: 1,2-Dichloroethane-d4	3770		ug/Kg dry	4780		79	70-130			
Surrogate: 4-Bromofluorobenzene	3760		ug/Kg dry	4780		79	70-130			
Surrogate: Toluene-d8	3460		ug/Kg dry	4780		72	70-130			

### 8100M Total Petroleum Hydrocarbons

<b>Batch BA52514 - 3550B</b>										
<b>Blank</b>										
Total Petroleum Hydrocarbons	ND	25.0	mg/kg wet							
Surrogate: O-Terphenyl	2.81		mg/kg wet	3.33		84	40-140			
<b>LCS</b>										
Total Petroleum Hydrocarbons	525	25.0	mg/kg wet	667		79	40-140			
Surrogate: O-Terphenyl	3.29		mg/kg wet	3.33		99	40-140			
<b>LCS Dup</b>										
Total Petroleum Hydrocarbons	480	25.0	mg/kg wet	667		72	40-140	9	25	
Surrogate: O-Terphenyl	3.01		mg/kg wet	3.33		90	40-140			
<b>Matrix Spike Source: 0501232-06</b>										
Total Petroleum Hydrocarbons	585	27.2	mg/kg dry	724	119	64	40-140			
Surrogate: O-Terphenyl	3.54		mg/kg dry	3.62		98	40-140			
<b>Matrix Spike Dup Source: 0501232-06</b>										
Total Petroleum Hydrocarbons	525	27.2	mg/kg dry	727	119	56	40-140	11	50	
Surrogate: O-Terphenyl	3.22		mg/kg dry	3.63		89	40-140			

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

### Notes and Definitions

J	Reported below 2xMRL; Estimated value.
B	Present in Blank.
+	Outside QC Limits.
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
mg/kg	Results reported as wet weight
TCLP	Toxicity Characteristic Leachate Procedure
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
TIC	A forward library search of the NBS Mass Spectral Library was performed on this sample using the McLafferty Probability Base Matching (PBM) Algorithm. An estimated concentration of non-TCL compounds tentatively identified is quantified by the internal standard method. The nearest internal standard free of interferences was used to quantify. A response factor of one was assumed. This search was inclusive of the ten largest peaks greater than ten percent of the nearest internal standard.
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: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501232

## **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)  
Drinking Water: 242400-C  
Wastewater: 242400-D

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

United States Department of Agriculture  
Soil Permit: S-54210

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

Maryland: 301  
Potable Water

Pennsylvania: 68-934



# CHAIN OF CUSTODY

Turn Time: Standard Other 5 DAYS  
 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:  
 MA-MCP \_\_\_\_\_ Navy \_\_\_\_\_ USACE \_\_\_\_\_ Other \_\_\_\_\_  
 Reporting Limits: RIDM AEC ESS LAB PROJECT ID: 05012322  
 Electronic Deliverable: Yes  No   
 Format: Excel \_\_\_\_\_ Access \_\_\_\_\_ PDF \_\_\_\_\_ Other \_\_\_\_\_

Co. Name: EA Project # \_\_\_\_\_ Project Name (20 Char. or less): 61965.01.003 Gorham  
 Contact Person: Jill Barrett Address: 2350 Post Road PO # 1825  
 City: Warwick State: RI Zip: 02886 Email Address: jbarrett@east.com

ESS LAB Sample#	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	Write Required Analysis
1	1/21/05	0930	X	S	S	SB-1 (14-15')	1/6	2	6/V	X VOC 8260B/5035 TPH 8100M
2	1/21/05	1100	X	S	S	SB-2 (1-2')	1/6	2	6/V	X
3	1/21/05	1115	X	S	S	SB-2 (25-26')	1/6	2	6/V	X
4	1/21/05	1445	X	S	S	SB-4 (9-10')	1/6	2	6/V	X
5	1/21/05	1500	X	S	S	SB-4 (23-24')	1/6	2	6/V	X
6	1/21/05	1630	X	S	S	SB-5 (25-26')	1/6	2	6/V	X
7	1/21/05	—	X	AQ	TRIP	BLANK	6	1	V	X

Container Type: P-Poly G-Glass S-Sterile V-VOA Matrix: S-Soil SD-Solid D-Sludge W-W-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  
 Cooler Temp: 58  
 Preservation Code: 1- NP, 2- HCl, 3- H<sub>2</sub>SO<sub>4</sub>, 4- HNO<sub>3</sub>, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9-  
 Sampled by: JRP  
 Comments: \_\_\_\_\_

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<u>Jill Barrett</u>	1/24/05 1325	<u>J. Davis</u>	1-24-05 1325
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

\*By circling MA-MCP, client acknowledges samples were collected

**ESS Laboratory**  
**Guide to Sample Handling and Preparation**  
 Revised 08/31/04

**All Samples Should Be Cooled to 4° C**

P=Poly  
 G=Glass  
 V=Vial  
 S = Sterile Container  
 NP = No Preservative  
 NA = Not Applicable

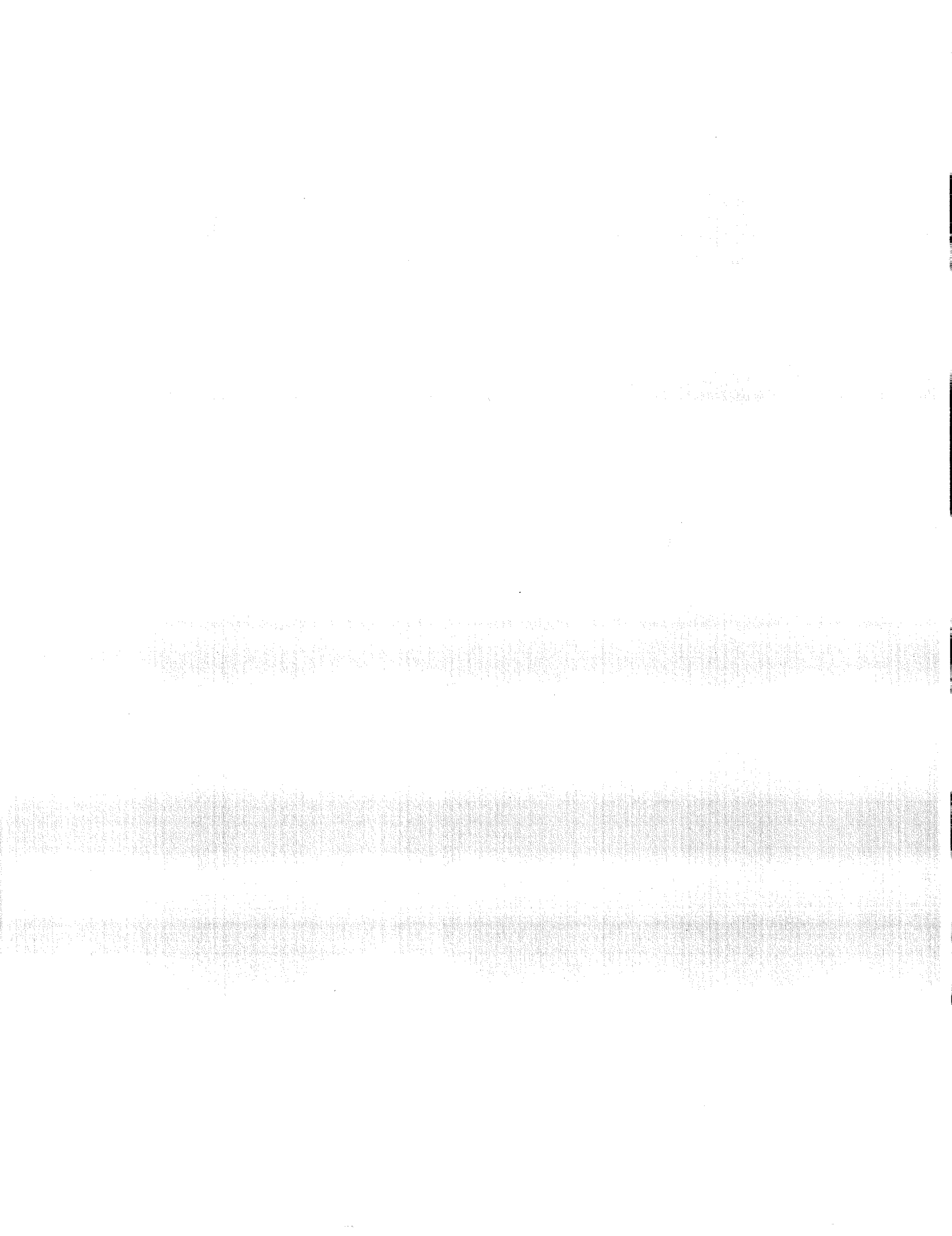
H<sub>2</sub>SO<sub>4</sub>=Sulfuric Acid to < 2 pH  
 1:1 HCl=Hydrochloric Acid to < 2 pH  
 HNO<sub>3</sub>=Nitric Acid to < 2 pH  
 NaOH=Sodium Hydroxide to > 12 pH  
 MeOH=15mL Methanol  
 Zn Acetate=4 drops zinc acetate/100mL

Analysis	Method Number	Standard Volume		Preservative		Water Hold Time	Soil Hold Time	pH check Required	Direct Delivery Required	Notes
		Aqueous	Soil	Aqueous	Soil					
Acidity	305.1	250 mL, P,G	8 oz G	NP	NP	14 days				
Alkalinity	301.1	250 mL, P,G	8 oz G	NP	NP	14 days				
Ammonia	350.2/350.3	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Asbestos	NA	NA	8 oz G	NP	NP	28 days				Subcontracted
Base Neutrals	8270/625	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
BOD - 5 day	405.1	1000 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
Bromide	320.1	250 mL, P,G	8 oz G	NP	NP	28 days				
Chloride	325.2/300.0	250 mL, P,G	8 oz G	NP	NP	28 days				
Chlorine (TRC)	330.1/330.5	250 mL, P,G	8 oz G	NP	NP	Immediate			Yes	
Chromium (VI)	7196A/3500	250 mL, P,G	NA	NP	NP	24 hours	1 month		Yes	4 day hold after extraction
COD	410.4	250 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Coliform	9221B	sterile cup	sterile cup	NP	NP	24 hours	24 hours		Yes	
Color	110.2	250 mL, P,G	NA	NP	NP	48 hours			Yes	
Conductance	120.1/2510B	250 mL, P,G	8 oz G	NP	NP	28 days				
Cyanide (Amenable)	335.1	1000 mL, P,G	8 oz G	NaOH	NP	14 days	14 days	Yes		
Cyanide (Total)	9010/335.2	1000 mL, P,G	8 oz G	NaOH	NP	14 days	14 days	Yes		
Dissolved Oxygen	360.1	500 mL, G*	NA	NP	NP	Immediate			Yes	* Glass only
EDB & DBCP	504/8011	3x40 mL, V	NA	NP/HCL	NP	28 days	28 days			No head space/air bubbles
EPH	MASS EPH	1000 mL, G	8 oz G	HCl	NP	14 days	14 days	Yes		40 day hold after extraction
Flash Point	1010	40 mL	2 oz G	NP	NP	7 days	7 days			
Fluoride	300.0	1000 mL, P,G	8 oz G	NP	NP	28 days				
Grain Size	NA	NA	8 oz G	NA	NP	NA				
GRO	8015/ME	3x40 mL, V	40 mL V	HCl	MeOH	14 days	14 days	Yes		No head space/air bubbles
Haloacetic Acids	552.2	3x40 mL, V	NA	NH4Cl	NA	14 days				7 day hold after extraction
Hardness	200.7/6010B	250 mL, P,G	8 oz G	HNO3	NP	6 months		Yes		
Herbicides	8151	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
Iodide	345.1	250 mL, P,G	8 oz G	NP	NP	24 hours				
Kjeldahl Nitrogen (Total)	351.3	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Mercury (Dissolved)	7471/245.1	250 mL, P,G	8 oz G	NP	NP	28 days		Yes	Yes*	Filtered in Field, * if not filtered in field
Mercury (Total)	7471/245.1	250 mL, P,G	8 oz G	HNO <sub>3</sub>	NP	28 days	28 days	Yes	Yes*	Filtered in Field, * if not filtered in field
Metals (Dissolved)	6010/200.7/200.9	250 mL, P,G	8 oz G	NP	NP	6 months		Yes	Yes*	Filtered in Field, * if not filtered in field
Metals (Total)	6010/200.7/200.9	250 mL, P,G	8 oz G	HNO <sub>3</sub>	NP	6 months	6 months	Yes		
Nitrate	353.2	250 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
Nitrate-Nitrite	353.2	250 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Nitrite	353.2	250 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
Odor	140.1	250 mL, G*	8 oz G	NP	NP	24 hours			Yes	* Glass only
Oil & Grease	1664	1000 mL, G*	NA	H <sub>2</sub> SO <sub>4</sub>	NP	28 days	28 days	Yes		* Glass only
Orthophosphate	365.1	1000 mL, P,G	8 oz G	NP	NP	48 hours			Yes	
PAH	8270	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
Paint Filter	9095	NA	8 oz G	NP	NP	28 days				
PCB	8082/608	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
PCB (Oil)	8082	NA	2 oz G	NP	NP	14 days				40 day hold after extraction
PCB (Wipe)	8082	NA	wipe kit	Hexane	NA	14 days				10 cm <sup>2</sup> template/gauze
PCB/Pesticides	608	2000 mL, G	8 oz G	NP	NP	7 days	14 days			
Pesticides	8081/608	2000 mL, G	8 oz G	NP	NP	7 days	14 days	Yes		pH 5-9 required
pH	9040/150.1/9045	250 mL, P,G	8 oz G	NP	NP	Immediate	ASAP		Yes	Done in the field
Phenol	5530/9065/420.1	1000 mL, G*	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		* Glass only
Phosphorous (Hydrolyz)	365.1	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Phosphorous (Total)	365.1	1000 mL, P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days		Yes		
Salinity	2520	250 mL, G	8 oz G	NP	NP	28 days				
Settleable Solids	160.5	1000 mL, P,G	NA	NP	NP	48 hours			Yes	
Silica	370.1	250 mL, P*	8 oz G	NP	NP	28 days				* Plastic only
Siloxane	NA	50 mL, P	NA	MeOH	NP	21 days		Yes		Done on air samples only
SPLP	1312	4000 mL, G	16 oz G	NP	NP	14 days	14 days			
Sulfide	376.2	500 mL, P	8 oz G	Zn Ace*, NaOH	NP	7 days	7 days	Yes		NaOH pH >9
Sulfite	377.1	250 mL, P,G	8 oz G	NP	NP	Immediate			Yes	Done in the field
Sulfate	375.4/9038	250 mL, P	8 oz G	NP	NP	28 days				
Surfactants (MBAS)	425.1	250 mL, P,G	NA	NP	NP	48 hours			Yes	
SVOA	8270/625	2000 mL, G	8 oz G	NP	NP	7 days	14 days			40 day hold after extraction
TCLP (Full)	1311	4000 mL, G	16 oz G	NP	NP	14 days	14 days			SVOA hold 7 days after spin
TDS	160.1	250 mL, P,G	NA	NP	NP	7 days	NA			
THM	524.2	3x40 mL, V	NA	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	NA	14 days	NA			
TOC	415.2	2x40 mL, V	2 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days				Subcontracted
TOX	450.1	2x40 mL, V	NA	H <sub>2</sub> SO <sub>4</sub>	NP	7 days				Subcontracted
TPH :GC FID	8100M	1000 mL, G	8 oz G	NP/HCL/H <sub>2</sub> SO <sub>4</sub>	NP	7 days	14 days	Yes		Glass only
TPH :Method	1664	1000 mL, G	8 oz G	HCL/H <sub>2</sub> SO <sub>4</sub>	NP	28 days	28 days	Yes		Glass only
TS	160.3	250 mL, P	NA	NP	NP	7 days				
TSS	160.2	250 mL, P	NA	NP	NP	7 days				
Turbidity	180.1	250mL, P,G	NA	NP	NP	48 hr			Yes	
TVS	160.4	250 mL, P	NA	NP	NP	7 days				
TX Total Halogens	9076	2 oz G	2 oz G	NP	NP	28 days	28 days			
Volatile Organics	8260/8021/624	3x40 mL, V	2 oz G	HCL	NP	14 days	14 days		Yes*	No hs/air bubbles, * Unpreserved VOC only
VPH	Mass VPH	3x40 mL, V	40 mL V	HCL	MeOH	14 days	28 days			Aq-No hs/air bubbles, Soil-include NP %solids
5035/8260	5035/8260	NA	40 mL V	NA	MeOH	NA	14 days			Must include NP %solids VOA

**APPENDIX D**

**WELL CONSTRUCTION DIAGRAMS**

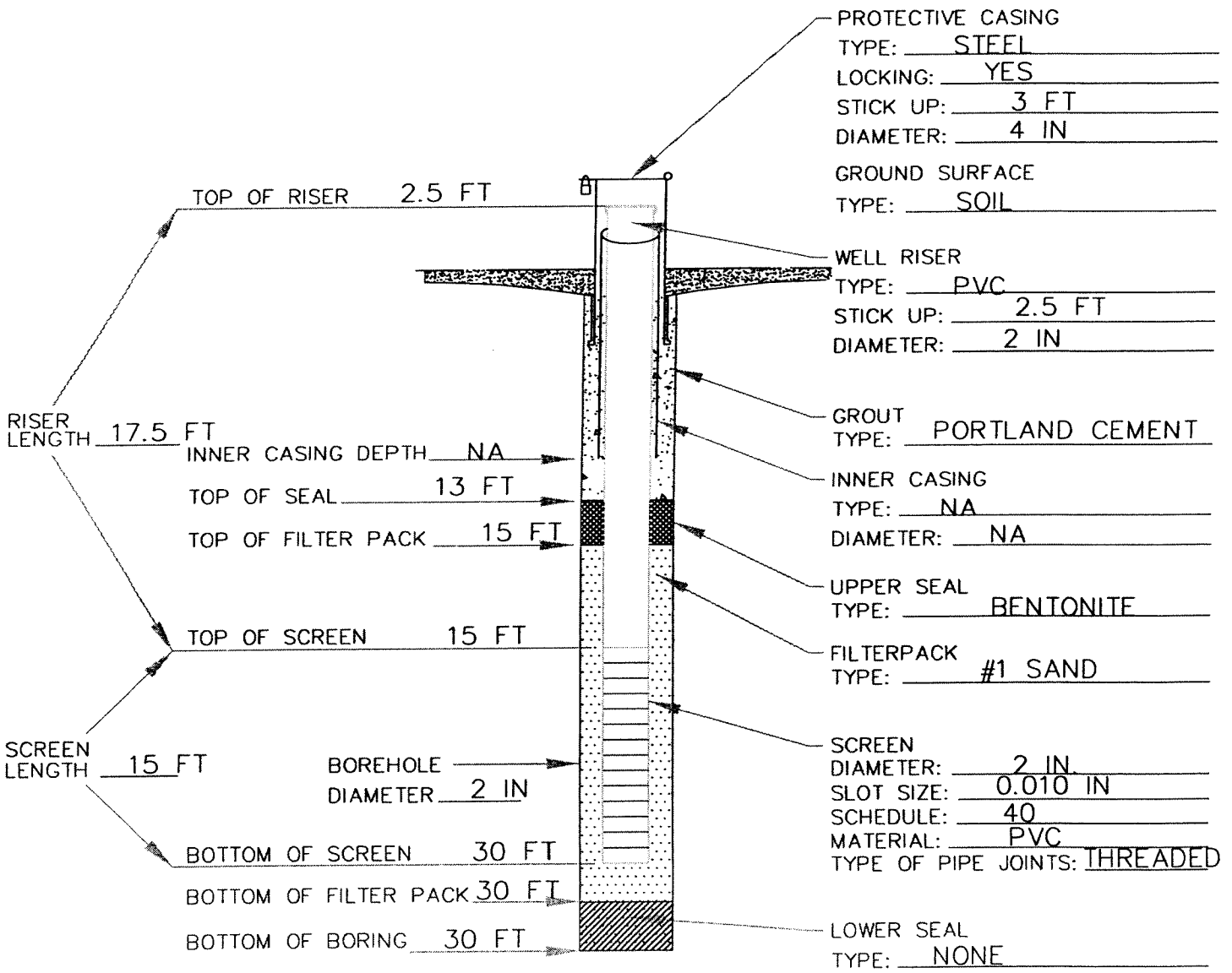




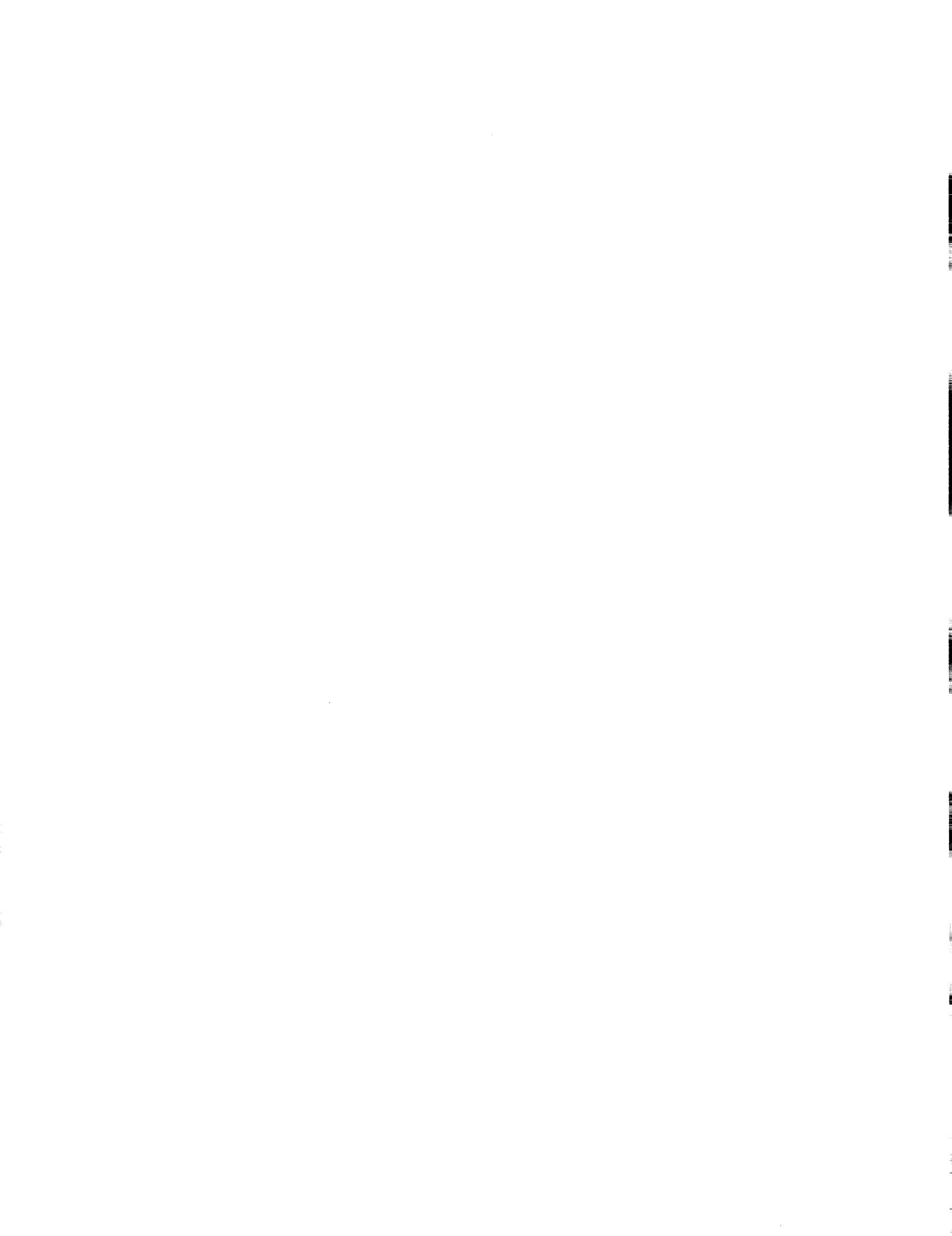
# MONITORING WELL CONSTRUCTION

## MW-1

CLIENT/SITE NAME: PARCEL B, FORMER GORHAM MANUFACTURING, PROVIDENCE, RI	
DATE INSTALLED: 1/21/05	PROJECT No. 61965.01
DEPTH TO WATER: 25.82 (BELOW TOP OF RISER) DATE/TIME 1/25/05 1205	EA INSPECTOR: J. PARRETT
DRILLING METHOD: GEOPROBE 6600	



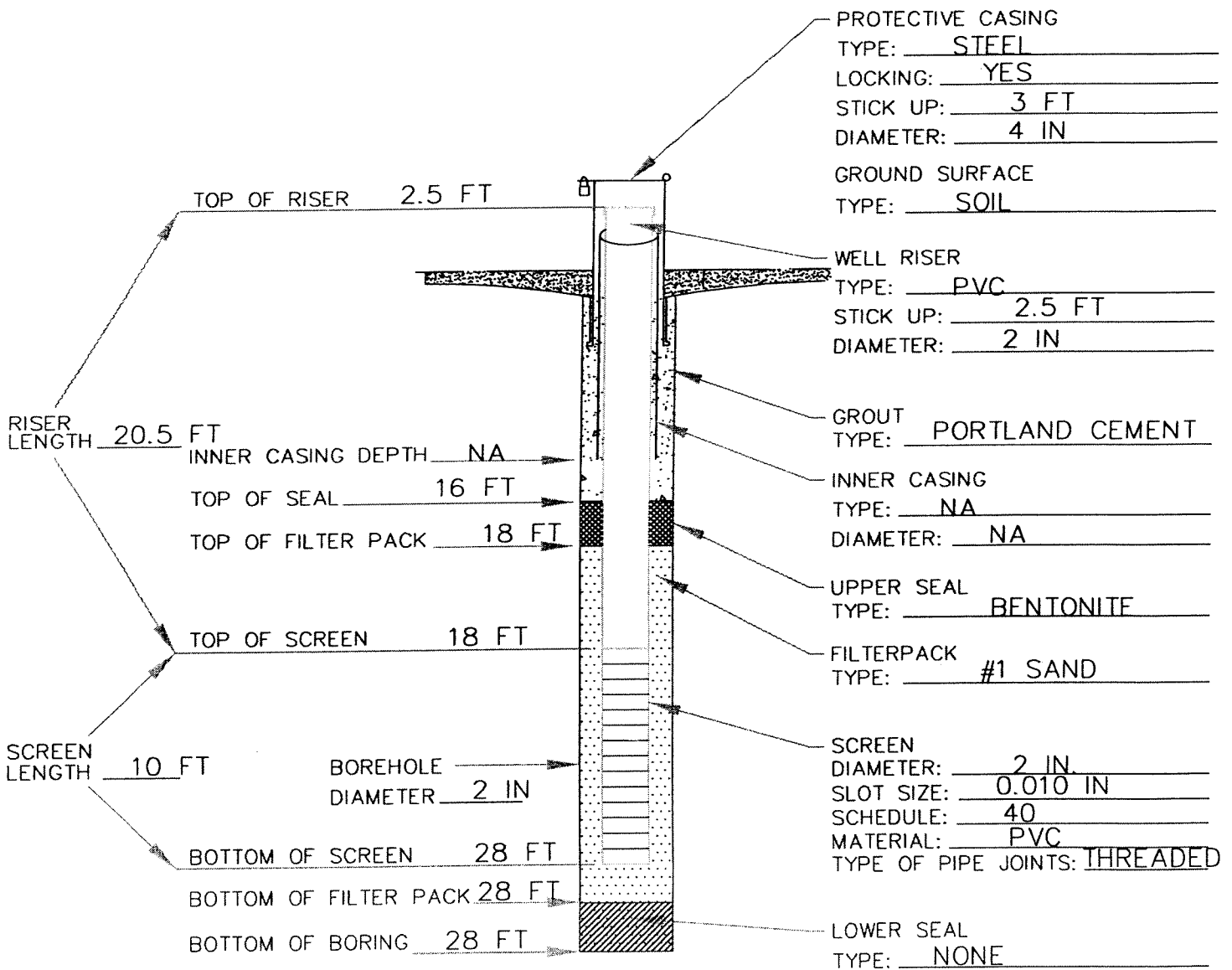
MONITORING WELL CONSTRUCTION  
(ALL DEPTH MEASUREMENTS IN FT. BELOW GROUND SURFACE)



# MONITORING WELL CONSTRUCTION

## MW-2

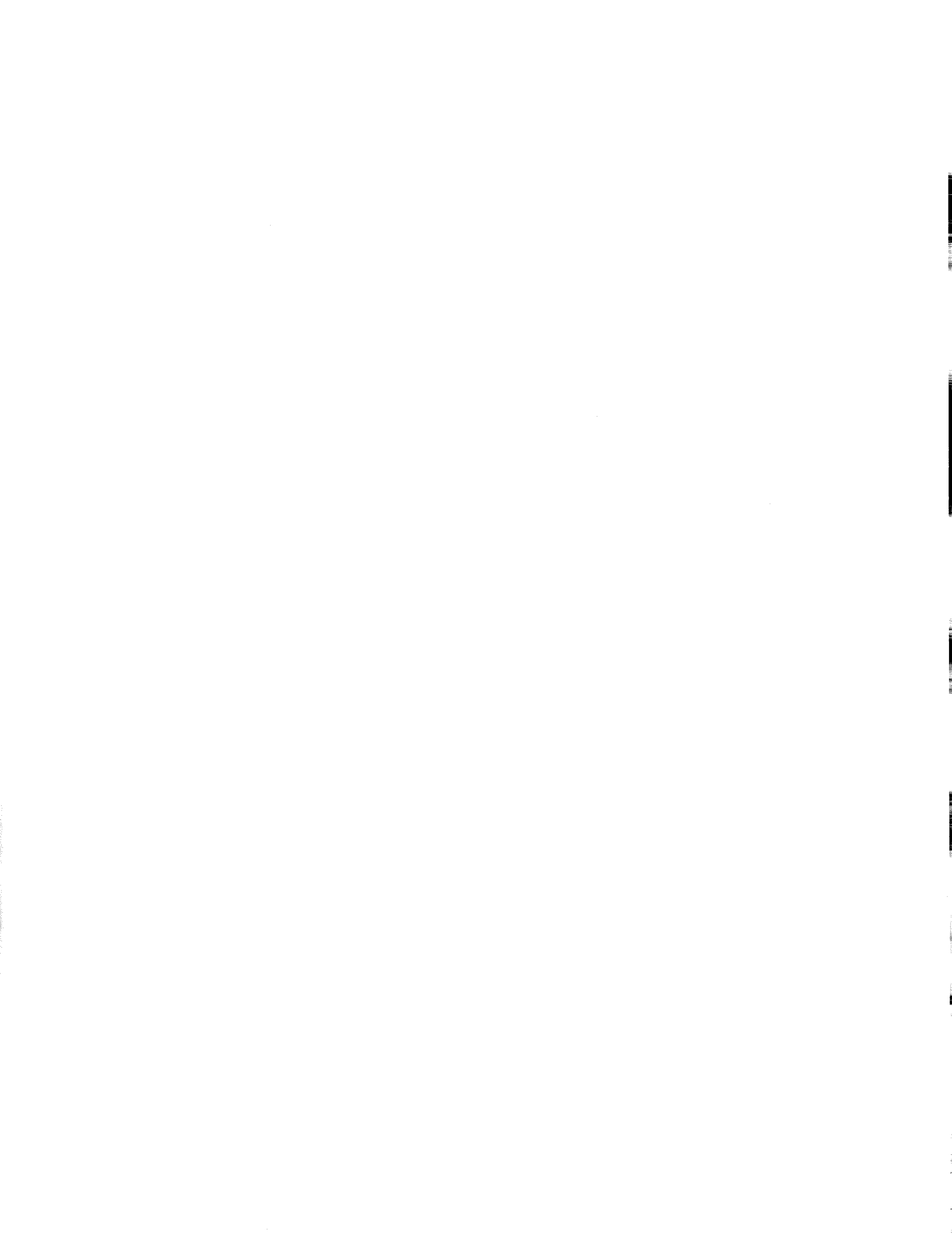
CLIENT/SITE NAME: <b>PARCEL B, FORMER GORHAM MANUFACTURING, PROVIDENCE, RI</b>	
DATE INSTALLED: <b>1/21/05</b>	PROJECT No. <b>61965.01</b>
DEPTH TO WATER: <b>25.56</b> (BELOW TOP OF RISER) DATE/TIME <b>1/25/05 1200</b>	EA INSPECTOR: <b>J. PARRETT</b>
DRILLING METHOD: <b>GEOPROBE 6600</b>	



MONITORING WELL CONSTRUCTION  
(ALL DEPTH MEASUREMENTS IN FT. BELOW GROUND SURFACE)



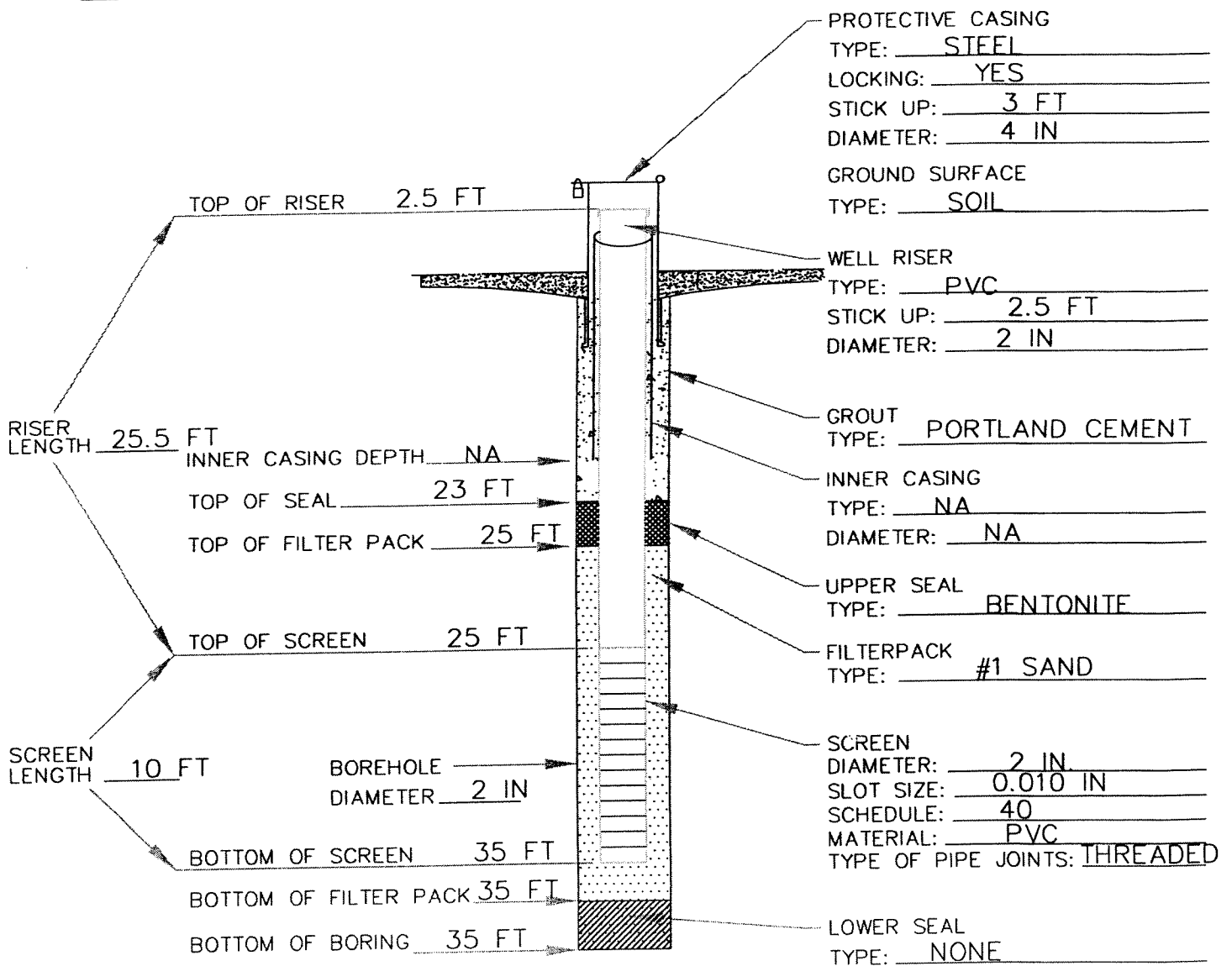
EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY



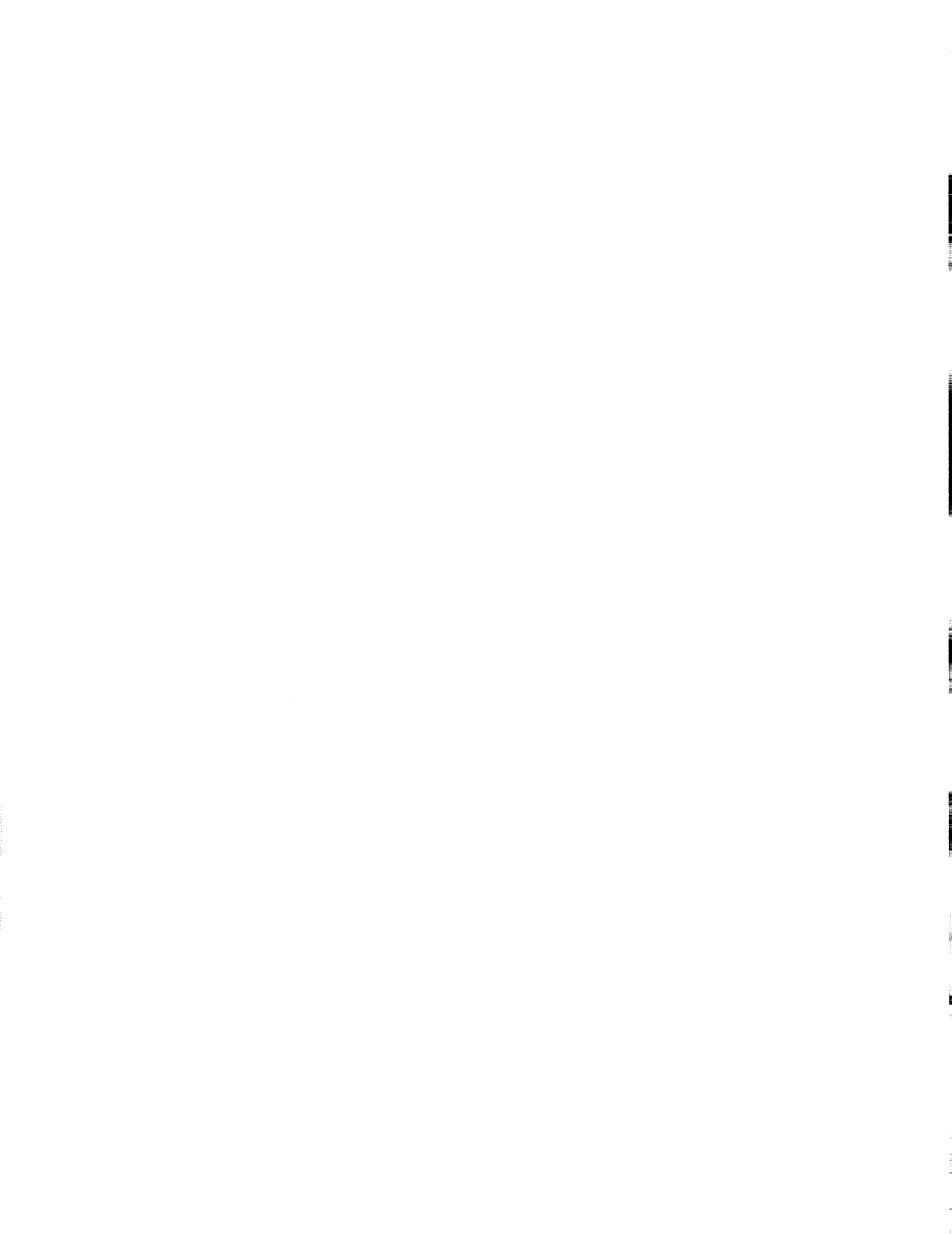
# MONITORING WELL CONSTRUCTION

## MW-3

CLIENT/SITE NAME: PARCEL B, FORMER GORHAM MANUFACTURING, PROVIDENCE, RI	
DATE INSTALLED: 1/21/05	PROJECT No. 61965.01
DEPTH TO WATER: 29.08 (BELOW TOP OF RISER) DATE/TIME 1/25/05 1145	EA INSPECTOR: J. PARRETT
DRILLING METHOD: GEOPROBE 6600	



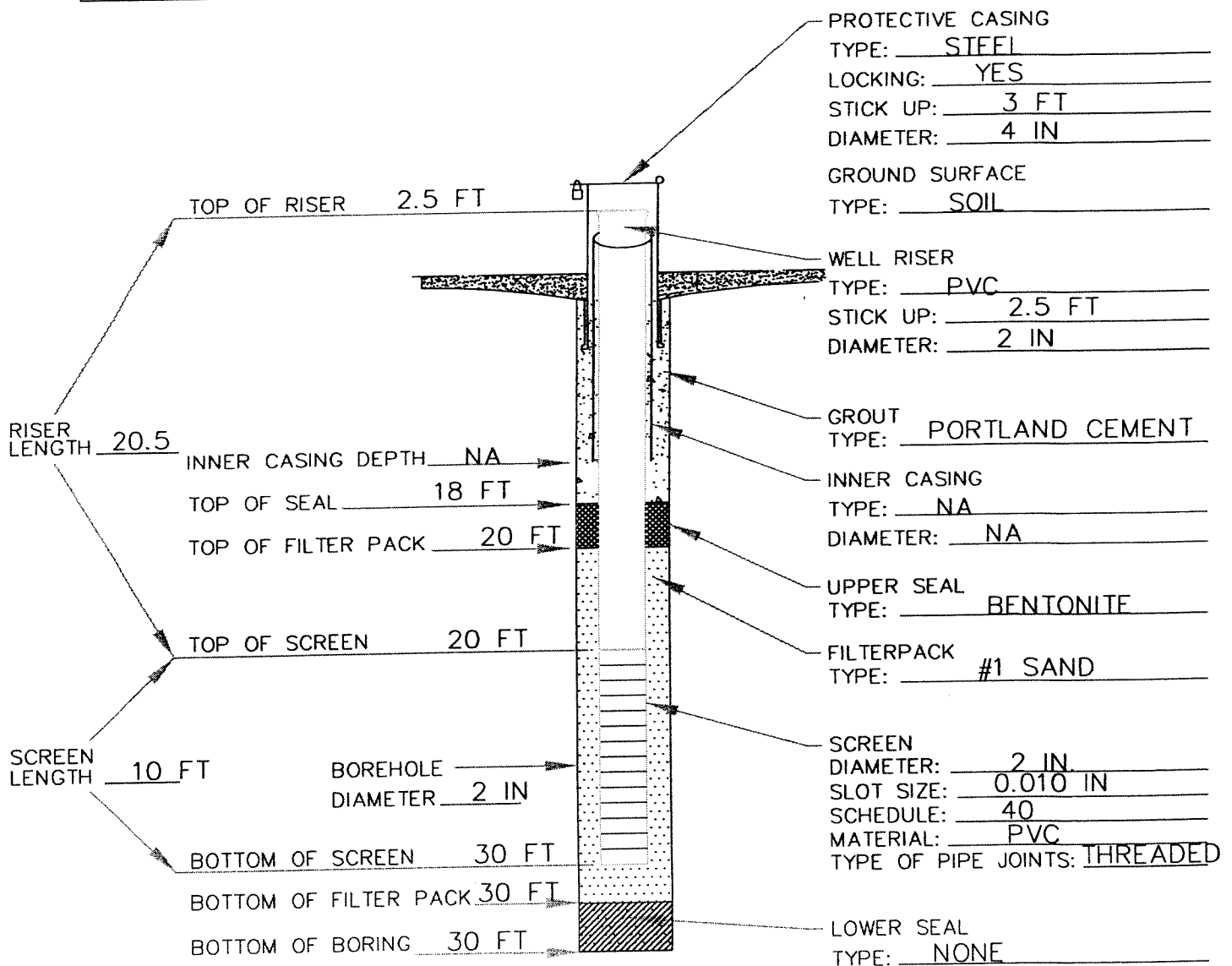
MONITORING WELL CONSTRUCTION  
(ALL DEPTH MEASUREMENTS IN FT. BELOW GROUND SURFACE)



# MONITORING WELL CONSTRUCTION

## MW-4

CLIENT/SITE NAME: <b>PARCEL B, FORMER GORHAM MANUFACTURING, PROVIDENCE, RI</b>	
DATE INSTALLED: <b>1/21/05</b>	PROJECT No. <b>61965.01</b>
DEPTH TO WATER: <b>29.08</b> (BELOW TOP OF RISER) DATE/TIME <b>1/25/05 1150</b>	EA INSPECTOR: <b>J. PARRETT</b>
DRILLING METHOD: <b>GEOPROBE 6600</b>	

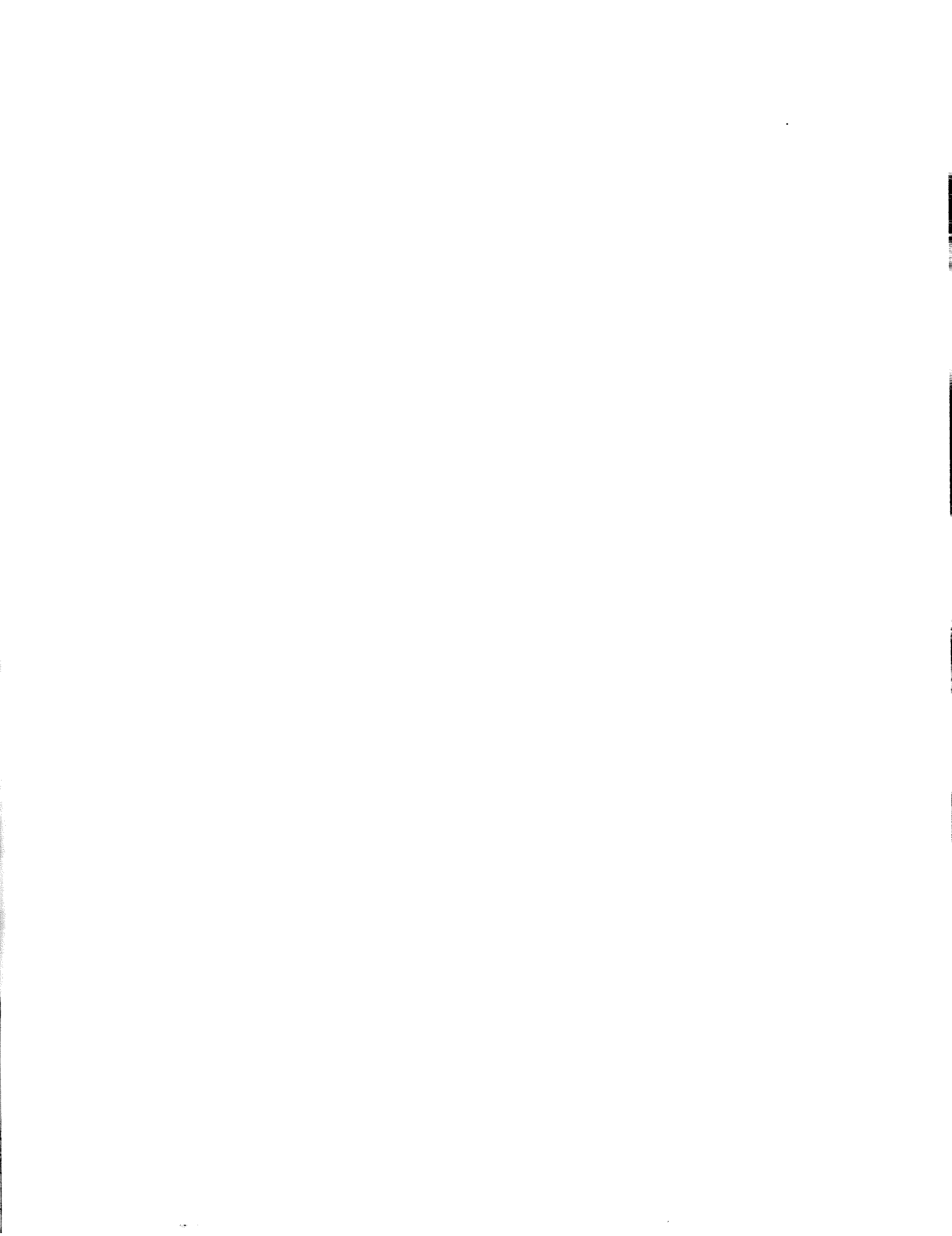


MONITORING WELL CONSTRUCTION  
 (ALL DEPTH MEASUREMENTS IN FT. BELOW GROUND SURFACE)



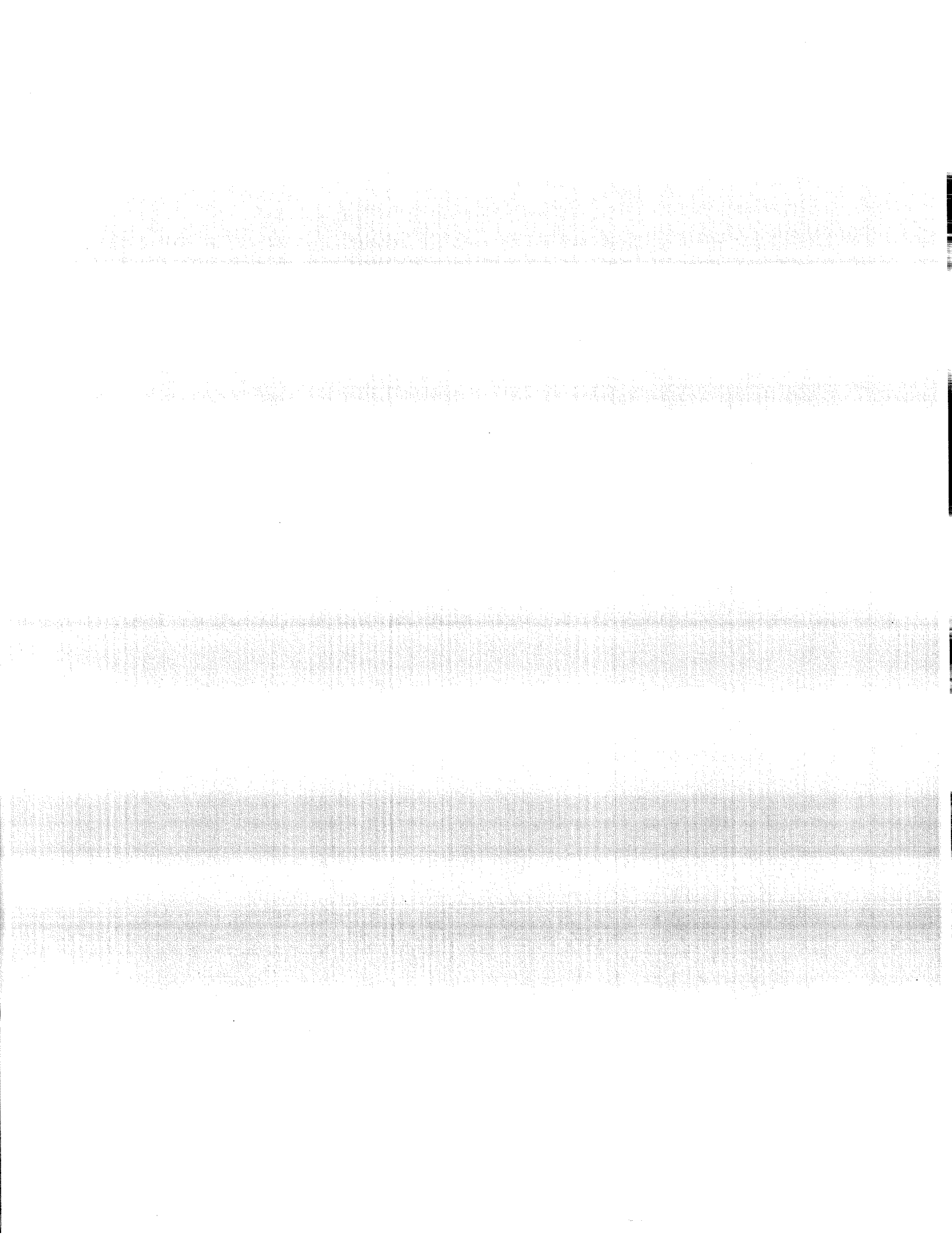
EA ENGINEERING,  
 SCIENCE, AND  
 TECHNOLOGY





**APPENDIX E**

**GROUNDWATER CERTIFICATES OF ANALYSIS**



# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

### PROJECT NARRATIVE

**CLIENT: EA Engineering, Science and Technology**

**CLIENT PROJECT ID: Gorham**

**ESS PROJECT ID: 0501288**

#### **Sample Receipt**

5 Ground Water samples and 1 Trip Blank were received on January 31, 2005 for the analysis specified on the enclosed Chain of Custody Record.

#### **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.

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

#### **Volatile Organics Analysis**

Blank Spike was outside of the recommended range for 1,4-Dioxane - Screen, 2-Butanone, Acetone and Tetrahydrofuran. These analytes were biased low.

The batch Matrix Spike/Matrix Spike Duplicate was outside of the recommended range for Acetone due to matrix interferences. This analyte was biased high, however, samples were non detect for this analyte.

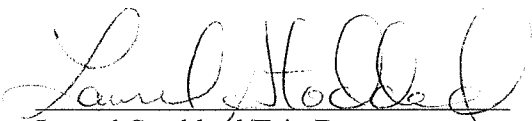
The Relative Percent Difference for the Matrix Spike/Matrix Spike Duplicate was outside of the recommended range for 1,2-Dibromo-3-Chloropropane, Acetone and Bromomethane.

The relative intensity of the characteristic ion is outside of criteria for Tetrachloroethane on samples 0501288-03 and 0501288-04.

No other observations noted.

This signed Certificate of Analysis is our approved release of your analytical results. Beginning with this Project Narrative, the entire report has been paginated. The Chain of Custody is the final report page. This report should not be copied except in full without the approval of the laboratory.

End of project narrative.



Laurel Stoddard/Eric Baanante  
Laboratory Director/Operations Manager  
mlp

2/10/05  
Date

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-1  
Date Sampled: 01/31/05 10:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-01  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,1-Trichloroethane	J 0.7	ug/L	1.0	0.4000	1	02/04/05
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	0.2000	1	02/04/05
1,1,2-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,1-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloropropene	ND	ug/L	1.0	0.4000	1	02/04/05
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,3-Trichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.1000	1	02/04/05
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	2.8000	1	02/04/05
1,2-Dibromoethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichlorobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
1,2-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichlorobenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,4-Dichlorobenzene	ND	ug/L	1.0	0.1200	1	02/04/05
1,4-Dioxane - Screen	ND	ug/L	500	500.0000	1	02/04/05
1-Chlorohexane	ND	ug/L	1.0	0.4000	1	02/04/05
2,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
2-Butanone	ND	ug/L	25.0	10.6000	1	02/04/05
2-Chlorotoluene	ND	ug/L	1.0	0.1800	1	02/04/05
2-Hexanone	ND	ug/L	10.0	2.8000	1	02/04/05
4-Chlorotoluene	ND	ug/L	1.0	0.1600	1	02/04/05
4-Isopropyltoluene	ND	ug/L	1.0	0.1000	1	02/04/05
4-Methyl-2-Pentanone	ND	ug/L	10.0	1.6000	1	02/04/05
Acetone	ND	ug/L	25.0	10.4000	1	02/04/05
Benzene	ND	ug/L	1.0	0.2000	1	02/04/05
Bromobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Bromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromodichloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromoform	ND	ug/L	1.0	0.2000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-1  
Date Sampled: 01/31/05 10:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-01  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Bromomethane	ND	ug/L	2.0	0.6000	1	02/04/05
Carbon Disulfide	ND	ug/L	1.0	0.2000	1	02/04/05
Carbon Tetrachloride	ND	ug/L	1.0	0.4000	1	02/04/05
Chlorobenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Chloroethane	ND	ug/L	2.0	0.2000	1	02/04/05
Chloroform	ND	ug/L	1.0	0.2000	1	02/04/05
Chloromethane	ND	ug/L	2.0	0.6000	1	02/04/05
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
cis-1,3-Dichloropropene	ND	ug/L	0.5	0.2000	1	02/04/05
Dibromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dibromomethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dichlorodifluoromethane	ND	ug/L	2.0	0.4000	1	02/04/05
Diethyl Ether	ND	ug/L	1.0	0.4000	1	02/04/05
Di-isopropyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethyl tertiary-butyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethylbenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Hexachlorobutadiene	ND	ug/L	0.6	0.4000	1	02/04/05
Isopropylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Methyl tert-Butyl Ether	ND	ug/L	1.0	0.6000	1	02/04/05
Methylene Chloride	ND	ug/L	5.0	0.2000	1	02/04/05
Naphthalene	ND	ug/L	1.0	0.2000	1	02/04/05
n-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
n-Propylbenzene	ND	ug/L	1.0	0.2000	1	02/04/05
sec-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
Styrene	ND	ug/L	1.0	0.1600	1	02/04/05
tert-Butylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Tertiary-amyl methyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
<b>Tetrachloroethene</b>	<b>10.5</b>	ug/L	1.0	0.4000	1	02/04/05
Tetrahydrofuran	ND	ug/L	5.0	2.2000	1	02/04/05
Toluene	ND	ug/L	1.0	0.1800	1	02/04/05
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.2000	1	02/04/05
trans-1,3-Dichloropropene	ND	ug/L	0.5	0.4000	1	02/04/05
<b>Trichloroethene</b>	<b>6.9</b>	ug/L	1.0	0.2000	1	02/04/05
<b>Trichlorofluoromethane</b>	<b>5.6</b>	ug/L	2.0	0.2000	1	02/04/05
Vinyl Acetate	ND	ug/L	5.0	0.2000	1	02/04/05
Vinyl Chloride	ND	ug/L	1.0	0.4000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-1  
Date Sampled: 01/31/05 10:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-01  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Xylene O	ND	ug/L	1.0	0.2000	1	02/04/05
Xylene P,M	ND	ug/L	2.0	0.4000	1	02/04/05
Xylenes (Total)	ND	ug/L	3.0			02/04/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>73 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>91 %</i>		<i>70-130</i>

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-2  
Date Sampled: 01/31/05 14:30  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-02  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Bromomethane	ND	ug/L	2.0	0.6000	1	02/04/05
Carbon Disulfide	ND	ug/L	1.0	0.2000	1	02/04/05
Carbon Tetrachloride	ND	ug/L	1.0	0.4000	1	02/04/05
Chlorobenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Chloroethane	ND	ug/L	2.0	0.2000	1	02/04/05
Chloroform	ND	ug/L	1.0	0.2000	1	02/04/05
Chloromethane	ND	ug/L	2.0	0.6000	1	02/04/05
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
cis-1,3-Dichloropropene	ND	ug/L	0.5	0.2000	1	02/04/05
Dibromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dibromomethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dichlorodifluoromethane	ND	ug/L	2.0	0.4000	1	02/04/05
Diethyl Ether	ND	ug/L	1.0	0.4000	1	02/04/05
Di-isopropyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethyl tertiary-butyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethylbenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Hexachlorobutadiene	ND	ug/L	0.6	0.4000	1	02/04/05
Isopropylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Methyl tert-Butyl Ether	ND	ug/L	1.0	0.6000	1	02/04/05
Methylene Chloride	ND	ug/L	5.0	0.2000	1	02/04/05
Naphthalene	ND	ug/L	1.0	0.2000	1	02/04/05
n-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
n-Propylbenzene	ND	ug/L	1.0	0.2000	1	02/04/05
sec-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
Styrene	ND	ug/L	1.0	0.1600	1	02/04/05
tert-Butylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Tertiary-amyl methyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
<b>Tetrachloroethene</b>	<b>10.7</b>	ug/L	1.0	0.4000	1	02/04/05
Tetrahydrofuran	ND	ug/L	5.0	2.2000	1	02/04/05
Toluene	ND	ug/L	1.0	0.1800	1	02/04/05
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.2000	1	02/04/05
trans-1,3-Dichloropropene	ND	ug/L	0.5	0.4000	1	02/04/05
<b>Trichloroethene</b>	<b>9.0</b>	ug/L	1.0	0.2000	1	02/04/05
<b>Trichlorofluoromethane</b>	<b>4.4</b>	ug/L	2.0	0.2000	1	02/04/05
Vinyl Acetate	ND	ug/L	5.0	0.2000	1	02/04/05
Vinyl Chloride	ND	ug/L	1.0	0.4000	1	02/04/05



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-2  
Date Sampled: 01/31/05 14:30  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-02  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,1-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	0.2000	1	02/04/05
1,1,2-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,1-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloropropene	ND	ug/L	1.0	0.4000	1	02/04/05
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,3-Trichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.1000	1	02/04/05
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	2.8000	1	02/04/05
1,2-Dibromoethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichlorobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
1,2-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichlorobenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,4-Dichlorobenzene	ND	ug/L	1.0	0.1200	1	02/04/05
1,4-Dioxane - Screen	ND	ug/L	500	500.0000	1	02/04/05
1-Chlorohexane	ND	ug/L	1.0	0.4000	1	02/04/05
2,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
2-Butanone	ND	ug/L	25.0	10.6000	1	02/04/05
2-Chlorotoluene	ND	ug/L	1.0	0.1800	1	02/04/05
2-Hexanone	ND	ug/L	10.0	2.8000	1	02/04/05
4-Chlorotoluene	ND	ug/L	1.0	0.1600	1	02/04/05
4-Isopropyltoluene	ND	ug/L	1.0	0.1000	1	02/04/05
4-Methyl-2-Pentanone	ND	ug/L	10.0	1.6000	1	02/04/05
Acetone	ND	ug/L	25.0	10.4000	1	02/04/05
Benzene	ND	ug/L	1.0	0.2000	1	02/04/05
Bromobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Bromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromodichloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromoform	ND	ug/L	1.0	0.2000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-2  
Date Sampled: 01/31/05 14:30  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-02  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Xylene O	ND	ug/L	1.0	0.2000	1	02/04/05
Xylene P,M	ND	ug/L	2.0	0.4000	1	02/04/05
Xylenes (Total)	ND	ug/L	3.0			02/04/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>74 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>90 %</i>		<i>70-130</i>

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-3  
Date Sampled: 01/31/05 13:45  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-03  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,1-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	0.2000	1	02/04/05
1,1,2-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,1-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloropropene	ND	ug/L	1.0	0.4000	1	02/04/05
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,3-Trichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.1000	1	02/04/05
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	2.8000	1	02/04/05
1,2-Dibromoethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichlorobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
1,2-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichlorobenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,4-Dichlorobenzene	ND	ug/L	1.0	0.1200	1	02/04/05
1,4-Dioxane - Screen	ND	ug/L	500	500.0000	1	02/04/05
1-Chlorohexane	ND	ug/L	1.0	0.4000	1	02/04/05
2,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
2-Butanone	ND	ug/L	25.0	10.6000	1	02/04/05
2-Chlorotoluene	ND	ug/L	1.0	0.1800	1	02/04/05
2-Hexanone	ND	ug/L	10.0	2.8000	1	02/04/05
4-Chlorotoluene	ND	ug/L	1.0	0.1600	1	02/04/05
4-Isopropyltoluene	ND	ug/L	1.0	0.1000	1	02/04/05
4-Methyl-2-Pentanone	ND	ug/L	10.0	1.6000	1	02/04/05
Acetone	ND	ug/L	25.0	10.4000	1	02/04/05
Benzene	ND	ug/L	1.0	0.2000	1	02/04/05
Bromobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Bromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromodichloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromoform	ND	ug/L	1.0	0.2000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-3  
Date Sampled: 01/31/05 13:45  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-03  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Bromomethane	ND	ug/L	2.0	0.6000	1	02/04/05	
Carbon Disulfide	ND	ug/L	1.0	0.2000	1	02/04/05	
Carbon Tetrachloride	ND	ug/L	1.0	0.4000	1	02/04/05	
Chlorobenzene	ND	ug/L	1.0	0.1400	1	02/04/05	
Chloroethane	ND	ug/L	2.0	0.2000	1	02/04/05	
Chloroform	ND	ug/L	1.0	0.2000	1	02/04/05	
Chloromethane	ND	ug/L	2.0	0.6000	1	02/04/05	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05	
cis-1,3-Dichloropropene	ND	ug/L	0.5	0.2000	1	02/04/05	
Dibromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05	
Dibromomethane	ND	ug/L	1.0	0.4000	1	02/04/05	
Dichlorodifluoromethane	ND	ug/L	2.0	0.4000	1	02/04/05	
Diethyl Ether	ND	ug/L	1.0	0.4000	1	02/04/05	
Di-isopropyl ether	ND	ug/L	1.0	0.2000	1	02/04/05	
Ethyl tertiary-butyl ether	ND	ug/L	1.0	0.2000	1	02/04/05	
Ethylbenzene	ND	ug/L	1.0	0.1800	1	02/04/05	
Hexachlorobutadiene	ND	ug/L	0.6	0.4000	1	02/04/05	
Isopropylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05	
Methyl tert-Butyl Ether	ND	ug/L	1.0	0.6000	1	02/04/05	
Methylene Chloride	ND	ug/L	5.0	0.2000	1	02/04/05	
Naphthalene	ND	ug/L	1.0	0.2000	1	02/04/05	
n-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05	
n-Propylbenzene	ND	ug/L	1.0	0.2000	1	02/04/05	
sec-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05	
Styrene	ND	ug/L	1.0	0.1600	1	02/04/05	
tert-Butylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05	
Tertiary-amyl methyl ether	ND	ug/L	1.0	0.2000	1	02/04/05	
<b>Tetrachloroethene</b>	J	<b>0.8</b>	ug/L	1.0	0.4000	1	02/04/05
Tetrahydrofuran	ND	ug/L	5.0	2.2000	1	02/04/05	
Toluene	ND	ug/L	1.0	0.1800	1	02/04/05	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.2000	1	02/04/05	
trans-1,3-Dichloropropene	ND	ug/L	0.5	0.4000	1	02/04/05	
<b>Trichloroethene</b>		<b>24.8</b>	ug/L	1.0	0.2000	1	02/04/05
<b>Trichlorofluoromethane</b>		<b>10.3</b>	ug/L	2.0	0.2000	1	02/04/05
Vinyl Acetate	ND	ug/L	5.0	0.2000	1	02/04/05	
Vinyl Chloride	ND	ug/L	1.0	0.4000	1	02/04/05	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-3  
Date Sampled: 01/31/05 13:45  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-03  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Xylene O	ND	ug/L	1.0	0.2000	1	02/04/05
Xylene P,M	ND	ug/L	2.0	0.4000	1	02/04/05
Xylenes (Total)	ND	ug/L	3.0			02/04/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>74 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>90 %</i>		<i>70-130</i>

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology

Client Project ID: Gorham

Client Sample ID: MW-4

Date Sampled: 01/31/05 12:15

Percent Solids: N/A

Initial Volume: 10

Final Volume: 10

Extraction Method: 5030B

ESS Laboratory Work Order: 0501288

ESS Laboratory Sample ID: 0501288-04

Sample Matrix: Ground Water

Analyst: MD

### 8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
<b>1,1,1-Trichloroethane</b>	J 0.4	ug/L	1.0	0.4000	1	02/04/05
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	0.2000	1	02/04/05
1,1,2-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,1-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloropropene	ND	ug/L	1.0	0.4000	1	02/04/05
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,3-Trichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.1000	1	02/04/05
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	2.8000	1	02/04/05
1,2-Dibromoethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichlorobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
1,2-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichlorobenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,4-Dichlorobenzene	ND	ug/L	1.0	0.1200	1	02/04/05
1,4-Dioxane - Screen	ND	ug/L	500	500.0000	1	02/04/05
1-Chlorohexane	ND	ug/L	1.0	0.4000	1	02/04/05
2,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
2-Butanone	ND	ug/L	25.0	10.6000	1	02/04/05
2-Chlorotoluene	ND	ug/L	1.0	0.1800	1	02/04/05
2-Hexanone	ND	ug/L	10.0	2.8000	1	02/04/05
4-Chlorotoluene	ND	ug/L	1.0	0.1600	1	02/04/05
4-Isopropyltoluene	ND	ug/L	1.0	0.1000	1	02/04/05
4-Methyl-2-Pentanone	ND	ug/L	10.0	1.6000	1	02/04/05
Acetone	ND	ug/L	25.0	10.4000	1	02/07/05
Benzene	ND	ug/L	1.0	0.2000	1	02/04/05
Bromobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Bromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromodichloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromoform	ND	ug/L	1.0	0.2000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-4  
Date Sampled: 01/31/05 12:15  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-04  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Bromomethane	ND	ug/L	2.0	0.6000	1	02/04/05
Carbon Disulfide	ND	ug/L	1.0	0.2000	1	02/04/05
Carbon Tetrachloride	ND	ug/L	1.0	0.4000	1	02/04/05
Chlorobenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Chloroethane	ND	ug/L	2.0	0.2000	1	02/04/05
Chloroform	ND	ug/L	1.0	0.2000	1	02/04/05
Chloromethane	ND	ug/L	2.0	0.6000	1	02/04/05
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
cis-1,3-Dichloropropene	ND	ug/L	0.5	0.2000	1	02/04/05
Dibromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dibromomethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dichlorodifluoromethane	ND	ug/L	2.0	0.4000	1	02/04/05
Diethyl Ether	ND	ug/L	1.0	0.4000	1	02/04/05
Di-isopropyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethyl tertiary-butyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethylbenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Hexachlorobutadiene	ND	ug/L	0.6	0.4000	1	02/04/05
Isopropylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Methyl tert-Butyl Ether	ND	ug/L	1.0	0.6000	1	02/04/05
Methylene Chloride	ND	ug/L	5.0	0.2000	1	02/04/05
Naphthalene	ND	ug/L	1.0	0.2000	1	02/04/05
n-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
n-Propylbenzene	ND	ug/L	1.0	0.2000	1	02/04/05
sec-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
Styrene	ND	ug/L	1.0	0.1600	1	02/04/05
tert-Butylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Tertiary-amyl methyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
<b>Tetrachloroethene</b>	<b>J 0.9</b>	ug/L	1.0	0.4000	1	02/04/05
Tetrahydrofuran	ND	ug/L	5.0	2.2000	1	02/04/05
Toluene	ND	ug/L	1.0	0.1800	1	02/04/05
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.2000	1	02/04/05
trans-1,3-Dichloropropene	ND	ug/L	0.5	0.4000	1	02/04/05
<b>Trichloroethene</b>	<b>122</b>	ug/L	10.0	2.2000	10	02/07/05
<b>Trichlorofluoromethane</b>	<b>15.4</b>	ug/L	2.0	0.2000	1	02/04/05
Vinyl Acetate	ND	ug/L	5.0	0.2000	1	02/04/05
Vinyl Chloride	ND	ug/L	1.0	0.4000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: MW-4  
Date Sampled: 01/31/05 12:15  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-04  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Xylene O	ND	ug/L	1.0	0.2000	1	02/04/05
Xylene P,M	ND	ug/L	2.0	0.4000	1	02/04/05
Xylenes (Total)	ND	ug/L	3.0			02/04/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	84 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	98 %		70-130
<i>Surrogate: Toluene-d8</i>	90 %		70-130



# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: DUP  
Date Sampled: 01/31/05 00:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-05  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,1-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	0.2000	1	02/04/05
1,1,2-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,1-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloropropene	ND	ug/L	1.0	0.4000	1	02/04/05
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,3-Trichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.1000	1	02/04/05
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	2.8000	1	02/04/05
1,2-Dibromoethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichlorobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
1,2-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichlorobenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,4-Dichlorobenzene	ND	ug/L	1.0	0.1200	1	02/04/05
1,4-Dioxane - Screen	ND	ug/L	500	500.0000	1	02/04/05
1-Chlorohexane	ND	ug/L	1.0	0.4000	1	02/04/05
2,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
2-Butanone	ND	ug/L	25.0	10.6000	1	02/04/05
2-Chlorotoluene	ND	ug/L	1.0	0.1800	1	02/04/05
2-Hexanone	ND	ug/L	10.0	2.8000	1	02/04/05
4-Chlorotoluene	ND	ug/L	1.0	0.1600	1	02/04/05
4-Isopropyltoluene	ND	ug/L	1.0	0.1000	1	02/04/05
4-Methyl-2-Pentanone	ND	ug/L	10.0	1.6000	1	02/04/05
Acetone	ND	ug/L	25.0	10.4000	1	02/04/05
Benzene	ND	ug/L	1.0	0.2000	1	02/04/05
Bromobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Bromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromodichloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromoform	ND	ug/L	1.0	0.2000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: DUP  
Date Sampled: 01/31/05 00:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-05  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Bromomethane	ND	ug/L	2.0	0.6000	1	02/04/05
Carbon Disulfide	ND	ug/L	1.0	0.2000	1	02/04/05
Carbon Tetrachloride	ND	ug/L	1.0	0.4000	1	02/04/05
Chlorobenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Chloroethane	ND	ug/L	2.0	0.2000	1	02/04/05
Chloroform	ND	ug/L	1.0	0.2000	1	02/04/05
Chloromethane	ND	ug/L	2.0	0.6000	1	02/04/05
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
cis-1,3-Dichloropropene	ND	ug/L	0.5	0.2000	1	02/04/05
Dibromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dibromomethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dichlorodifluoromethane	ND	ug/L	2.0	0.4000	1	02/04/05
Diethyl Ether	ND	ug/L	1.0	0.4000	1	02/04/05
Di-isopropyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethyl tertiary-butyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethylbenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Hexachlorobutadiene	ND	ug/L	0.6	0.4000	1	02/04/05
Isopropylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Methyl tert-Butyl Ether	ND	ug/L	1.0	0.6000	1	02/04/05
Methylene Chloride	ND	ug/L	5.0	0.2000	1	02/04/05
Naphthalene	ND	ug/L	1.0	0.2000	1	02/04/05
n-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
n-Propylbenzene	ND	ug/L	1.0	0.2000	1	02/04/05
sec-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
Styrene	ND	ug/L	1.0	0.1600	1	02/04/05
tert-Butylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Tertiary-amyl methyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
<b>Tetrachloroethene</b>	<b>10.3</b>	ug/L	1.0	0.4000	1	02/04/05
Tetrahydrofuran	ND	ug/L	5.0	2.2000	1	02/04/05
Toluene	ND	ug/L	1.0	0.1800	1	02/04/05
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.2000	1	02/04/05
trans-1,3-Dichloropropene	ND	ug/L	0.5	0.4000	1	02/04/05
<b>Trichloroethene</b>	<b>8.7</b>	ug/L	1.0	0.2000	1	02/04/05
<b>Trichlorofluoromethane</b>	<b>4.5</b>	ug/L	2.0	0.2000	1	02/04/05
Vinyl Acetate	ND	ug/L	5.0	0.2000	1	02/04/05
Vinyl Chloride	ND	ug/L	1.0	0.4000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: DUP  
Date Sampled: 01/31/05 00:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-05  
Sample Matrix: Ground Water  
Analyst: MD

### 8260B Volatile Organic Compounds

Xylene O	ND	ug/L	1.0	0.2000	1	02/04/05
Xylene P,M	ND	ug/L	2.0	0.4000	1	02/04/05
Xylenes (Total)	ND	ug/L	3.0			02/04/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>74 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>90 %</i>		<i>70-130</i>

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: TB-1  
Date Sampled: 01/31/05 00:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-06  
Sample Matrix: Aqueous  
Analyst: MD

### 8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>2xMDL</u>	<u>DF</u>	<u>Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,1-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	0.2000	1	02/04/05
1,1,2-Trichloroethane	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,1-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
1,1-Dichloropropene	ND	ug/L	1.0	0.4000	1	02/04/05
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,3-Trichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.2000	1	02/04/05
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.1000	1	02/04/05
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	2.8000	1	02/04/05
1,2-Dibromoethane	ND	ug/L	1.0	0.2000	1	02/04/05
<b>1,2-Dichlorobenzene</b>	<b>J 0.3</b>	ug/L	1.0	0.1800	1	02/04/05
1,2-Dichloroethane	ND	ug/L	1.0	0.2000	1	02/04/05
1,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichlorobenzene	ND	ug/L	1.0	0.1600	1	02/04/05
1,3-Dichloropropane	ND	ug/L	1.0	0.2000	1	02/04/05
1,4-Dichlorobenzene	ND	ug/L	1.0	0.1200	1	02/04/05
1,4-Dioxane - Screen	ND	ug/L	500	500.0000	1	02/04/05
1-Chlorohexane	ND	ug/L	1.0	0.4000	1	02/04/05
2,2-Dichloropropane	ND	ug/L	1.0	0.4000	1	02/04/05
2-Butanone	ND	ug/L	25.0	10.6000	1	02/04/05
2-Chlorotoluene	ND	ug/L	1.0	0.1800	1	02/04/05
2-Hexanone	ND	ug/L	10.0	2.8000	1	02/04/05
4-Chlorotoluene	ND	ug/L	1.0	0.1600	1	02/04/05
4-Isopropyltoluene	ND	ug/L	1.0	0.1000	1	02/04/05
4-Methyl-2-Pentanone	ND	ug/L	10.0	1.6000	1	02/04/05
Acetone	ND	ug/L	25.0	10.4000	1	02/04/05
Benzene	ND	ug/L	1.0	0.2000	1	02/04/05
Bromobenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Bromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromodichloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Bromoform	ND	ug/L	1.0	0.2000	1	02/04/05

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: TB-1  
Date Sampled: 01/31/05 00:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-06  
Sample Matrix: Aqueous  
Analyst: MD

### 8260B Volatile Organic Compounds

Bromomethane	ND	ug/L	2.0	0.6000	1	02/04/05
Carbon Disulfide	ND	ug/L	1.0	0.2000	1	02/04/05
Carbon Tetrachloride	ND	ug/L	1.0	0.4000	1	02/04/05
Chlorobenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Chloroethane	ND	ug/L	2.0	0.2000	1	02/04/05
Chloroform	ND	ug/L	1.0	0.2000	1	02/04/05
Chloromethane	ND	ug/L	2.0	0.6000	1	02/04/05
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
cis-1,3-Dichloropropene	ND	ug/L	0.5	0.2000	1	02/04/05
Dibromochloromethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dibromomethane	ND	ug/L	1.0	0.4000	1	02/04/05
Dichlorodifluoromethane	ND	ug/L	2.0	0.4000	1	02/04/05
Diethyl Ether	ND	ug/L	1.0	0.4000	1	02/04/05
Di-isopropyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethyl tertiary-butyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Ethylbenzene	ND	ug/L	1.0	0.1800	1	02/04/05
Hexachlorobutadiene	ND	ug/L	0.6	0.4000	1	02/04/05
Isopropylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Methyl tert-Butyl Ether	ND	ug/L	1.0	0.6000	1	02/04/05
<b>Methylene Chloride</b>	<b>5.0</b>	ug/L	5.0	0.2000	1	02/04/05
Naphthalene	ND	ug/L	1.0	0.2000	1	02/04/05
n-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
n-Propylbenzene	ND	ug/L	1.0	0.2000	1	02/04/05
sec-Butylbenzene	ND	ug/L	1.0	0.1200	1	02/04/05
Styrene	ND	ug/L	1.0	0.1600	1	02/04/05
tert-Butylbenzene	ND	ug/L	1.0	0.1400	1	02/04/05
Tertiary-amyl methyl ether	ND	ug/L	1.0	0.2000	1	02/04/05
Tetrachloroethene	ND	ug/L	1.0	0.4000	1	02/04/05
Tetrahydrofuran	ND	ug/L	5.0	2.2000	1	02/04/05
Toluene	ND	ug/L	1.0	0.1800	1	02/04/05
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.2000	1	02/04/05
trans-1,3-Dichloropropene	ND	ug/L	0.5	0.4000	1	02/04/05
Trichloroethene	ND	ug/L	1.0	0.2000	1	02/04/05
Trichlorofluoromethane	ND	ug/L	2.0	0.2000	1	02/04/05
Vinyl Acetate	ND	ug/L	5.0	0.2000	1	02/04/05
Vinyl Chloride	ND	ug/L	1.0	0.4000	1	02/04/05

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham  
Client Sample ID: TB-1  
Date Sampled: 01/31/05 00:00  
Percent Solids: N/A  
Initial Volume: 10  
Final Volume: 10  
Extraction Method: 5030B

ESS Laboratory Work Order: 0501288  
ESS Laboratory Sample ID: 0501288-06  
Sample Matrix: Aqueous  
Analyst: MD

### 8260B Volatile Organic Compounds

Xylene O	ND	ug/L	1.0	0.2000	1	02/04/05
Xylene P,M	ND	ug/L	2.0	0.4000	1	02/04/05
Xylenes (Total)	ND	ug/L	3.0	0.4000		02/04/05

---

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>85 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>91 %</i>		<i>70-130</i>

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

Batch BB50406 - 5030B

#### Blank

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,2,4-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,4-Dioxane - Screen	ND	500	ug/L
1-Chlorohexane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
2-Butanone	ND	25.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
2-Hexanone	ND	10.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
4-Isopropyltoluene	ND	1.0	ug/L
4-Methyl-2-Pentanone	ND	10.0	ug/L
Acetone	ND	25.0	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon Disulfide	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	0.5	ug/L
Dibromochloromethane	ND	1.0	ug/L



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

#### Batch BB50406 - 5030B

Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	5.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.5	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	2.0	ug/L							
Vinyl Acetate	ND	5.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	20.8		ug/L	25.0		83	70-130			
Surrogate: 4-Bromofluorobenzene	24.3		ug/L	25.0		97	70-130			
Surrogate: Toluene-d8	22.7		ug/L	25.0		91	70-130			

#### LCS

1,1,1,2-Tetrachloroethane	24.6		ug/L	25.0		98	70-130			
1,1,1-Trichloroethane	24.7		ug/L	25.0		99	70-130			
1,1,2,2-Tetrachloroethane	21.2		ug/L	25.0		85	70-130			
1,1,2-Trichloroethane	24.1		ug/L	25.0		96	70-130			
1,1-Dichloroethane	23.2		ug/L	25.0		93	70-130			
1,1-Dichloroethene	24.5		ug/L	25.0		98	70-130			
1,1-Dichloropropene	25.5		ug/L	25.0		102	70-130			
1,2,3-Trichlorobenzene	22.8		ug/L	25.0		91	70-130			
1,2,3-Trichloropropane	21.8		ug/L	25.0		87	70-130			
1,2,4-Trichlorobenzene	23.4		ug/L	25.0		94	70-130			
1,2,4-Trimethylbenzene	25.9		ug/L	25.0		104	70-130			
1,2-Dibromo-3-Chloropropane	20.2		ug/L	25.0		81	70-130			
1,2-Dibromoethane	23.8		ug/L	25.0		95	70-130			
1,2-Dichlorobenzene	24.7		ug/L	25.0		99	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>8260B Volatile Organic Compounds</b>										
<b>Batch BB50406 - 5030B</b>										
1,2-Dichloroethane	24.2		ug/L	25.0		97	70-130			
1,2-Dichloropropane	22.5		ug/L	25.0		90	70-130			
1,3,5-Trimethylbenzene	26.5		ug/L	25.0		106	70-130			
1,3-Dichlorobenzene	25.4		ug/L	25.0		102	70-130			
1,3-Dichloropropane	22.4		ug/L	25.0		90	70-130			
1,4-Dichlorobenzene	25.3		ug/L	25.0		101	70-130			
1,4-Dioxane - Screen	329		ug/L	500		66	70-130			+
1-Chlorohexane	24.5		ug/L	25.0		98	70-130			
2,2-Dichloropropane	24.7		ug/L	25.0		99	70-130			
2-Butanone	16.2		ug/L	25.0		65	70-130			+
2-Chlorotoluene	24.7		ug/L	25.0		99	70-130			
2-Hexanone	19.2		ug/L	25.0		77	70-130			
4-Chlorotoluene	25.2		ug/L	25.0		101	70-130			
4-Isopropyltoluene	27.5		ug/L	25.0		110	70-130			
4-Methyl-2-Pentanone	22.4		ug/L	25.0		90	70-130			+
Acetone	17.3		ug/L	25.0		69	70-130			
Benzene	24.2		ug/L	25.0		97	70-130			
Bromobenzene	25.1		ug/L	25.0		100	70-130			
Bromochloromethane	23.4		ug/L	25.0		94	70-130			
Bromodichloromethane	23.7		ug/L	25.0		95	70-130			
Bromoform	23.0		ug/L	25.0		92	70-130			
Bromomethane	28.4		ug/L	25.0		114	70-130			
Carbon Disulfide	25.9		ug/L	25.0		104	70-130			
Carbon Tetrachloride	25.2		ug/L	25.0		101	70-130			
Chlorobenzene	24.7		ug/L	25.0		99	70-130			
Chloroethane	24.2		ug/L	25.0		97	70-130			
Chloroform	25.0		ug/L	25.0		100	70-130			
Chloromethane	25.3		ug/L	25.0		101	70-130			
cis-1,2-Dichloroethene	24.2		ug/L	25.0		97	70-130			
cis-1,3-Dichloropropene	24.4		ug/L	25.0		98	70-130			
Dibromochloromethane	22.0		ug/L	25.0		88	70-130			
Dibromomethane	23.6		ug/L	25.0		94	70-130			
Dichlorodifluoromethane	26.2		ug/L	25.0		105	70-130			
Diethyl Ether	24.5		ug/L	25.0		98	70-130			
Di-isopropyl ether	24.2		ug/L	25.0		97	70-130			
Ethyl tertiary-butyl ether	24.0		ug/L	25.0		96	70-130			
Ethylbenzene	25.3		ug/L	25.0		101	70-130			
Hexachlorobutadiene	31.5		ug/L	25.0		126	70-130			
Isopropylbenzene	27.1		ug/L	25.0		108	70-130			
Methyl tert-Butyl Ether	44.2		ug/L	50.0		88	70-130			
Methylene Chloride	22.1		ug/L	25.0		88	70-130			
Naphthalene	20.4		ug/L	25.0		82	70-130			
n-Butylbenzene	25.8		ug/L	25.0		103	70-130			
n-Propylbenzene	25.6		ug/L	25.0		102	70-130			
sec-Butylbenzene	25.8		ug/L	25.0		103	70-130			
Styrene	25.4		ug/L	25.0		102	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>8260B Volatile Organic Compounds</b>										
<b>Batch BB50406 - 5030B</b>										
tert-Butylbenzene	26.5		ug/L	25.0		106	70-130			
Tertiary-amyl methyl ether	22.7		ug/L	25.0		91	70-130			
Tetrachloroethene	25.4		ug/L	25.0		102	70-130			
Tetrahydrofuran	17.1		ug/L	25.0		68	70-130			+
Toluene	25.3		ug/L	25.0		101	70-130			
trans-1,2-Dichloroethene	25.2		ug/L	25.0		101	70-130			
trans-1,3-Dichloropropene	25.0		ug/L	25.0		100	70-130			
Trichloroethene	27.3		ug/L	25.0		109	70-130			
Trichlorofluoromethane	26.9		ug/L	25.0		108	70-130			
Vinyl Acetate	21.6		ug/L	25.0		86	70-130			
Vinyl Chloride	25.4		ug/L	25.0		102	70-130			
Xylene O	26.0		ug/L	25.0		104	70-130			
Xylene P,M	51.5		ug/L	50.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	23.6		ug/L	25.0		94	70-130			
Surrogate: 4-Bromofluorobenzene	24.0		ug/L	25.0		96	70-130			
Surrogate: Toluene-d8	23.8		ug/L	25.0		95	70-130			
<b>LCS Dup</b>										
1,1,1,2-Tetrachloroethane	24.6		ug/L	25.0		98	70-130	0	20	
1,1,1-Trichloroethane	24.6		ug/L	25.0		98	70-130	1	20	
1,1,1,2,2-Tetrachloroethane	21.3		ug/L	25.0		85	70-130	0	20	
1,1,1,2-Trichloroethane	24.1		ug/L	25.0		96	70-130	0	20	
1,1-Dichloroethane	23.1		ug/L	25.0		92	70-130	1	20	
1,1-Dichloroethene	24.2		ug/L	25.0		97	70-130	1	20	
1,1-Dichloropropene	24.8		ug/L	25.0		99	70-130	3	20	
1,2,3-Trichlorobenzene	22.8		ug/L	25.0		91	70-130	0	20	
1,2,3-Trichloropropane	21.9		ug/L	25.0		88	70-130	1	20	
1,2,4-Trichlorobenzene	23.5		ug/L	25.0		94	70-130	0	20	
1,2,4-Trimethylbenzene	25.8		ug/L	25.0		103	70-130	1	20	
1,2-Dibromo-3-Chloropropane	20.2		ug/L	25.0		81	70-130	0	20	
1,2-Dibromoethane	23.8		ug/L	25.0		95	70-130	0	20	
1,2-Dichlorobenzene	24.6		ug/L	25.0		98	70-130	1	20	
1,2-Dichloroethane	24.4		ug/L	25.0		98	70-130	1	20	
1,2-Dichloropropane	22.8		ug/L	25.0		91	70-130	1	20	
1,3,5-Trimethylbenzene	26.6		ug/L	25.0		106	70-130	0	20	
1,3-Dichlorobenzene	25.4		ug/L	25.0		102	70-130	0	20	
1,3-Dichloropropane	22.6		ug/L	25.0		90	70-130	0	20	
1,4-Dichlorobenzene	25.1		ug/L	25.0		100	70-130	1	20	
1,4-Dioxane - Screen	406		ug/L	500		81	70-130	20	20	
1-Chlorohexane	24.3		ug/L	25.0		97	70-130	1	20	
2,2-Dichloropropane	24.5		ug/L	25.0		98	70-130	1	20	
2-Butanone	16.6		ug/L	25.0		66	70-130	2	20	+
2-Chlorotoluene	25.4		ug/L	25.0		102	70-130	3	20	
2-Hexanone	19.8		ug/L	25.0		79	70-130	3	20	
4-Chlorotoluene	25.1		ug/L	25.0		100	70-130	1	20	
4-Isopropyltoluene	27.4		ug/L	25.0		110	70-130	0	20	
4-Methyl-2-Pentanone	22.2		ug/L	25.0		89	70-130	1	20	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>8260B Volatile Organic Compounds</b>										
<b>Batch BB50406 - 5030B</b>										
Acetone	14.5		ug/L	25.0		58	70-130	17	20	+
Benzene	24.2		ug/L	25.0		97	70-130	0	20	
Bromobenzene	25.1		ug/L	25.0		100	70-130	0	20	
Bromochloromethane	23.6		ug/L	25.0		94	70-130	0	20	
Bromodichloromethane	23.6		ug/L	25.0		94	70-130	1	20	
Bromoform	23.4		ug/L	25.0		94	70-130	2	20	
Bromomethane	28.1		ug/L	25.0		112	70-130	2	20	
Carbon Disulfide	25.5		ug/L	25.0		102	70-130	2	20	
Carbon Tetrachloride	25.2		ug/L	25.0		101	70-130	0	20	
Chlorobenzene	24.6		ug/L	25.0		98	70-130	1	20	
Chloroethane	23.9		ug/L	25.0		96	70-130	1	20	
Chloroform	24.8		ug/L	25.0		99	70-130	1	20	
Chloromethane	25.4		ug/L	25.0		102	70-130	1	20	
cis-1,2-Dichloroethene	24.1		ug/L	25.0		96	70-130	1	20	
cis-1,3-Dichloropropene	24.2		ug/L	25.0		97	70-130	1	20	
Dibromochloromethane	22.1		ug/L	25.0		88	70-130	0	20	
Dibromomethane	23.5		ug/L	25.0		94	70-130	0	20	
Dichlorodifluoromethane	25.8		ug/L	25.0		103	70-130	2	20	
Diethyl Ether	24.3		ug/L	25.0		97	70-130	1	20	
Di-isopropyl ether	24.0		ug/L	25.0		96	70-130	1	20	
Ethyl tertiary-butyl ether	23.8		ug/L	25.0		95	70-130	1	20	
Ethylbenzene	25.2		ug/L	25.0		101	70-130	0	20	
Hexachlorobutadiene	32.0		ug/L	25.0		128	70-130	2	20	
Isopropylbenzene	27.2		ug/L	25.0		109	70-130	0.9	20	
Methyl tert-Butyl Ether	44.2		ug/L	50.0		88	70-130	0	20	
Methylene Chloride	21.8		ug/L	25.0		87	70-130	1	20	
Naphthalene	20.3		ug/L	25.0		81	70-130	1	20	
n-Butylbenzene	25.7		ug/L	25.0		103	70-130	0	20	
n-Propylbenzene	25.2		ug/L	25.0		101	70-130	1	20	
sec-Butylbenzene	25.9		ug/L	25.0		104	70-130	1	20	
Styrene	25.5		ug/L	25.0		102	70-130	0	20	
tert-Butylbenzene	26.2		ug/L	25.0		105	70-130	0.9	20	
Tertiary-amyl methyl ether	22.6		ug/L	25.0		90	70-130	1	20	
Tetrachloroethene	25.6		ug/L	25.0		102	70-130	0	20	
Tetrahydrofuran	17.8		ug/L	25.0		71	70-130	4	20	
Toluene	25.2		ug/L	25.0		101	70-130	0	20	
trans-1,2-Dichloroethene	25.0		ug/L	25.0		100	70-130	1	20	
trans-1,3-Dichloropropene	25.0		ug/L	25.0		100	70-130	0	20	
Trichloroethene	27.1		ug/L	25.0		108	70-130	0.9	20	
Trichlorofluoromethane	26.6		ug/L	25.0		106	70-130	2	20	
Vinyl Acetate	21.5		ug/L	25.0		86	70-130	0	20	
Vinyl Chloride	24.9		ug/L	25.0		100	70-130	2	20	
Xylene O	25.8		ug/L	25.0		103	70-130	1	20	
Xylene P,M	51.6		ug/L	50.0		103	70-130	0	20	
Surrogate: 1,2-Dichloroethane-d4	23.4		ug/L	25.0		94	70-130			
Surrogate: 4-Bromofluorobenzene	23.9		ug/L	25.0		96	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

Batch **BB50406 - 5030B**

<i>Surrogate: Toluene-d8</i>	23.7		ug/L	25.0		95	70-130			
<b>Matrix Spike</b>	<b>Source: 0501288-01</b>									
1,1,1,2-Tetrachloroethane	21.4		ug/L	25.0	ND	86	70-130			
1,1,1-Trichloroethane	22.8		ug/L	25.0	0.700	88	70-130			
1,1,2,2-Tetrachloroethane	18.9		ug/L	25.0	ND	76	70-130			
1,1,2-Trichloroethane	21.0		ug/L	25.0	ND	84	70-130			
1,1-Dichloroethane	21.1		ug/L	25.0	ND	84	70-130			
1,1-Dichloroethene	22.9		ug/L	25.0	ND	92	70-130			
1,1-Dichloropropene	23.7		ug/L	25.0	ND	95	70-130			
1,2,3-Trichlorobenzene	17.9		ug/L	25.0	ND	72	70-130			
1,2,3-Trichloropropane	19.2		ug/L	25.0	ND	77	70-130			
1,2,4-Trichlorobenzene	18.0		ug/L	25.0	ND	72	70-130			
1,2,4-Trimethylbenzene	21.3		ug/L	25.0	ND	85	70-130			
1,2-Dibromo-3-Chloropropane	28.5		ug/L	25.0	ND	114	70-130			
1,2-Dibromoethane	21.0		ug/L	25.0	ND	84	70-130			
1,2-Dichlorobenzene	20.4		ug/L	25.0	ND	82	70-130			
1,2-Dichloroethane	21.2		ug/L	25.0	ND	85	70-130			
1,2-Dichloropropane	20.6		ug/L	25.0	ND	82	70-130			
1,3,5-Trimethylbenzene	21.6		ug/L	25.0	ND	86	70-130			
1,3-Dichlorobenzene	21.1		ug/L	25.0	ND	84	70-130			
1,3-Dichloropropane	19.9		ug/L	25.0	ND	80	70-130			
1,4-Dichlorobenzene	20.6		ug/L	25.0	ND	82	70-130			
1,4-Dioxane - Screen	376		ug/L	500	ND	75	70-130			
1-Chlorohexane	21.3		ug/L	25.0	ND	85	70-130			
2,2-Dichloropropane	21.8		ug/L	25.0	ND	87	70-130			
2-Butanone	18.0		ug/L	25.0	ND	72	70-130			
2-Chlorotoluene	19.7		ug/L	25.0	ND	79	70-130			
2-Hexanone	18.9		ug/L	25.0	ND	76	70-130			
4-Chlorotoluene	20.6		ug/L	25.0	ND	82	70-130			
4-Isopropyltoluene	19.2		ug/L	25.0	ND	77	70-130			
4-Methyl-2-Pentanone	22.4		ug/L	25.0	ND	90	70-130			
Acetone	39.1		ug/L	25.0	ND	156	70-130			+
Benzene	22.6		ug/L	25.0	ND	90	70-130			
Bromobenzene	21.0		ug/L	25.0	ND	84	70-130			
Bromochloromethane	19.5		ug/L	25.0	ND	78	70-130			
Bromodichloromethane	21.2		ug/L	25.0	ND	85	70-130			
Bromoform	20.6		ug/L	25.0	ND	82	70-130			
Bromomethane	17.7		ug/L	25.0	ND	71	70-130			
Carbon Disulfide	24.0		ug/L	25.0	ND	96	70-130			
Carbon Tetrachloride	23.0		ug/L	25.0	ND	92	70-130			
Chlorobenzene	21.8		ug/L	25.0	ND	87	70-130			
Chloroethane	19.0		ug/L	25.0	ND	76	70-130			
Chloroform	22.5		ug/L	25.0	ND	90	70-130			
Chloromethane	18.0		ug/L	25.0	ND	72	70-130			
cis-1,2-Dichloroethene	22.3		ug/L	25.0	ND	89	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

##### Batch BB50406 - 5030B

cis-1,3-Dichloropropene	22.1		ug/L	25.0	ND	88	70-130			
Dibromochloromethane	19.2		ug/L	25.0	ND	77	70-130			
Dibromomethane	21.5		ug/L	25.0	ND	86	70-130			
Dichlorodifluoromethane	22.6		ug/L	25.0	ND	90	70-130			
Diethyl Ether	22.0		ug/L	25.0	ND	88	70-130			
Di-isopropyl ether	21.9		ug/L	25.0	ND	88	70-130			
Ethyl tertiary-butyl ether	21.9		ug/L	25.0	ND	88	70-130			
Ethylbenzene	22.3		ug/L	25.0	ND	89	70-130			
Hexachlorobutadiene	21.2		ug/L	25.0	ND	85	70-130			
Isopropylbenzene	23.6		ug/L	25.0	ND	94	70-130			
Methyl tert-Butyl Ether	39.8		ug/L	50.0	ND	80	70-130			
Methylene Chloride	20.2		ug/L	25.0	ND	81	70-130			
Naphthalene	18.0		ug/L	25.0	ND	72	70-130			
n-Butylbenzene	19.1		ug/L	25.0	ND	76	70-130			
n-Propylbenzene	21.5		ug/L	25.0	ND	86	70-130			
sec-Butylbenzene	20.1		ug/L	25.0	ND	80	70-130			
Styrene	22.3		ug/L	25.0	ND	89	70-130			
tert-Butylbenzene	19.1		ug/L	25.0	ND	76	70-130			
Tertiary-amyl methyl ether	21.0		ug/L	25.0	ND	84	70-130			
Tetrachloroethene	31.3		ug/L	25.0	10.5	83	70-130			
Tetrahydrofuran	18.5		ug/L	25.0	ND	74	70-130			
Toluene	22.5		ug/L	25.0	ND	90	70-130			
trans-1,2-Dichloroethene	23.2		ug/L	25.0	ND	93	70-130			
trans-1,3-Dichloropropene	21.7		ug/L	25.0	ND	87	70-130			
Trichloroethene	28.2		ug/L	25.0	6.90	85	70-130			
Trichlorofluoromethane	27.9		ug/L	25.0	5.60	89	70-130			
Vinyl Acetate	19.7		ug/L	25.0	ND	79	70-130			
Vinyl Chloride	22.4		ug/L	25.0	ND	90	70-130			
Xylene O	22.9		ug/L	25.0	ND	92	70-130			
Xylene P,M	46.3		ug/L	50.0	ND	93	70-130			
Surrogate: 1,2-Dichloroethane-d4	21.0		ug/L	25.0		84	70-130			
Surrogate: 4-Bromofluorobenzene	24.2		ug/L	25.0		97	70-130			
Surrogate: Toluene-d8	23.2		ug/L	25.0		93	70-130			

##### Matrix Spike Dup Source: 0501288-01

1,1,1,2-Tetrachloroethane	22.1		ug/L	25.0	ND	88	70-130	2	20	
1,1,1-Trichloroethane	24.1		ug/L	25.0	0.700	94	70-130	7	20	
1,1,2,2-Tetrachloroethane	19.2		ug/L	25.0	ND	77	70-130	1	20	
1,1,2-Trichloroethane	23.0		ug/L	25.0	ND	92	70-130	9	20	
1,1-Dichloroethane	22.2		ug/L	25.0	ND	89	70-130	6	20	
1,1-Dichloroethene	24.0		ug/L	25.0	ND	96	70-130	4	20	
1,1-Dichloropropene	24.8		ug/L	25.0	ND	99	70-130	4	20	
1,2,3-Trichlorobenzene	18.3		ug/L	25.0	ND	73	70-130	1	20	
1,2,3-Trichloropropane	19.4		ug/L	25.0	ND	78	70-130	1	20	
1,2,4-Trichlorobenzene	18.8		ug/L	25.0	ND	75	70-130	4	20	
1,2,4-Trimethylbenzene	21.9		ug/L	25.0	ND	88	70-130	3	20	
1,2-Dibromo-3-Chloropropane	18.6		ug/L	25.0	ND	74	70-130	43	20	+

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

#### Batch BB50406 - 5030B

1,2-Dibromoethane	21.8		ug/L	25.0	ND	87	70-130	4	20	
1,2-Dichlorobenzene	21.1		ug/L	25.0	ND	84	70-130	2	20	
1,2-Dichloroethane	22.4		ug/L	25.0	ND	90	70-130	6	20	
1,2-Dichloropropane	21.5		ug/L	25.0	ND	86	70-130	5	20	
1,3,5-Trimethylbenzene	22.4		ug/L	25.0	ND	90	70-130	5	20	
1,3-Dichlorobenzene	21.4		ug/L	25.0	ND	86	70-130	2	20	
1,3-Dichloropropane	20.6		ug/L	25.0	ND	82	70-130	2	20	
1,4-Dichlorobenzene	21.7		ug/L	25.0	ND	87	70-130	6	20	
1,4-Dioxane - Screen	365		ug/L	500	ND	73	70-130	3	20	
1-Chlorohexane	22.2		ug/L	25.0	ND	89	70-130	5	20	
2,2-Dichloropropane	22.7		ug/L	25.0	ND	91	70-130	4	20	
2-Butanone	19.5		ug/L	25.0	ND	78	70-130	8	20	
2-Chlorotoluene	19.6		ug/L	25.0	ND	78	70-130	1	20	
2-Hexanone	19.5		ug/L	25.0	ND	78	70-130	3	20	
4-Chlorotoluene	21.6		ug/L	25.0	ND	86	70-130	5	20	
4-Isopropyltoluene	20.0		ug/L	25.0	ND	80	70-130	4	20	
4-Methyl-2-Pentanone	23.2		ug/L	25.0	ND	93	70-130	3	20	
Acetone	21.2		ug/L	25.0	ND	85	70-130	59	20	+
Benzene	23.4		ug/L	25.0	ND	94	70-130	4	20	
Bromobenzene	21.8		ug/L	25.0	ND	87	70-130	4	20	
Bromochloromethane	20.2		ug/L	25.0	ND	81	70-130	4	20	
Bromodichloromethane	22.2		ug/L	25.0	ND	89	70-130	5	20	
Bromoform	21.4		ug/L	25.0	ND	86	70-130	5	20	
Bromomethane	22.4		ug/L	25.0	ND	90	70-130	24	20	+
Carbon Disulfide	25.1		ug/L	25.0	ND	100	70-130	4	20	
Carbon Tetrachloride	24.1		ug/L	25.0	ND	96	70-130	4	20	
Chlorobenzene	22.5		ug/L	25.0	ND	90	70-130	3	20	
Chloroethane	19.9		ug/L	25.0	ND	80	70-130	5	20	
Chloroform	23.6		ug/L	25.0	ND	94	70-130	4	20	
Chloromethane	19.6		ug/L	25.0	ND	78	70-130	8	20	
cis-1,2-Dichloroethene	23.4		ug/L	25.0	ND	94	70-130	5	20	
cis-1,3-Dichloropropene	22.9		ug/L	25.0	ND	92	70-130	4	20	
Dibromochloromethane	20.0		ug/L	25.0	ND	80	70-130	4	20	
Dibromomethane	22.7		ug/L	25.0	ND	91	70-130	6	20	
Dichlorodifluoromethane	24.7		ug/L	25.0	ND	99	70-130	10	20	
Diethyl Ether	23.1		ug/L	25.0	ND	92	70-130	4	20	
Di-isopropyl ether	22.8		ug/L	25.0	ND	91	70-130	3	20	
Ethyl tertiary-butyl ether	22.6		ug/L	25.0	ND	90	70-130	2	20	
Ethylbenzene	23.0		ug/L	25.0	ND	92	70-130	3	20	
Hexachlorobutadiene	22.6		ug/L	25.0	ND	90	70-130	6	20	
Isopropylbenzene	24.4		ug/L	25.0	ND	98	70-130	4	20	
Methyl tert-Butyl Ether	42.4		ug/L	50.0	ND	85	70-130	6	20	
Methylene Chloride	21.0		ug/L	25.0	ND	84	70-130	4	20	
Naphthalene	17.5		ug/L	25.0	ND	70	70-130	3	20	
n-Butylbenzene	20.0		ug/L	25.0	ND	80	70-130	5	20	
n-Propylbenzene	22.7		ug/L	25.0	ND	91	70-130	6	20	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

##### Batch BB50406 - 5030B

sec-Butylbenzene	21.0		ug/L	25.0	ND	84	70-130	5	20	
Styrene	23.1		ug/L	25.0	ND	92	70-130	3	20	
tert-Butylbenzene	19.8		ug/L	25.0	ND	79	70-130	4	20	
Tertiary-amyl methyl ether	21.8		ug/L	25.0	ND	87	70-130	4	20	
Tetrachloroethene	32.3		ug/L	25.0	10.5	87	70-130	5	20	
Tetrahydrofuran	19.4		ug/L	25.0	ND	78	70-130	5	20	
Toluene	23.2		ug/L	25.0	ND	93	70-130	3	20	
trans-1,2-Dichloroethene	24.2		ug/L	25.0	ND	97	70-130	4	20	
trans-1,3-Dichloropropene	22.6		ug/L	25.0	ND	90	70-130	3	20	
Trichloroethene	30.1		ug/L	25.0	6.90	93	70-130	9	20	
Trichlorofluoromethane	30.7		ug/L	25.0	5.60	100	70-130	12	20	
Vinyl Acetate	20.0		ug/L	25.0	ND	80	70-130	1	20	
Vinyl Chloride	24.1		ug/L	25.0	ND	96	70-130	6	20	
Xylene O	23.6		ug/L	25.0	ND	94	70-130	2	20	
Xylene P,M	47.6		ug/L	50.0	ND	95	70-130	2	20	
Surrogate: 1,2-Dichloroethane-d4	21.7		ug/L	25.0		87	70-130			
Surrogate: 4-Bromofluorobenzene	24.2		ug/L	25.0		97	70-130			
Surrogate: Toluene-d8	23.0		ug/L	25.0		92	70-130			

##### Batch BB50702 - 5030B

Blank										
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							
1,1,1-Trichloroethane	ND	1.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L							
1,1,2-Trichloroethane	ND	1.0	ug/L							
1,1-Dichloroethane	ND	1.0	ug/L							
1,1-Dichloroethene	ND	1.0	ug/L							
1,1-Dichloropropene	ND	1.0	ug/L							
1,2,3-Trichlorobenzene	ND	1.0	ug/L							
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	ug/L							
1,2,4-Trimethylbenzene	ND	1.0	ug/L							
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L							
1,2-Dibromoethane	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichloroethane	ND	1.0	ug/L							
1,2-Dichloropropane	ND	1.0	ug/L							
1,3,5-Trimethylbenzene	ND	1.0	ug/L							
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,3-Dichloropropane	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
1,4-Dioxane - Screen	ND	500	ug/L							
1-Chlorohexane	ND	1.0	ug/L							
2,2-Dichloropropane	ND	1.0	ug/L							
2-Butanone	ND	25.0	ug/L							
2-Chlorotoluene	ND	1.0	ug/L							



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

##### Batch BB50702 - 5030B

2-Hexanone	ND	10.0	ug/L							
4-Chlorotoluene	ND	1.0	ug/L							
4-Isopropyltoluene	ND	1.0	ug/L							
4-Methyl-2-Pentanone	ND	10.0	ug/L							
Acetone	ND	25.0	ug/L							
Benzene	ND	1.0	ug/L							
Bromobenzene	ND	1.0	ug/L							
Bromochloromethane	ND	1.0	ug/L							
Bromodichloromethane	ND	1.0	ug/L							
Bromoform	ND	1.0	ug/L							
Bromomethane	ND	2.0	ug/L							
Carbon Disulfide	ND	1.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
Chlorobenzene	ND	1.0	ug/L							
Chloroethane	ND	2.0	ug/L							
Chloroform	ND	1.0	ug/L							
Chloromethane	ND	2.0	ug/L							
cis-1,2-Dichloroethene	ND	1.0	ug/L							
cis-1,3-Dichloropropene	ND	0.5	ug/L							
Dibromochloromethane	ND	1.0	ug/L							
Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Diethyl Ether	ND	1.0	ug/L							
Di-isopropyl ether	ND	1.0	ug/L							
Ethyl tertiary-butyl ether	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	5.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Tetrahydrofuran	ND	5.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.5	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	2.0	ug/L							
Vinyl Acetate	ND	5.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

## Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

### 8260B Volatile Organic Compounds

#### Batch BB50702 - 5030B

Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	18.4		ug/L	25.0		74	70-130			
Surrogate: 4-Bromofluorobenzene	24.5		ug/L	25.0		98	70-130			
Surrogate: Toluene-d8	22.7		ug/L	25.0		91	70-130			

#### LCS

1,1,1,2-Tetrachloroethane	24.1		ug/L	25.0		96	70-130			
1,1,1-Trichloroethane	24.5		ug/L	25.0		98	70-130			
1,1,2,2-Tetrachloroethane	21.1		ug/L	25.0		84	70-130			
1,1,2-Trichloroethane	24.3		ug/L	25.0		97	70-130			
1,1-Dichloroethane	23.1		ug/L	25.0		92	70-130			
1,1-Dichloroethene	24.4		ug/L	25.0		98	70-130			
1,1-Dichloropropene	25.3		ug/L	25.0		101	70-130			
1,2,3-Trichlorobenzene	21.0		ug/L	25.0		84	70-130			
1,2,3-Trichloropropane	22.1		ug/L	25.0		88	70-130			
1,2,4-Trichlorobenzene	21.8		ug/L	25.0		87	70-130			
1,2,4-Trimethylbenzene	25.1		ug/L	25.0		100	70-130			
1,2-Dibromo-3-Chloropropane	20.6		ug/L	25.0		82	70-130			
1,2-Dibromoethane	23.4		ug/L	25.0		94	70-130			
1,2-Dichlorobenzene	23.9		ug/L	25.0		96	70-130			
1,2-Dichloroethane	23.8		ug/L	25.0		95	70-130			
1,2-Dichloropropane	22.5		ug/L	25.0		90	70-130			
1,3,5-Trimethylbenzene	25.9		ug/L	25.0		104	70-130			
1,3-Dichlorobenzene	24.8		ug/L	25.0		99	70-130			
1,3-Dichloropropane	22.4		ug/L	25.0		90	70-130			
1,4-Dichlorobenzene	24.6		ug/L	25.0		98	70-130			
1,4-Dioxane - Screen	348		ug/L	500		70	70-130			
1-Chlorohexane	24.9		ug/L	25.0		100	70-130			
2,2-Dichloropropane	25.2		ug/L	25.0		101	70-130			
2-Butanone	21.8		ug/L	25.0		87	70-130			
2-Chlorotoluene	25.5		ug/L	25.0		102	70-130			
2-Hexanone	20.7		ug/L	25.0		83	70-130			
4-Chlorotoluene	25.2		ug/L	25.0		101	70-130			
4-Isopropyltoluene	23.6		ug/L	25.0		94	70-130			
4-Methyl-2-Pentanone	24.2		ug/L	25.0		97	70-130			
Acetone	18.4		ug/L	25.0		74	70-130			
Benzene	24.2		ug/L	25.0		97	70-130			
Bromobenzene	24.6		ug/L	25.0		98	70-130			
Bromochloromethane	21.0		ug/L	25.0		84	70-130			
Bromodichloromethane	23.4		ug/L	25.0		94	70-130			
Bromoform	22.8		ug/L	25.0		91	70-130			
Bromomethane	24.5		ug/L	25.0		98	70-130			
Carbon Disulfide	25.9		ug/L	25.0		104	70-130			
Carbon Tetrachloride	25.7		ug/L	25.0		103	70-130			
Chlorobenzene	24.4		ug/L	25.0		98	70-130			
Chloroethane	20.3		ug/L	25.0		81	70-130			

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

##### Batch BB50702 - 5030B

Chloroform	24.8		ug/L	25.0		99	70-130			
Chloromethane	20.3		ug/L	25.0		81	70-130			
cis-1,2-Dichloroethene	23.9		ug/L	25.0		96	70-130			
cis-1,3-Dichloropropene	24.3		ug/L	25.0		97	70-130			
Dibromochloromethane	21.7		ug/L	25.0		87	70-130			
Dibromomethane	23.3		ug/L	25.0		93	70-130			
Dichlorodifluoromethane	25.3		ug/L	25.0		101	70-130			
Diethyl Ether	24.2		ug/L	25.0		97	70-130			
Di-isopropyl ether	23.9		ug/L	25.0		96	70-130			
Ethyl tertiary-butyl ether	23.6		ug/L	25.0		94	70-130			
Ethylbenzene	24.7		ug/L	25.0		99	70-130			
Hexachlorobutadiene	27.3		ug/L	25.0		109	70-130			
Isopropylbenzene	26.7		ug/L	25.0		107	70-130			
Methyl tert-Butyl Ether	43.8		ug/L	50.0		88	70-130			
Methylene Chloride	21.6		ug/L	25.0		86	70-130			
Naphthalene	19.1		ug/L	25.0		76	70-130			
n-Butylbenzene	24.0		ug/L	25.0		96	70-130			
n-Propylbenzene	24.5		ug/L	25.0		98	70-130			
sec-Butylbenzene	24.3		ug/L	25.0		97	70-130			
Styrene	25.2		ug/L	25.0		101	70-130			
tert-Butylbenzene	22.8		ug/L	25.0		91	70-130			
Tertiary-amyl methyl ether	22.5		ug/L	25.0		90	70-130			
Tetrachloroethene	25.5		ug/L	25.0		102	70-130			
Tetrahydrofuran	20.8		ug/L	25.0		83	70-130			
Toluene	25.1		ug/L	25.0		100	70-130			
trans-1,2-Dichloroethene	25.0		ug/L	25.0		100	70-130			
trans-1,3-Dichloropropene	25.0		ug/L	25.0		100	70-130			
Trichloroethene	27.4		ug/L	25.0		110	70-130			
Trichlorofluoromethane	26.7		ug/L	25.0		107	70-130			
Vinyl Acetate	21.6		ug/L	25.0		86	70-130			
Vinyl Chloride	24.9		ug/L	25.0		100	70-130			
Xylene O	25.6		ug/L	25.0		102	70-130			
Xylene P,M	51.2		ug/L	50.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	23.2		ug/L	25.0		93	70-130			
Surrogate: 4-Bromofluorobenzene	24.1		ug/L	25.0		96	70-130			
Surrogate: Toluene-d8	24.0		ug/L	25.0		96	70-130			

##### LCS Dup

1,1,1,2-Tetrachloroethane	24.1		ug/L	25.0		96	70-130	0	20	
1,1,1-Trichloroethane	21.8		ug/L	25.0		87	70-130	12	20	
1,1,1,2-Tetrachloroethane	21.0		ug/L	25.0		84	70-130	0	20	
1,1,2-Trichloroethane	22.9		ug/L	25.0		92	70-130	5	20	
1,1-Dichloroethane	20.6		ug/L	25.0		82	70-130	11	20	
1,1-Dichloroethene	21.8		ug/L	25.0		87	70-130	12	20	
1,1-Dichloropropene	22.3		ug/L	25.0		89	70-130	13	20	
1,2,3-Trichlorobenzene	21.1		ug/L	25.0		84	70-130	0	20	
1,2,3-Trichloropropane	21.8		ug/L	25.0		87	70-130	1	20	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>8260B Volatile Organic Compounds</b>										
<b>Batch BB50702 - 50308</b>										
1,2,4-Trichlorobenzene	22.1		ug/L	25.0		88	70-130	1	20	
1,2,4-Trimethylbenzene	25.6		ug/L	25.0		102	70-130	2	20	
1,2-Dibromo-3-Chloropropane	20.4		ug/L	25.0		82	70-130	0	20	
1,2-Dibromoethane	23.2		ug/L	25.0		93	70-130	1	20	
1,2-Dichlorobenzene	24.2		ug/L	25.0		97	70-130	1	20	
1,2-Dichloroethane	20.9		ug/L	25.0		84	70-130	12	20	
1,2-Dichloropropane	21.6		ug/L	25.0		86	70-130	5	20	
1,3,5-Trimethylbenzene	26.2		ug/L	25.0		105	70-130	1	20	
1,3-Dichlorobenzene	25.3		ug/L	25.0		101	70-130	2	20	
1,3-Dichloropropane	22.0		ug/L	25.0		88	70-130	2	20	
1,4-Dichlorobenzene	24.6		ug/L	25.0		98	70-130	0	20	
1,4-Dioxane - Screen	305		ug/L	500		61	70-130	14	20	+
1-Chlorohexane	24.4		ug/L	25.0		98	70-130	2	20	
2,2-Dichloropropane	22.2		ug/L	25.0		89	70-130	13	20	
2-Butanone	19.0		ug/L	25.0		76	70-130	13	20	
2-Chlorotoluene	23.7		ug/L	25.0		95	70-130	7	20	
2-Hexanone	20.7		ug/L	25.0		83	70-130	0	20	
4-Chlorotoluene	25.1		ug/L	25.0		100	70-130	1	20	
4-Isopropyltoluene	23.9		ug/L	25.0		96	70-130	2	20	
4-Methyl-2-Pentanone	20.5		ug/L	25.0		82	70-130	17	20	
Acetone	18.5		ug/L	25.0		74	70-130	0	20	
Benzene	21.5		ug/L	25.0		86	70-130	12	20	
Bromobenzene	24.9		ug/L	25.0		100	70-130	2	20	
Bromochloromethane	18.6		ug/L	25.0		74	70-130	13	20	
Bromodichloromethane	20.7		ug/L	25.0		83	70-130	12	20	
Bromoform	22.7		ug/L	25.0		91	70-130	0	20	
Bromomethane	22.3		ug/L	25.0		89	70-130	10	20	
Carbon Disulfide	23.0		ug/L	25.0		92	70-130	12	20	
Carbon Tetrachloride	22.9		ug/L	25.0		92	70-130	11	20	
Chlorobenzene	24.5		ug/L	25.0		98	70-130	0	20	
Chloroethane	18.1		ug/L	25.0		72	70-130	12	20	
Chloroform	21.9		ug/L	25.0		88	70-130	12	20	
Chloromethane	18.2		ug/L	25.0		73	70-130	10	20	
cis-1,2-Dichloroethene	21.4		ug/L	25.0		86	70-130	11	20	
cis-1,3-Dichloropropene	21.4		ug/L	25.0		86	70-130	12	20	
Dibromochloromethane	21.5		ug/L	25.0		86	70-130	1	20	
Dibromomethane	20.6		ug/L	25.0		82	70-130	13	20	
Dichlorodifluoromethane	22.6		ug/L	25.0		90	70-130	12	20	
Diethyl Ether	21.2		ug/L	25.0		85	70-130	13	20	
Di-isopropyl ether	21.0		ug/L	25.0		84	70-130	13	20	
Ethyl tertiary-butyl ether	20.6		ug/L	25.0		82	70-130	14	20	
Ethylbenzene	25.2		ug/L	25.0		101	70-130	2	20	
Hexachlorobutadiene	28.1		ug/L	25.0		112	70-130	3	20	
Isopropylbenzene	26.8		ug/L	25.0		107	70-130	0	20	
Methyl tert-Butyl Ether	38.3		ug/L	50.0		77	70-130	13	20	
Methylene Chloride	19.2		ug/L	25.0		77	70-130	11	20	

# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

#### 8260B Volatile Organic Compounds

##### Batch BB50702 - 5030B

Naphthalene	19.2		ug/L	25.0		77	70-130	1	20	
n-Butylbenzene	24.4		ug/L	25.0		98	70-130	2	20	
n-Propylbenzene	26.0		ug/L	25.0		104	70-130	6	20	
sec-Butylbenzene	24.7		ug/L	25.0		99	70-130	2	20	
Styrene	25.1		ug/L	25.0		100	70-130	1	20	
tert-Butylbenzene	23.3		ug/L	25.0		93	70-130	2	20	
Tertiary-amyl methyl ether	19.5		ug/L	25.0		78	70-130	14	20	
Tetrachloroethene	25.6		ug/L	25.0		102	70-130	0	20	
Tetrahydrofuran	18.6		ug/L	25.0		74	70-130	11	20	
Toluene	25.1		ug/L	25.0		100	70-130	0	20	
trans-1,2-Dichloroethene	22.3		ug/L	25.0		89	70-130	12	20	
trans-1,3-Dichloropropene	24.5		ug/L	25.0		98	70-130	2	20	
Trichloroethene	24.3		ug/L	25.0		97	70-130	13	20	
Trichlorofluoromethane	23.7		ug/L	25.0		95	70-130	12	20	
Vinyl Acetate	18.9		ug/L	25.0		76	70-130	12	20	
Vinyl Chloride	22.1		ug/L	25.0		88	70-130	13	20	
Xylene O	25.8		ug/L	25.0		103	70-130	1	20	
Xylene P,M	51.5		ug/L	50.0		103	70-130	1	20	
Surrogate: 1,2-Dichloroethane-d4	20.3		ug/L	25.0		81	70-130			
Surrogate: 4-Bromofluorobenzene	23.9		ug/L	25.0		96	70-130			
Surrogate: Toluene-d8	23.8		ug/L	25.0		95	70-130			

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

Client Name: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

### Notes and Definitions

- J        Reported below 2xMRL; Estimated value.  
+        Outside QC Limits.  
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  
mg/kg    Results reported as wet weight  
TCLP     Toxicity Characteristic Leachate Procedure  
I/V      Initial Volume  
F/V      Final Volume  
§        Subcontracted analysis; see attached report  
TIC      A forward library search of the NBS Mass Spectral Library was performed on this sample using the McLafferty Probability Base Matching (PBM) Algorithm. An estimated concentration of non-TCL compounds tentatively identified is quantified by the internal standard method. The nearest internal standard free of interferences was used to quantify. A response factor of one was assumed. This search was inclusive of the ten largest peaks greater than ten percent of the nearest internal standard.
- 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: EA Engineering, Science, and Technology  
Client Project ID: Gorham

ESS Laboratory Work Order: 0501288

## **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)  
Drinking Water: 242400-C  
Wastewater: 242400-D

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

United States Department of Agriculture  
Soil Permit: S-54210

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

Maryland: 301  
Potable Water

Pennsylvania: 68-934

# 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  RI  CT  NH  NJ  NY  ME  Other \_\_\_\_\_  
 Is this project for any of the following: USACE Other \_\_\_\_\_  
 MA-MCP Navy \_\_\_\_\_

Reporting Limits  
**RIDEM GB**  
 Groundwater Objectives: 0501288  
 Electronic Deliverable Yes  No \_\_\_\_\_  
 Format: Excel Access PDF Other \_\_\_\_\_

ESS LAB PROJECT ID \_\_\_\_\_

Project # **6196501** Project Name (20 Char. or less) **Gorham**

Contact Person **Bill Parrett** Address **2350 Post Rd**

City **Warwick** State **RI** Zip **02885** PO# \_\_\_\_\_

Telephone # **(401) 736-3440** Fax # **(401) 736-3423** Email Address **parrett@esslab.com**

ESS LAB Sample#	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8260 VOA	8021 GRO	8015 VPH	8100 TPH	8015 DRG	EPH	w/PAHs	w/PAHs & Diesel	8081 PCB	8082 PCB	8270 PAH	SVOA	RORA8	PP13	TAL23	NBC7	MCP-METALS (13)	MCP-METALS (13) w/Hg
1	1/31/05	1000	X	GN		MW-1	2	3	V	X																	
2		1430				MW-2																					
3		1345				MW-3																					
4		1215				MW-4																					
5						DUP																					
6						TB-1		1																			

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: **2.6**

Preservation Code: 1- NP, 2- HCl, 3- H<sub>2</sub>SO<sub>4</sub>, 4- HNO<sub>3</sub>, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- \_\_\_\_\_  
 Sampled by: **Matt Griewe**  
 Comments: \_\_\_\_\_

Relinquished by: (Signature) <b>Matthew Griewe</b>	Date/Time <b>1/31/05 13:10</b>	Received by: (Signature) <b>P. Davis</b>	Date/Time <b>1/31/05 13:10</b>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

\*By circling MA-MCP, client acknowledges samples were collected



# ESS Laboratory Guide to Sample Handling and Preparation

Revised 08/31/04

## All Samples Should Be Cooled to 4° C

Analysis	Method Number	Standard Volume		Preservative		Water Hold Time	Soil Hold Time	pH check Required	Direct Delivery Required	Notes
		Aqueous	Soil	Aqueous	Soil					
		8 oz G	8 oz G	NP	NP					
Acidity	305.1	250 mL P,G	8 oz G	NP	NP	14 days				H <sub>2</sub> SO <sub>4</sub> =Sulfuric Acid to < 2 pH 1:1 HCl=Hydrochloric Acid to < 2 pH
Alkalinity	301.1	250 mL P,G	8 oz G	NP	NP	14 days				HNO <sub>3</sub> =Nitric Acid to < 2 pH
Ammonia	350.2/350.3	1000 mL P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days	Yes			NaOH=Sodium Hydroxide to > 12 pH MeOH=15mL Methanol
Asbestos	NA	NA	8 oz G	NP	NP	28 days				Zn Acetate=4 drops zinc acetate/100mL
Base Neutrals	8270/825	2000 mL G	8 oz G	NP	NP	7 days	Yes			
BOD - 5 day	405.1	1000 mL P,G	8 oz G	NP	NP	48 hours				
Bromide	320.1	250 mL P,G	8 oz G	NP	NP	28 days				
Chloride	325.2/300.0	250 mL P,G	8 oz G	NP	NP	28 days				
Chlorine (TRC)	330.1/330.5	250 mL P,G	8 oz G	NP	NP	Immediate				
Chromium (VI)	7196A/3500	250 mL P,G	NA	NP	NP	24 hours	Yes			4 day hold after extraction
COD	410.4	250 mL P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days	Yes			
Coliform	9221B	sterile cup	sterile cup	NP	NP	24 hours	Yes			
Color	110.2	250 mL P,G	NA	NP	NP	48 hours	Yes			
Conductance	120.1/2510B	250 mL P,G	8 oz G	NP	NP	28 days				
Cyanide (Amenable)	335.1	1000 mL P,G	8 oz G	NaOH	NP	14 days	Yes			
Cyanide (Total)	9010/335.2	1000 mL P,G	8 oz G	NaOH	NP	14 days	Yes			
Dissolved Oxygen	360.1	500 mL G*	NA	NP	NP	Immediate				* Glass only
EDB & DBCP	504/8011	3x40 mL V	NA	NP/HCL	NP	28 days				No head space/air bubbles
EPH	MASS EPH	1000 mL G	8 oz G	HCl	NP	14 days	Yes			40 day hold after extraction
Flash Point	1010	40 mL	2 oz G	NP	NP	7 days				
Fluoride	300.0	1000 mL P,G	8 oz G	NP	NP	28 days				
Grain Size	NA	NA	8 oz G	NP	NP	NA				
GRO	8015/ME	3x40 mL V	40 mL V	HCl	MeOH	14 days	Yes			No head space/air bubbles
Haloacetic Acids	552.2	3x40 mL V	NA	NH4Cl	N/A	14 days				7 day hold after extraction
Hardness	200.7/6010B	250 mL P,G	8 oz G	HNO3	NP	6 months	Yes			
Herbicides	8151	2000 mL G	8 oz G	NP	NP	14 days				
Iodide	345.1	250 mL P,G	8 oz G	NP	NP	24 hours				
Kjeldahl Nitrogen (Total)	351.3	1000 mL P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days	Yes			Filtered in Field, * if not filtered in field
Mercury (Dissolved)	7471/245.1	250 mL P,G	8 oz G	NP	NP	28 days	Yes			
Mercury (Total)	7471/245.1	250 mL P,G	8 oz G	HNO <sub>3</sub>	NP	28 days	Yes			Filtered in Field, * if not filtered in field
Metals (Dissolved)	6010/200.7/200.9	250 mL P,G	8 oz G	NP	NP	6 months	Yes			
Metals (Total)	6010/200.7/200.9	250 mL P,G	8 oz G	HNO <sub>3</sub>	NP	6 months	Yes			
Nitrate	353.2	250 mL P,G	8 oz G	NP	NP	48 hours	Yes			
Nitrate-Nitrite	353.2	250 mL P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days	Yes			
Nitrite	353.2	250 mL P,G	8 oz G	NP	NP	48 hours	Yes			* Glass only
Odor	140.1	250 mL G*	8 oz G	NP	NP	24 hours	Yes			* Glass only
Oil & Grease	1664	1000 mL G*	NA	H2SO4	NP	28 days	Yes			
Orthophosphate	365.1	1000 mL P,G	8 oz G	NP	NP	48 hours				
PAH	8270	2000 mL G	8 oz G	NP	NP	7 days				40 day hold after extraction
Paint Filter	9095	NA	8 oz G	NP	NP	7 days				10 cm <sup>2</sup> template/gauze
PCB	8082/608	2000 mL G	8 oz G	NP	NP	7 days				
PCB (Oil)	8082	NA	2 oz G	NP	NP	14 days				
PCB (Wipe)	8082	NA	wipe kit	Hexane	NA	14 days				
PCB/Pesticides	608	2000 mL G	8 oz G	NP	NP	7 days				
Pesticides	8081/608	2000 mL G	8 oz G	NP	NP	14 days				
pH	9040/150.1/9045	250 mL P,G	8 oz G	NP	NP	7 days	Yes			pH 5-9 required
Phenol	5530/9065/420.1	1000 mL G*	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	Immediate	Yes			Done in the field
Phosphorous (Hydrolyz)	365.1	1000 mL P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days	Yes			* Glass only
Phosphorous (Total)	365.1	1000 mL P,G	8 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days	Yes			
Salinity	2520	250 mL G	8 oz G	NP	NP	28 days				
Settleable Solids	160.5	1000 mL P,G	NA	NP	NP	28 days				Yes
Silica	370.1	250 mL P*	8 oz G	NP	NP	48 hours				* Plastic only
Siloxane	NA	50 mL P	NA	MeOH	NP	28 days				Done on air samples only
SPLP	1312	4000 mL G	16 oz G	NP	NP	21 days	Yes			
Sulfide	376.2	500 mL P	8 oz G	Zn Acet, NaOH	NP	7 days	Yes			NaOH pH > 9
Sulfite	377.1	250 mL P,G	8 oz G	NP	NP	Immediate	Yes			Done in the field
Sulfate	375.4/9038	250 mL P	8 oz G	NP	NP	28 days				
Surfactants (MBAS)	425.1	250 mL P,G	NA	NP	NP	48 hours				Yes
SVOA	8270/625	2000 mL G	8 oz G	NP	NP	7 days				40 day hold after extraction
TCLP (Fuel)	1311	4000 mL G	16 oz G	NP	NP	14 days				SVQA hold 7 days after spin
TDS	160.1	250 mL P,G	8 oz G	NP	NP	7 days				
THM	524.2	3x40 mL V	NA	Na2S2O3	NA	14 days				
TOC	415.2	2x40 mL V	2 oz G	H <sub>2</sub> SO <sub>4</sub>	NP	28 days				Subcontracted
TOX	450.1	2x40 mL V	NA	H <sub>2</sub> SO <sub>4</sub>	NP	7 days				Subcontracted
TPH (GC FID)	8100M	1000 mL G	8 oz G	NP/HCL/H <sub>2</sub> SO <sub>4</sub>	NP	7 days	Yes			Glass only
TPH (Method)	1664	1000 mL G	8 oz G	HCL/H <sub>2</sub> SO <sub>4</sub>	NP	28 days	Yes			Glass only
TSS	160.3	250 mL P	NA	NP	NP	7 days				
TSS	160.2	250 mL P	NA	NP	NP	7 days				
Turbidity	180.1	250mL P,G	NA	NP	NP	48 hr				Yes
TVS	160.4	250 mL P	NA	NP	NP	7 days				
Volatile Halogens	9076	2 oz G	2 oz G	NP	NP	28 days				Yes*
Volatile Organics	8260/8021/624	3x40 mL V	2 oz G	HCL	NP	14 days				No hs/air bubbles, * Unpreserved VOC only
VPH	Mass VPH	3x40 mL V	40 mL V	HCL	MeOH	14 days				Aq-No hs/air bubbles, Soil-include NP %solids
VOCs/9260	5035/8260	NA	40 mL V	NA	MeOH	14 days				Must include NP %solids VOA

**APPENDIX F**

**GEOTECHNICAL SOIL BORING LOGS**

1948

...

...

1

...

...

...

<b>HAMMER</b>		<b>Allstate Drilling Co.</b>		SHEET <u>1</u> OF <u>1</u>	
EAST PROVIDENCE, R.I. 02915		LOCATION <u>PROVIDENCE</u>		HOLE NO. <u>B-1 O.W.</u>	
CLIENT: <u>H.V. COLLINS</u>		ALLSTATE NO. <u>T-178</u>		GROUND ELEVATION <u>25.5'</u>	
PROJECT: <u>NEW PROVIDENCE HIGH SCHOOL</u>		DATE, START: <u>2/01/05</u>		GROUND WATER DEPTH <u>25.5'</u>	
FORMER GORHAM MILLS		DATE, FINISH: <u>2/01/05</u>			
INSPECTOR: <u>R. COOK, JR.</u>		SAMPLER I. D. <u>1 3/8"</u>			
DRILLER: <u>J. MASTROFRANCESCO</u>		CASING I. D. <u>---</u>			
CASING: WT. <u>---</u> FALL <u>---</u>					
SAMPLER: WT. <u>140</u> FALL <u>30</u>					

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NO. DEPTHS ELEV FT	TYPE OF SAMPLE	PENETRATION BLOWS PER 6 INCHES	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOILS, REMARKS <small>REMARKS INCLUDE COLOR GRADATION TYPE OF SOIL ETC MOISTURE TYPE CONDITION HARDNESS DRILLING TIME SEAMS ETC</small>
0	A	0-2.0	D-1	23-19-12-10	DENSE		F-C DK BR-BLK SAND AND F-C GRAVEL, tr of silt, little wood and asphalt-fill
	U						
	G						
	E						
	R	5-7.0	D-2	4-5-4-3	LOOSE		
	S						
-10		10-12.0	D-3	10-15-16-17	DENSE	9.0	F-C LT BR SAND, LITTLE F-C GRAVEL, tr of silt
		15-17.0	D-4	7-12-13-15	MED. DENSE		
-20		20-22.0	D-5	10-17-19-22	DENSE	22.3	
		25-27.0	D-6	6-10-10-12	MED. DENSE	27.0	F DK GR SAND, some silt
-30							END OF BORING - 27.0'
							INSTALLED 26.0' OF 2" M.W. AS O.W.
-40							

GROUND SURFACE TO <u>25.0</u> FT. USED AUGERS CASING: THEN <u>INSTALLED WELL</u>		HOLE NO. <u>B-1 O.W.</u>	
Type of Sample C = Cored    W = Washed UP = Undisturbed Piston TP = Test Pit    A = Auger US = Undisturbed Shelby V = Vane Test		Penetration Resistance 140 lb. Wt falling 30" on 2" O.D. Sampler Cohesive Consistency	
Proportions Used	140 lb. Wt falling 30" on 2" O.D. Sampler	Cohesionless Density	Cohesive Consistency
Trace little some and	0 to 10% 11 to 20% 21 to 35% 36 to 50%	Very Loose Med Dense Very Dense	0-2 Very Soft 3-4 Soft 5-8 M/SHF 9-15 SHF 16-30 V-Striff 31+ Hard
Summary		Earth Boring <u>27.0'</u>	
		Rock Coring <u>---</u>	
		Samples <u>D-6</u>	

# Allstate Drilling Co.

EAST PROVIDENCE, R.I. 02915

SHEET 1 OF 1  
 LOCATION PROVIDENCE  
 HOLE NO. B-2  
 LINE & STA. \_\_\_\_\_  
 OFFSET \_\_\_\_\_

CASING: WT. 140 FALL 30  
 SAMPLER: WT. 140 FALL 30

CLIENT: H.V. COLLINS  
 PROJECT: NEW PROVIDENCE HIGH SCHOOL  
FORMER GORHAM MILLS

INSPECTOR: \_\_\_\_\_ ALLSTATE NO. T-178  
 DRILLER: R. COOK, JR. SAMPLER I. D. 1 3/8"  
 HELPER: J. MASTROFRANCESCO CASING I. D. \_\_\_\_\_  
 DATE START: 2/02/05 GROUND ELEVATION \_\_\_\_\_  
 DATE FINISH: 2/02/05 GROUND WATER DEPTH 26.5

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NO. DEPTHS ELEV FT	TYPE OF SAMPLE	PENETRATION BLOWS PER 6 INCHES	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOILS, REMARKS REMARKS INCLUDE COLOR GRADATION TYPE OF SOIL, ETC MOLE-COLOR TYPE CONDITION HARDNESS, DRILLING TIME, SEAMS, ETC
0	A	0-2.0	D-1	21-15-10-13	MED.		F-M DK BR SAND, LITTLE C SAND, LITTLE F-C GRAV., tr of silt-fill
	U				DENSE	5.0	
	G						
	E						
	R	5-7.0	D-2	1-2-1-1	VERY LOOSE	7.3	F-M LT BR SAND, TR OF C SAND, tr of silt
	S						
-10		10-12.0	D-3	3-5-7-7	MED. DENSE		F-M LT GR-BR SAND, tr of silt
		15-17.0	D-4	6-8-10-10	MED. DENSE		F-M LT GR-BR SAND, TR F GRAV., tr of silt
		20-22.0	D-5	5-7-9-10	MED. DENSE	25.0	
-20							
		25-27.0	D-6	5-7-7-9	MED. DENSE	27.0	F-DK-GR SAND, tr of silt
							END OF BORING
-30							
-40							

GROUND SURFACE TO 25.0 FT. USED AUGERS: THEM CASING: THEM SAMPLE SPOON

Type of Sample: C = Cores, W = Washed, U = Undisturbed Piston, IP = Test Pit, A = Auger, US = Undisturbed Shelby, V = Vane Test

Proportions Used: trace little same and; 0 to 10%, 11 to 20%, 21 to 35%, 36 to 50%

140 lb. Wt falling 30" on 2" O.D. Sampler

Cohesionless Density	Penetration Resistance
0-4	0-2
5-9	3-4
10-29	5-8
30-49	9-15
50 +	16-30
	31 +

Earth Boring B-2 Summary 27.0  
 Rock Coring D-6  
 Samples \_\_\_\_\_

**Allstate Drilling Co.**  
EAST PROVIDENCE, R.I. 02915

**HAMMER** SHEET 1 OF 1  
LOCATION PROVIDENCE  
HOLE NO. B-3  
LINE & STA. \_\_\_\_\_  
OFFSET \_\_\_\_\_

CASING: WT. 140 FALL 30  
SAMPLER: WT. 140 FALL 30

CLIENT: H.V. COLLINS  
PROJECT: NEW PROVIDENCE HIGH SCHOOL  
FORMER GORHAM MILLS

INSPECTOR: R. COOK, JR. ALLSTATE NO. T-178  
DRILLER: J. MASTROFRANCESCO SAMPLER I. D. 1 3/8" DATE START: 2/02/05  
HELPER: \_\_\_\_\_ CASING I. D. \_\_\_\_\_ DATE FINISH: 2/02/05

GROUND ELEVATION 25.0  
GROUND WATER DEPTH \_\_\_\_\_

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NO. DEPTHS ELEV FT	TYPE OF SAMPLE	PENETRATION BLOWS PER 6 INCHES	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOILS, REMARKS REMARKS INCLUDE COLOR GRADATION TYPE OF SOIL ETC MOE-COLOR TYPE CONDITION HARDNESS DRILLING TIME SEAMS ETC
0	A	0-2.0	D-1	31-21-17-12	DENSE		F-M LT BR SAND, LITTLE F-M GRAV., tr of silt-fill
	U						
	G						
	E						
	R	5-7.0	D-2	3-2-5-6	LOOSE		
	S						
-10		10-10.5	D-3	120	VERY DENSE	10.0 11.0	CONCRETE
		15-17.0	D-4	5-7-7-8	MED. DENSE		F-M LT GR SAND, tr of silt
-20		20-22.0	D-5	6-12-12-13	MED. DENSE	24.7	
		25-27.0	D-6	6-12-12-13	MED. DENSE	27.0	F DK GR-BR SAND, tr of silt
-30							END OF BORING
-40							

GROUND SURFACE TO 25.0 FT. USED AUGERS CASING: THEN SAMPLE SPOON HOLE NO. B-3 Summary

Penetration Resistance  
140 lb. Wt falling 30" on 2" O.D. Sampler

Cohesionless Density	Very Loose	0-2	Very Soft
	Loose	3-4	Soft
	Med Dense	5-8	M/Shift
	Dense	9-15	Stiff
	Very Dense	16-30	V-Shift
		31+	Hard

Proportions Used

Trace	0 to 10%
little	11 to 20%
some	21 to 35%
and	36 to 50%

Type of Sample C = Cored W = Washed  
 UF = Undisturbed Piston  
 TP = Test Pit A = Auger  
 US = Undisturbed Shelby  
 V = Vane Test

Earth Boring 27.0  
 Rock Coring D-6  
 Samples \_\_\_\_\_

**HAMMER**

**Allstate Drilling Co.**  
EAST PROVIDENCE, R.I. 02915

SHEET 1 OF 1  
LOCATION PROVIDENCE  
HOLE NO. B-4  
LINE & STA. \_\_\_\_\_  
OFFSET \_\_\_\_\_

CASING: WT. \_\_\_\_\_ FALL \_\_\_\_\_  
SAMPLER: WT. 140 FALL 30

CLIENT: H.V. COLLINS  
PROJECT: NEW PROVIDENCE HIGH SCHOOL  
FORMER GORHAM MILLS

INSPECTOR: \_\_\_\_\_ ALLSTATE NO. T-178  
DRILLER: R. COOK, JR. SAMPLER I. D. 1 3/8" DATE: START 2/01/05  
HELPER: J. MASTROFRANCESCO CASING I. D. \_\_\_\_\_ DATE: FINISH 2/01/05  
GROUND ELEVATION \_\_\_\_\_  
GROUND WATER DEPTH MOIST

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NO DEPTHS ELEV FT	TYPE OF SAMPLE	PENETRATION BLOWS PER 6 INCHES	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOILS, REMARKS <small>REMARKS INCLUDE COLOR GRADATION TYPE OF SOIL ETC MOCL-COLOR TYPE CONDITION HARDNESS DRILLING TIME SEAMS ETC</small>
0		0-2.0	D-1	21-10-6-15	MED. DENSE		F-C LT BR SAND AND F-C GRAY., tr of silt, SOME BRICK FRAGS-fill
	A					8.0	
	U						
	G						
	E						
	R	5-7.0	D-2	8-5-6-6	MED. DENSE		
	S						
		10-12.0	D-3	3-4-6-8	MED. DENSE		F-M LT BR SAND, LITTLE C SAND, TR F-M GRAY., tr of silt
		15-17.0	D-4	3-6-8-8	MED. DENSE		
		20-22.0	D-5	10-15-15-16	DENSE	25.0	
		25-27.0	D-6	18-24-21-18	DENSE	27.0	F-C DK GR SAND AND F-C GRAY., little silt
							END OF BORING

GROUND SURFACE TO 25.0 FT. USED AUGERS THEN SAMPLE SPOON CASING: \_\_\_\_\_ HOLE NO. B-4

Summary  
Earth Boring 27.0  
Rock Coring --  
Samples D-6

Penetration Resistance 140 lb. Wt falling 30" on 2" O.D Sampler	Cohesive Consistency	Proportions Used	
		Trace	W = Washed
0.2	Very Soft	0 to 10%	
3.4	Soft	11 to 20%	
5.8	M/Stiff	21 to 35%	
9.15	Stiff	36 to 50%	
14-30	V-Stiff		
31+	Hard		

Type of Sample  
D = Dry  
UP = Undisturbed  
TP = Test Pit  
US = Undisturbed Shelby  
V = Vane Test  
C = Cored  
W = Washed  
A = Auger









SHEET 1 OF 1  
 LOCATION PROVIDENCE  
 HOLE NO. B-8  
 LINE & STA. \_\_\_\_\_  
 OFFSET \_\_\_\_\_

# Allstate Drilling Co.

EAST PROVIDENCE, R.I. 02915

CLIENT: H. V. COLLINS  
 PROJECT: NEW PROVIDENCE HIGH SCHOOL  
 FORMER GORHAM MILLS

INSPECTOR: R. COOK, JR.  
 DRILLER: J. MASTROFRANCESCO  
 HELPER: \_\_\_\_\_

ALLSTATE NO. T-178  
 DATE, START: 2/01/05  
 DATE, FINISH: 2/01/05  
 GROUND ELEVATION: \_\_\_\_\_  
 GROUND WATER DEPTH: MOIST

SAMPLER I. D. 1 3/8"  
 CASING I. D. --

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NO. DEPTHS ELEV. FT.	TYPE OF SAMPLE	PENETRATION BLOWS PER 6 INCHES	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV.	FIELD IDENTIFICATION OF SOILS. REMARKS	
							REMARKS INCLUDE COLOR GRADATION TYPE OF SOIL, ETC.	POCC-COLOR TYPE CONDITION HARDNESS DRILLING TIME, SEAMS ETC.
0		0-2.0	D-1	32-16-8-11	MED.	2.5	F-M LT BR SAND AND F-C GRAV., tr of silt, tr of wood-fill	
	A				DENSE			
	U					4.8	CONCRETE	
	G							
	E							
	R	5-7.0	D-2	10-18-18-20	DENSE			
	S							
		10-12.0	D-3	8-13-10-8	MED.	14.8		
					DENSE			
		15-17.0	D-4	10-16-18-21	DENSE		F-C LT BR SAND, LITTLE F-M GRAV., tr of silt	
		20-22.0	D-5	14-16-12-16	MED.	23.9		
					DENSE			
		25-27.0	D-6	8-11-14-12	MED.	27.0	F-C LT GR-BR SAND, LITTLE F-C GRAV., tr of silt	
					DENSE			
							END OF BORING	

GROUND SURFACE TO 25.0 FT. USED AUGERS CASING: THEN SAMPLE SPOON

Type of Sample D = Dry UP = Undisturbed Piston IP = Test Pit US = Undisturbed Shelby V = Vane Test	Proportions Used 0 to 10% 11 to 20% 21 to 35% 36 to 50%	Cohesionless Density Very Loose Loose Med Dense Very Dense	Penetration Resistance 140 lb. Wt falling 30" on 2" O.D. Sampler	Summary	
				Earth Boring	27.0
				Rock Coring	D-6
				Samples	

HOLE NO. B-8





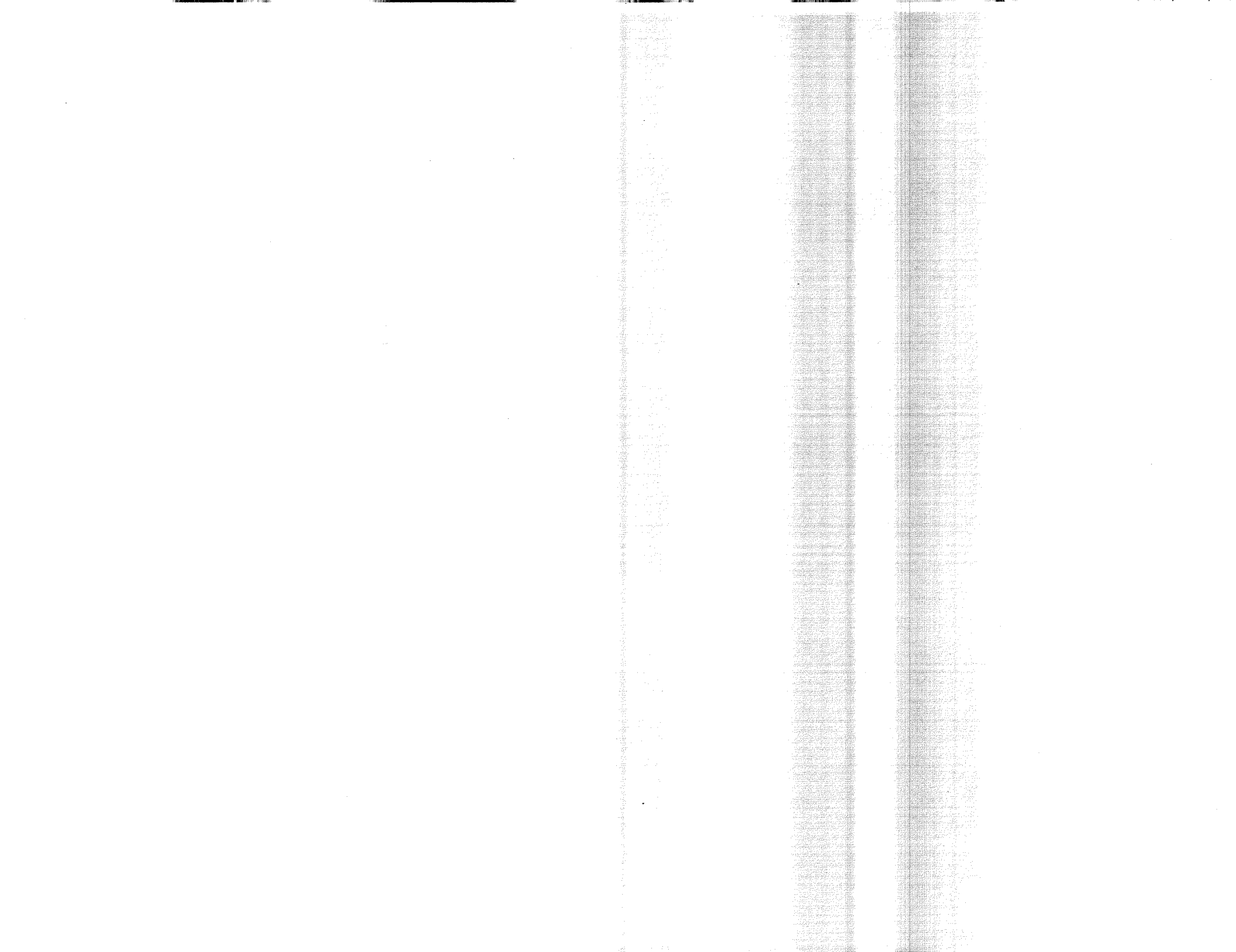




**APPENDIX G**

**GEOTECHNICAL TEST PIT LOGS**





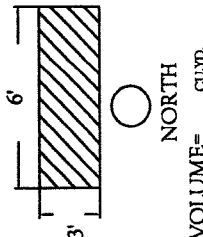

# TEST PIT FIELD LOG


CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 1  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT MODEL CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 7:30 AM  
 TIME COMPLETED 7:45 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
1'	FILL/GARBAGE DARK BROWN/BLACK DECOMPOSING ORGANICS	M-D	*	
2'				
3'				
4'	SANDY GRAVEL FILL/GARBAGE BRN/TAN MIX FC SAND & GRAVEL			1
5'				2
6'				
7'				
8'				
9'				
10'	END OF TEST PIT DUE TO DISCOVERY OF CONCRETE SLAB			
11'				
12'				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.  
 1. ROUND REINFORCING ROD ENCOUNTERED AT A DEPTH OF 4'.  
 2. CONCRETE FOUNDATION WALL ENCOUNTERED AT A DEPTH OF 5'.

TEST PIT PLAN 	<b>LEGEND:</b> <u>BOULDER COUNT</u> SIZE RANGE CLASSIFICATION    LETTER DESIGNATION 6"-18"                                    A 18"-36"                                    B 36" AND LARGER                        C	<u>PROPORTIONS USED</u> TRACE (TR)                            0-10% LITTLE (LD)                            10-20% SOME (SO)                                20-35% AND    35-50%	<u>ABBREVIATIONS</u> F-FINE M-MEDIUM C-COARSE F/M-FINE TO MEDIUM F/C-FINE TO COARSE V-VERY GR-CRAY BN-BROWN YEL-YELLOW
VOLUME = _____ CU.YD.		<u>EXCAVATION EFFORT</u> E-EASY M-MODERATE D-DIFFICULT GROUND WATER BLAISED TIME TO READING (HRS.)  G.W.L.	

DRAWN BY: <u>HJS</u>	DATE: <u>2/21/05</u>		<b>GEISSER ENGINEERING CORP.</b> CONSULTING ENGINEERS 227 WAMPANOAG TRAIL RIVERSIDE, RHODE ISLAND 02915 PHONE # 401-438-7711    FAX # 401-438-0281 www.geisserengineering.com    EMAIL: gec@geisserengineering.com															
DESIGNED BY: <u>HJS</u>	SCALE: <u>N.T.S.</u>	PLAN REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">NO.</th> <th style="width: 90%;">COMMENTS</th> <th style="width: 10%;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	COMMENTS	DATE												
NO.	COMMENTS			DATE														
CHECKED BY: <u>G/JG</u>	JOB NO.: <u>T-178</u>	TEST PIT FIELD LOGS PROVIDENCE SCHOOL - GORHAM SITE PROVIDENCE, RI																
PROJECT:																		

# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 2  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT MODEL CAPACITY 1 CU.YD. REACH 13 FT DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 7:45 AM  
 TIME COMPLETED 7:55 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
0 TO 6"	FILL/SARGE DARK BROWN/BLACK DECOMPOSING ORGANICS	M-D	*	
1'	END OF TEST PIT DUE TO DISCOVERY OF CONCRETE SLAB			
2'				
3'				
4'				
5'				
6'				
7'				
8'				
9'				
10'				
11'				
12'				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<p>TEST PIT PLAN</p>	<p><b>LEGEND:</b></p> <p><b>BOULDER COUNT</b></p> <table style="font-size: small;"> <tr> <td>SIZE RANGE CLASSIFICATION</td> <td>LETTER DESIGNATION</td> </tr> <tr> <td>6"-18"</td> <td>A</td> </tr> <tr> <td>18"-36"</td> <td>B</td> </tr> <tr> <td>36" AND LARGER</td> <td>C</td> </tr> </table>	SIZE RANGE CLASSIFICATION	LETTER DESIGNATION	6"-18"	A	18"-36"	B	36" AND LARGER	C	<p><b>PROPORTIONS USED</b></p> <table style="font-size: small;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (LD)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table>	TRACE (TR)	0-10%	LITTLE (LD)	10-20%	SOME (SO)	20-35%	AND	35-50%	<p><b>ABBREVIATIONS</b></p> <table style="font-size: small;"> <tr> <td>F-FINE</td> <td>M-MEDIUM</td> <td>C-COARSE</td> <td>F/M-FINE TO MEDIUM</td> </tr> <tr> <td>V-VERY</td> <td>GR-GRAY</td> <td>BN-BROWN</td> <td>YEL-YELLOW</td> </tr> </table>	F-FINE	M-MEDIUM	C-COARSE	F/M-FINE TO MEDIUM	V-VERY	GR-GRAY	BN-BROWN	YEL-YELLOW	<p><b>EXCAVATION EFFORT</b></p> <table style="font-size: small;"> <tr> <td>B-EASY</td> <td>M-MODERATE</td> <td>D-DIFFICULT</td> </tr> </table> <p><b>GROUND WATER</b></p> <p>ELASED TIME TO READING (HRS.)</p> <p style="font-size: x-small;">G.W.L.</p>	B-EASY	M-MODERATE	D-DIFFICULT
SIZE RANGE CLASSIFICATION	LETTER DESIGNATION																														
6"-18"	A																														
18"-36"	B																														
36" AND LARGER	C																														
TRACE (TR)	0-10%																														
LITTLE (LD)	10-20%																														
SOME (SO)	20-35%																														
AND	35-50%																														
F-FINE	M-MEDIUM	C-COARSE	F/M-FINE TO MEDIUM																												
V-VERY	GR-GRAY	BN-BROWN	YEL-YELLOW																												
B-EASY	M-MODERATE	D-DIFFICULT																													
<p>DRAWN BY: <u>HJS</u> DATE: <u>2/21/05</u></p> <p>DESIGNED BY: <u>HJS</u> SCALE: <u>N.T.S.</u></p> <p>CHECKED BY: <u>G/JG</u> JOB NO.: <u>T-178</u></p>		<p>PLAN REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>NO.</th> <th>COMMENTS</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	COMMENTS	DATE																									
NO.	COMMENTS	DATE																													
<p>PROJECT: <u>TEST PIT FIELD LOGS</u>  <u>PROVIDENCE SCHOOL - GORHAM SITE</u>  <u>PROVIDENCE, RI</u></p>																															

**GEISSER ENGINEERING CORP.**  
 CONSULTING ENGINEERS  
 227 WAMPANOAG TRAIL  
 RIVERSIDE, RHODE ISLAND 02915  
 PHONE # 401-438-7711 FAX # 401-438-0281  
 www.geisserengineering.com EMAIL: gec@geisserengineering.com

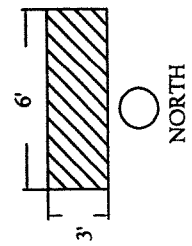
# TEST PIT FIELD LOG


CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 3  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT \_\_\_\_\_ MODEL \_\_\_\_\_ CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 7:55 AM  
 TIME COMPLETED 8:25 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
— 1' —	ORGANICS	E	*	
— 2' —	TOP SOIL DARK BROWN/BLACK SUBSOIL ORANGE/LT BRN. WISPY ROOTS/ORGANICS			
— 3' —	F/C SAND LT. SILT LI. COBBLE/GRAVEL			
— 4' —				
— 5' —	F/C SAND LT. BRN. LI. SILT LI. COBBLE/GRAVEL			
— 6' —				1
— 7' —				
— 8' —	F/C SAND LT. BRN. LI. SILT LI. COBBLE/GRAVEL			
— 9' —				
— 10' —	END OF TEST PIT			
— 11' —				
— 12' —				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.  
 1. WATER MOLDING DISCOVERED AT 6'

<b>TEST PIT PLAN</b>  <p style="text-align: center;">NORTH</p> <p>VOLUME = _____ CU.YD.</p>	<b>LEGEND:</b> <b>BOULDER COUNT</b> SIZE RANGE CLASSIFICATION A 6"-18" B 18"-36" C 36" AND LARGER	<b>PROPORTIONS USED</b> TRACE (TR) 0-10% LITTLE (L) 10-20% SOME (SO) 20-35% AND 35-50%	<b>ABBREVIATIONS</b> FINE MEDIUM COARSE F/C FINE TO MEDIUM V/C FINE TO COARSE V/V VERY GR GRAY BR BROWN YEL YELLOW	<b>EXCAVATION EFFORT</b> E-EASY M-MODERATE D-DIFFICULT <b>GROUND WATER</b> BLASED TRAC TO READING (HRS)
---	--	--	---	---

DRAWN BY: <u>HJS</u> DATE: <u>2/21/05</u>	PLAN REVISIONS NO. _____ DATE _____ COMMENTS _____	 <p> <b>GEISSER ENGINEERING CORP.</b>          CONSULTING ENGINEERS          227 WAMPANOAG TRAIL          RIVERSIDE, RHODE ISLAND 02915          PHONE # 401-438-7711 FAX # 401-438-0281          www.geisserengineering.com EMAIL: geo@geisserengineering.com       </p>
DESIGNED BY: <u>HJS</u> SCALE: <u>N.T.S.</u>	CHECKED BY: <u>GJG</u> JOB NO.: <u>T-178</u>	PROJECT: <u>TEST PIT FIELD LOGS          PROVIDENCE SCHOOL - GORHAM SITE          PROVIDENCE, RI</u>

# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 4  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT \_\_\_\_\_ MODEL \_\_\_\_\_ CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER \_\_\_\_\_ HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 8:25 AM  
 TIME COMPLETED 8:55 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
— 1' —	0 TO 6" TOP SOIL DARK BROWN/BLACK ORGANICS SUBSOIL ORANGE /LT. BRN ORGANICS WISPY ROOTS/ORGANICS	E	*	
— 2' —	16" TO 4' F/C SAND LN. SILT LL. COBBLE/GRAVEL			
— 3' —				
— 4' —				
— 5' —	4' TO 6' F/C SAND LN. SILT LL. COBBLE/GRAVEL			
— 6' —				
— 7' —				1
— 8' —	6' TO 10' F/C SAND LN. SILT LL. COBBLE/GRAVEL			
— 9' —				
— 10' —	END OF TEST PIT			
— 11' —				
— 12' —				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.  
 1. WATER MOLDING DISCOVERED AT 6'

<p>TEST PIT PLAN</p> <p style="text-align: center;">3'      6'</p> <p style="text-align: center;">○ NORTH</p> <p>VOLUME = _____ CU.YD.</p>	<p>LEGEND:</p> <p><b>BOULDER COUNT</b></p> <table style="width: 100%;"> <tr> <th>SIZE RANGE CLASSIFICATION</th> <th>LETTER DESIGNATION</th> </tr> <tr> <td>6"-18"</td> <td>A</td> </tr> <tr> <td>18"-36"</td> <td>B</td> </tr> <tr> <td>36" AND LARGER</td> <td>C</td> </tr> </table>	SIZE RANGE CLASSIFICATION	LETTER DESIGNATION	6"-18"	A	18"-36"	B	36" AND LARGER	C	<p>PROPORTIONS USED</p> <table style="width: 100%;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (L)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table>	TRACE (TR)	0-10%	LITTLE (L)	10-20%	SOME (SO)	20-35%	AND	35-50%	<p>ABBREVIATIONS</p> <table style="width: 100%;"> <tr> <td>R-FINE</td> <td>M-MEDIUM</td> <td>C-COARSE</td> <td>F/FINE TO MEDIUM</td> <td>V-VERY</td> <td>GR-BROWN</td> <td>Y-YELLOW</td> </tr> </table>	R-FINE	M-MEDIUM	C-COARSE	F/FINE TO MEDIUM	V-VERY	GR-BROWN	Y-YELLOW	<p>EXCAVATION EFFORT</p> <table style="width: 100%;"> <tr> <td>B-EASY</td> <td>M-MODERATE</td> <td>D-DIFFICULT</td> </tr> </table> <p>GROUND WATER</p> <p>RAISED TIME TO READING (HRS)</p> <p style="text-align: right;">G.W.L.</p>	B-EASY	M-MODERATE	D-DIFFICULT
SIZE RANGE CLASSIFICATION	LETTER DESIGNATION																													
6"-18"	A																													
18"-36"	B																													
36" AND LARGER	C																													
TRACE (TR)	0-10%																													
LITTLE (L)	10-20%																													
SOME (SO)	20-35%																													
AND	35-50%																													
R-FINE	M-MEDIUM	C-COARSE	F/FINE TO MEDIUM	V-VERY	GR-BROWN	Y-YELLOW																								
B-EASY	M-MODERATE	D-DIFFICULT																												
<p>DRAWN BY: <u>HJS</u> DATE: <u>2/21/05</u></p> <p>DESIGNED BY: <u>HJS</u> SCALE: <u>N.T.S.</u></p> <p>CHECKED BY: <u>GJG</u> JOB NO.: <u>T-178</u></p> <p>PROJECT: <u>TEST PIT FIELD LOGS</u>  <u>PROVIDENCE SCHOOL - GORHAM SITE</u>  <u>PROVIDENCE, RI</u></p>		<p>PLAN REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>COMMENTS</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	COMMENTS	DATE													<p><b>GG</b></p> <p><b>GEISSER ENGINEERING CORP.</b>          CONSULTING ENGINEERS          227 WAMPANOAG TRAIL          RIVERSIDE, RHODE ISLAND 02915          PHONE # 401-438-7711      FAX # 401-438-0281          www.geisserengineering.com      EMAIL: gve@geisserengineering.com</p>											
NO.	COMMENTS	DATE																												

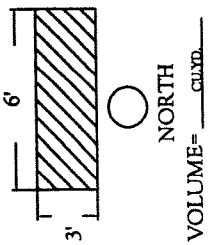


# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 5  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT MODEL CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 8:55 AM  
 TIME COMPLETED 9:25 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
0 TO 6"	WASHED AND LAYERED FINE SAND TO 2" SAND TO 6" GRAVEL TO 4"	D	*	
1'				
2'				
3'				
4'	F/C SAND BRN DEBRIS/GARBAGE HEAVY CONCENTRATIONS OF CLAY BRICK, DECOMPOSING WOOD, AND CONCRETE SECTIONS			
5'				
6'				
7'				
8'				
9'				
10'	END OF TEST PIT			
11'				
12'				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<b>TEST PIT PLAN</b>  <p style="text-align: center;">NORTH VOLUME = _____ CU.YD.</p>	<b>LEGEND:</b> <b>BOULDER COUNT</b> SIZE RANGE CLASSIFICATION 6"-18"      A 18"-36"      B 36" AND LARGER      C	<b>PROPORTIONS USED</b> TRACE (TR)      0-10% LITTLE (LD)      10-20% SOME (SO)      20-35% AND      35-50%	<b>ABBREVIATIONS</b> F-FINE M-MEDIUM C-COARSE F/M-FINE TO MEDIUM F/C-FINE TO COARSE V-VERY GR-GRAY BN-BROWN YEL-YELLOW	<b>EXCAVATION EFFORT</b> E-EASY M-MODERATE D-DIFFICULT <b>GROUND WATER</b> BLAISED TIME TO READING (HRS.)  G.W.L.
DRAWN BY: <u>HJS</u> DATE: <u>2/21/05</u> DESIGNED BY: <u>HJS</u> SCALE: <u>N.T.S.</u> CHECKED BY: <u>GJG</u> JOB NO.: <u>T-178</u>		PLAN REVISIONS NO.      DATE      COMMENTS		
PROJECT: <u>TEST PIT FIELD LOGS PROVIDENCE SCHOOL - GORHAM SITE PROVIDENCE, RI</u>		 <b>GEISSER ENGINEERING CORP.</b> CONSULTING ENGINEERS 227 WAMPANOAG TRAIL RIVERSIDE, RHODE ISLAND 02915 PHONE # 401-438-7711      FAX # 401-438-0281 www.geisserengineering.com      EMAIL: <a href="mailto:ge@geisserengineering.com">ge@geisserengineering.com</a>		

# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 6  
 OPERATOR T-178 FILE NO. T-178  
 MAKE/CAT MODEL CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 9:25 AM  
 TIME COMPLETED 9:55 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
	WASHED AND LAYERED FINE SAND TO 2" SAND TO 6" ASPHALT TO 4"	D	*	
1'	F/C SAND BRN DEBRIS/GARBAGE			
2'	HEAVY CONCENTRATIONS OF CLAY BRICK, DECOMPOSING WOOD, AND CONCRETE SECTIONS			
3'				
4'				
5'	WHITE BASIC LATEX COMPOUND USED FOR SILVERSMITH MOLDS			
6'				
7'				
8'	F/C SAND BRN DEBRIS/GARBAGE			
9'	HEAVY CONCENTRATIONS OF CLAY BRICK, DECOMPOSING WOOD, AND CONCRETE SECTIONS			
10'	END OF TEST PIT	▲		
11'				
12'				

REMARKS: \* . NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<p><b>TEST PIT PLAN</b></p> <p style="text-align: center;">NORTH VOLUME = <u>        </u> CU.YD.</p>	<p><b>LEGEND:</b></p> <p><b>BOULDER COUNT</b></p> <p>SIZE RANGE CLASSIFICATION      LETTER DESIGNATION</p> <p>6"-18"                                      A</p> <p>18"-36"                                     B</p> <p>36" AND LARGER                        C</p>	<p><b>PROPORTIONS USED</b></p> <p>TRACE (TR)                              0-10%</p> <p>LITTLE (L)                                10-20%</p> <p>SOME (SO)                                20-35%</p> <p>AND                                         35-50%</p>	<p><b>ABBREVIATIONS</b></p> <p>F-FINE M-MEDIUM C-COARSE F/M-FINE TO MEDIUM F/C-FINE TO COARSE V-VERY GR-GRAY BN-BROWN YEL-YELLOW</p>	<p><b>EXCAVATION EFFORT</b></p> <p>E-EASY M-MODERATE D-DIFFICULT</p> <p><b>GROUND WATER</b></p> <p>ELASD TIME TO READING (HRS.)</p> <p style="text-align: right;">G.W.L.</p>												
<p>DRAWN BY: <u>HJS</u>      DATE: <u>2/21/05</u></p>		<p>PLAN REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">NO.</th> <th style="width: 20%;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>			NO.	DATE										
NO.	DATE															
<p>DESIGNED BY: <u>HJS</u>      SCALE: <u>N.T.S.</u></p>		<p>COMMENTS</p>														
<p>CHECKED BY: <u>GJG</u>      JOB NO.: <u>T-178</u></p>		<p> </p>														
<p>TEST PIT FIELD LOGS PROVIDENCE SCHOOL - GORHAM SITE PROVIDENCE, RI</p>																

**GEISSER ENGINEERING CORP.**  
 CONSULTING ENGINEERS  
 227 WAMPANOAG TRAIL  
 RIVERSIDE, RHODE ISLAND 02915  
 PHONE # 401-488-7711      FAX # 401-438-0281  
 www.geisserengineering.com      EMAIL: ge@geisserengineering.com

# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 7  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT \_\_\_\_\_ MODEL \_\_\_\_\_ CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER \_\_\_\_\_ HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 9:55 AM  
 TIME COMPLETED 10:25 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
— 1' —	0 TO 5' F/C SAND BRN LOAM CONCENTRATION HEAVY CONCENTRATIONS OF CLAY BRICK, DECOMPOSING WOOD, AND CONCRETE SECTIONS	D-E	*	
— 2' —				
— 3' —				
— 4' —				
— 5' —				
— 6' —				
— 7' —				
— 8' —	5' TO 10' F/C SAND TAN LI SILT LI. COBBLE/GRAVEL			
— 9' —				
— 10' —	END OF TEST PIT			
— 11' —				
— 12' —				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<p>TEST PIT PLAN</p> <p style="text-align: center;">NORTH VOLUME = _____ CU.YD.</p>	<p>LEGEND:</p> <p><b>BOULDER COUNT</b></p> <table style="width: 100%;"> <tr> <td>SIZE RANGE CLASSIFICATION</td> <td>LETTER DESIGNATION</td> </tr> <tr> <td>6"-18"</td> <td>A</td> </tr> <tr> <td>18"-36"</td> <td>B</td> </tr> <tr> <td>36" AND LARGER</td> <td>C</td> </tr> </table>	SIZE RANGE CLASSIFICATION	LETTER DESIGNATION	6"-18"	A	18"-36"	B	36" AND LARGER	C	<p>PROPORTIONS USED</p> <table style="width: 100%;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (LD)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table>	TRACE (TR)	0-10%	LITTLE (LD)	10-20%	SOME (SO)	20-35%	AND	35-50%	<p>ABBREVIATIONS</p> <table style="width: 100%;"> <tr> <td>FINE</td> <td>GRAVEL</td> </tr> <tr> <td>MEDIUM</td> <td>BN-BROWN</td> </tr> <tr> <td>COARSE</td> <td>YEL-YELLOW</td> </tr> <tr> <td>F/CFINE TO MEDIUM</td> <td></td> </tr> <tr> <td>F/CFINE TO COARSE</td> <td></td> </tr> <tr> <td>V-VARY</td> <td></td> </tr> <tr> <td>GR-GRAY</td> <td></td> </tr> <tr> <td>BN-BROWN</td> <td></td> </tr> <tr> <td>YEL-YELLOW</td> <td></td> </tr> </table>	FINE	GRAVEL	MEDIUM	BN-BROWN	COARSE	YEL-YELLOW	F/CFINE TO MEDIUM		F/CFINE TO COARSE		V-VARY		GR-GRAY		BN-BROWN		YEL-YELLOW	
SIZE RANGE CLASSIFICATION	LETTER DESIGNATION																																				
6"-18"	A																																				
18"-36"	B																																				
36" AND LARGER	C																																				
TRACE (TR)	0-10%																																				
LITTLE (LD)	10-20%																																				
SOME (SO)	20-35%																																				
AND	35-50%																																				
FINE	GRAVEL																																				
MEDIUM	BN-BROWN																																				
COARSE	YEL-YELLOW																																				
F/CFINE TO MEDIUM																																					
F/CFINE TO COARSE																																					
V-VARY																																					
GR-GRAY																																					
BN-BROWN																																					
YEL-YELLOW																																					
<p>EXCAVATION EFFORT</p> <table style="width: 100%;"> <tr> <td>E-EASY</td> <td>GROUND WATER</td> </tr> <tr> <td>M-MODERATE</td> <td>ELASERD</td> </tr> <tr> <td>D-DIFFICULT</td> <td>TIME TO READING (HRS.)</td> </tr> </table> <p style="text-align: right;">G.W.L. </p>		E-EASY	GROUND WATER	M-MODERATE	ELASERD	D-DIFFICULT	TIME TO READING (HRS.)	<p>PLAN REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	DATE	COMMENTS																									
E-EASY	GROUND WATER																																				
M-MODERATE	ELASERD																																				
D-DIFFICULT	TIME TO READING (HRS.)																																				
NO.	DATE	COMMENTS																																			
<p>DRAWN BY: <u>HJS</u> DATE: <u>2/21/05</u></p> <p>DESIGNED BY: <u>HJS</u> SCALE: <u>N.T.S.</u></p> <p>CHECKED BY: <u>GJG</u> JOB NO.: <u>T-178</u></p>		<p><b>GEISSER ENGINEERING CORP.</b>          CONSULTING ENGINEERS          227 WAMPANOAG TRAIL          RIVERSIDE, RHODE ISLAND 02915          PHONE # 401-438-7711 FAX # 401-438-0281          www.geisserengineering.com EMAIL: ge@geisserengineering.com</p>																																			
<p style="text-align: center;">TEST PIT FIELD LOGS          PROVIDENCE SCHOOL - GORHAM SITE          PROVIDENCE, RI</p>																																					



# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 8  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT MODEL CAPACITY 1 CU.YD. REACH 13 FT DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 10:25 AM  
 TIME COMPLETED 10:55 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
— 1'	TOPSOIL BRN ORGANICS	D-E	*	
— 2'	SUBSOIL LT. BRN ORGANICS			
— 3'	CLAY BRICK MORTAR			
— 4'	F/C SAND TAN LT. SILT			
— 5'	LL. COBBLE/GRAVEL			
— 6'				
— 7'	F/C SAND & GRAVEL			
— 8'	LT. BRN LL. SILT			
— 9'	F/C SAND GRAY LL. SILT			
— 10'	LL. COBBLE/GRAVEL			
— 11'	END OF TEST PIT			
— 12'				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<p><b>TEST PIT PLAN</b></p> <p style="text-align: center;">NORTH VOLUME= <u>      </u> CU.YD.</p>	<p><b>LEGEND:</b></p> <table style="width: 100%;"> <tr> <th>BOULDER COUNT</th> <th>LETTER DESIGNATION</th> </tr> <tr> <td>SIZE RANGE CLASSIFICATION</td> <td>A</td> </tr> <tr> <td>6"-18"</td> <td>B</td> </tr> <tr> <td>18"-36"</td> <td>C</td> </tr> <tr> <td>36" AND LARGER</td> <td></td> </tr> </table>	BOULDER COUNT	LETTER DESIGNATION	SIZE RANGE CLASSIFICATION	A	6"-18"	B	18"-36"	C	36" AND LARGER		<p><b>PROPORTIONS USED</b></p> <table style="width: 100%;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (LD)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table>	TRACE (TR)	0-10%	LITTLE (LD)	10-20%	SOME (SO)	20-35%	AND	35-50%	<p><b>ABBREVIATIONS</b></p> <p>F-FINE M-MEDIUM C-COARSE F/M-FINE TO MEDIUM V-VERY GR-GRAY BN-BROWN YEL-YELLOW</p>
BOULDER COUNT	LETTER DESIGNATION																				
SIZE RANGE CLASSIFICATION	A																				
6"-18"	B																				
18"-36"	C																				
36" AND LARGER																					
TRACE (TR)	0-10%																				
LITTLE (LD)	10-20%																				
SOME (SO)	20-35%																				
AND	35-50%																				
<p><b>EXCAVATION EFFORT</b></p> <p>E-EASY M-MODERATE D-DIFFICULT</p> <p><b>GROUND WATER</b></p> <p>RAISED TIME TO READING (RTS) O.W.L.</p>		<p><b>PLAN REVISIONS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	DATE	COMMENTS															
NO.	DATE	COMMENTS																			
<p>DRAWN BY: <u>HJS</u> DATE: <u>2/21/05</u></p> <p>DESIGNED BY: <u>HJS</u> SCALE: <u>N.T.S.</u></p> <p>CHECKED BY: <u>GJG</u> JOB NO.: <u>T-178</u></p>		<p style="text-align: center;"><b>GEISSER ENGINEERING CORP.</b></p> <p style="text-align: center;">CONSULTING ENGINEERS        227 WAMPANOAG TRAIL        RIVERSIDE, RHODE ISLAND 02915        PHONE # 401-438-7711 FAX # 401-438-0281</p> <p style="text-align: center;">www.geisserengineering.com EMAIL: gec@geisserengineering.com</p>																			

PROJECT: TEST PIT FIELD LOGS  
 PROVIDENCE SCHOOL - GORHAM SITE  
 PROVIDENCE, RI

# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 9  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT MODEL CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 10:55 AM  
 TIME COMPLETED 11:25 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
1'	F/C SAND BRN TO TAN LL SILT HEAVY CONCENTRATIONS OF THE FOLLOWING: CLAY BRICK STEEL HOLDING TANKS DECOMPOSING WOOD CONCRETE SLAB SECTIONS REINFORCING STEEL WITHING AND EXPOSING FROM CONCRETE SLAB SECTIONS	D-E	*	
2'				
3'				
4'				
5'				
6'				
7'				
8'				
9'				
10'		END OF TEST PIT		
11'				
12'				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<p>TEST PIT PLAN</p> <p style="text-align: center;">3'      6'</p> <p style="text-align: center;">○ NORTH</p> <p>VOLUME = _____ CU.YD.</p>	<p>LEGEND:</p> <p><b>BOULDER COUNT</b></p> <table style="width: 100%;"> <tr> <th>SIZE RANGE CLASSIFICATION</th> <th>LETTER DESIGNATION</th> </tr> <tr> <td>6"-18"</td> <td>A</td> </tr> <tr> <td>18"-36"</td> <td>B</td> </tr> <tr> <td>36" AND LARGER</td> <td>C</td> </tr> </table>	SIZE RANGE CLASSIFICATION	LETTER DESIGNATION	6"-18"	A	18"-36"	B	36" AND LARGER	C	<p>PROPORTIONS USED</p> <table style="width: 100%;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (L)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table>	TRACE (TR)	0-10%	LITTLE (L)	10-20%	SOME (SO)	20-35%	AND	35-50%	<p>ABBREVIATIONS</p> <table style="width: 100%;"> <tr> <td>R-FINE</td> <td>M-MEDIUM</td> <td>C-COARSE</td> <td>F/FINE TO MEDIUM</td> <td>F/C-FINE TO COARSE</td> <td>V-VERY</td> <td>GR-GRAY</td> <td>BN-BROWN</td> <td>YEL-YELLOW</td> </tr> </table>	R-FINE	M-MEDIUM	C-COARSE	F/FINE TO MEDIUM	F/C-FINE TO COARSE	V-VERY	GR-GRAY	BN-BROWN	YEL-YELLOW	<p>EXCAVATION EFFORT</p> <table style="width: 100%;"> <tr> <td>E-EASY</td> <td>M-MODERATE</td> <td>D-DIFFICULT</td> </tr> </table> <p>GROUND WATER</p> <p>RAISED TIME TO READING (HRS.)</p> <p style="text-align: right;">G.W.L.</p>	E-EASY	M-MODERATE	D-DIFFICULT
SIZE RANGE CLASSIFICATION	LETTER DESIGNATION																															
6"-18"	A																															
18"-36"	B																															
36" AND LARGER	C																															
TRACE (TR)	0-10%																															
LITTLE (L)	10-20%																															
SOME (SO)	20-35%																															
AND	35-50%																															
R-FINE	M-MEDIUM	C-COARSE	F/FINE TO MEDIUM	F/C-FINE TO COARSE	V-VERY	GR-GRAY	BN-BROWN	YEL-YELLOW																								
E-EASY	M-MODERATE	D-DIFFICULT																														
<p>DRAWN BY: <u>HJS</u> DATE: <u>2/21/05</u></p> <p>DESIGNED BY: <u>HJS</u> SCALE: <u>N.T.S.</u></p> <p>CHECKED BY: <u>GJG</u> JOB NO.: <u>T-178</u></p> <p>PROJECT: <u>TEST PIT FIELD LOGS</u> <u>PROVIDENCE SCHOOL - GORHAM SITE</u> <u>PROVIDENCE, RI</u></p>		<p>PLAN REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	DATE	COMMENTS													<p><b>GEISSER ENGINEERING CORP.</b>          CONSULTING ENGINEERS          227 WAMPANOAG TRAIL          RIVERSIDE, RHODE ISLAND 02915          PHONE # 401-438-7711      FAX # 401-438-0281          www.geisserengineering.com      EMAIL: ges@geisserengineering.com</p>													
NO.	DATE	COMMENTS																														

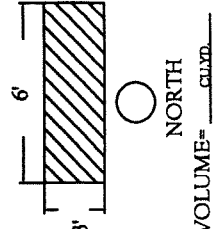

# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 10  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT \_\_\_\_\_ MODEL \_\_\_\_\_ CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 11:25 AM  
 TIME COMPLETED 11:55 AM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
— 1' —	0 TO 5'	D-E	*	
— 2' —	F/C SAND BRN HEAVY CONCENTRATIONS OF CLAY BRICK, DECOMPOSING WOOD, AND CONCRETE SECTIONS			
— 3' —				
— 4' —				
— 5' —				
— 6' —				
— 7' —				
— 8' —	F/C SAND TAN LI. SILT LI. COBBLE/GRAVEL			
— 9' —				
— 10' —	END OF TEST PIT			
— 11' —				
— 12' —				

REMARKS: \* . NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<b>TEST PIT PLAN</b>  <p style="text-align: center;">NORTH VOLUME= _____ CU.YD.</p>	<b>LEGEND:</b> <b>BOULDER COUNT</b> SIZE RANGE CLASSIFICATION 6"-18" A 18"-36" B 36" AND LARGER C	<b>PROPORTIONS USED</b> TRACE (TN) 0-10% LITTLE (L) 10-20% SOME (SO) 20-35% AND 35-50%	<b>ABBREVIATIONS</b> F/BRN FINE M/MEDM MEDIUM C/COARSE COARSE F/M/PRN TO MEDM FINE TO MEDIUM F/C/FINE TO COARSE FINE TO COARSE V/VERY GR/GRAY BR/BROWN YEL/YELLOW	<b>EXCAVATION EFFORT</b> E-EASY M-MODERATE D-DIFFICULT <b>GROUND WATER</b> BLASED TIME TO READING (HRS)  G.W.L.
---	--	--	--	---

DRAWN BY: <u>HJS</u>	DATE: <u>2/21/05</u>	PLAN REVISIONS	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	COMMENTS												
NO.	DATE	COMMENTS																
DESIGNED BY: <u>HJS</u>	SCALE: <u>N.T.S.</u>	GEISSER ENGINEERING CORP. CONSULTING ENGINEERS 227 WAMPANOAG TRAIL RIVERSIDE, RHODE ISLAND 02915 PHONE # 401-438-7711 FAX # 401-438-0281 www.geisserengineering.com EMAIL: gec@geisserengineering.com																
CHECKED BY: <u>GJG</u>	JOB NO.: <u>T-178</u>	TEST PIT FIELD LOGS PROVIDENCE SCHOOL - GORHAM SITE PROVIDENCE, RI																



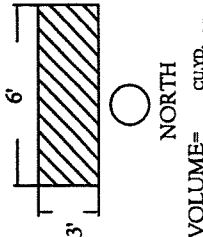

# TEST PIT FIELD LOG


CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 12  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT. MODEL CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 12:25 PM  
 TIME COMPLETED 12:55 PM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
— 1' —	0 TO 6" TOPSOIL DK. BRN	D-E	*	
— 2' —				
— 3' —				
— 4' —				
— 5' —	6" TO 10" SANDY GRAVEL L.L. SILT BRN/TAN MIX F.C SAND & GRAVEL			1
— 6' —				
— 7' —				
— 8' —				
— 9' —				
— 10' —	END OF TEST PIT			
— 11' —				
— 12' —				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.  
 1. FOUNDATION DISCOVERED AT A DEPTH OF 5'

<b>TEST PIT PLAN</b>  <p style="text-align: center;">NORTH VOLUME= <u>    </u> CU.YD.</p>	<b>LEGEND:</b> <b>BOULDER COUNT</b> SIZE RANGE CLASSIFICATION 6"-18" A 18"-36" B 36" AND LARGER C	<b>PROPORTIONS USED</b> TRACE (TR) 0-10% LITTLE (LD) 10-20% SOME (SO) 20-35% AND 35-50%	<b>ABBREVIATIONS</b> F-FINE M-MEDIUM C-COARSE F/M-FINE TO MEDIUM F/C-FINE TO COARSE V-VERY GR-GRAY BN-BROWN YEL-YELLOW															
<b>EXCAVATION EFFORT</b> E-EASY M-MODERATE D-DIFFICULT <b>GROUND WATER</b> RAISED TIME TO READING (HRS)  G.W.L.		<b>PLAN REVISIONS</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	DATE	COMMENTS												
NO.	DATE	COMMENTS																

DRAWN BY: <u>HJS</u> DESIGNED BY: <u>HJS</u> CHECKED BY: <u>G/JG</u>	DATE: <u>2/21/05</u> SCALE: <u>N.T.S.</u> JOB NO.: <u>T-178</u>	 <b>GEISSER ENGINEERING CORP.</b> CONSULTING ENGINEERS 227 WAMPANOAG TRAIL RIVERSIDE, RHODE ISLAND 02915 PHONE # 401-438-7711 FAX # 401-438-0281 www.geisserengineering.com EMAIL: gec@geisserengineering.com
TEST PIT FIELD LOGS PROVIDENCE SCHOOL - GORHAM SITE PROVIDENCE, RI		

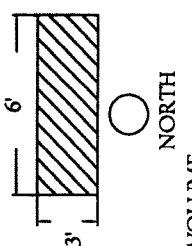

# TEST PIT FIELD LOG


CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 13  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT \_\_\_\_\_ MODEL \_\_\_\_\_ CAPACITY 1 CU.YD. REACH 13 FT. DATE 2/21/05

G.J.G. ENGINEER \_\_\_\_\_ HENRY \_\_\_\_\_ GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 12:55 AM  
 TIME COMPLETED 1:25 PM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
— 1' —	0 TO 3' F/C SAND DK BRN HEAVY CONCENTRATIONS OF CLAY BRICK	D-E	*	
— 2' —				
— 3' —				
— 4' —	3' TO 10' F/C SAND TAN LI. SILT LI. COBBLE/GRAVEL			
— 5' —				
— 6' —				
— 7' —				
— 8' —				
— 9' —				
— 10' —		END OF TEST PIT	↑	
— 11' —				
— 12' —				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.

<p><b>TEST PIT PLAN</b></p>  <p style="text-align: center;">NORTH VOLUME = _____ CU.YD.</p>	<p><b>LEGEND:</b></p> <p><b>BOULDER COUNT</b></p> <p>SIZE RANGE CLASSIFICATION</p> <p>6" - 18"      A</p> <p>18" - 36"      B</p> <p>36" AND LARGER      C</p>	<p><b>PROPORTIONS USED</b></p> <p>TRACE (TR)      0-10%</p> <p>LITTLE (LD)      10-20%</p> <p>SOME (SO)      20-35%</p> <p>AND      35-50%</p>	<p><b>ABBREVIATIONS</b></p> <p>F-FINE M-MEDIUM C-COARSE F/C-FINE TO MEDIUM V-VERY GR-GRAY BN-BROWN YEL-YELLOW</p>	<p><b>EXCAVATION EFFORT</b></p> <p>E-EASY M-MODERATE D-DIFFICULT</p> <p><b>GROUND WATER</b></p> <p>RAISED TIME TO READING (HRS)</p> <p style="text-align: right;">G.W.L.</p> 															
<p><b>DRAWN BY:</b> HJS      <b>DATE:</b> 2/21/05</p>		<p><b>PLAN REVISIONS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">NO.</th> <th style="width: 85%;">COMMENTS</th> <th style="width: 10%;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	COMMENTS	DATE													<p><b>DESIGNED BY:</b> HJS      <b>SCALE:</b> N.T.S.</p>
NO.	COMMENTS	DATE																	
<p><b>CHECKED BY:</b> G.J.G.      <b>JOB NO.:</b> T-178</p>		<p><b>PROJECT:</b> TEST PIT FIELD LOGS PROVIDENCE SCHOOL - GORHAM SITE PROVIDENCE, RI</p>																	

  
**GEISSER ENGINEERING CORP.**  
 CONSULTING ENGINEERS  
 227 WAMPANOAG TRAIL  
 RIVERSIDE, RHODE ISLAND 02915  
 PHONE # 401-438-7711      FAX # 401-438-0281  
 www.geisserengineering.com      EMAIL: gec@geisserengineering.com

# TEST PIT FIELD LOG

CONTRACTOR FLEET CONSTRUCTION TEST PIT NO. 14  
 OPERATOR \_\_\_\_\_ FILE NO. T-178  
 MAKE/CAT MODEL CAPACITY 1 CU.YD. REACH 13 FT DATE 2/21/05

G.J.G. ENGINEER HENRY GROUND ELEV. N/A  
 WEATHER SUNNY/COLD TIME STARTED 1:25 PM  
 TIME COMPLETED 1:55 PM

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT	REMARK NO.
0 TO 6"	TOPSOIL DK BRN ORGANICS	D-E	*	
1'				
2'				
3'				
4'				
5'	6" TO 10" SANDY GRAVEL LL SILT BRN/TAN MIX F-C SAND & GRAVEL			1
6'				
7'				
8'				2
9'				
10'	END OF TEST PIT			
11'				
12'				

REMARKS: \* - NO BOULDERS MEETING CLASSIFICATIONS WERE FOUND IN THIS TEST PIT.  
 1. WOOD POCKET DISCOVERED AT A DEPTH OF 7'  
 2. FOUNDATION DISCOVERED AT A DEPTH OF 8'

**TEST PIT PLAN**



VOLUME = \_\_\_\_\_ CU.YD.

**LEGEND:**

BOULDER COUNT	LETTER DESIGNATION
SIZE RANGE CLASSIFICATION	A B C
6"-18"	
18"-36"	
36" AND LARGER	

**PROPORTIONS USED**

TRACE (TR)	0-10%
LITTLE (L)	10-20%
SOME (SO)	20-35%
AND	35-50%

**ABBREVIATIONS**

FFNE	FINE
MMEDIUM	M-MODERATE
CCOARSE	D-DIFFICULT
F/AMFNE TO MEDIUM	
F/C/FNE TO COARSE	
V-VERY	
GR-GRAY	
BR-BROWN	
YEL-YELLOW	

**EXCAVATION EFFORT**

E-EASY	
M-MODERATE	
D-DIFFICULT	
GROUND WATER	
BLARSED	
TIME TO READING (HRS.)	



DRAWN BY: HJS DATE: 2/21/05  
 DESIGNED BY: HJS SCALE: N.T.S.  
 CHECKED BY: GJG JOB NO.: T-178

PROJECT: TEST PIT FIELD LOGS  
PROVIDENCE SCHOOL - GORHAM SITE  
PROVIDENCE, RI

**PLAN REVISIONS**

NO.	COMMENTS	DATE



**GEISSER ENGINEERING CORP.**  
 CONSULTING ENGINEERS  
 227 WAMPANOAG TRAIL  
 RIVERSIDE, RHODE ISLAND 02915  
 PHONE # 401-438-7711  
 FAX # 401-438-0281

