E. PERRY IRON PHASE II SITE ASSESSMENT REPORT PORTLAND, MAINE

Maine Department of Environmental Protection
Brownfields Site Assessments
Augusta, Maine

July 8, 2005

WOODARD & CURRAN
Engineering • Science • Operations

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Draft Memorandum

DATE: July 20, 2005

TO: Rick Knowland
Dept. of Planning and Econ. Dev.
City of Portland
PHONE: 874-8725

FROM: John Tewhey
Tewhey Associates
PHONE: 839-4261

RE: **Summary and Interpretation of Woodard & Curran Phase II Site Assessment Report of the E. Perry Metal Recycling Facilities in the Bayside Area of Portland**

Background. The firm of Woodard & Curran of Portland recently conducted a Phase II Environmental Site Assessment of the two parcels that comprise the E. Perry metal recycling facility in Portland. The parcel at 115 Lancaster Street is approximately one acre in size and includes the office and receiving facility for incoming scrap metal and a scrap metal storage and processing yard. The parcel is partially paved. The parcel at 9 Somerset Street is less than one acre in size and is used as a scrap metal processing facility and a maintenance facility for trucks and other equipment. Most of the Somerset Street site is paved. Both sites are fenced.

The field exploration and sampling activities on the two E. Perry parcels occurred during the period from April 26 to May 3, 2005. The work was done in accordance with Maine DEP- and USEPA-approved work plans described in the Maine Brownfields Quality Assurance Project Plan (QAPP) as well as the Maine Brownfields Site-Specific Quality Assurance Project Plan for the E. Perry Site, Portland, Maine that were developed by Woodard & Curran. Site explorations consisted of soil borings, test pits, and groundwater monitoring wells that were done by the firm of Yarmouth Environmental Services of Yarmouth. Soil and groundwater samples were submitted for analysis to Analytics Environmental Laboratory LLC of Portsmouth, NH and Severn Trent Laboratory in Burlington, VT.

Woodard & Curran issued a final report of the Phase II Site Assessment of the two E. Perry parcels on July 8, 2005. The report contains six sections and four appendices. A summary of the methods, findings, and recommendations of the Woodard & Curran

report are provided herein. Tewhey Associates has interpreted the results of the Woodard & Curran report with respect to the soil-group categories established as part of the July 2001 VRAP agreement for the rail yard portion of the Portland Brownfields Project site.

Exploration Program. A total of five deep soil borings for soil sampling and installation of monitoring wells were done on the Lancaster Street site. The average depth of soil borings at the Lancaster Street site was 16.5 feet. A total of seven deep soil borings for soil sampling and installation of monitoring wells were done on the Somerset Street site. The average depth of soil borings at the Somerset Street site was 13 feet. Three shallow soil samples were taken at the Lancaster Street site and six shallow soil samples were taken at the Somerset Street site. A total of 25 soil samples (8 from Somerset and 17 from Lancaster) and 14 groundwater samples (5 from Somerset and 9 from Lancaster) were submitted for laboratory analysis. The samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and 23 metal parameters, including arsenic, cadmium, copper, lead, mercury, nickel, and zinc.

VRAP Conditions Within the Portland Brownfields Site. The two E. Perry parcels are located within 14-acre Portland Brownfields Project Site. VRAP provisions for soil handling and disposition for the Portland Brownfields Project site were established as part of the property transfer of the 6-acre Guilford rail yard within the Brownfields site to the Maine DOT in 2001. Since that time, the Maine DEP has applied the soil provisions of the rail yard VRAP to parcels within the Portland Brownfield site and other Bayside properties that have sought VRAP certification and protection. The 2001 VRAP for the rail yard property established three categories of soils for the purpose of handling and reuse. The characteristics of the three soil groups and their potential applicability to soils at the E. Perry site are described below.

- **Group 1 Soils**: Group 1 soils are "clean" soils that show no signs of staining, petroleum odor, and have photoionization detector (PID) readings of < 20 ppm. Group 1 soils require no special handling. Most subsurface fill soils and native soils at a depth of three feet or greater on the two E. Perry parcels fall into the category of Group 1 soils, i.e., soil that is unstained, has no petroleum/chemical odor, and has low photoionization detector readings.

- **Group 2 Soils**: Group 2 soils include stained, odorous, ash-containing, or PID sensitive soils that contain levels of contaminants that may or may not exceed the Maine DEP Soil Guidelines criteria for a given contaminant. Group 2 soils can remain on site and be used for construction purposes, but must be covered by paving, foundation slabs, or other clean soils. Group 2 soils within the rail yard property and at other Bayside locations typically contain elevated levels of arsenic, lead, and polyaromatic hydrocarbons (PAHs), including B(a)P. The potential contact risk of the chemicals present in Group 2 soils within Bayside dictate their being covered. Essentially all surficial and shallow soils (i.e., less than three foot depth) at the two E.Perry parcels fall into the category of Group 2 soils.

- **Group 3 Soils**: Group 3 soils include stained, odorous, ash-containing, or PID sensitive soils which contain levels of contaminant(s) that both exceed the Maine DEP Soil Guidelines criteria and fail TCLP testing for hazardous waste characteristics. There has been previous TCLP testing of high-lead and high-arsenic soils from the rail yard site. Group 3 soils within the Portland Brownfields site which have been subjected to TCLP testing have been far below the levels which designate a soil sample as hazardous waste. The levels of arsenic and lead in shallow soils on the E. Perry site are roughly comparable to the levels found in shallow soils on the rail yard site. Therefore, it is unlikely that high-lead or high-arsenic soils on the E. Perry site would fall into the category of Group 3 soils. According to the rail yard VRAP agreement of July 2001, Group 3 soils require excavation and removal to an appropriate off-site disposal area.

Analytical Results. In the Woodard & Curran assessment, a total of 39 soil and groundwater samples were subject to analysis of 169 chemical parameters, resulting in 6,591 analytical results. There were 102 analyses of the 6,591 total analyses (1.5 percent) that exceeded the Maine DEP criteria for residential guidelines for soil and drinking water standards for groundwater. If adult worker (i.e., industrial) guidelines for soil are applied to the analytical results, the number of analyses that exceed Maine DEP criteria are fewer.

Soil Analyses. The chemical parameters of environmental significance that exceeded Maine DEP soil criteria at several sampling locations on the two parcels were lead and benzo(a)pyrene, and, to a lesser extent, PCBs, arsenic, cadmium, copper and zinc.

- Benzo(a)pyrene (B(a)P) and Related Compounds: The highest level of B(a)P on the two parcels (54 mg/kg) was detected in shallow soils at sampling location SS-A near the eastern boundary of the Somerset Street parcel. Tewhey Associates has previously detected similarly high levels of B(a)P and other polyaromatic hydrocarbons (PAHs) in shallow soil on the adjacent parcel to the east. The adjacent parcel to the east was formerly used as a staging and waste transfer area by a waste management firm. All other detections of B(a)P on the two E. Perry parcels were less than 10 mg/kg.

- Lead. Elevated levels of lead in shallow soils were detected at sampling location SS-C located on the eastern portion of the Somerset Street parcel and at sampling location B5/MW5 within the central working area of the Lancaster Street parcel. The highest detection of lead in soil was 29,800 mg/kg at location B5/MW5 on the Lancaster Street site. Other elevated detections of lead were an order of magnitude (i.e., 10 times) lower. The lead contamination is attributable to both metal handling activities and the former presence of railroad operations in the area.

Groundwater Analyses. There were very few detections of significant chemical parameters that exceeded Maine DEP groundwater criteria on the two parcels. There were detections of 28 ug/L of benzene and 97 ug/L of gasoline additive MTBE in monitoring well MW-E on the Somerset Street site. The Maine DHS criteria for drinking water for the parameters are 12 ug/L for benzene and 35 ug/L for MTBE. Other parameters that exceeded DHS criteria in the 12 monitoring wells on the two parcels were sodium (detected in 12 monitoring wells), manganese (9), antimony (2), arsenic (2), and cadmium (1). The Bayside area and the E. Perry sites are designated groundwater non-attainment zone and there is no requirement to conduct remediation of groundwater. There is a requirement to remove floating free-product petroleum from the water table in non-attainment zones, but no floating free-product was detected on either of the E. Perry parcels.

Conclusions and Recommendations of the Woodard & Curran Report. A brief summary of the conclusions and recommendations of the Woodard & Curran report of July 8, 2005 are as follows:

Conclusions.

- Environmental media that have been affected by metal recycling operations are soil and groundwater.
- Semi-volatile organic compounds (i.e., B(a)P and related compounds) and metals could potentially create a human health concern if direct contact to these soils is not controlled.
- Groundwater is not considered a current risk to human health because groundwater is not used as a source of drinking water.
- Volatilization of volatile organic compounds (VOCs) in groundwater through subsurface soils could possibly present a risk to indoor air quality.
- The data associated with the site investigation are of good and sufficient quality to satisfy their intended end use.
- The findings of the assessment are consistent with a conceptual site model in which on-going metal recycling activities have resulted in chemical releases that have, in turn, impacted site soils and groundwater. Potential receptors of site contamination include site workers and area residents. Potential exposure routes include inhalation/ingestion of wind-blown dust, dermal contact of soil, and inhalation of vapor emanating from soil.

Recommendations.

- Provide a copy of the Woodard & Curran report to the current owner/operator of the metal recycling facility for evaluation of potential exposure risk.
- Develop a remedial option evaluation for contaminated soil.
- Prepare a soil management plan to control the potential exposure and possible migration of on-site soils.
- Prepare VRAP application.

- Conduct an analysis of the potential for volatile emissions on the site prior to redevelopment to ensure that future foundation designed is appropriate for existing site conditions.

Tewhey Comment on Potential Remediation Costs. When the information and data in the Woodard & Curran report is compared to the information and data from similar site assessments conducted within the Portland Brownfields Project site and at other Bayside sites, it is likely that the soils present on the E. Perry parcels fall into Group 1 and Group 2 categories, as defined in the July 2001 VRAP agreement for the Portland Brownfields rail yard site.

The soil handling provisions of the Portland Brownfields site VRAP agreement, as presented above, represents a soil management plan for redevelopment of Bayside sites. Should the E. Perry parcels be redeveloped in the future, shallow Group 2 soils could represent a potential dermal contact or ingestion risk due to the presence of B(a)P, lead and other non-volatile, low-soluble contaminants. Consistent with other VRAP-sanctioned parcels within the Portland Brownfields site and in the Bayside area, the site remediation of Group 2 soils during redevelopment would consist of (1) utilizing the soils on site, (2) remediating Group 2 soils via covering by pavement, foundation slabs, or clean fill, and (3) documenting the presence of covered Group 2 soils on site by means of deed notification. It is likely that all shallow soils on the E. Perry parcels would fall under the Group 2 category. However, it is possible that a limited area of high-lead soils in the area of B5/MW5 on the Lancaster Street site could fall into a Group 3 category. An estimate of remediation costs for limited soil removal on the Lancaster Street could be as high as $50,000 for the removal of up to 100 cubic yards of lead-contaminated soil in the central, high-use portion of the site.

Cc: Nicholas Hodgkins, Maine DEP (VRAP)
Karl Kasper, Woodard & Curran
Kate Skinner, Woodard & Curran
Jack Lufkin, City of Portland
Mark Plourde, Maine Valuation Co.

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1. INTRODUCTION

1.1 PURPOSE

The purpose of this report is to describe the field work methods and analytical results for a Phase II Environmental Site Assessment (ESA) completed by Woodard & Curran (W&C) between April 26, 2005 and May 3, 2005 at the E. Perry Iron Site (Site) in Portland, Maine. **Figure 1-1** is the Site location plan. This work was performed under the Maine Department of Environmental Protection's (MEDEP's) Municipal Brownfields Program. The work was done in accordance with the MEDEP and U.S. Environmental Protection Agency (EPA) approved *Maine Brownfields Quality Assurance Project Plan* (QAPP) and the *Site-Specific Maine Brownfields Site-Specific Quality Assurance Project Plan for the E. Perry Site, Portland, Maine* (SSQAPP). The field activities took place at two properties, with the addresses of 9 Somerset Street and 115 Lancaster Street in Portland, Maine (referenced jointly as the "Site"). Included in the work scope for the Site were the following activities: shallow soil sampling, subsurface soil borings, and monitoring well installation and sampling.

1.2 PROJECT GOALS

The objective of the shallow soil sampling, subsurface soil borings, monitoring well installation, and groundwater sampling was to collect sufficient data to determine the nature of contaminants on the Site that may impact future re-development of the Site.

1.3 SPECIAL TERMS AND CONDITIONS

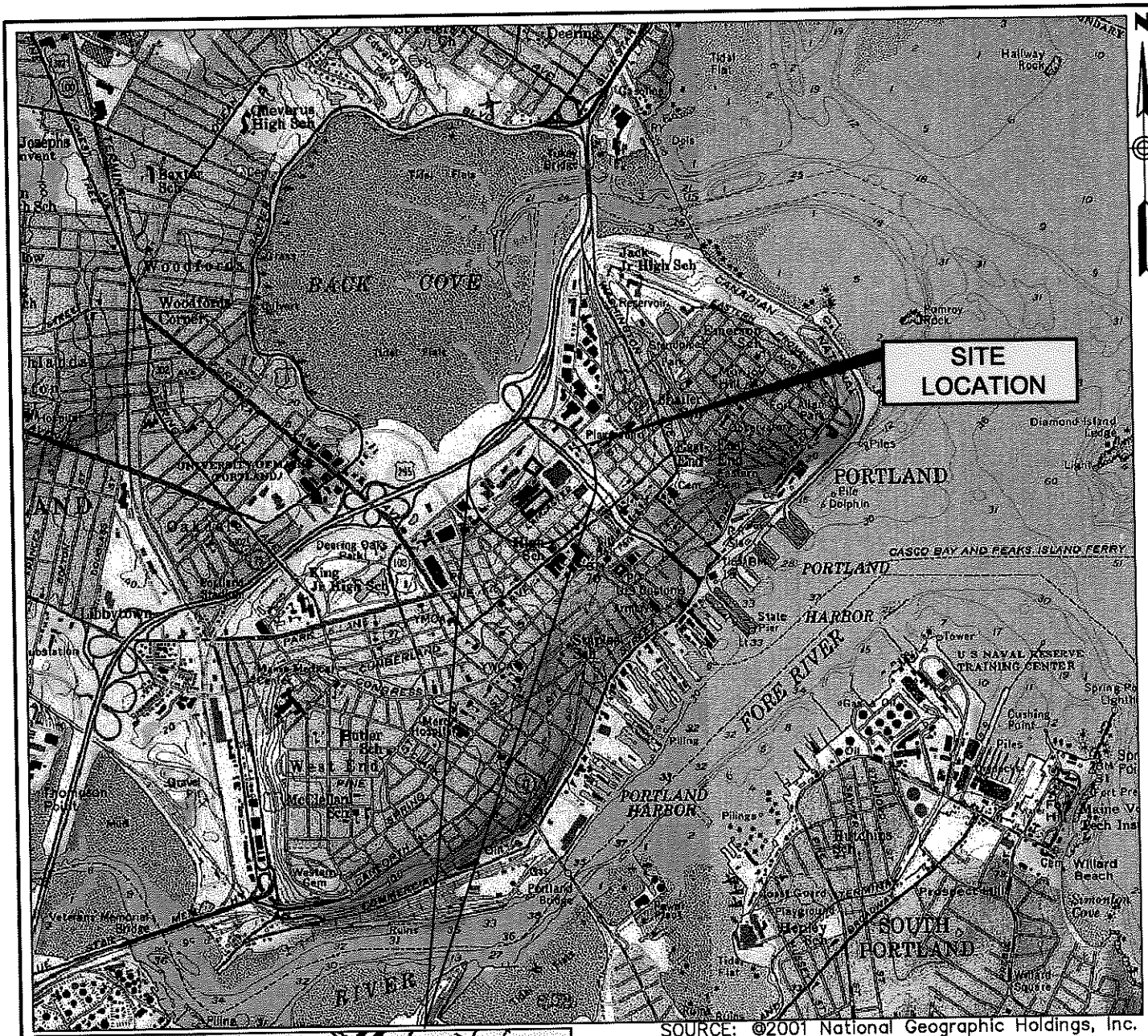
There are no special terms and conditions.

1.4 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

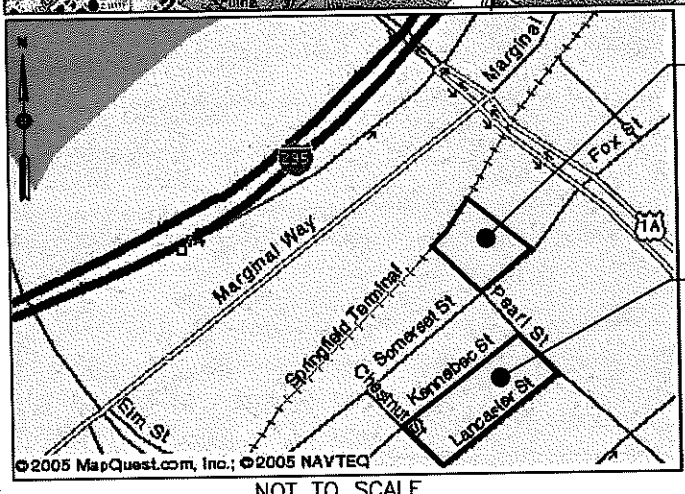
There are no limitations and exceptions of assessment.

1.5 LIMITING CONDITIONS AND METHODOLOGY USED

Both properties of the Site are working scrap metal yards. Limiting conditions on the Site include restricted access to certain areas due to scrap metal piles and parked semi-truck trailers. The Site investigation was conducted in a safe manner, with caution taken around obstacles such as scrap metal piles, working cranes, and dump trucks, therefore, limiting some access.



SOURCE: ©2001 National Geographic Holdings, Inc.



9 SOMERSET STREET PROPERTY

115 LANCASTER STREET PROPERTY

NOT TO SCALE

2500' 0 2500' 5000'

BAR SCALE
1" = 2500'

WOODARD & CURRAN
Engineering · Science · Operations
PORTLAND, MAINE 1-800-426-4262

SITE LOCATION MAP

DESIGNED BY: KS	CHECKED BY: KS
DRAWN BY: PFF	21217901-U1-1.dwg

MEDEP BROWNFIELDS
E. PERRY SITE
PORTLAND, MAINE

REPORT

JOB NO: 212179.02
DATE: JULY 2005
SCALE: AS NOTED

FIGURE 1-1

2. BACKGROUND

The following sections describe the Site, physical setting, history, adjacent property land use, and a summary of previous investigations.

2.1 SITE DESCRIPTION AND FEATURES

The Site consists of two locations: 9 Somerset Street and 115 Lancaster Street in Portland, Maine. The properties are located in the downtown "Bayside" area of Portland. The smaller of the two properties is located at 9 Somerset Street, and is less than one acre. Bordering this parcel to the northeast is a vacant field, to the northwest is railroad tracks, to the southwest is a scrap metal yard (different ownership), and to the southeast by Somerset Street. The property has a fence on all sides and two locking gates on Somerset Street. There is one small building on the eastern corner of the parcel which functions as a small office. The rest of the parcel is open with several parked semi-truck trailers. The property is paved with a loading ramp facing the railroad tracks in the western corner of the parcel.

The larger of the properties, 115 Lancaster Street, is approximately one acre in size and occupies one city block. The streets bordering the property are Pearl Street to the northeast, Kennebec Street to the northwest, Chestnut Street to the southwest, and Lancaster Street to the southeast. The property has one small building on the eastern corner of the premises which consists of a small office, entrance gate, and truck scale for the scrap metal yard. The rest of the parcel is open with several sorted piles of various scrap metal. There is a road or path through the parcel that is used by Site cranes and commercial delivery dumptrucks. The general public frequents the scrap metal yard with deliveries, also.

2.2 PHYSICAL SETTING

Site topography at both locations is relatively level, with regional topography sloping toward Portland's Back Cove, which lies approximately 1,300 feet to the northwest. The Site has approximately 3.5 to 10.7 feet of fill over marine sediments. The Site is approximately nine feet above mean sea level.

2.3 SITE HISTORY AND LAND USE

The Site was originally an historic reclaimed area (filled wetland/surface water) and has been used as a scrap metal salvage yard since the 1950s.

2.4 ADJACENT PROPERTY LAND USE

The properties adjacent to both parcels consist of industrial and commercial properties.

CITY OF PORTLAND
IN THE CITY COUNCIL

AMENDMENT TO CITY CODE
SEC. 14-49 (ZONING TEXT AND MAP AMENDMENT)
RE: Conditional Zoning Agreement
Williston-West Church

ORDERED, that the zoning map and text of the City of Portland, dated December 2000 as amended and on file in the Department of Planning & Development, and incorporated by reference into the Zoning Ordinance by Sec. 14-49 of the Portland City Code, is hereby amended to reflect a conditional rezoning as detailed below.

CONDITIONAL ZONE AGREEMENT
RE:
WILLISTON-WEST CHURCH

AGREEMENT made this ____ day of _____, 2012 by 32 Thomas Street, LLC, 477 Congress St., Suite 601, Portland, Maine ("Developer"), and its successors and assigns.

W I T N E S S E T H

WHEREAS, the Developer owns real property located at 32 Thomas Street, consisting of the parcel shown on the City's Tax Map 62, Block E, Lot 5, being more particularly described in a deed recorded in Cumberland County Registry of Deeds in Book 29217, Page 171 (collectively the "Property"); and

WHEREAS, the existing building complex located on the Property was formerly used as the Williston-West Church; and

WHEREAS, the Property, located within the West End Historic District, is currently zoned R-4 Residential; and

WHEREAS, the properties on the opposite sides of Thomas and Carroll Streets, directly across from the Property, are zoned R-6 Residential; and

WHEREAS, the building complex located on the Property is comprised of two principal portions, the sanctuary and the parish house; and

WHEREAS, the building complex is listed in the National Register of Historic Places, the sanctuary is a designated local landmark as defined by Article IX of the Portland City Code and the parish house is a contributing structure within the West End Historic District under Article IX; and

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Penn Ion - Somerset | JOB NUMBER: 212179.2 | DATE: 4/29/05
SAMPLE LOCATION: MW-E | LOCATION ACTIVITY: START 4/29/05 END

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: Ø

WATER LEVEL/WELL DATA

WELL DEPTH: 15 FT
DEPTH TO SCREEN TOP: 5 FT
DEPTH TO WATER: 5.26 FT
☐ MEASURED ☒ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

PROTECTIVE CASING STICK-UP (FROM GROUND): Ø FT
PROTECTIVE CASING/WELL DIFF.: ____ FT

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ____

HEIGHT OF WATER COLUMN: ____ FT
LENGTH OF SCREEN: 10 FT
X ☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

____ L/PURGE VOL
____ L/TOTAL PURGED

ALLOWABLE DRAWDOWN: ____ FT
MAX. ALLOWED DEPTH TO WATER: ____ FT
SAMPLE DEPTH: ____ FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____
WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch 1"

PURGE DATA

PURGE RATE ____ ml/min. | PUMP SETTING low | HISTORICAL PURGE RATE ____ ml/min. | HISTORICAL PUMP SETTING ____

	5	10	15	20	25	30	SAMPLE MEASUREMENTS
TIME (MINS.)	1345	1350	1355	1400	1405		
PURGE VOLUME (liters)							
DEPTH TO WATER (ft.)	5.26	5.24	5.24				
TEMP. (°C)	8.99	9.26	9.18	9.21			
SPECIFIC CONDUCTIVITY (umhos/cm)	1,067	1,023	1,083	1,075			
pH, (units)	6.38	6.38	6.39	6.39			
TURBIDITY (ntu)							
mg/L DISSOLVED OXYGEN (ppm)	2.16	0.80	0.82	0.79			
ORP (mv)	-77.0	-77.5	-78.3	-70.2			

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS
☒ CLEAR ☐ COLORED ____ ☒ CLOUDY ____ ☐ TURBID ____ ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX ☐ DEIONIZED WATER ☐ HNO3/D.I.WATER ☐ POTABLE WATER ☐ TSP SOLUTION
☒ NONE dedicated ☐ METHANOL SOLUTION ☐ ____

PURGING	SAMPLING	
☒	☒	PERISTALTIC PUMP
☐	☐	REDI FLOW II
☐	☐	BAILER
☐	☐	PVC/SILICON TUBING
☐	☐	TEFLON/SILICON TUBING
☐	☐	AIRLIFT

PURGING	SAMPLING	
☒	☐	ENCLOSED FLOW CELL
☐	☐	HORIBA U-10
☐	☐	WATERRA
☐	☐	IN-LINE FILTER
	☐	PRESS/VAC FILTER
☐	☐	____

WATER LEVEL EQUIPMENT USED
☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: Ø

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	____ / ____ / ____
☐ SVOC	8270	↓	4°		☒	____ / ____ / ____
☐ PCB	8082		↓		☒	____ / ____ / ____
☐ TAL Metals	6010				☒	____ / ____ / ____
☐					☐	____ / ____ / ____
☐						

NOTES

SIGNATURE: Kate Shelley
RECEIVED BY: ____

3. PHASE II ACTIVITIES

3.1 SCOPE OF ASSESSMENT

The following section includes a description of the field work methods for the Phase II Environmental Assessment at the Site. Included is information on the Conceptual Site Model (CSM) and Phase II Investigation Sampling Plan as described in the SSQAPP. The Scope of Work (SOW) included the following activities: shallow soil sampling, subsurface soil borings, and monitoring well installation and sampling. The analytical program and deviations from the work plan are also discussed. The field work took place between April 26, 2005 and May 3, 2005.

3.1.1 Supplemental Records Review

The scope of this Phase II ESA did not include a supplemental records review.

3.1.2 Conceptual Site Model

The soils at the Somerset Street property consist mostly of approximately 2.5 to 12 feet of fill over marine sediments, with the groundwater table located within the fill. At the Lancaster Street Site, a two to five foot layer of medium sand exists between the fill and the marine clay. A CSM includes an evaluation of suspected chemical sources, migration pathways, and receptors. The following table presents the suspected primary sources of chemical releases, chemical migration pathways, potential exposure routes, and receptors.

- **Primary Sources** – Includes various salvage yard activities, and weathering of salvage yard objects, resulting in possible chemical releases.
- **Migration Pathways** – Includes particulates or dust from wind-blown soil or soil transported by surface water runoff, vapors from the groundwater, and ambient vapors from specific sources in the salvage yard, which are possible migration pathways.
- **Exposure Routes** – Potential human exposure routes include inhalation/ingestion and dermal contact of soil, inhalation of vapors from groundwater and ambient air.
- **Receptors** – Potential human receptors include Site workers and area residents for inhalation/ingestion and dermal contact of soil as wind-blown dust or surface water runoff; Site workers and area residents for inhalation of groundwater vapors; and Site workers for inhalation of ambient air vapors.

Table 3-1. Conceptual Site Model

Primary Sources	Migration Pathway	Potential Exposure Route	Potential Receptors	
			Site Workers	Area Residents
Salvage Yard Activities	Soil (Dust, Surface Runoff)	Inhalation/Ingestion (Dust)	√	√
		Dermal Contact	√	√
	Groundwater (Vapor)	Inhalation	√	√
	Air (Vapor)	Inhalation	√	

3.1.2.1 Sampling Plan

The sampling plan was based on the CSM and consisted of an investigation at both properties. The field sampling plan was described in the SSQAPP and included activities related to the shallow and subsurface soil sampling, and monitoring well installation and sampling. Field activities and methods are described in Section 4.2. **Figure 3-1** depicts the sample locations on the Somerset Street property, and **Figure 3-2** shows the sample locations on the Lancaster Street property. **Table 3-2** lists a summary of exploration activities. Standard operating procedures for this project are included in the Project QAPP.

3.1.3 Chemical Testing Plan

The laboratory analytical program for this Site was described in the SSQAPP and is detailed in Section 4.3 below

3.1.4 Deviations from the Work Plan

One deviation from the work plan occurred. *SOP 2*, titled *Groundwater Sampling Using Low flow Purging and Sampling Protocol* states that, after stabilization, if the turbidity is greater than 30 NTUs, a filtered and unfiltered (metals) sample may be collected, and that an in-line filter is preferred. One unfiltered sample was collected in an unacidified sample bottle. The sample was filtered and acidified at the laboratory, as opposed to field filtering. While a deviation from the proposed work plan, it should not result in a data quality issue.


MW-A
SS-B
MW-B
SS-C
MW-C
SS-A
MW-E
MW-D
PERRY ST
WILMOT ST
SOMERSET ST
FRANKLIN ART
Legend
Soil Boring Locations
Monitoring Well Locations
Feet
0 30 60 120
N
W
E
S
Sources:
Orthophoto was acquired from MEGIS and is based on Spring 2001 photography.
Parcel boundary lines are approximate.
DESIGNED BY: RAK
DRAWN BY: RAK
FIGURE 3-1
EXPLORATION LOCATIONS
E. PERRY SITE- SOMERSET ST
PORTLAND, ME
REPORT
SCALE: 1" = 60'
JOB NO.: 212179.02
DATE: JULY 2005
DOC: PORTLANDKK.MXD
WOODARD & CURRAN
Engineering • Science • Operations

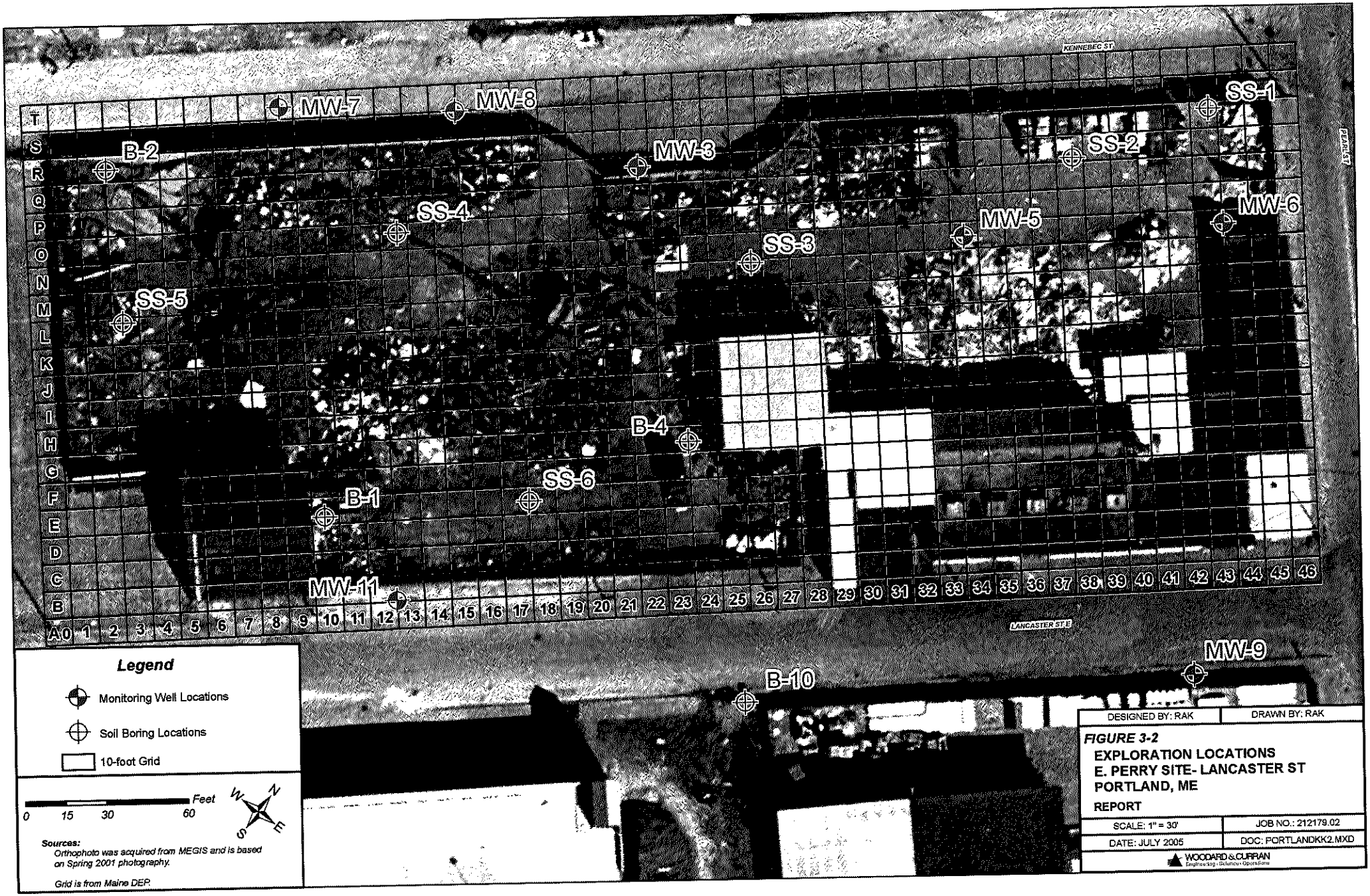

KENNEBEC ST
LANCASTER ST E
PEARL ST
MW-7
MW-8
MW-3
SS-1
SS-2
MW-6
B-2
SS-4
MW-5
SS-3
SS-5
B-4
SS-6
B-1
MW-11
B-10
MW-9
T
S
R
Q
P
O
N
M
L
K
J
I
H
G
F
E
D
C
B
A 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46
Legend
Monitoring Well Locations
Soil Boring Locations
10-foot Grid
Feet
0 15 30 60
W N S E
Sources:
Orthophoto was acquired from MEGIS and is based on Spring 2001 photography.
Grid is from Maine DEP.
DESIGNED BY: RAK
DRAWN BY: RAK
FIGURE 3-2
EXPLORATION LOCATIONS
E. PERRY SITE- LANCASTER ST
PORTLAND, ME
REPORT
SCALE: 1" = 30'
JOB NO.: 212179.02
DATE: JULY 2005
DOC: PORTLANDKK2.MXD
WOODARD & CURRAN
Engineering · Science · Operations

Table 3-2
Summary of Exploration Activities
E. Perry Site
Portland, Maine

Boring ID	Monitoring Well ID	Completion Date	Total Boring Depth (ft bgs)	Screen Length (ft)	Screened Interval (ft bgs)	Depth to Water (ft bgs)	Fill/Natural Material Interface (ft bgs)
155 Lancaster Street							
B-A	MW-A	04/26/2005	16	10	3-13	4.0	6.4
B-B	MW-B	04/26/2005	16	10	4-14	8.0	8.0
B-C	MW-C	04/26/2005	16	10	5-15	8.0	11.6
B-D	MW-D	04/26/2005	14	10	4-14	8.0	10.7
B-E	MW-E	04/26/2005	20	10	5-15	7.5	8.4
SS-A	n/a	04/26/2005	4	n/a	n/a	>4	>4
SS-B	n/a	04/26/2005	4	n/a	n/a	>4	>4
SS-C	n/a	04/26/2005	4	n/a	n/a	>4	>4
9 Somerset Street							
B-1	n/a	04/27/2005	4	n/a	n/a	>4	3.8
B-2	n/a	04/27/2005	4	n/a	n/a	>4	2.8
B-3	MW-3	04/27/2005	12	10	2-12	3.5	2.9
B-4	n/a	04/27/2005	4	n/a	n/a	>4	>4
B-5	MW-5	04/27/2005	12	10	2-12	3.5	6.7
B-6	MW-6	04/28/2005	13	10	3-13	4.0	4.5
B-7	MW-7	04/29/2005	13	10	3-13	4.0	3.5
B-8	MW-8	04/29/2005	13	10	3-13	4.0	3.5
B-9	MW-9	04/28/2005	14	10	4-14	n/a	1.5
B-10	n/a	04/28/2005	4	n/a	n/a	>4	1.1
B-11	MW-11	04/29/2005	14	10	4-14	7.5	<4
SS-1	n/a	04/28/2005	4	n/a	n/a	>4	2.9
SS-2	n/a	04/28/2005	4	n/a	n/a	>4	3
SS-3	n/a	04/28/2005	4	n/a	n/a	>4	2.6
SS-4	n/a	04/28/2005	4	n/a	n/a	>4	3
SS-5	n/a	04/28/2005	4	n/a	n/a	>4	2.6
SS-6	n/a	04/28/2005	4	n/a	n/a	>4	3

Notes:
ft bgs = feet below ground surface
n/a = not applicable

3.2 FIELD EXPLORATIONS AND METHODS

The following sections summarize the methods used for completion of the field activities at the Site.

3.2.1.1 Task 1 - Site Walk

W&C attended a Site visit on April 11, 2005 with MEDEP, Tewhey Associates, and the City of Portland to review Site conditions and mark the locations for the Geoprobe explorations.

3.2.1.2 Task 2 – Utility Clearance and Permitting

W&C contacted DIGSAFE 72 hours prior to the scheduled Geoprobe exploration field work to obtain utility clearances. The Geoprobe subcontractor, Yarmouth Environmental Services, obtained a Street Opening Permit from the City of Portland in order to conduct Geoprobe explorations along the city streets.

3.2.1.3 Task 3 - Shallow Soil Sampling

Shallow soil borings were completed by sampling soils to depths of four feet below ground surface (bgs). A Geoprobe rig operated by Yarmouth Environmental Services of Yarmouth, Maine, was used to collect the soil samples in general accordance with *SOPs S5* and *S6* in the Project QAPP. Shallow soil borings were completed at three locations on the Somerset Street property (SS-A through SS-C) and at six locations on the Lancaster Street property (SS-1 through SS-6). Standard four-foot continuous Geoprobe sampling was used for the shallow soil sampling. As described in the plan, locations were selected based on visual observations, available access with the Geoprobe rig, spatial distribution throughout the Site, and special considerations during the field work in an attempt to identify the presence and nature of Site contaminants. Soil was screened upon opening of the plastic sample sleeve using a handheld photoionization detector (PID) meter (see SOP S8 in the Project QAPP). A single laboratory sample was collected in each shallow soil location and submitted to the off-Site laboratory for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), TAL Metals, and polychlorinated biphenyls (PCB) analysis. After the laboratory sample was collected, a sample of soil was placed in a baggie for headspace screening with the PID. **Appendix A** contains the soil field boring logs.

3.2.1.4 Task 4 - Soil Borings

Geoprobe subsurface soil borings were completed on both Sites using continuous soil sampling with standard four foot sampling sleeves. In all, five soil borings were completed on the Somerset Street Site (B-A through B-E) to depths of approximately six to eight feet below the groundwater table, (see Figure 3-1). All five borings on the Somerset Street Site were converted to monitoring wells. On the Lancaster Street Site, eleven soil borings were completed with continuous soil sampling (B-1 through B-11). Seven of the borings were drilled to depths of approximately six to eight feet below the water table (see Figure 3-1) for installation of monitoring wells and four of the borings were drilled to four feet bgs. The locations of the borings were pre-selected during a Site visit on April 11, 2005 by MEDEP, Tewhey Associates, the City of Portland, and W&C. In all soil borings, after the Geoprobe sampling sleeve was brought to the surface and opened, the soil was screened with a PID (see SOP S8). Based on PID screenings and visual observations, one soil sample was collected from each exploration and submitted to an off-site laboratory for VOCs, SVOCs, TAL Metals, and PCB analysis. The samples were stored in an insulated cooler on ice until pick up by the laboratory courier. After the laboratory sample was collected,

a sample of soil was placed in a baggie for headspace screening with the PID. Appendix A contains the soil field boring logs.

3.2.1.5 Task 5 - Monitoring Well Installation

A total of twelve monitoring wells were installed on the Site: five (MW-A through MW-E) at the Somerset Street property, and seven (MW-3, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-11) at the Lancaster Street property. **Appendix B** contains the monitoring well installation logs. Monitoring wells were installed in general accordance with SOP S7 in the Project QAPP. Each well installation was completed using the following specifications:

Monitoring Well Construction Details

- Monitoring wells were completed using pre-packed 10-foot well screens;
- Wells were screened across the water table;
- Wells were constructed of one-inch O.D. PVC screen and riser;
- All wells were completed as flush mount installations with a road box cemented at the surface; and
- Prior to drilling activities, a backhoe was used to create a shallow excavation for each soil boring. This facilitated completion of the wells with flush mount road boxes and concrete protective pads. The pads are approximately three feet by three feet and 12 inches thick.

3.3 SAMPLING AND CHEMICAL ANALYSES METHODS

The following section summarizes the methods used for collecting laboratory samples at the Site. Laboratory samples collected at the Site include soil and groundwater. The samples were submitted to Analytics Environmental Laboratory of Portsmouth, New Hampshire for analysis.

3.3.1 Soil

Soil sampling was completed by sampling boreholes at both properties included in the Site. Soil sampling was completed in the shallow soil sampling and subsurface soil sampling locations. One laboratory sample was submitted for analysis per boring. The sample was chosen based on PID readings, visual observation, and soil recovery limitations. Soil samples were collected for laboratory analysis as described in the SSQAPP. A total of 25 soil samples were collected from the Site, with eight soil samples collected from the Somerset Street property, and 17 soil samples collected from the Lancaster Street property. All soil samples were field screened for total VOCs with a PID as the acetate Geoprobe sleeve was opened in accordance with *SOP S8* in the Project QAPP. In the shallow soil and subsurface soil borings that only extended from the ground surface to four feet bgs, the laboratory samples were collected in this interval.

In subsurface soil borings that were converted to monitoring wells and drilled deeper than four feet bgs, the laboratory soil samples were taken from the initial, shallow geoprobe sample based on PID readings and visual observation. On two occasions, most of the soil laboratory samples were collected in the 0 to four feet bgs interval, but because of poor soil recoveries, one of the sample jars had to be filled with soil from the next, or four to eight foot bgs, interval. The laboratory soil samples were collected in the appropriate sample containers and kept in an insulated cooler with ice until picked up by the laboratory courier. Soil samples were submitted to the laboratory for analysis by the following EPA methods: VOC

(EPA Method 8260B), SVOC (EPA Method 8270C), TAL Metals (EPA Method 6010) and PCB analysis (EPA Method 8082). **Table 3-3** presents the summary of sampling activities including the depth of borings, media sampled, and analyses.

3.3.1.1 Task 6 - Groundwater Sampling

Twelve of the Geoprobe soil borings on the Site, five at the Somerset Street property, and seven at the Lancaster Street property, were converted into monitoring wells. As described in the SSQAPP, the wells were developed with a minimum effort after installation to remove silt. Each well was developed for approximately 15 minutes by pumping with a peristaltic pump. The monitoring wells were sampled immediately using a modified low-flow purge and sample method in general accordance with SOP S2 (see the Project QAPP). **Appendix C** contains the groundwater sampling logs. The following modifications were made to the SOP for groundwater sampling at the Site:

- Measurements of temperature and oxidation reduction potential (ORP)/observed electrode potential (Eh) were not used as indicators of stabilization;
- A reasonable effort was made to achieve stabilization of field parameters. However, if stabilization was not achieved within 20 minutes, it was noted on the field sheet and samples were collected; and
- If the turbidly measurement was greater than 30 NTUs, an unfiltered sample was collected for TAL metals and submitted to the laboratory for filtering and acidification prior to analysis.

The laboratory groundwater samples were collected in the appropriate sample containers and kept in an insulated cooler with ice until picked up by the laboratory courier. Groundwater samples were submitted to the laboratory for analysis by the following EPA methods: VOC (EPA Method 8260B), SVOC (EPA Method 8270C), TAL Metals (EPA Method 6010) and PCB analysis (EPA Method 8082). A summary of the samples and analyses is presented in Table 4-2.

3.3.1.2 Sample Management

Samples were collected and managed, as described in *SOPs S7* and *S9* in the Project QAPP. Sample preservation requirements are listed in Table 3-5 of the SSQAPP.

3.3.1.3 Equipment Decontamination and Management of Investigation Derived Waste (IDW)

Decontamination procedures are described in *SOP S12* in the Project QAPP. IDW was managed as follows:

- Purged water was discharged to the ground surface and allowed to infiltrate the soil.
- No free product was encountered.

3.3.1.4 Task 7 - Reporting

This Phase II ESA report was completed as described in the Project QAPP.

Table 3-3
Summary of Analyses
E. Perry Site
Portland, Maine

	Boring ID	Monitoring Well ID	Sample Interval (ft bgs)	Analyses							
				Soil				Groundwater			
				VOC	SVOC	Metals	PCB	VOC	SVOC	Metals	PCB
9 Somerset Street											
	B-A	MW-A	0-4'	√	√	√	√	√	√	√	√
	B-B	MW-B	0-4', 4-8'	√	√	√	√*	√	√	√	√
	B-C	MW-C	0-4'	√	√	√	√	√	√	√	√
	B-D	MW-D	0-4', 4-8'	√	√	√*	√*	√	√	√	√
	B-E	MW-E	0-4'	√	√	√	√	√	√	√	√
	SS-A	n/a	0-4'	√	√	√	√				
	SS-B	n/a	0-4'	√	√	√	√				
	SS-C	n/a	0-4'	√	√	√	√				
115 Lancaster Street											
	B-1	n/a	0-4'	√	√	√	√				
	B-2	n/a	0-4'	√	√	√	√				
	B-3	MW-3	0-4'	√	√	√	√	√	√	√	√
	B-4	n/a	0-4'	√	√	√	√				
	B-5	MW-5	0-4'	√	√	√	√	√	√	√	√
	B-6	MW-6	0-4'	√	√	√	√	√	√	√	√
	B-7	MW-7	0-4'	√	√	√	√	√	√	√	√
	B-8	MW-8	0-4'	√	√	√	√	√	√	√	√
	B-9	MW-9	0-4'	√	√	√	√	√	√	√	√
	B-10	n/a	0-4'	√	√	√	√				
	B-11	MW-11	0-4'	√	√	√	√	√	√	√	√
	SS-1	n/a	0-4'	√	√	√	√				
	SS-2	n/a	0-4'	√	√	√	√				
	SS-3	n/a	0-4'	√	√	√	√				
	SS-4	n/a	0-4'	√	√	√	√				
	SS-5	n/a	0-4'	√	√	√	√				
	SS-6	n/a	0-4'	√	√	√	√				

Notes:
* = Samples taken from the 4-8' bgs interval due to lack of sample volume in 0-4' interval
ft bgs = feet below ground surface
n/a = No monitoring well installed
√= Sample was submitted for these analyses
B = Soil Boring
SS = Surface soil sample
VOC = Volatile Organic Compounds, EPA Method 8260
SVOC = Semi-Volatile Organic Compounds, EPA Method 8270
PCB = Polychlorinated Biphenyls, EPA Method 8082
Metals = TAL metals, EPA Method 6061

4. EVALUATION AND PRESENTATION OF RESULTS

4.1 SUBSURFACE CONDITIONS

The field work consisted of shallow soil samples, geoprobe soil borings, and monitoring well installations. The following section describes the geologic setting and hydrogeologic conditions at the Site.

4.1.1 Geologic Setting

The Somerset Street Site geologic setting consists of approximately six to 12 feet of fill over marine sediments. The fill consists of sand and silt with gravel, with frequent glass, ash, wood, and metal fragments. The marine sediments consists of gray to dark gray silty marine clay with frequent shell fragments. The geologic setting at the Lancaster Street Site consists of approximately 2.5 to seven feet of fill over approximately two to four feet of brown medium sand. Gray silty marine clay was below the sand.

4.1.2 Hydrogeologic Conditions

The groundwater table at the Somerset Street Site was approximately 4 to 8 feet bgs on the day of the field work. The groundwater at the Lancaster Street Site was approximately 3.5 to 7.5 feet bgs on the day of the field work.

4.2 ANALYTICAL DATA

The following section describes the soil and groundwater analytical results for the Site.

4.2.1 Soil

Eight soil samples were collected from the Somerset Street property, and 17 and soil samples were collected from the Lancaster Street property. The soil samples were analyzed for VOCs, SVOCs, PCBs, and TAL Metals. Tabulated analytical results for detected compounds are presented in **Table 4-1** for the Somerset Street property, and **Table 4-2** for the Lancaster Street property. Form 1 laboratory data packages are included in **Appendix D.** For comparison purposes, analytical results were compared to residential, trespasser, and adult worker guidelines from the Maine Remedial Action Guidelines (RAGs).

Somerset Street

On the Somerset Street property, five VOCs were detected in soil samples, but at concentrations below the residential, worker, and trespasser RAGs (see Table 4-1). The most commonly detected VOC was naphthalene, which was detected in all soil samples from the property, except SS-C. Naphthelene is a component of gasoline and diesel fuel.

Table 4-1
Woodard & Curran
Summary of Somerset Street Soil Results
E.Perry Site, Portland, Maine

	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-A 04/26/2005 0-4 ft	B-B 04/26/2005 0-4 ft	B-B 04/26/2005 4-8 ft	B-C 04/26/2005 0-4 ft	B-D 04/26/2005 0-4 ft	B-D 04/26/2005 4-8 ft	B-E 04/26/2005 0-4 ft	SS-A 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-C 04/26/2005 0-4 ft
Volatile Organic Compounds (mg/kg)														
Acetone	635	475	3330	<0.68J	<0.84J	---	<0.66J	<0.41J	---	<0.60J	<0.65	---	<0.59J	<0.44J
Benzene	10	5	105	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	0.055J
Bromobenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Bromochloromethane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Bromodichloromethane	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
Bromoform	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
Bromomethane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065J	---	<0.059J	<0.044J
tert-Butyl alcohol	---	---	---	<1.4J	<1.7J	---	<1.3J	<0.81J	---	<1.2J	<1.3	---	<1.2J	<0.89J
n-Butylbenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
sec-Butylbenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
tert-Butylbenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Carbon disulfide	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Carbon tetrachloride	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Chlorobenzene	415	310	2180	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Chloroethane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Chloroform	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
Chloromethane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065J	---	<0.059J	<0.044J
2-Chlorotoluene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
4-Chlorotoluene	---	---	---	<0.067J	<0.085	---	<0.066	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,2-Dibromo-3-chloropropane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Dibromochloromethane	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
1,2-Dibromoethane	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
Dibromomethane	---	---	---	<0.067J	<0.085	---	<0.066	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,2-Dichlorobenzene	3560	2670	10000	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,3-Dichlorobenzene	---	---	---	<0.067	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,4-Dichlorobenzene	---	---	---	<0.067	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Dichlorodifluoromethane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,1-Dichloroethane	860	645	4520	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,2-Dichloroethane	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
1,1-Dichloroethene	0.3	0.2	3	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
cis-1,2-Dichloroethene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
trans-1,2-Dichloroethene	180	135	940	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,2-Dichloropropane	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
1,3-Dichloropropane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
2,2-Dichloropropane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,1-Dichloropropene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
cis-1,3-Dichloropropene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
trans-1,3-Dichloropropene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Diethyl ether	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Ethyl t-butyl ether	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	0.024J
Ethylbenzene	2210	1670	10000	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Hexachlorobutadiene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
2-Hexanone	---	---	---	<0.68J	<0.84J	---	<0.66J	<0.41J	---	<0.60J	<0.65	---	<0.59J	<0.44J
Isopropylbenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
di-Isopropylether	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
p-Isopropyltoluene	---	---	---	<0.067J	<0.085J	---	<0.066J	0.036J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Methyl ethyl ketone	10000	10000	10000	<0.68J	<0.84J	---	<0.66J	<0.41J	---	<0.60J	<0.65	---	<0.59J	<0.44J
Methyl isobutyl ketone	---	---	---	<0.68J	<0.84J	---	<0.66J	<0.41J	---	<0.60J	<0.65	---	<0.59J	<0.44J

Table 4-1
Woodard & Curran
Summary of Somerset Street Soil Results
E.Perry Site, Portland, Maine

	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-A 04/26/2005 0-4 ft	B-B 04/26/2005 0-4 ft	B-B 04/26/2005 4-8 ft	B-C 04/26/2005 0-4 ft	B-D 04/26/2005 0-4 ft	B-D 04/26/2005 4-8 ft	B-E 04/26/2005 0-4 ft	SS-A 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-C 04/26/2005 0-4 ft
Methyl tert-butyl ether	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	0.024J
Methylene chloride	28	13	275	<0.34J	<0.42J	---	<0.33J	<0.20J	---	<0.30J	<0.33	---	<0.30J	<0.22J
Naphthalene	325	245	1710	1.5J	0.063	---	0.32	0.020J	---	0.033J	28	---	0.066	<0.044J
n-Propylbenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Styrene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Tert-amyl methyl ether	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,1,1,2-Tetrachloroethane	2140	660	2400	<0.067J	<0.085	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,1,2,2-Tetrachloroethane	---	---	---	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
Tetrachloroethene	7	3	65	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Tetrahydrofuran	---	---	---	<0.34J	<0.42J	---	<0.33J	<0.20J	---	<0.30J	<0.33	---	<0.30J	<0.22J
Toluene	3190	2390	10000	<0.067J	<0.085J	---	0.050J	<0.041J	---	<0.060J	<0.065	---	0.050J	<0.044J
1,2,3-Trichlorobenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,2,4-Trichlorobenzene	720	540	3800	<0.067J	<0.085J	---	<0.066J	<0.041	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,1,1-Trichloroethane	350	260	1840	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,1,2-Trichloroethane	7	3	70	<0.051J	<0.063J	---	<0.050J	<0.030J	---	<0.045J	<0.049	---	<0.044J	<0.033J
Trichloroethene	40	19	400	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Trichlorofluoromethane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,2,3-Trichloropropane	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
1,2,4-Trimethylbenzene	---	---	---	<0.067J	<0.085J	---	0.076J	<0.041J	---	<0.060J	<0.065	---	0.037J	<0.044J
1,3,5-Trimethylbenzene	---	---	---	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
Vinyl chloride	0.1	0.04	0.8	<0.067J	<0.085J	---	<0.066J	<0.041J	---	<0.060J	<0.065	---	<0.059J	<0.044J
m&p-Xylene	---	---	---	<0.067J	<0.085J	---	0.1	<0.041J	---	0.043J	<0.065	---	0.07	0.07
o-Xylene	---	---	---	<0.067J	<0.085J	---	0.059J	<0.041J	---	<0.060J	<0.065	---	0.032J	<0.044J
Total Xylenes	10000	10000	10000	ND	ND	---	0.159	ND	---	0.043	ND	---	0.102	0.07
Semi-Volatile Organic Compounds (mg/kg)														
Acenaphthene	---	---	---	0.38	<0.63	---	<2.8	<0.55	---	<0.57	23	---	<0.61	<0.63
Acenaphthylene	---	---	---	0.4	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Aniline	---	---	---	<0.59	<0.63J	---	<2.8J	<0.55J	---	<0.57J	<20J	---	<0.61J	<0.63J
Anthracene	---	---	---	1	0.44J	---	3.2	<0.55	---	<0.57	40	---	<0.61	<0.63
Azobenzene	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Benz(b)fluoranthene	---	---	---	3.2	2.0J	---	7	0.41J	---	0.40J	42	---	2.3	0.53J
Benzidine	---	---	---	<0.59	<0.63R	---	<2.8R	<0.55R	---	<0.57R	<20J	---	<0.61J	<0.63J
Benzo(a)anthracene	---	---	---	2.4	1.5J	---	7.7	0.38J	---	0.29J	60	---	1.1	0.57J
Benzo(a)pyrene	7	2	9	[2.5]	1.5	---	[7.4]	0.36J	---	0.33J	[54]	---	1.5	0.59J
Benzo(g,h,i)perylene	---	---	---	0.86	0.50J	---	5	<0.55	---	<0.57	32	---	0.58J	0.53J
Benzo(k)fluoranthene	---	---	---	2.6	1.9J	---	5.3	0.38J	---	0.35J	42	---	1.3	0.53J
Benzoic acid	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Benzyl alcohol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
bis(2-Chloroethoxy)methane	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
bis(2-Chloroethyl) ether	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
bis(2-Chloroisopropyl)ether	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
bis(2-Ethylhexyl) phthalate	3970	1220	4460	<0.59	0.81	---	<2.8	<0.55	---	<0.57	<20	---	2	<0.63
4-Bromophenyl phenyl ether	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Butylbenzyl phthalate	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Carbazole	---	---	---	0.46	<0.63	---	1.7J	<0.55	---	<0.57	21	---	<0.61	<0.63
4-Chloro-3-methylphenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
4-Chloroaniline	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2-Chloronaphthalene	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2-Chlorophenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63

Table 4-1
Woodard & Curran
Summary of Somerset Street Soil Results
E.Perry Site, Portland, Maine

	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-A 04/26/2005 0-4 ft	B-B 04/26/2005 0-4 ft	B-B 04/26/2005 4-8 ft	B-C 04/26/2005 0-4 ft	B-D 04/26/2005 0-4 ft	B-D 04/26/2005 4-8 ft	B-E 04/26/2005 0-4 ft	SS-A 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-C 04/26/2005 0-4 ft
4-Chlorophenyl phenyl ether	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Chrysene	---	---	---	2.4	1.7	---	8	0.37J	---	0.34J	60	---	1.3	0.64
Dibenz(a,h)anthracene	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Dibenzofuran	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	17J	---	<0.61	<0.63
3,3'-Dichlorobenzidine	---	---	---	<0.59	<0.63R	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,4-Dichlorophenol	22	16	112	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,6-Dichlorophenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Diethyl phthalate	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Dimethyl phthalate	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,4-Dimethylphenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Di-n-butyl phthalate	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
4,6-Dinitro-2-methylphenol	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,4-Dinitrophenol	---	---	---	<0.59J	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,4-Dinitrotoluene	---	---	---	<0.59J	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,6-Dinitrotoluene	---	---	---	<0.59J	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Di-n-octyl-phthalate	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Fluoranthene	---	---	---	4.6	2.7J	---	16	0.92	---	0.53J	150	---	1.6	1
Fluorene	---	---	---	0.49J	<0.63	---	1.5J	<0.55	---	<0.57	22	---	<0.61	<0.63
Hexachlorobenzene	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Hexachlorocyclopentadiene	---	---	---	<0.59R	<0.63R	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Hexachloroethane	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Indeno(1,2,3-cd)pyrene	---	---	---	0.94	0.56J	---	5	<0.55	---	<0.57	35	---	0.62	0.50J
Isophorone	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2-Methylnaphthalene	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2-Methylphenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
3&4-Methylphenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2-Nitroaniline	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
3-Nitroaniline	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
4-Nitroaniline	---	---	---	<0.59	<0.63J	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Nitrobenzene	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2-Nitrophenol	---	---	---	<0.59	<0.63R	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
4-Nitrophenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
n-Nitrosodimethylamine	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
n-Nitrosodiphenylamine	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
n-Nitroso-di-propylamine	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Pentachlorophenol	2	1	21	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Phenanthrene	---	---	---	3.5	1.8J	---	15	0.58	---	<0.57	160	---	0.91	0.62J
Phenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
Pyrene	---	---	---	3.7	2.4J	---	15	0.78	---	0.48J	120	---	1.8	0.96
Pyridine	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,3,4,6-Tetrachlorophenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,4,5-Trichlorophenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
2,4,6-Trichlorophenol	---	---	---	<0.59	<0.63	---	<2.8	<0.55	---	<0.57	<20	---	<0.61	<0.63
PCBs (mg/Kg)														
Aroclor 1016	0.4	0.1	0.2	<0.44	---	<0.018	<0.17	---	<0.017	<0.017	<0.024	---	<0.018	<0.020
Aroclor 1221	---	---	---	<0.44	---	<0.018	<0.17	---	<0.017	<0.017	<0.024	---	<0.018	<0.020
Aroclor 1232	---	---	---	<0.44	---	<0.018	<0.17	---	<0.017	<0.017	<0.024	---	<0.018	<0.020
Aroclor 1242	---	---	---	<0.44	---	<0.018	<0.17	---	<0.017	<0.017	<0.024	---	<0.018	<0.020
Aroclor 1248	---	---	---	<0.44	---	<0.018	<0.17	---	<0.017	<0.017	<0.024	---	<0.018	<0.020

Table 4-1
Woodard & Curran
Summary of Somerset Street Soil Results
E.Perry Site, Portland, Maine

	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-A 04/26/2005 0-4 ft	B-B 04/26/2005 0-4 ft	B-B 04/26/2005 4-8 ft	B-C 04/26/2005 0-4 ft	B-D 04/26/2005 0-4 ft	B-D 04/26/2005 4-8 ft	B-E 04/26/2005 0-4 ft	SS-A 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-B 04/26/2005 0-4 ft	SS-C 04/26/2005 0-4 ft
Aroclor 1254	---	---	---	<0.44	---	<0.018	<0.17	---	<0.017	<0.017	<0.024	---	0.47	<0.020
Aroclor 1260	---	---	---	5.5	---	<0.018	0.97	---	<0.017	0.034	<0.024	---	0.57	<0.020
Total PCBs	7.2	2.2	8.1	[5.5]	---	ND	0.97	---	ND	0.034	ND	---	1.04	ND
Total Inorganic Analytes (mg/kg)														
Aluminum	---	---	---	5610	4960	---	3680	---	20000	11000	6760	---	7310	4490
Antimony	---	---	---	51.7	17.6	---	44.4	---	1.5	2.6	1.4	---	7.7	24.5
Arsenic	30	10	30	[30.1]	[69.9]	---	[73.4]	---	8.7	[11.8]	[15.1]	---	[25.1]	[56.5]
Barium	10000	10000	10000	604	370	---	516	---	134	98	181	---	321	1250
Beryllium	10	4	15	<0.21U	<0.25U	---	<0.29U	---	0.74	0.49	0.38	---	0.56	0.33
Cadmium	23	27	35	[24.2]	10	---	10.6	---	<0.082	1.1	0.36	---	8.6	[27.6]
Calcium	---	---	---	2970	1280	---	3620	---	1470	2220	26000	---	12000	5420
Chromium	---	---	---	69.1	62	---	123	---	45.7	28.2	15.9	---	50.3	141
Cobalt	---	---	---	14.4	29.1	---	37.2	---	8.7	8.2	5.4	---	8.9	25.4
Copper	600	650	600	[973]	[997]	---	[1200]	---	24.1	92.3	66.5	---	[7320]	[1770]
Iron	---	---	---	122000	283000	---	420000	---	21600	35000	14700	---	66500	262000
Lead	700	375	700	[2780]	[2880]	---	[2850]	---	42.5	165	[836]	---	[1720]	[7200]
Magnesium	---	---	---	2890	1930	---	946	---	6460	4280	2350	---	2260	2770
Manganese	---	---	---	673	1330	---	2060	---	273	355	171	---	458	1340
Mercury	610	60	320	3.6	1.4	---	2.5	---	0.87	3.6	0.054	---	3.6	7
Nickel	10000	3800	10000	78.7	61.6	---	104	---	34.5	22.6	12.3	---	76.9	150
Potassium	---	---	---	1030	596	---	427	---	3300	3530	1160	---	686	641
Selenium	10000	950	5350	<4.0	<5.0	---	<4.0	---	<4.3	<3.9	<0.44	---	<3.7	<4.3
Silver	10000	950	5350	0.51	0.82	---	0.54	---	<0.18	<0.17	<0.19	---	0.88	1.3
Sodium	---	---	---	394	320	---	337	---	339	361	86.7	---	434	299
Thallium	---	---	---	5.4	11.5	---	17.7	---	1.8	1.1	<0.67	---	3	12.9
Vanadium	---	---	---	25.9	41.5	---	116	---	36.5	28	18	---	22.6	69.5
Zinc	1500	1500	1500	[4040]	[3320]	---	[2460]	---	473	435	169J	---	[6330]J	[5020]J
Total solids	---	---	---	0.016	0.022	0.016	0.011	0.01	0.016	0.013	---	0.038	0.02	0.024

Units in milligrams per kilogram (mg/kg)
RAGs = Remedial Action Guideline
< = not detected at reporting limit
[ ] = above criteria
J = estimated
R = rejected
U = result revised to nondetect

Table 4-2
Woodard & Curran
Summary of Lancaster Street Soil Results
E. Perry Site, Portland, Maine

	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-1 04/27/2005 0-4 ft	B-10 04/28/2005 0-4 ft	B-11 04/28/2005 0-4 ft	B-2 04/27/2005 0-4 ft	B-3 04/27/2005 0-4 ft	B-4 04/27/2005 0-4 ft	B-5 04/27/2005 0-4 ft	B-6 04/28/2005 0-4 ft	B-6 04/28/2005 4-5 ft	B-7 04/29/2005 0-4 ft	B-7 04/29/2005 4-8 ft
Volatile Organic Compounds (mg/kg)														
Acetone	635	475	3330	<0.42	<0.36	<0.38J	<0.51	<0.35	<0.42	<0.56J	<0.50	---	<4.2J	---
Benzene	10	5	105	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	0.032J	<0.050	---	<0.42J	---
Bromobenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Bromochloromethane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Bromodichloromethane	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
Bromoform	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
Bromomethane	---	---	---	<0.042J	<0.036J	<0.038J	<0.051J	<0.035J	<0.043J	<0.056J	<0.050J	---	<0.42J	---
tert-Butyl alcohol	---	---	---	<0.84	<0.72	<0.75J	<1.0	<0.70	<0.85	<1.1J	<1.00	---	<8.4J	---
n-Butylbenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.036	<0.043	<0.056J	<0.050	---	<0.42J	---
sec-Butylbenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
tert-Butylbenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.036	<0.043	<0.056J	<0.050	---	<0.42J	---
Carbon disulfide	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Carbon tetrachloride	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Chlorobenzene	415	310	2180	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Chloroethane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Chloroform	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
Chloromethane	---	---	---	<0.042J	<0.036	<0.038J	<0.051J	<0.035J	<0.043J	<0.056J	<0.050J	---	<0.42J	---
2-Chlorotoluene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
4-Chlorotoluene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,2-Dibromo-3-chloropropane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Dibromochloromethane	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
1,2-Dibromoethane	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
Dibromomethane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,2-Dichlorobenzene	3560	2670	10000	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	<1.2	<0.42J	---
1,3-Dichlorobenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	<1.2	<0.42J	---
1,4-Dichlorobenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	<1.2	<0.42J	---
Dichlorodifluoromethane	---	---	---	<0.042	<0.036	<0.038	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,1-Dichloroethane	860	645	4520	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,2-Dichloroethane	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
1,1-Dichloroethene	0.3	0.2	3	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
cis-1,2-Dichloroethene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
trans-1,2-Dichloroethene	180	135	940	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,2-Dichloropropane	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042	<0.037	---	<0.31J	---
1,3-Dichloropropane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
2,2-Dichloropropane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,1-Dichloropropene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
cis-1,3-Dichloropropene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
trans-1,3-Dichloropropene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Diethyl ether	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Ethyl t-butyl ether	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	0.036J	<0.050	---	<0.42J	---
Ethylbenzene	2210	1670	10000	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	<1.2	<0.42J	---
Hexachlorobutadiene	---	---	---	<0.42	<0.36	<0.38J	<0.51	<0.35	<0.42	<0.56J	<0.50	---	<4.2J	---
2-Hexanone	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Isopropylbenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
di-Isopropylether	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
p-Isopropyltoluene	---	---	---	<0.42	<0.36	<0.38J	<0.51	<0.35	<0.42	<0.56J	<0.50	---	<4.2J	---
Methyl ethyl ketone	10000	10000	10000	<0.42	<0.36	<0.38J	<0.51	<0.35	<0.42	<0.56J	<0.50	---	<4.2J	---
Methyl isobutyl ketone	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Methyl tert-butyl ether	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Methylene chloride	28	13	275	<0.21	<0.18	<0.19J	<0.26	0.10J	<0.21	<0.28J	<0.25	---	<2.1J	---
Naphthalene	325	245	1710	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	0.17	<0.050	<1.2	1.3J	---

Table 4-2
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Summary of Lancaster Street Soil Results
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	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-1 04/27/2005 0-4 ft	B-10 04/28/2005 0-4 ft	B-11 04/28/2005 0-4 ft	B-2 04/27/2005 0-4 ft	B-3 04/27/2005 0-4 ft	B-4 04/27/2005 0-4 ft	B-5 04/27/2005 0-4 ft	B-6 04/28/2005 0-4 ft	B-6 04/28/2005 4-5 ft	B-7 04/29/2005 0-4 ft	B-7 04/29/2005 4-8 ft
n-Propylbenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Styrene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Tert-amyl methyl ether	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,1,1,2-Tetrachloroethane	2140	660	2400	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,1,2,2-Tetrachloroethane	---	---	---	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
Tetrachloroethene	7	3	65	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
Tetrahydrofuran	---	---	---	<0.21	<0.18	<0.19J	<0.26	<0.18	<0.21	<0.28J	<0.25	---	<2.1J	---
Toluene	3190	2390	10000	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	0.062	<0.050	---	<0.42J	---
1,2,3-Trichlorobenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,2,4-Trichlorobenzene	720	540	3800	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	<1.2	<0.42J	---
1,1,1-Trichloroethane	350	260	1840	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,1,2-Trichloroethane	7	3	70	<0.032	<0.027	<0.028J	<0.038	<0.026	<0.032	<0.042J	<0.037	---	<0.31J	---
Trichloroethene	40	19	400	<0.042	<0.036	<0.038J	0.026J	<0.035	<0.043	<0.056J	<0.050	---	[20]	---
Trichlorofluoromethane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	0.043J	<0.056J	<0.050	---	<0.42J	---
1,2,3-Trichloropropane	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
1,2,4-Trimethylbenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	0.068	<0.050	---	<0.42J	---
1,3,5-Trimethylbenzene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	0.028J	<0.050	---	<0.42J	---
Vinyl chloride	0.1	0.04	0.8	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	<0.056J	<0.050	---	<0.42J	---
m&p-Xylene	---	---	---	0.025J	<0.036	<0.038J	0.026J	<0.035	<0.043	0.1	<0.050	---	<0.42J	---
o-Xylene	---	---	---	<0.042	<0.036	<0.038J	<0.051	<0.035	<0.043	0.06	<0.050	---	<0.42J	---
Total Xylenes	10000	10000	10000	0.025	ND	ND	0.026	ND	ND	0.16	ND	---	ND	---
Semi-Volatile Organic Compounds (mg/kg)														
Acenaphthene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	0.70J	2.1	---
Acenaphthylene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Aniline	---	---	---	<0.58J	<0.53	<0.28J	<0.55J	<0.56J	<0.54J	<1.2J	---	<1.2J	<1.4J	---
Anthracene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	0.32J	0.66J	---	1.8	3.4	---
Azobenzene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Benz(b)fluoranthene	---	---	---	0.66	<0.53	0.34	0.92	<0.56	0.98	3	---	2.4	2.2	---
Benzidine	---	---	---	<0.58J	<0.53J	<0.28R	<0.55	<0.56J	<0.54J	<1.2J	---	<1.2J	<1.4R	---
Benzo(a)anthracene	---	---	---	0.48J	<0.53	0.28J	0.87J	<0.56	0.96	2.1	---	4.2	3.6	---
Benzo(a)pyrene	7	2	9	0.64	<0.53	0.31	0.68J	<0.56	1	[2.2]	---	[2.2]	[3.0]	---
Benzo(g,h,i)perylene	---	---	---	0.38J	<0.53	0.21J	0.29J	<0.56	0.41J	0.60J	---	0.79J	1.8	---
Benzo(k)fluoranthene	---	---	---	0.39J	<0.53	0.27J	0.81J	<0.56	0.93	2.3	---	1.8	2.1	---
Benzoic acid	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Benzyl alcohol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
bis(2-Chloroethoxy)methane	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
bis(2-Chloroethyl) ether	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
bis(2-Chloroisopropyl)ether	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
bis(2-Ethylhexyl) phthalate	3970	1220	4460	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
4-Bromophenyl phenyl ether	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Butylbenzyl phthalate	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	0.71J	1.5	---
Carbazole	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
4-Chloro-3-methylphenol	---	---	---	<0.58	<0.53	<0.28	<0.55J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
4-Chloroaniline	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2-Chloronaphthalene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2-Chlorophenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
4-Chlorophenyl phenyl ether	---	---	---	0.55J	<0.53	0.36	0.96J	<0.56	1.1	2.6	---	3.3	3.6	---
Chrysene	---	---	---	<0.58	<0.53	<0.28	<0.55J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Dibenz(a,h)anthracene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	1.4	---
Dibenzofuran	---	---	---	<0.58	<0.53	<0.28	<0.55J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
3,3'-Dichlorobenzidine	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,4-Dichlorophenol	22	16	112	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---

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	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-1 04/27/2005 0-4 ft	B-10 04/28/2005 0-4 ft	B-11 04/28/2005 0-4 ft	B-2 04/27/2005 0-4 ft	B-3 04/27/2005 0-4 ft	B-4 04/27/2005 0-4 ft	B-5 04/27/2005 0-4 ft	B-6 04/28/2005 0-4 ft	B-6 04/28/2005 4-5 ft	B-7 04/29/2005 0-4 ft	B-7 04/29/2005 4-8 ft
2,6-Dichlorophenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Diethyl phthalate	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Dimethyl phthalate	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,4-Dimethylphenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Di-n-butyl phthalate	---	---	---	<0.58	<0.53	<0.28	<0.55J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
4,6-Dinitro-2-methylphenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,4-Dinitrophenol	---	---	---	<0.58	<0.53	<0.28	<0.55J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,4-Dinitrotoluene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,6-Dinitrotoluene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Di-n-octyl-phthalate	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Fluoranthene	---	---	---	0.96	0.39J	0.61	1.3J	<0.56	2.1	4.3	---	9.8	9.5	---
Fluorene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	0.60J	---	0.64J	1.9	---
Hexachlorobenzene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Hexachlorocyclopentadiene	---	---	---	<0.58	<0.53	<0.28	<0.55J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Hexachloroethane	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Indeno(1,2,3-cd)pyrene	---	---	---	0.39J	<0.53	0.23J	0.34J	<0.56	0.48J	0.68J	---	0.96J	1.9	---
Isophorone	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2-Methylnaphthalene	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2-Methylphenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
3&4-Methylphenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2-Nitroaniline	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
3-Nitroaniline	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
4-Nitroaniline	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Nitrobenzene	---	---	---	<0.58	<0.53	<0.28	<0.55J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2-Nitrophenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
4-Nitrophenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
n-Nitrosodimethylamine	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
n-Nitrosodiphenylamine	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
n-Nitroso-di-propylamine	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Pentachlorophenol	2	1	21	<0.58	<0.53	<0.28	<0.55	<0.56	1.6	3	---	6.5	12	---
Phenanthrene	---	---	---	0.76	<0.53	0.3	0.51J	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Phenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
Pyrene	---	---	---	0.97	0.30J	0.5	1.3	<0.56	1.7	4.4	---	8.4	7.5	---
Pyridine	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,3,4,6-Tetrachlorophenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,4,5-Trichlorophenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
2,4,6-Trichlorophenol	---	---	---	<0.58	<0.53	<0.28	<0.55	<0.56	<0.54	<1.2	---	<1.2	<1.4	---
PCBs (mg/kg)														
Aroclor 1016	0.4	0.1	0.2	<0.18	<0.017	<0.015	<0.017	<0.017	<0.017	<0.18	<0.18	---	<0.015	---
Aroclor 1221	---	---	---	<0.18	<0.017	<0.015	<0.017	<0.017	<0.017	<0.18	<0.18	---	<0.015	---
Aroclor 1232	---	---	---	<0.18	<0.017	<0.015	<0.017	<0.017	<0.017	<0.18	<0.18	---	<0.015	---
Aroclor 1242	---	---	---	<0.18	<0.017	<0.015	<0.017	<0.017	<0.017	<0.18	<0.18	---	<0.015	---
Aroclor 1248	---	---	---	<0.18	<0.017	<0.015	<0.017	<0.017	<0.017	<0.18	<0.18	---	<0.015	---
Aroclor 1254	---	---	---	4.2	0.052	0.04	<0.017	<0.017	<0.017	4.7	1.3	---	0.034	---
Aroclor 1260	---	---	---	6.2D	0.11	0.12D	<0.017	<0.017	<0.017	4.3	1.2	---	0.036	---
Total PCBs	7.2	2.2	8.1	[10.4]	0.162	0.16	ND	ND	ND	[9.0]	[2.6]	---	0.07	---
Total Inorganic Analytes (mg/Kg)														
Aluminum	---	---	---	16700	9890	9300	10900	4760	7810	13200	26500	---	---	10400
Antimony	---	---	---	20.3	1.5	1.3	1.1	1.3	1.7	77.7	15.7	---	---	1.4B
Arsenic	30	10	30	[25.8]	8.1	7.4	[14.6]	4.6	[11.0]	[51.8]	[21.3]	---	---	9.9
Barium	10000	10000	10000	479	47	102	50.8	31.9	347	2600	590	---	---	40.5
Beryllium	10	4	15	0.72	0.46	0.48	0.48	0.2	0.4	0.61	0.39	---	---	0.42B

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	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-1 04/27/2005 0-4 ft	B-10 04/28/2005 0-4 ft	B-11 04/28/2005 0-4 ft	B-2 04/27/2005 0-4 ft	B-3 04/27/2005 0-4 ft	B-4 04/27/2005 0-4 ft	B-5 04/27/2005 0-4 ft	B-6 04/28/2005 0-4 ft	B-6 04/28/2005 4-5 ft	B-7 04/29/2005 0-4 ft	B-7 04/29/2005 4-8 ft
Cadmium	23	27	35	19.8	0.22	0.28	0.57	0.24	1.2	[48.1]	18.7	---	---	<0.081
Calcium	---	---	---	10500	1330	2400	2510	1140	4490	13300	5000	---	---	2270
Chromium	---	---	---	96.1	26.6	22.9	37.5	11.5	37.9	199	330	---	---	34
Cobalt	---	---	---	17.2	6.2	5.2	8.3	2.7	6.5	25.6	15	---	---	6
Copper	600	650	600	[1590]	19.6	77.7	30	61	87.4	[2530]	[2080]	---	---	16.6
Iron	---	---	---	125000	13000	13500	16100	6680	15600	188000	60300	---	---	13600
Lead	700	375	700	[3180]	58.2	195	41.9	97.7	[874]	[29800]	[2510]	---	---	9.2
Magnesium	---	---	---	2640	4160	3550	5370	1980	2900	4980	3920	---	---	4730
Manganese	---	---	---	986	209	224	300	68.9	357	1430	608	---	---	178
Mercury	610	60	320	1.6	0.024	0.25	0.46	0.22	1.2	15.6	9	---	---	<0.018
Nickel	10000	3800	10000	103	16.9	17.6	28.4	10	26.1	240	323	---	---	23.4
Potassium	---	---	---	1210	2200	1850	2130	885	1260	1460	1460	---	---	2150
Selenium	10000	950	5350	<4.6	<0.39	<0.34	<0.38	<0.40	0.59	<4.7	<4.8	---	---	<0.38
Silver	10000	950	5350	1.7	<0.17	<0.33	<0.17	<0.17	0.4	3.6	3.1	---	---	<0.37
Sodium	---	---	---	487	211	237	139	155	93.6	3320	382	---	---	304
Thallium	---	---	---	5.6	0.85	<0.75	<0.59	0.63	<0.76	9.7	2.5	---	---	<0.85
Vanadium	---	---	---	27.3	22.3	25.2	25.7	10.6	21	74.6	45.5	---	---	24.3
Zinc	1500	1500	1500	[2970]J	54.9J	156	877J	172	332	<823J	[3400]J	---	---	95.8
Total solids	---	---	---	0.015	0.007	0.012	0.011	0.011	0.009	0.016	0.015	---	---	0.011

Units in milligrams per kilogram (mg/kg)
RAGs = Remedial Action Guideline
< = not detected at reporting limit
[ ] = above criteria
B or J = estimated
R = rejected
- = not analyzed or not available

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	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-8 04/29/2005 0-4 ft	B-9 04/28/2005 0-4 ft	SS-1 04/28/2005 0-4 ft	SS-2 04/28/2005 0-4 ft	SS-3 04/28/2005 0-4 ft	SS-4 04/28/2005 0-4 ft	SS-5 04/28/2005 0-4 ft	SS-6 04/28/2005 0-4 ft
Volatile Organic Compounds (mg/kg)											
Acetone	635	475	3330	<0.35J	<0.35	<0.47J	<0.39J	<0.45	<0.40	<0.37	<0.44J
Benzene	10	5	105	<0.035J	<0.035	<0.047J	<0.039J	0.14	<0.040	0.053	<0.044J
Bromobenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Bromochloromethane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Bromodichloromethane	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
Bromoform	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
Bromomethane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045J	<0.040J	<0.037J	<0.044J
tert-Butyl alcohol	---	---	---	<0.70J	<0.70	<0.95J	<0.77J	<0.89	<0.81	<0.74	<0.87J
n-Butylbenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
sec-Butylbenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	0.071	<0.044J
tert-Butylbenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Carbon disulfide	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Carbon tetrachloride	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Chlorobenzene	415	310	2180	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Chloroethane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Chloroform	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
Chloromethane	---	---	---	<0.035J	<0.035	<0.047	<0.039J	<0.045	<0.040	<0.037	<0.044J
2-Chlorotoluene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
4-Chlorotoluene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,2-Dibromo-3-chloropropane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Dibromochloromethane	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
1,2-Dibromoethane	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
Dibromomethane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,2-Dichlorobenzene	3560	2670	10000	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,3-Dichlorobenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,4-Dichlorobenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Dichlorodifluoromethane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,1-Dichloroethane	860	645	4520	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,2-Dichloroethane	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
1,1-Dichloroethene	0.3	0.2	3	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
cis-1,2-Dichloroethene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
trans-1,2-Dichloroethene	180	135	940	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,2-Dichloropropane	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
1,3-Dichloropropane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
2,2-Dichloropropane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,1-Dichloropropene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
cis-1,3-Dichloropropene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
trans-1,3-Dichloropropene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Diethyl ether	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Ethyl t-butyl ether	---	---	---	<0.035J	0.067	<0.047J	<0.039J	0.077	<0.040	0.25	<0.044J
Ethylbenzene	2210	1670	10000	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Hexachlorobutadiene	---	---	---	<0.35J	<0.35	<0.47J	<0.39J	<0.45	<0.40	<0.37	<0.44J
2-Hexanone	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	0.020J	<0.044J
Isopropylbenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
di-Isopropylether	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	0.32	<0.044J
p-Isopropyltoluene	---	---	---	<0.35J	<0.35	<0.47J	<0.39J	<0.45	<0.40	<0.37	<0.44J
Methyl ethyl ketone	10000	10000	10000	<0.35J	<0.35	<0.47J	<0.39J	<0.45	<0.40	<0.37	<0.44J
Methyl isobutyl ketone	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Methyl tert-butyl ether	---	---	---	<0.17J	<0.17	<0.24J	<0.19J	<0.22	<0.20	<0.18	<0.22J
Methylene chloride	28	13	275	0.020J	<0.035	<0.047J	<0.039J	<0.045	<0.040	0.16	<0.044J
Naphthalene	325	245	1710								

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n-Propylbenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	0.028J	<0.040	0.18	<0.044J
Styrene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Tert-amyl methyl ether	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,1,1,2-Tetrachloroethane	2140	660	2400	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,1,2,2-Tetrachloroethane	---	---	---	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
Tetrachloroethene	7	3	65	<0.035J	<0.035	0.06	<0.039J	<0.045	0.048	<0.037	<0.044J
Tetrahydrofuran	---	---	---	<0.17J	<0.17	<0.24J	<0.19J	<0.22	<0.20	<0.18	<0.22J
Toluene	3190	2390	10000	<0.035J	<0.035	<0.047J	<0.039J	0.9	0.028J	0.5	<0.044J
1,2,3-Trichlorobenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,2,4-Trichlorobenzene	720	540	3800	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,1,1-Trichloroethane	350	260	1840	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,1,2-Trichloroethane	7	3	70	<0.026J	<0.026	<0.036J	<0.029J	<0.033	<0.030	<0.028	<0.033J
Trichloroethene	40	19	400	0.021J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
Trichlorofluoromethane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	0.095	<0.040	<0.037	<0.044J
1,2,3-Trichloropropane	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
1,2,4-Trimethylbenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	0.17	0.028J	0.37	<0.044J
1,3,5-Trimethylbenzene	---	---	---	<0.035J	<0.035	<0.047J	<0.039J	0.06	<0.040	0.13	<0.044J
Vinyl chloride	0.1	0.04	0.8	<0.035J	<0.035	<0.047J	<0.039J	<0.045	<0.040	<0.037	<0.044J
m&p-Xylene	---	---	---	<0.035J	0.34	<0.047J	<0.039J	0.8	0.054	0.59	<0.044J
o-Xylene	---	---	---	<0.035J	0.081	<0.047J	<0.039J	0.21	0.023J	0.16	<0.044J
Total Xylenes	10000	10000	10000	ND	0.421	ND	ND	1.01	0.077	0.75	ND
Semi-Volatile Organic Compounds (mg/kg)											
Acenaphthene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Acenaphthylene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Aniline	---	---	---	<0.28J	<0.53	<0.65J	<0.58	<0.57J	<0.55J	<0.56J	<0.59J
Anthracene	---	---	---	0.17J	<0.53	<0.65	<0.58	<0.57	0.33J	<0.56	<0.59
Azobenzene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Benz(b)fluoranthene	---	---	---	0.85	<0.53	0.50J	0.94	0.73	1.1	<0.56	1.4
Benzidine	---	---	---	<0.28R	<0.53	<0.65J	<0.58J	<0.57	<0.55J	<0.56J	<0.59J
Benzo(a)anthracene	---	---	---	0.69	<0.53	0.7	0.63	0.42J	0.94	<0.56	0.85
Benzo(a)pyrene	7	2	9	0.66	<0.53	0.65J	0.79	0.92	0.88	<0.56	1.3
Benzo(g,h,i)perylene	---	---	---	0.48	<0.53	0.48J	<0.58	0.44J	<0.55	<0.56	0.45J
Benzo(k)fluoranthene	---	---	---	0.63	<0.53	0.49J	0.72	0.45J	0.83	<0.56	1.3
Benzoic acid	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Benzyl alcohol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
bis(2-Chloroethoxy)methane	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
bis(2-Chloroethyl) ether	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
bis(2-Chloroisopropyl)ether	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
bis(2-Ethylhexyl) phthalate	3970	1220	4460	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
4-Bromophenyl phenyl ether	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Butylbenzyl phthalate	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Carbazole	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
4-Chloro-3-methylphenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
4-Chloroaniline	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2-Chloronaphthalene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2-Chlorophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
4-Chlorophenyl phenyl ether	---	---	---	0.76	<0.53	0.71	0.73	0.55J	1.1	<0.56	1.1
Chrysene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Dibenz(a,h)anthracene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Dibenzofuran	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
3,3'-Dichlorobenzidine	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,4-Dichlorophenol	22	16	112								

Table 4-2
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Summary of Lancaster Street Soil Results
E. Perry Site, Portland, Maine

	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-8 04/29/2005 0-4 ft	B-9 04/28/2005 0-4 ft	SS-1 04/28/2005 0-4 ft	SS-2 04/28/2005 0-4 ft	SS-3 04/28/2005 0-4 ft	SS-4 04/28/2005 0-4 ft	SS-5 04/28/2005 0-4 ft	SS-6 04/28/2005 0-4 ft
2,6-Dichlorophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Diethyl phthalate	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Dimethyl phthalate	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,4-Dimethylphenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Di-n-butyl phthalate	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
4,6-Dinitro-2-methylphenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,4-Dinitrophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,4-Dinitrotoluene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,6-Dinitrotoluene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Di-n-octyl-phthalate	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Fluoranthene	---	---	---	1.1	<0.53	1.6	1.3	0.42J	2	0.33J	1.4
Fluorene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Hexachlorobenzene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Hexachlorocyclopentadiene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Hexachloroethane	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Indeno(1,2,3-cd)pyrene	---	---	---	0.52	<0.53	0.50J	<0.58	<0.57	0.28J	<0.56	0.52J
Isophorone	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2-Methylnaphthalene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2-Methylphenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
3&4-Methylphenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2-Nitroaniline	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
3-Nitroaniline	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
4-Nitroaniline	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Nitrobenzene	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2-Nitrophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
4-Nitrophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
n-Nitrosodimethylamine	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
n-Nitrosodiphenylamine	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
n-Nitroso-di-propylamine	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Pentachlorophenol	2	1	21	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Phenanthrene	---	---	---	0.59	<0.53	1.1	0.59	<0.57	1.4	<0.56	0.78
Phenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
Pyrene	---	---	---	1	<0.53	1.4	1	0.35J	1.5	0.39J	1.3
Pyridine	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,3,4,6-Tetrachlorophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,4,5-Trichlorophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
2,4,6-Trichlorophenol	---	---	---	<0.28	<0.53	<0.65	<0.58	<0.57	<0.55	<0.56	<0.59
PCBs (mg/kg)											
Aroclor 1016	0.4	0.1	0.2	<0.15	<0.017	<0.020	<0.17	<0.017	<0.17	<0.18	<0.18
Aroclor 1221	---	---	---	<0.15	<0.017	<0.020	<0.17	<0.017	<0.17	<0.18	<0.18
Aroclor 1232	---	---	---	<0.15	<0.017	<0.020	<0.17	<0.017	<0.17	<0.18	<0.18
Aroclor 1242	---	---	---	<0.15	<0.017	<0.020	<0.17	<0.017	<0.17	<0.18	<0.18
Aroclor 1248	---	---	---	<0.15	<0.017	<0.020	<0.17	<0.017	<0.17	<0.18	<0.18
Aroclor 1254	---	---	---	0.43	0.079	<0.020	1.2	0.64	2.6	1	0.69
Aroclor 1260	---	---	---	0.80J	0.059	<0.020	0.64	0.53	1.3	0.54	1.5
Total PCBs	7.2	2.2	8.1	1.23	0.138	ND	1.84	1.17	[3.9]	1.54	2.19
Total Inorganic Analytes (mg/kg)											
Aluminum	---	---	---	6410	9510	9060	12500	10800	8460	8480	8350
Antimony	---	---	---	1.7	1.0B	2.1	15.8	161	47.7	2.1	4.4
Arsenic	30	10	30	7.6	8.7	[13.2]	[17.5]	[26.2]	[46.9]	[11.0]	[13.1]
Barium	10000	10000	10000	34.8	31.9	332	569	362	972	48	99.8
Beryllium	10	4	15	0.33	0.40B	0.57	0.27	0.27	0.5	0.37	0.33

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E. Perry Site, Portland, Maine

	Maine RAGs Adult Worker	Maine RAGs Residential	Maine RAGs Trespasser	B-8 04/29/2005 0-4 ft	B-9 04/28/2005 0-4 ft	SS-1 04/28/2005 0-4 ft	SS-2 04/28/2005 0-4 ft	SS-3 04/28/2005 0-4 ft	SS-4 04/28/2005 0-4 ft	SS-5 04/28/2005 0-4 ft	SS-6 04/28/2005 0-4 ft
Cadmium	23	27	35	0.16	0.23B	1.4	[29.4]	6.6	[42.0]	0.84	1.2
Calcium	---	---	---	1560	1820	20100	8500	6190	6050	2600	1540
Chromium	---	---	---	15.9	23	33.1	144	20500	159	25.1	35.9
Cobalt	---	---	---	4.8	4.8	7.7	16.7	146	15.7	7.8	5.8
Copper	600	650	600	39.5	16.2	149	[3100]	[2170]	[1880]	65.2	321
Iron	---	---	---	14600	13000	37300	115000	198000	134000	16100	27000
Lead	700	375	700	120	15.2	333	[2310]	[2540]	[3340]	211	[566]
Magnesium	---	---	---	2410	3470	2230	12600	1540	2640	4200	3080
Manganese	---	---	---	159	160	424	671	2320	843	281	533
Mercury	610	60	320	0.11	<0.017	0.46	3.3	0.43	3.5	0.24	0.56
Nickel	10000	3800	10000	12.9	15.2	27.3	231	[8700]	122	22	18.1
Potassium	---	---	---	1250	1530	1260	1030	713	1180	1260	2800
Selenium	10000	950	5350	<0.35	<0.40	<5.3	<5.4	<4.0	<4.3	<0.40	<5.0
Silver	10000	950	5350	<0.34	<0.17	0.31	3.2	2.1	1.2	<0.17	<0.22
Sodium	---	---	---	156	147B	324	1110	135	1630	49.7	177
Thallium	---	---	---	<0.78	<0.61	1.5	5.5	6.6	6.2	<0.61	1
Vanadium	---	---	---	15.4	17.4	25.9	27	113	32.1	19.7	24.9
Zinc	1500	1500	1500	126	31.1	1210J	[8970]J	[1890]J	[15100]J	744J	217J
Total solids	---	---	---	0.011	0.008	0.024	0.015	0.013	0.01	0.013	0.015

Units in milligrams per kilogram (mg/kg)
RAGs = Remedial Action Guideline
< = not detected at reporting limit
[ ] = above criteria
B or J = estimated
R = rejected
- = not analyzed or not available

Several SVOCs were detected in the soil samples (Table 4-1). The most commonly detected SVOCs were the PAHs benzo(b)fluoranthene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, flouranthene, and pyrene, which were detected in every soil sample from the property. Only benzo(a)pyrene exceeded the residential and adult worker RAGs. These SVOCs are commonly a by-product of combustion and are most likely associated with charred fill identified in the area. This area was repeatedly used to dispose of debris after major Portland fires in the 1800s.

One PCB (Aroclor 1260) was detected in four of the samples, B-A, B-C, B-E, and SS-B, but only B-A had a concentration (5.5 mg/kg) that exceeded the residential RAG (Table 4-1). PCBs are a common contaminant in many recycling operations and are associated with transformers, hydraulic fluids, and other electrical equipment.

Almost every metal in the laboratory TAL Metals analyte list, except selenium, was detected in each soil sample (Table 4-1). Metals with detections exceeding the residential, adult worker, or trespasser RAGs were arsenic, cadmium, copper, lead, and zinc. The metals detected are naturally occurring elements in Maine soil, however, it is likely that the relative concentrations of these metals are associated with either urban fill or salvage yard operations.

Lancaster Street

On the Lancaster Street property, fifteen VOCs were detected in soil samples, but at concentrations below the residential, worker, and trespasser RAGs (Table 4-2). The most commonly detected VOC was xylene, which was detected in B-1, B-2, B-5, B-9 and SS-3 through SS-5.

Several SVOCs were detected in the soil samples. The most commonly detected SVOCs were benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, flouranthene, phananthrene, and pyrene, which were detected in at least 12 of the 17 samples from the site. None of the SVOCs exceeded the residential, worker, and trespasser RAGs (see Table 4-2).

Two PCBs (Aroclor 1254 and Aroclor 1260) were detected in 13 of the 17 samples. The residential RAG was exceeded in two samples, B-1 (6.2 mg/kg), and B-5 (4.2 mg/kg) (see Table 4-2). PCBs are a common contaminant in many recycling operations and are associated with transformers, hydraulic fluids, and other electrical equipment.

Five metals exceeded the residential, adult worker, or trespasser RAGs (Table 4-2). The metals with RAG exceedances were the same as the Somerset property: arsenic, cadmium, copper, lead, and zinc. The metals detected are naturally occurring elements in Maine soil, however, it is likely that the relative concentrations of these metals are associated with either urban fill or salvage yard operations.

4.2.2 Groundwater

Five groundwater samples were collected from the Somerset Street property, and seven groundwater samples were collected from the Lancaster Street property. The groundwater samples were analyzed for VOCs, SVOCs, PCBs, and TAL Metals. Tabulated analytical results for detected compounds are presented in **Table 4-3** for the Somerset Street property, and **Table 4-4** for the Lancaster Street property. Form 1 laboratory data packages are included in **Appendix D**. While the entire area surrounding the Site is supplied with public water, results were compared to the Maximum Exposure Guidelines (MEGs) for comparative purposes only. This groundwater is not being used as a drinking water supply.

Somerset Street

Nine VOCs were detected in the groundwater samples from the Somerset Street property, with two, benzene and methyl-tert-butyl-ether (MTBE), exceeding the MEGs (see Table 4-3). The most frequent VOC detections in groundwater samples were acetone and MTBE (both found in MW-C and MW-E). MTBE and benzene are common fuel related compounds and are ubiquitous in many urban groundwater settings.

Only one SVOC, bis(2-Ethylhexyl)phthalate, was detected in the groundwater sample from MW-C (Table 4-3). Bis(2-Ethylhexyl)phthalate is associated with the manufacturing of plastics and used in PVC products. It is also a common lab contaminant. MW-B had a detection of the PCB Aroclor 1254 at 0.23 ug/L, which did not exceed the MEG. There were 15 metals that were detected in the groundwater samples. Three of these, antimony, manganese, and sodium, exceeded the MEGs. Antimony exceeded its MEG at only one location, MW-A, while manganese exceeded the MEG at MW-A and MW-C through MW-E. Sodium exceeded the MEG at all five groundwater sampling locations. The metals detected are naturally occurring elements in Maine soil, however, it is likely that the relative concentrations of these metals are associated with either urban fill or salvage yard operations.

Lancaster Street

On the Lancaster Street property, there were ten groundwater samples that had VOC detections. The most frequent detection was MTBE, which was detected at MW-3, MW-7, and MW-8, but none of the detections were above the MEG. MTBE is a common fuel related compounds and is ubiquitous in many urban groundwater settings. There were no SVOCs or PCBs detected in the groundwater samples. There were several metals detected in the groundwater samples. The most frequent occurrences were barium, calcium, magnesium, manganese, potassium, sodium, and zinc. Of these detections, antimony, arsenic, cadmium, manganese, and sodium exceeded the MEGs. Refer to Table 4-4 for a list of detections. The metals detected are naturally occurring elements in Maine soil, however, it is likely that the relative concentrations of these metals are associated with either urban fill or salvage yard operations.

Table 4-3
Woodard & Curran
Summary of Somerset Street Groundwater Results
E.Perry Site, Portland, Maine

		MW-A	MW-B	MW-C	MW-D	MW-E
		MW-A	MW-B	MW-C	MW-D	MW-E
	MEG	05/02/2005	05/02/2005	05/02/2005	05/02/2005	04/29/2005
Volatile Organic Compounds (ug/L)						
Acetone	700	<10	<10	13	<10	28
Benzene	12	<2	<2	<2	<2	[28]
Bromobenzene	---	<2	<2	<2	<2	<2
Bromochloromethane	10	<2	<2	<2	<2	<2
Bromodichloromethane	6	<2	<2	<2	<2	<2
Bromoform	44	<2	<2	<2	<2	<2
Bromomethane	10	<2	<2	<2	<2	<2
tert-Butyl alcohol	---	<20	<20	<20	<20	15J
n-Butylbenzene	---	<2	<2	<2	<2	<2
sec-Butylbenzene	---	<2	<2	<2	<2	<2
tert-Butylbenzene	---	<2	<2	<2	<2	<2
Carbon disulfide	---	<2	<2	<2	<2	<2J
Carbon tetrachloride	3	<2	<2	<2	<2	<2
Chlorobenzene	---	<2	<2	<2	<2	<2
Chloroethane	---	<2	<2	<2	<2	<2J
Chloroform	57	<2	<2	<2	<2	<2
Chloromethane	3	<2	<2	<2	<2	<2J
2-Chlorotoluene	140	<2	<2	<2	<2	<2
4-Chlorotoluene	140	<2	<2	<2	<2	<2
1,2-Dibromo-3-chloropropane	0.25	<2	<2	<2	<2	<2
Dibromochloromethane	4	<2	<2	<2	<2	<2
1,2-Dibromoethane	0.004	<2	<2	<2	<2	<2
Dibromomethane	---	<2	<2	<2	<2	<2
1,2-Dichlorobenzene	63	<2	<2	<2	<2	<2
1,3-Dichlorobenzene	60	<2	<2	<2	<2	<2
1,4-Dichlorobenzene	21	<2	<2	<2	<2	<2
Dichlorodifluoromethane	1400	<2	<2	<2	<2	<2
1,1-Dichloroethane	70	<2	<2	<2	<2	<2
1,2-Dichloroethane	4	<2	<2	<2	<2	<2
1,1-Dichloroethene	0.6	<2	<2	<2	<2	<2J
cis-1,2-Dichloroethene	70	<2	<2	<2	<2	<2
trans-1,2-Dichloroethene	140	<2	<2	<2	<2	<2
1,2-Dichloropropane	5	<2	<2	<2	<2	<2
1,3-Dichloropropane	---	<2	<2	<2	<2	<2
2,2-Dichloropropane	---	<2	<2	<2	<2	<2
1,1-Dichloropropene	---	<2	<2	<2	<2	<2
cis-1,3-Dichloropropene	---	<2	<2	<2	<2	<2
trans-1,3-Dichloropropene	---	<2	<2	<2	<2	<2
Diethyl ether	---	<2J	<2J	<2J	<2J	<2J
Ethyl t-butyl ether	---	<2	<2	<2	<2	<2
Ethylbenzene	70	<2	<2	<2	<2	1J
Hexachlorobutadiene	4	<2	<2	<2	<2	<2J
2-Hexanone	---	<10	<10	<10	<10	<10
Isopropylbenzene	---	<2	<2	<2	<2	<2
di-Isopropylether	---	<2	<2	<2	<2	<2
p-Isopropyltoluene	70	<2	<2	<2	<2	<2
Methyl ethyl ketone	1440	<10J	<10J	<10J	<10J	8J
Methyl isobutyl ketone	---	<10	<10	<10	<10	<10
Methyl tert-butyl ether	35	<2	<2	2	<2	[97]
Methylene chloride	47	<5	<5	<5	<5	<5
Naphthalene	14	<2	<2	<2	<2	<2
n-Propylbenzene	---	<2	<2	<2	<2	<2
Styrene	140	<2	<2	<2	<2	<2
Tert-amyl methyl ether	---	<2	<2	<2	<2	11
1,1,1,2-Tetrachloroethane	13	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1.8	<2	<2	<2	<2	<2
Tetrachloroethene	7	<2	<2	<2	<2	<2
Tetrahydrofuran	70	<5	<5	<5	<5	<5
Toluene	1400	<2	<2	<2	<2	<2
1,2,3-Trichlorobenzene	---	<2	<2	<2	<2	<2
1,2,4-Trichlorobenzene	70	<2	<2	<2	<2J	<2
1,1,1-Trichloroethane	200	<2	<2	<2	<2	<2
1,1,2-Trichloroethane	6	<2	<2	<2	<2	<2
Trichloroethene	32	<2	<2	<2	<2	<2
Trichlorofluoromethane	2000	<2	<2	<2	<2	<2
1,2,3-Trichloropropane	0.05	<2	<2	<2	<2	<2
1,2,4-Trimethylbenzene	---	<2J	<2	<2	<2	4

Table 4-3
Woodard & Curran
Summary of Somerset Street Groundwater Results
E.Perry Site, Portland, Maine

		MW-A	MW-B	MW-C	MW-D	MW-E
		MW-A	MW-B	MW-C	MW-D	MW-E
	MEG	05/02/2005	05/02/2005	05/02/2005	05/02/2005	04/29/2005
1,3,5-Trimethylbenzene	---	<2	<2	<2	<2	<2
Vinyl chloride	0.2	<2	<2	<2	<2	<2
m&p-Xylene	---	<2	<2	<2	<2	10
o-Xylene	---	<2	<2	<2	<2	<2
Total Xylenes	14000	ND	ND	ND	ND	10
Semi-Volatile Organic Compounds (ug/L)						
3-Nitroaniline	---	---	---	---	---	<2
Acenaphthene	---	<2	<2	<2	<2	<2
Acenaphthylene	---	<2	<2	<2	<2	<2
Aniline	---	---	---	---	---	<2
Anthracene	---	<2	<2	<2	<2	<2
Azobenzene	---	<2	<2	<2	<2	<2
Benzidine	---	<20J	<20J	<20J	<20J	<20R
Benzo(a)anthracene	---	<2	<2	<2	<2	<2
Benzo(a)pyrene	0.05	<2	<2	<2	<2	<2
Benzo(b)fluoranthene	---	<2	<2	<2	<2	<2
Benzo(g,h,i)perylene	---	---	---	---	---	<2
Benzo(k)fluoranthene	---	<2	<2	<2	<2	<2
Benzoic acid	---	<10	<10	<10	<10J	<10J
Benzyl alcohol	---	<5	<5	<5	<5J	<5J
bis(2-Chloroethoxy)methane	---	<2	<2	<2	<2	<2
bis(2-Chloroethyl) ether	0.3	<2	<2	<2	<2	<2
bis(2-Chloroisopropyl)ether	300	<2	<2	<2	<2	<2
bis(2-Ethylhexyl) phthalate	---	<2	<2	6	<2	<2
4-Bromophenyl phenyl ether	---	<2	<2	<2	<2	<2
Butylbenzyl phthalate	---	<2	<2	<2	<2	<2
Carbazole	---	---	---	---	---	<2
4-Chloro-3-methylphenol	---	<10	<10	<10	<10J	<10J
4-Chloroaniline	---	---	---	---	---	<2
2-Chloronaphthalene	---	---	---	---	---	<2
2-Chlorophenol	35	<5	<5	<5	<5J	<5J
4-Chlorophenyl phenyl ether	---	<2	<2	<2	<2	<2
Chrysene	---	---	---	---	---	<2
Dibenzo(a,h)anthracene	---	---	---	---	---	<2
Dibenzofuran	---	---	---	---	---	<2
3,3'-Dichlorobenzidine	---	<20	<20	<20	<20	<20
2,4-Dichlorophenol	21	<5	<5	<5	<5J	<5J
2,6-Dichlorophenol	---	<5	<5	<5	<5J	<5J
Diethyl phthalate	5000	<2	<2	<2	<2	<2
Dimethyl phthalate	---	<2J	<2J	<2J	<2J	<2J
2,4-Dimethylphenol	---	<5	<5	<5	<5J	<5J
Di-n-butyl phthalate	700	<2	<2	<2	<2	<2
4,6-Dinitro-2-methylphenol	---	<5	<5	<5	<5J	<5J
2,4-Dinitrophenol	14	<5	<5	<5	<5J	<5J
2,4-Dinitrotoluene	0.5	<2	<2	<2	<2	<2
2,6-Dinitrotoluene	0.5	<2	<2	<2	<2	<2
Di-n-octyl-phthalate	---	<2	<2	<2	<2	<2
Fluoranthene	---	---	---	---	---	<2
Fluorene	---	---	---	---	---	<2
Hexachlorobenzene	0.2	<2	<2	<2	<2	<2
Hexachlorocyclopentadiene	50	<2	<2	<2	<2	<2
Hexachloroethane	7	---	---	---	---	<2
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	<2
Isophorone	370	---	---	---	---	<2
2-Methylnaphthalene	---	---	---	---	---	<2
2-Methylphenol	---	<5	<5	<5	<5J	<5J
3&4-Methylphenol	---	<5	<5	<5	<5J	<5J
2-Nitroaniline	---	---	---	---	---	<2
4-Nitroaniline	---	---	---	---	---	<2
Nitrobenzene	3.5	<2	<2	<2	<2	<2
2-Nitrophenol	---	<5	<5	<5	<5J	<5J
4-Nitrophenol	60	<5	<5	<5	<5J	<5J
n-Nitrosodimethylamine	---	---	---	---	---	<2
n-Nitrosodiphenylamine	---	---	---	---	---	<2
n-Nitroso-di-propylamine	---	---	---	---	---	<2
Pentachlorophenol	3	<10	<10	<10	<10J	<10J
Phenanthrene	---	---	---	---	---	<2
Phenol	4000	<5	<5	<5	<5J	<5J

Table 4-3
Woodard & Curran
Summary of Somerset Street Groundwater Results
E.Perry Site, Portland, Maine

		MW-A	MW-B	MW-C	MW-D	MW-E
		MW-A	MW-B	MW-C	MW-D	MW-E
	MEG	05/02/2005	05/02/2005	05/02/2005	05/02/2005	04/29/2005
Pyrene	---	---	---	---	---	<2
Pyridine	---	---	---	---	---	<2
2,3,4,6-Tetrachlorophenol	---	<5	<5	<5	<5J	<5J
2,4,5-Trichlorophenol	---	<5	<5	<5	<5J	<5J
2,4,6-Trichlorophenol	32	<5	<5	<5	<5J	<5J
PCBs (ug/L)						
Aroclor 1016	---	<0.2	<0.2	<0.2J	<0.2	<0.2
Aroclor 1221	---	<0.2	<0.2	<0.2J	<0.2	<0.2
Aroclor 1232	---	<0.2	<0.2	<0.2J	<0.2	<0.2
Aroclor 1242	---	<0.2	<0.2	<0.2J	<0.2	<0.2
Aroclor 1248	---	<0.2	<0.2	<0.2J	<0.2	<0.2
Aroclor 1254	---	<0.2	0.23	<0.2J	<0.2	<0.2
Aroclor 1260	---	<0.2J	<0.2J	<0.2J	<0.2J	<0.2J
Total PCBs	0.5	ND	0.23	ND	ND	ND
Dissolved Inorganic Analytes (ug/L)						
Aluminum	1430	<88.0	<88.0	<88.0	<88.0	192
Antimony	3	[6.6]B	<4.1	<4.1	<4.1	<8.3
Arsenic	10	<4.2	<4.2	<4.2	<4.2	<4.5
Barium	2000	72.1B	196B	45.4B	109	175
Beryllium	---	<0.29U	<0.20	<0.20	<0.20	<0.30
Cadmium	3.5	1.8B	2.2B	<0.60	<0.60	<0.80
Calcium	---	82200	65700	60100	82900	52100
Chromium	40	<1.2	<1.2	<1.2	<1.2	<2.5
Cobalt	---	3.8B	<2.7	<2.7	<2.7	<3.7
Copper	1300	9.7B	3.9B	3.5B	<2.6	<4.2
Iron	---	87.5B	38.9B	<37.9	2060	29800
Lead	10	<2.9	3.2	<2.9	<2.9	7.6
Magnesium	---	17000	7880	86900	18300	10800
Manganese	500	[513]	396	[785]	[1570]	[1320]
Mercury	2	<0.10	<0.10	<0.10	<0.10	<0.10
Nickel	140	19.6B	10.7B	11.0B	5.7	6.8
Potassium	---	9510	2860B	72600	21600	17100
Selenium	35	<4.2	<4.2	<4.2	<4.2	<3.8
Silver	35	<1.8	<1.8	<1.8	<1.8	<3.7
Sodium	20000	[27500]	[27900]	[1010000]	[92700]	[134000]
Thallium	0.5	<6.4	<6.4	<6.4	<6.4	<8.5
Vanadium	---	<2.7	<2.7	<2.7	<2.7	<4.3
Zinc	2000	631	475	35.2	87.9	58.9

Units in micrograms per liter (ug/l)
MEG = Maximum Exposure Guideline
< = not detected at reporting limit
[ ] = above criteria
B or J = estimated
R = rejected
U = revised to nondetect

Table 4-4
Woodard & Curran
Summary of Lancaster Street Groundwater Results
E.Perry Site, Portland, Maine

	MEG	MW-11 05/03/05 Primary	MW-3 05/03/05 Primary	MW-3 05/03/05 Duplicate	MW-5 05/02/05 Primary	MW-6 05/02/05 Primary	MW-7 05/03/05 Primary	MW-8 05/02/05 Primary	MW-9 05/03/05 Primary	MW-9 05/03/05 Duplicate
Volatile Organic Compounds (ug/L)										
Acetone	700	<10	<10	<10	22	<10	<10	<10	<10	<10
Benzene	12	<2	<2	<2	<2	<2	<2	2	<2	<2
Bromobenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromochloromethane	10	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromodichloromethane	6	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromoform	44	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromomethane	10	<2	<2	<2	<2	<2	<2	<2	<2	<2
tert-Butyl alcohol	---	<20	<20	<20	<20	<20	<20	10J	<20	<20
n-Butylbenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
sec-Butylbenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
tert-Butylbenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon disulfide	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon tetrachloride	3	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chlorobenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chloroethane	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chloroform	57	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chloromethane	3	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-Chlorotoluene	140	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-Chlorotoluene	140	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromo-3-chloropropane	0.25	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibromochloromethane	4	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane	0.004	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibromomethane	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dichlorobenzene	63	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,3-Dichlorobenzene	60	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,4-Dichlorobenzene	21	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dichlorodifluoromethane	1400	<2	<2	<2	<2	<2	<2	2	<2	<2
1,1-Dichloroethane	70	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dichloroethane	4	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	0.6	<2	<2	<2	<2	<2	<2	<2	<2	<2
cis-1,2-Dichloroethene	70	<2J	<2J	<2J	<2	6	<2J	<2J	<2J	<2J
trans-1,2-Dichloroethene	140	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dichloropropane	5	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,3-Dichloropropane	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
2,2-Dichloropropane	---	<2J	<2J	<2J	<2	<2	<2J	<2J	<2J	<2J
1,1-Dichloropropene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
cis-1,3-Dichloropropene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
trans-1,3-Dichloropropene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Diethyl ether	---	<2	<2	<2	<2J	<2J	<2	<2	<2	<2
Ethyl t-butyl ether	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Ethylbenzene	70	<2	<2	<2	<2	<2	<2	<2	<2	<2
Hexachlorobutadiene	4	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-Hexanone	---	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isopropylbenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
di-Isopropylether	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene	70	<2	<2	<2	<2	<2	<2	<2	<2	<2
Methyl ethyl ketone	1440	<10	<10	<10	<10J	<10J	<10	<10	<10	<10
Methyl isobutyl ketone	---	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl tert-butyl ether	35	<2	4	3	<2	<2	30	33	<2	<2
Methylene chloride	47	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene	14	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Styrene	140	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tert-amyl methyl ether	---	<2	<2	<2	<2	<2	2	4	<2	<2
1,1,1,2-Tetrachloroethane	13	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1.8	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tetrachloroethene	7	<2	<2	<2	<2	2	<2	<2	<2	<2
Tetrahydrofuran	70	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	1400	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-Trichlorobenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,4-Trichlorobenzene	70	<2	<2	<2	<2J	<2J	<2	<2	<2	<2
1,1,1-Trichloroethane	200	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2-Trichloroethane	6	<2	<2	<2	<2	<2	<2	<2	<2	<2

Table 4-4
Woodard & Curran
Summary of Lancaster Street Groundwater Results
E.Perry Site, Portland, Maine

		MW-11	MW-3	MW-3	MW-5	MW-6	MW-7	MW-8	MW-9	MW-9
		05/03/05	05/03/05	05/03/05	05/02/05	05/02/05	05/03/05	05/02/05	05/03/05	05/03/05
	MEG	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Duplicate
Trichloroethene	32	<2	<2	<2	<2	2	4	<2	<2	<2
Trichlorofluoromethane	2000	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-Trichloropropane	0.05	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,4-Trimethylbenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,3,5-Trimethylbenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Vinyl chloride	0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
m&p-Xylene	---	<2	<2	<2	<2	<2	<2	<2	2	2
o-Xylene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Xylenes	14000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (ug/l)										
Acenaphthene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Acenaphthylene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Aniline	---	<2	<2J	<2	---	---	<2	<2	<2	<2
Anthracene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Azobenzene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzidine	---	<20J	<20R	<20J	<20J	<20J	<20J	<20J	<20J	<20J
Benzo(a)anthracene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzo(a)pyrene	0.05	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzo(b)fluoranthene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzo(g,h,i)perylene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Benzo(k)fluoranthene	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzoic acid	---	<10J	<10	<10	<10	<10R	<10R	<10R	<10	<10
Benzyl alcohol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
bis(2-Chloroethoxy)methane	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
bis(2-Chloroethyl) ether	0.3	<2	<2	<2	<2	<2	<2	<2	<2	<2
bis(2-Chloroisopropyl)ether	300	<2	<2	<2	<2	<2	<2	<2	<2	<2
bis(2-Ethylhexyl) phthalate	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-Bromophenyl phenyl ether	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Butylbenzyl phthalate	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbazole	---	<2	<2	<2	---	---	<2	<2	<2	<2
4-Chloro-3-methylphenol	---	<10J	<10	<10	<10	<10R	<10R	<10R	<10	<10
4-Chloroaniline	---	<2	<2	<2	---	---	<2	<2	<2	<2
2-Chloronaphthalene	---	<2	<2	<2	---	---	<2	<2	<2	<2
2-Chlorophenol	35	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
4-Chlorophenyl phenyl ether	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chrysene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Dibenzo(a,h)anthracene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Dibenzofuran	---	<2	<2	<2	---	---	<2	<2	<2	<2
3,3'-Dichlorobenzidine	---	<20	<20	<20	<20	<20	<20	<20	<20	<20
2,4-Dichlorophenol	21	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
2,6-Dichlorophenol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
Diethyl phthalate	5000	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dimethyl phthalate	---	<2	<2	<2	<2J	<2J	<2	<2	<2	<2
2,4-Dimethylphenol	---	<5J	<5J	<5	<5	<5R	<5R	<5R	<5	<5
Di-n-butyl phthalate	700	<2	<2	<2	<2	<2	<2	<2	<2	<2
4,6-Dinitro-2-methylphenol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
2,4-Dinitrophenol	14	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
2,4-Dinitrotoluene	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2
2,6-Dinitrotoluene	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2
Di-n-octyl-phthalate	---	<2	<2	<2	<2	<2	<2	<2	<2	<2
Fluoranthene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Fluorene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Hexachlorobenzene	0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Hexachlorocyclopentadiene	50	<2	<2	<2	<2	<2	<2	<2	<2J	<2J
Hexachloroethane	7	<2	<2	<2	---	---	<2	<2	<2	<2
Indeno(1,2,3-cd)pyrene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Isophorone	370	<2	<2	<2	---	---	<2	<2	<2	<2
2-Methylnaphthalene	---	<2	<2	<2	---	---	<2	<2	<2	<2
2-Methylphenol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
3&4-Methylphenol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
2-Nitroaniline	---	<2	<2	<2	---	---	<2	<2	<2	<2
3-Nitroaniline	---	<2	<2	<2	---	---	<2	<2	<2	<2
4-Nitroaniline	---	<2	<2	<2	---	---	<2	<2	<2	<2
Nitrobenzene	3.5	<2	<2	<2	<2	<2	<2	<2	<2	<2

Table 4-4
Woodard & Curran
Summary of Lancaster Street Groundwater Results
E.Perry Site, Portland, Maine

	MEG	MW-11 05/03/05 Primary	MW-3 05/03/05 Primary	MW-3 05/03/05 Duplicate	MW-5 05/02/05 Primary	MW-6 05/02/05 Primary	MW-7 05/03/05 Primary	MW-8 05/02/05 Primary	MW-9 05/03/05 Primary	MW-9 05/03/05 Duplicate
2-Nitrophenol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
4-Nitrophenol	60	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
n-Nitrosodimethylamine	---	<2	<2	<2	---	---	<2	<2	<2	<2
n-Nitrosodiphenylamine	---	<2	<2	<2	---	---	<2	<2	<2	<2
n-Nitroso-di-propylamine	---	<2	<2	<2	---	---	<2	<2	<2	<2
Pentachlorophenol	3	<10J	<10J	<10J	<10	<10R	<10R	<10R	<10J	<10J
Phenanthrene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Phenol	4000	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
Pyrene	---	<2	<2	<2	---	---	<2	<2	<2	<2
Pyridine	---	<2	<2	<2	---	---	<2	<2	<2	<2
2,3,4,6-Tetrachlorophenol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
2,4,5-Trichlorophenol	---	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
2,4,6-Trichlorophenol	32	<5J	<5	<5	<5	<5R	<5R	<5R	<5	<5
PCBs (ug/L)										
Aroclor 1016	---	<0.2	<0.2	<0.2	<0.2J	<0.2J	<0.2J	<0.2	<0.2	<0.2
Aroclor 1221	---	<0.2	<0.2	<0.2	<0.2J	<0.2J	<0.2J	<0.2	<0.2	<0.2
Aroclor 1232	---	<0.2	<0.2	<0.2	<0.2J	<0.2J	<0.2J	<0.2	<0.2	<0.2
Aroclor 1242	---	<0.2	<0.2	<0.2	<0.2J	<0.2J	<0.2J	<0.2	<0.2	<0.2
Aroclor 1248	---	<0.2	<0.2	<0.2	<0.2J	<0.2J	<0.2J	<0.2	<0.2	<0.2
Aroclor 1254	---	<0.2	<0.2	<0.2	<0.2J	<0.2J	<0.2J	<0.2	<0.2	<0.2
Aroclor 1260	---	<0.2	<0.2	<0.2	<0.2J	<0.2J	<0.2J	<0.2	<0.2	<0.2
Total PCBs	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dissolved Inorganic Analytes (ug/L)										
Aluminum	1430	<88.0	<88.0	<88.0	<88.0	<88.0	<88.0	<88.0	<88.0	<88.0
Antimony	3	<4.1	[8.6]	[9.8]	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1
Arsenic	10	<4.5	<4.5	<4.5	[12.6]	[98.4]	<4.5	<4.5	<4.5	<4.5
Barium	2000	105	40.1	43	110	22.1	108	74.2	41.8	44.8
Beryllium	---	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Cadmium	3.5	1.2	1.3	1.4	<0.60	0.79	[24.3]	1	<0.60	<0.60
Calcium	---	116000	44800	42600	60400	286000	213000	102000	19400	20600
Chromium	40	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Cobalt	---	15.1	16.8	17.5	<2.7	13.6	39.3	22	<2.7	<2.7
Copper	1300	<2.6	<6.5U	<6.9U	<2.6	<2.6	<5.2U	<2.6	<8.6U	8.6
Iron	---	<37.9J	496J	452J	730	70800	<37.9J	1520J	<83.7UJ	<37.9J
Lead	10	<2.7J	<2.7J	<2.7J	<2.9	<2.9	3.4J	<2.7J	<2.7J	3.7J
Magnesium	---	14900	6200	5760	31700	50700	24800	16400	2320	2490
Manganese	500	[1190]	144	148	[1250]	[1330]	[4160]	[1970]	193	202
Mercury	2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nickel	140	12.5	41.6	41.3	11.5	27.3	138	11.2	<3.0	<3.0
Potassium	---	17500	7460	6880	29400	43600	24000	16600	5360	5720
Selenium	35	7.6	6.7	8.8	<4.2	<4.2	4.8	<4.2	<4.2	<4.2
Silver	35	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Sodium	20000	[209000]	[96500]	[94200]	[119000]	[262000]	[98500]	[133000]	[87300]	[86500]
Thallium	0.5	<8.5	<8.5	<8.5	<6.4	<6.4	<8.5	<8.5	<8.5	<8.5
Vanadium	---	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7
Zinc	2000	354J	623J	655J	195	704	[26000]J	295J	61.0J	40.4J

Units in micrograms per liter (ug/l)
MEG = Maximum Exposure Guideline
< = not detected at reporting limit
[ ] = above criteria
J = estimated
R = rejected
U = revised to nondetect
- = not analyzed or not available

5. DISCUSSION OF FINDINGS AND CONCLUSIONS

5.1 FINDINGS AND CONCLUSIONS

Based on the results of the Phase II investigation at the Site, the following findings are provided:

Lancaster Street

Soils – Low detections of VOCs and PCBs were reported in shallow site soils, however, these were all below the MEDEP RAGs. Several metals were reported above MEDEP residential, adult worker, and trespasser RAGs. These compounds could potentially create a human health concern if direct contact to these soils is not controlled.

Groundwater – While groundwater beneath the property does not meet drinking water standards for some metals, it is not considered a current risk to human health because no one is using this water as a source of drinking water. Groundwater results were compared to drinking water criteria for comparative purposes only.

Based on a preliminary screening level evaluation of the potential impact from volatilization of groundwater constituents (VOCs) through the subsurface and into indoor air of overlying buildings, it does not appear that VOCs in groundwater would create a risk to indoor air quality. However, this pathway should be re-evaluated prior to future construction of buildings on the site.

Somerset Street

Soils – Low detections of VOCs and PCBs were reported in shallow site soils, however, these were all below MEDEP health based criteria. Several SVOCs and metals were reported above MEDEP residential, adult worker, and trespasser RAGs. These compounds could potentially create a human health concern if direct contact to these soils is not controlled.

Groundwater – While groundwater beneath the property does not meet drinking water standards for some VOCs and metals, it is not considered a current risk to human health because no one is using this water as a source of drinking water. Groundwater results were compared to drinking water criteria for comparative purposes only.

Based on a preliminary screening level evaluation of the potential impact from volatilization of groundwater constituents (VOCs) through the subsurface and into indoor air of overlying buildings, it does not appear that VOCs in groundwater would create a risk to indoor air quality. However, this pathway should be re-evaluated prior to future construction of buildings on the site.

5.2 CONCEPTUAL SITE MODEL UPDATE

The CSM includes the primary sources, migration pathways, exposure routes, and potential receptors.

It has been confirmed by the field investigation that site contaminants in exceedance of the RAGs and MEGs exist on Site. Verification of other aspects of the CSM, migration pathways, exposure routes, and receptors, involves off-site analysis, which was not part of the Phase II scope and, therefore, can be addressed in a general manner here.

- **Primary Sources** – Primary sources on the Site are consistent with the CSM. Various salvage yard activities and weathering of salvage yard objects have resulted in chemical releases and residual metals detections on the Site.
- **Migration Pathways** – The results of the field investigation indicate elevated levels of some SVOCs and metals in the soil and groundwater at both properties, and elevated levels of VOCs in the groundwater at the Somerset Street property. The following possible soil migration pathways include:
  - Contaminants adhere to soil particles and are blown off-Site by the wind, as well as transported by surface water runoff.
  - Groundwater migration pathways exist as groundwater comes in contact with Site soils and flows downgradient.
- **Exposure Routes** - Potential exposure routes include inhalation/ingestion and dermal contact of soil, inhalation of vapors from groundwater, and ambient air.
- **Receptors** - Potential receptors include Site workers and area residents for inhalation/ingestion and dermal contact of soil as wind-blown dust or surface water runoff, Site workers and area residents for inhalation of groundwater vapors, and Site workers for inhalation of ambient air vapors.

The CSM can be verified by the existence of contaminant detections that exceed the MEDEP RAGs and MEGs. Once the presence of primary sources are confirmed, the rest of the CSM, the migration pathways, exposure routes, and receptors, can also be inferred.

5.3 AFFECTED MEDIA

Media that have been affected by the scrap metal yard activities are soil and groundwater. Evidence of this is the detection of contaminants in soil and groundwater that exceed the MEDEP RAGs and MEGs.

5.4 EVALUATION OF MEDIA QUALITY

A data quality assessment was performed for data associated with soil and water samples collected as part of the E. Perry Brownfields Investigation in Portland, Maine. The assessment was conducted using criteria and procedures specified in the Project QAPP (Woodard & Curran, 2005), Region I EPA-NE Data Validation Functional Guidelines for Evaluation of Environmental Analyses (EPA, 1996), and the Region I Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (EPA, 1988).

The spring field sampling program for the Brownfields Investigations was conducted in April and May of 2005. Samples collected during the investigations included soils and groundwater. Samples were submitted to Analytics Environmental Laboratory for the following analyses: VOCs, SVOCs, inorganic elements, and PCBs. Laboratory analyses included both field and laboratory quality control samples to meet the requirements of an Analytical Level II.

The data assessment was completed using criteria specified for a modified Tier I validation level. As specified in the Project QAPP, the modified Level I validation includes a review of the following parameters:

- Data completeness
- Holding times

- Sample preservation
- Blank results (using 5X and 10X rules)
- Surrogate recoveries
- Matrix spike and matrix spike duplicate results
- Field duplicates
- Laboratory control samples

Upon completion of the data validation procedure, data qualifiers were applied to sample concentrations to identify potential bias and interference. Qualifiers applied to the sample results include the following:

- U - The compound/element was not detected above the associated detection limit.

- J - The corresponding concentration is an estimated value. This qualifier is used for detections below the contract required detection limit (CRDL) or for values for which not all associated quality control criteria were met.

- R - Data is rejected because quality control criteria is not met and is considered unusable.

- UJ - The compound was analyzed, but not detected. The associated detection limit is considered estimated due to quality control results which do not meet EPA validation specifications.

- UR - The compound was analyzed, but not detected. The associated detection limit is rejected due to quality control problems.

5.4.1 Data Validation Results

Overall, the data associated with the Site investigation are of good quality and of sufficient quality for their intended end use of Site characterization. Samples were properly preserved and were analyzed within chemical parameter specific holding times. Target VOCs, SVOCs and PCBs were not detected in associated blanks. Trace concentrations of metals, including aluminum, beryllium, copper, iron, and zinc were detected in preparation and continuing calibration blanks. The 5X rule was used to establish action level concentrations, below which sample detections were qualified as non-detect.

In general, surrogate recoveries for VOCs and PCBs were acceptable. For SVOCs, the recoveries of acid fraction surrogates below 10% resulted in the rejection of all acid fraction results for MW-6, MW-7 and MW-8. Acid fraction results were qualified as estimated (J) for MW-11 and MW-D due to low surrogate recoveries.

Laboratory control sample recoveries were generally acceptable for most analytes indicating an acceptable level of accuracy for the analyses. Positive and non-detect results for associated samples were qualified as estimated for recoveries below specifications to indicate a potential low bias. For recoveries that exceeded criteria, only positive results of associated samples were qualified as estimated.

Field duplicate results were acceptable for all chemical parameters indicating that there was acceptable precision demonstrated for analytical and sample collection techniques. Matrix spike results were also generally acceptable; however, a low bias was indicated for several SVOCs in the analysis of B-2.

6. RECOMMENDATIONS

Based on the findings and conclusions, W&C is providing the following recommendations:

1. Current owner/operator be provided a copy of the soil results to evaluate their potential exposure risk.

2. Develop remedial option evaluation for contaminated soils.

3. Prepare a soil management plan to control the potential exposure and possible migration of these soils.

4. Prepare Voluntary Response Action Plan (VRAP) application.

5. A rigorous evaluation of the potential for volatile emissions has not been conducted. This analysis should be conducted prior to property redevelopment to ensure that foundation construction is designed appropriately for the existing conditions.

APPENDIX A: BORING AND MONITORING WELL INSTALLATION LOGS

WOODARD & CURRAN
Engineering • Science • Operations

BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Somerset Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
SS-A

START DATE	04/26/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	> 4'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	38"		Fill: Black-stained, dry silty sand, trace clay clumps, brick fragments, burned wood fragments, white silty chalk substance, rock fragments	
1					
2					
3					
4				Bottom of Exploration at 4' bgs	
5				Fill/Natural interface: > 4' bgs	
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WOODARD & CURRAN
Engineering • Science • Operations

BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Somerset Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

SS-B

START DATE	04/26/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	> 4'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	36"	0	Fill: Black-stained, dry silty sand, trace clay clumps, brick fragments,	
1				burned wood fragments; white silty chaulk substance, rock fragments	
2				At 3.5' bgs becomes wet and oily coarse to medium sand and gravel	
3				with brick fragments	
4				Bottom of Exploration at 4' bfs	
5				Fill/Natural interface: > 4' bgs	
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WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Somerset Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

SS-C

START DATE	04/26/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	> 4'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4)	36"	0	Fill: Brown medium to fine sand, trace silt.	
1				Becomes white-gray fine gravel and medium to coarse sand.	
2				Bbecomes fine brown sand.	
3				odor at interface	
4				Black silty sand with fine gravel and trace brick fragments.	
5				Bottom of Exploration at 4' bgs	
6				Fill/Natural interface: > 4' bgs	
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WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Somerset Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-A / MW-A

START DATE	04/26/2005	BORING DEPTH	16'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	13'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	3'	SCREEN INTERVAL	3-13'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	6.4'
SAMPLE TYPE	Soil	G.WATER DEPTH	4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')	16"	1.8	Drilled through reinforced concrete loading ramp
1				Fill: Alternating layers of brown medium sand, and dark
2				brown/black coarse to fine sand with some silt, little fine gravel, dry
3				
4	S2, (4-8')	28"	0	Becomes wet at 4 feet. 1-inch layer of dark brown silty sand with trace fine
5				gravel and brick fragments that becomes brown sand with some silt (6.2')
6				Fill/Natural interface: 6.4' bgs
7				Olive brown , silty clay (CL), trace rust mottles and shell fragments,
8	S3, (8-12')	36"	3.3	grades gray/dark gray with depth
9				SAA, except becomes gray, moist
10				At 11.25', 6-inch layerof black, silty, organic clay.
11				
12	S4, (12-16')	37"	1.1	SAA
13				
14				
15				
16				Bottom of Exploration at 16' bgs
17				MW-A installed
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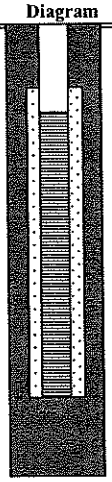
Well Construction Diagram



WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Somerset Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

B-B / MW-B

START DATE	04/26/2005	BORING DEPTH	16'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	14'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	4'	SCREEN INTERVAL	4-14'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	8'
SAMPLE TYPE	Soil	G.WATER DEPTH	8'	SAMPLE DEPTH	0-4', 4-8'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4)	16"		Fill: Dark brown/black silty sand, trace to little coarse gravel (0-1')
1				2-inch gravel layer followed by 2-inch layer of brick (1.7')
2				
3				
4	S2 (4-8)	8.5"	0.3	Brown/dark brown, silty, coarse to fine moist sand, trace to little of fine
5				to coarse gravel, brick fragments, trace wet clay
6				
7				
8	S3, (8-12)	8"	0.3	Fill/Natural interface: 8' bgs
9				Gray, wet silty clay (CL) with shell fragments
10				
11				
12	S4, (12-16)	11"	4.8	SAA
13				
14				
15				
16				Bottom of Exploration at 16' bgs
17				MW-B installed
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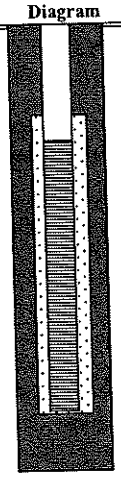
Well Construction Diagram



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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Somerset Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-D / MW-D

START DATE	04/26/2005	BORING DEPTH	14'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	14'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	4'	SCREEN INTERVAL	4-14'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	10.7'
SAMPLE TYPE	Soil	G.WATER DEPTH	8'	SAMPLE DEPTH	0-4', 4-8'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, S2, (0-1')		1.1, 1.1	PID sample from backhoe excavation:
1				Fill: Dark brown/black silty sand, trace to little coarse gravel (0-1')
2				2-inch gravel layer followed by 2-inch layer of brick (1.7')
3	S3 (0-4')			
4	S4, (4-8')	34"	7	Geoprobe Sample: Silty sand with trace fine gravel, trace clay, rust
5				mottles
6				
7				
8	S5, (8-12')	36"	4	Dark brown medium sand (8-8.2')
9				Silty clay with sand (9.5')
10				Black silty sand with trace fine gravel
11				Fill/Natural interface: 10.7' bgs
12				Dark gray, wet clayey silt/fine sand (SM/SP) with trace shell fragments.
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14				Bottom of Exploration at 14' bgs
15				MW-D installed
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Well Construction Diagram

WOODARD & CURRAN
Engineering • Science • Operations

BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Somerset Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-E / MW-E

START DATE	04/26/2005	BORING DEPTH	20'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	15'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	5'	SCREEN INTERVAL	5-15'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	8.4'
SAMPLE TYPE	Soil	G.WATER DEPTH	7.5'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-1')		1.3	PID sample from backhoe excavation: Asphalt (0-2"). Fill: Dark brown/black coarse to fine sand, little clay, trace to little coarse gravel/cobbles, wood fragments, asphalt fragments.
1				
2				
3	S2, (0-4')	13"	0	Geoprobe sample: Fill: Dark brown/black sandy fine gravel
4				At 0.5', becomes silty clay with fine sand.
5	S3, (4-8')	10.5"	2.6	Silty clay with fine sand and trace fine gravel
6				At 7.5', 1-inch layer of orange crushed rock and sand, becomes wet
7				At 7.6', becomes black crushed rock and sand
8	S4, (8-12')	31"	1.1	Fill: Dark gray/black silty clay with sand trace fine gravel
9				Fill/Natural interface: 8.4' bgs
10				Olive gray silty clay (CL) with fine sand.
11				Grades siltier, grey clay with find sand (11.7')
12	S5, (12-16')	44"	0.3	Gray/dark gray, wet clay with trace shell fragments
13				
14				Clay becomes moist
15				
16	S6, (16-20')		4	SAA
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20				Bottom of Exploration at 20' bgs
21				MW-E installed
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Well Construction Diagram

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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
SS-1

START DATE	04/28/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	2.9'
SAMPLE TYPE	Soil	G.WATER DEPTH	>4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	25"		Fill: Dark brown/black coarse to fine sand, little to some silt, trace-little coarse to fine gravel, trace glass and metal fragments. 3-5" layer of burned material/ash (34-37").	
1					
2					
3				Fill/Natural interface: 2.9' bgs	
4				Sand (SP), brown coarse to fine sand, trace to little coarse to fine gravel.	
5				Bottom of Exploration at 4' bgs	
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WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
SS-3

START DATE	04/28/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	2.6'
SAMPLE TYPE	Soil	G.WATER DEPTH	≥ 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	36"		Fill: Dark brown/black coarse to fine sand, little to some silt, trace-little coarse to fine gravel, trace glass and metal fragments.	
1					
2				Fill/Natural interface: 2.6' bgs	
3				Sand (SP), brown coarse to fine sand, trace to little coarse to fine gravel.	
4				Bottom of Exploration at 4' bgs.	
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

SS-4

START DATE	04/28/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	3'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	27"		Fill: Dark brown/black coarse to fine sand, little to some silt, trace-little coarse to fine gravel, trace glass and metal fragments.	
1					
2				Fill/Natural interface: 3' bgs	
3				Sand (SP), brown coarse to fine sand, trace to little coarse to fine gravel.	
4				Bottom of Exploration at 4' bgs.	
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

SS-5

START DATE	04/28/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	2.6'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	32"		Fill: Dark brown/black coarse to fine sand, little to some silt, trace-little coarse to fine gravel, trace glass and metal fragments.	
1					
2				Fill/Natural interface: 2.6' bgs	
3				Sand (SP), brown coarse to fine sand, trace to little coarse to fine gravel.	
4				Bottom of Exploration at 4' bgs	
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

SS-6

START DATE	04/28/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	3'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	31"		Fill: Dark brown/black coarse to fine sand, little to some silt, trace-little coarse to fine gravel, trace glass and metal fragments.	
1					
2				Fill/Natural interface: 3' bgs	
3				Sand (SP), brown coarse to fine sand, trace to little coarse to fine gravel.	
4				Bottom of Exploration at 4' bgs	
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-1

START DATE	04/27/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	3.8'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	22"		Fill: Dark brown/black coarse to fine sand, little silt, little coarse to fine gravel, glass and metal fragments.	
1					
2				Fill/Natural interface: 3.8' bgs	
3				Sand (SP), brown coarse to fine sand, trace silt, little coarse to fine gravel.	
4					
5				Bottom of Exploration at 4' bgs	
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WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-2

START DATE	04/27/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	2.8'
SAMPLE TYPE	Soil	G.WATER DEPTH	≥ 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	31"		Fill: Brown coarse to fine sand, trace silt, little coarse to fine gravel, glass and metal fragments (0-0.4'), Sand turns to black (0.4'-0.9'), Greyish-white silty sandy ash (0.9'-1'), Gray coarse to fine sand, similar to above (1'-1.5').	
1					
2					
3					
4				Fill/Natural interface: 2.8' bgs	
5				Sand (SP), brown coarse to fine sand, trace silt, little coarse to fine gravel.	
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7				Bottom of Exploration at 4' bgs	
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-3 / MW-3

START DATE	04/27/2005	BORING DEPTH	12'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	12'	CASING STICKUP	Flush
DRILLER	E. Thomas	RISER LENGTH	2'	SCREEN INTERVAL	2-12'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	2.9'
SAMPLE TYPE	Soil	G.WATER DEPTH	3.5'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')	20"	0.8	Fill: Black/dark brown coarse to fine sand, trace silt, little coarse to fine
1	S2 (resample)	36"		gravel; Brown coarse to fine sand (0.5'-0.6'); Bricks (0.6'-1')
2				Fill/Natural interface: 2.9' bgs.
3				
4	S3, (4-8')	13"	0.8	Brown, wet coarse to fine sand, trace siet, little coarse to fine gravel
5				Medium brown sand, trace fine gravel (4'-4.4')
6				Light brown coarse to fine, mostly coarse to medium, sand (4.4'-4.6')
7				Grades to dark gray (4.6'-5.1')
8	S4, (8-12')	30"	0.8	Dark gray silty clay (CL) with many shell fragments.
9				
10				
11				Bluish gray silty clay (CL) (11.1' to 12'); Many shell fragments (11' - 11.4')
12				Bottom of Exploration at 12' bgs
13				MW-3 installed
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Well Construction Diagram

WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-4

START DATE	04/27/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	> 4'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	24"		Fill: Dark brown/black coarse to fine sand, trace silt, little coarse to fine gravel, glass and metal fragments.	
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4				Bottom of Exploration at 4' bgs	
5				Fill/Natural interface: > 4' bgs	
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment

Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

B-5 / MW-5

START DATE	04/27/2005	BORING DEPTH	12'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	12'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	2'	SCREEN INTERVAL	2-12'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	6.7'
SAMPLE TYPE	Soil	G.WATER DEPTH	3.5-4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')	35"	6.8	Fill: Brown silty coarse to fine gravel, trace coarse to fine sand, moist/wet (0-0.25'); Black coarse to fine sand, trace silt, little coarse to fine gravel, metal, glass and wire fragements (0.25-3.2')
1				
2				
3				Silty clay and brick fragments (3.2-4')
4	S2, (4-8')	34"	4.3	Black, wet silty coarse to fine sand (4-4.3')
5				
6				Fill/Natural interface: 6.7' bgs
7				Brown coarse to fine sand (SP), mostly medium to fine sand, trace coarse to fine gravel.
8				
9	S3, (8-12')	30"	3.4	Dark gray silty clay (CL/SM), claycey silt/silty clay, shell fragments
10				
11				1" of brown medium sand (10.95')
12				Bottom of Exploration at 12' bgs
13				MW-5 installed
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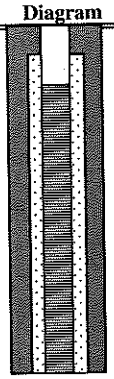
Well Construction Diagram



Top of screen (2 ft. bgs)

Bottom of screen, B-5 (12 ft. bgs)

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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

B-6 / MW-6

START DATE	04/28/2005	BORING DEPTH	13'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	13'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	3'	SCREEN INTERVAL	3-13'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	4-5'
SAMPLE TYPE	Soil	G.WATER DEPTH	3.5-4'	SAMPLE DEPTH	0-4', 4-5'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')	6"		Fill: Dark brown, dry coarse to fine sand, some silt, little coarse to
1				fine gravel.
2				
3				
4	S2, (4-8')	8"		Fill/Natural interface: 4-5' bgs
5				Brown, wet coarse to fine sand (SP).
6				At 7.9', 0.5" layer of gray coarse to fine sand.
7				
8	S3, (8-12')	20"	1.6	Becomes brown
9				
10				
11				At 11.1', becomes dark gray silty clay (CL).
12				
13				Bottom of Exploration at 13' bgs
14				MW-6 installed
15				
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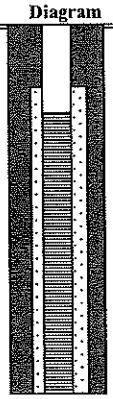
Well Construction Diagram



WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment

Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

B-7 / MW-7

START DATE	04/29/2005	BORING DEPTH	13'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	13'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	3-13'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	3.5'
SAMPLE TYPE	Soil	G.WATER DEPTH	4'	SAMPLE DEPTH	0-4', 4-8'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')	21"	1.8	Fill: Dark brown coarse to fine sand, some silt, little coarse to fine gravel.
1				
2				
3				Fill/Natural interface: 3.5' bgs
4	S2, (4-8')	8"		Brown, wet coarse to fine sand (SP), little coarse to fine gravel.
5				
6				
7				
8	S3, (8-12')	32"	2.4	Coarse to fine gravel (GP) with some coarse to fine sand (SP).
9				
10				Silty clay (CL) (10.4')
11				
12				
13				Bottom of Exploration at 13' bgs
14				MW-7 installed
15				
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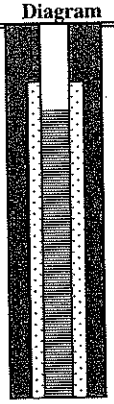
Well Construction Diagram



WOODARD & CURRAN
Engineering • Science • Operations

BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-8 / MW-8

START DATE	04/29/2005	BORING DEPTH	13'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	13'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	3'	SCREEN INTERVAL	3-13'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	3.5'
SAMPLE TYPE	Soil	G.WATER DEPTH	4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')	17.5"	2.2	Fill: Dark brown coarse to fine sand, some silt, little coarse to fine gravel.
1				
2				
3				Fill/Natural interface: 3.5' bgs
4	S2, (4-8')	21"	2	Brown, wet coarse to fine sand (SP), little/some coarse to fine gravel.
5				
6				
7				
8	S3, (8-12')	24"	2	SAA
9				
10				
11				Gray silty clay (CL) with shell fragments (11.1').
12				
13				Bottom of Exploration at 13' bgs
14				MW-8 installed
15				
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Well Construction Diagram

Top of screen (3 ft. bgs)

Bottom of screen, B-8 (13 ft. bgs)

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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION
MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.
B-9 / MW-9

START DATE	04/28/2005	BORING DEPTH	14'	PVC STICKUP	0
CONTRACTOR	Yarmouth Env.	WELL DEPTH	14'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	4'	SCREEN INTERVAL	4-14'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	1.5'
SAMPLE TYPE	Soil	G.WATER DEPTH	5'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')			Fill: Dark brown coarse to fine sand, some silt, little coarse to fine gravel.
1				Fill/Natural interface: 1.5' bgs
2				
3				
4	S2, (4-8')			Sand (SP), brown coarse to fine sand, trace silt.
5				
6				
7				
8	S3, (8-12')			SAA
9				
10				
11				
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13				
14				Bottom of Exploration at 14' bgs
15				MW-9 installed
16				
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Well Construction Diagram

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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment
Lancaster Street Site
E. Perry Iron, Portland, Maine

BORING/ WELL No.

B-10

START DATE	04/28/2005	BORING DEPTH	4'	PVC STICKUP	n/a
CONTRACTOR	Yarmouth Env.	WELL DEPTH	n/a	CASING STICKUP	n/a
DRILLER	E. Thomas	RISER LENGTH	n/a	SCREEN INTERVAL	n/a
GEOLOGIST	K. Skinner	SCREEN LENGTH	n/a	PVC TYPE	n/a
DRILLING METHOD	Geoprobe	SLOT SIZE	n/a	FILL/NAT'L	1.1'
SAMPLE TYPE	Soil	G.WATER DEPTH	> 4'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks	Well Construction Diagram
0	S1, (0-4')	31.5"		Fill: Dark brown coarse to fine sand, trace silt, little coarse to fine gravel	
1				Fill/Natural interface: 1.1' bgs	
2					
3				Sand (SP), brown coarse to fine sand, trace silt	
4				Bottom of Exploration at 4' bgs	
5					
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WOODARD & CURRAN
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BORING LOG

41 Hutchins Drive
Portland, Maine

SITE LOCATION

MEDEP/W&C Brownfields Site Assessment

Lancaster Street Site
E. Perry Iron, Portland, Maine

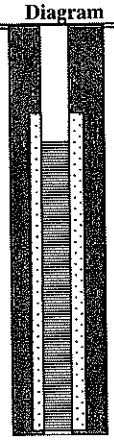
BORING/ WELL No.

B-11 / MW-11

START DATE	04/29/2005	BORING DEPTH	14'	PVC STICKUP	0
CONTRACTOR	Yarmouth Environme	WELL DEPTH	14'	CASING STICKUP	flush
DRILLER	E. Thomas	RISER LENGTH	4'	SCREEN INTERVAL	4-14'
GEOLOGIST	K. Skinner	SCREEN LENGTH	10'	PVC TYPE	Sch. 40
DRILLING METHOD	Geoprobe	SLOT SIZE	10	FILL/NAT'L	4'
SAMPLE TYPE	Soil	G.WATER DEPTH	7.5'	SAMPLE DEPTH	0-4'
BORING CREATED BY	HH	BORING CHECKED BY	EFC		

Depth (ft)	Sample No. & Interval	Rec. Length	PID (ppm)	Field Description and Remarks
0	S1, (0-4')	14"		Fill: Dark brown coarse to fine sand, some silt, little coarse to fine gravel.
4	S2, (4-8')	12"	2	Fill/Natural interface: 4' bgs Brown moist to wet coarse to fine sand and gravel (SP-GP). Becomes wet at 7.5'
8	S3, (8-12')	14"	1.3	Coarse to medium sand (SP) grading to coarse to fine gravel (GP) with some brown coarse to fine sand.
14				Bottom of Exploration at 14' bgs MW-11 installed

Well Construction Diagram



APPENDIX B: GROUNDWATER SAMPLING FIELD LOGS

PROJECT: E. Penn Iron - Lancaster JOB NUMBER: 21279.02 DATE: 5/3/05

SAMPLE LOCATION: MW-3 LOCATION ACTIVITY: START END 900

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: MW-3 DUP, MW-3 (MS), MW-3 (MSD)

WATER LEVEL/WELL DATA

WELL DEPTH: 12 FT
DEPTH TO SCREEN TOP: 2 FT
DEPTH TO WATER: 3.98 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED ☒ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

PROTECTIVE CASING STICK-UP (FROM GROUND): 0 FT
PROTECTIVE CASING/WELL DIFF.: FT

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ____

X ☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

L/PURGE VOL
L/TOTAL PURGED

ALLOWABLE DRAWDOWN: FT
MAX. ALLOWED DEPTH TO WATER: FT
SAMPLE DEPTH: FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____

WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch ☒ 4"

PURGE DATA

PURGE RATE: 240 ml/min. HISTORICAL PURGE RATE: ____ ml/min.
PUMP SETTING: low HISTORICAL PUMP SETTING: ____

	5	10	15	20	25		SAMPLE MEASUREMENTS
TIME (MINS.)							
PURGE VOLUME (liters)	240	240	240	240	240		
DEPTH TO WATER (ft.)	4.17	4.17	4.17	4.17	4.17		
TEMP. (°C)	5.99	6.17	6.00	6.00	5.98		
SPECIFIC CONDUCTIVITY (umhos/cm)	0.770	0.745	0.740	0.739	0.737		
pH, (units)	6.66	6.48	6.43	6.41	6.37		
TURBIDITY (ntu)	193	137	116	98	80		
DISSOLVED OXYGEN (ppm)	9.02	5.29	4.61	4.30	4.10		
ORP (mv)	35.5	26.8	26.8	25.9	26.5		

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS

☒ CLEAR ☐ COLORED ____ ☒ CLOUDY ____ ☐ TURBID ____ ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX ☒ NONE/dedicated ☐ METHANOL SOLUTION ☐ ____ ☐ HNO3/D.I.WATER ☐ POTABLE WATER ☐ TSP SOLUTION

PURGING	SAMPLING	
☒	☒	PERISTALTIC PUMP
☐	☐	REDI FLOW II
☐	☐	BAILER
☐	☐	PVC/SILICON TUBING
☐	☐	TEFLON/SILICON TUBING
☐	☐	AIRLIFT

PURGING	SAMPLING	
☒	☐	ENCLOSED FLOW CELL
☐	☐	HORIBA U-10
☐	☐	WATERRA
☐	☐	IN-LINE FILTER
	☐	PRESS/VAC FILTER
☐	☐	____

WATER LEVEL EQUIPMENT USED
☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: 0

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCl		☒	____ / ____ / ____
☐ TAL metals	6010	↓	4°		☒	____ / ____ / ____
☐ SVOC	8270				☒	____ / ____ / ____
☐ ~~Pest~~/PCB	8082				☒	____ / ____ / ____
☐					☐	____ / ____ / ____

NOTES

SIGNATURE: Peter Strauss
RECEIVED BY: ____

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Penn Iron - Lancaster | JOB NUMBER: 212179.2 | DATE: 5/2/05
SAMPLE LOCATION: MW-5 | LOCATION ACTIVITY | START: 1400 | END: 1425

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: Ø

WATER LEVEL/WELL DATA

WELL DEPTH: 12 FT
DEPTH TO SCREEN TOP: 2 FT
DEPTH TO WATER: 3.82 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED ☑ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

PROTECTIVE CASING STICK-UP (FROM GROUND): Ø FT
PROTECTIVE CASING/WELL DIFF.: FT

☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

L/PURGE VOL
L/TOTAL PURGED

	YES	NO	N/A
WELL INTEGRITY	☑	☐	☐
PROT. CASING SECURE	☑	☐	☐
CONCRETE COLLAR INTACT	☑	☐	☐
WELL LOCKED	☑	☐	☐

OTHER: ____

ALLOWABLE DRAWDOWN: FT
MAX. ALLOWED DEPTH TO WATER: FT
SAMPLE DEPTH: FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____

WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch ☒ 1"

PURGE DATA

PURGE RATE: 200 ml/min. | PUMP SETTING: low
HISTORICAL PURGE RATE: ____ ml/min. | HISTORICAL PUMP SETTING: ____

	5	10	15	20	25		SAMPLE MEASUREMENTS
TIME (MINS.)	5	10	15	20	25		
PURGE VOLUME (liters)	200	200	200	200	200		
DEPTH TO WATER (ft.)	~~3.82~~ 3.83	3.83	3.83	3.83	3.83		
TEMP. (°C)	8.91	8.48	8.32	8.36	8.58		
SPECIFIC CONDUCTIVITY (~~umhos/cm~~)	1.653	1.647	1.638	1.605	1.546		
pH, (units)	7.39	7.26	7.21	7.19	7.16		
TURBIDITY (ntu)	109	77	58	56	47		
DISSOLVED OXYGEN (~~ppm~~)	2.58	1.42	1.13	1.28	1.57		
ORP (mv)	-82.2	-91.2	-98.3	-103.2	-108.4		

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS

☒ CLEAR ☐ COLORED ____ ☑ CLOUDY ____ ☐ TURBID ____ ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX ☒ NONE/dedicated ☐ METHANOL SOLUTION ☐ HNO3/D.I.WATER ☐ DEIONIZED WATER ☐ POTABLE WATER ☐ TSP SOLUTION ☐ ____

	PURGING	SAMPLING
☒ PERISTALTIC PUMP	☒	☑
☐ REDI FLOW II	☐	☐
☐ BAILER	☐	☐
☐ PVC/SILICON TUBING	☐	☐
☐ TEFLON/SILICON TUBING	☐	☐
☐ AIRLIFT	☐	☐

	PURGING	SAMPLING
☐ ENCLOSED FLOW CELL	☒	☐
☐ HORIBA U-10	☐	☐
☐ WATERRA	☐	☐
☐ IN-LINE FILTER	☐	☐
☐ PRESS/VAC FILTER	☐	☐
☐ ____	☐	☐

WATER LEVEL EQUIPMENT USED
☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: Ø

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCl		☑	____ / ____ / ____
☐ SVOC	8270	↓	4°		☒	____ / ____ / ____
☐ PCB	8082		↓		☑	____ / ____ / ____
☐ TAL Metals	6010				☑	____ / ____ / ____
☐					☐	____ / ____ / ____

NOTES: Pumped well for 20 mins before filling flow cell

SIGNATURE: Kate Sullivan
RECEIVED BY: ____

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Penn Site - Lancaster | JOB NUMBER: 212179.2 | DATE: 5/2/05
SAMPLE LOCATION: MW-6 | LOCATION ACTIVITY: START 1450 END 1520

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: Ø

WATER LEVEL/WELL DATA

WELL DEPTH: 13 FT
DEPTH TO SCREEN TOP: 3 FT
DEPTH TO WATER: 4.22 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED ☒ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ——

PROTECTIVE CASING STICK-UP (FROM GROUND): Ø FT
PROTECTIVE CASING/WELL DIFF.: 0.37 FT

X ☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

L/PURGE VOL
L/TOTAL PURGED

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐
OTHER:			

ALLOWABLE DRAWDOWN: FT
MAX. ALLOWED DEPTH TO WATER: FT
SAMPLE DEPTH: FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ——
WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch 1"

PURGE DATA

PURGE RATE: 180 ml/min. | HISTORICAL PURGE RATE: —— ml/min.
PUMP SETTING: low | HISTORICAL PUMP SETTING: ——

	5	10	15	20	25		SAMPLE MEASUREMENTS
TIME (MINS.)	180	180	180	180	180		
PURGE VOLUME (liters)	4.26	4.26	4.26	4.26	4.26		
DEPTH TO WATER (ft.)	9.48	9.11	9.17	9.31	9.09		
TEMP. (°C)	3.134	3.131	3.133	3.134	3.139		
SPECIFIC CONDUCTIVITY (umhos/cm)	6.36	6.14	6.05	5.95	5.88		
pH, (units)	915	835	661	267	54		
TURBIDITY (ntu)	4.02	2.65	2.11	2.10	1.84		
DISSOLVED OXYGEN (ppm)	-21.8	-20.6	-20.1	-20.2	-19.3		
ORP (mv)							

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS: ☒ CLEAR ☐ COLORED —— ☒ CLOUDY —— ☐ TURBID —— ☐ ODOR —— ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED: ☐ LIQUI-NOX ☒ NONE (dedicated) ☐ DEIONIZED WATER ☐ METHANOL SOLUTION ☐ HNO3/D.I.WATER ☐ —— ☐ POTABLE WATER ☐ TSP SOLUTION

	PURGING	SAMPLING
PERISTALTIC PUMP	☒	☒
REDI FLOW II	☐	☐
BAILER	☐	☐
PVC/SILICON TUBING	☐	☐
TEFLON/SILICON TUBING	☐	☐
AIRLIFT	☐	☐

	PURGING	SAMPLING
ENCLOSED FLOW CELL	☒	☐
HORIBA U-10	☐	☐
WATERRA	☐	☐
IN-LINE FILTER	☐	☐
PRESS/VAC FILTER	☐	☐
——	☐	☐

WATER LEVEL EQUIPMENT USED: ☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: Ø

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	/ /
☐ SVOC	8270	↓	4°		☐	/ /
☐ PCB	8082		↓		☒	/ /
☐ TAL Metals	6010				☒	/ /
☐					☐	/ /

NOTES: let pump for 15 minutes before connecting to flow cell

SIGNATURE: [signature]
RECEIVED BY: ——

.09 - REVISION 2/24/98

PROJECT: E. Perry Iron - Lancaster | JOB NUMBER: 21279.2 | DATE: 5/3/05

SAMPLE LOCATION: MW-7 | LOCATION ACTIVITY: START 700 | END 800

FIELD QA DATA: ☐ | FIELD DUPLICATE COLLECTED ID: Ø

WATER LEVEL/WELL DATA

WELL DEPTH: 13 FT | DEPTH TO SCREEN TOP: 3 FT | DEPTH TO WATER: 4.01 FT

☐ MEASURED ☒ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

PROTECTIVE CASING STICK-UP (FROM GROUND): Ø FT

PROTECTIVE CASING/WELL DIFF.: 0.31 FT

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ____

HEIGHT OF WATER COLUMN: ____ FT | LENGTH OF SCREEN: 10 FT

X ☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

L/PURGE VOL: ____ | L/TOTAL PURGED: ____

ALLOWABLE DRAWDOWN: ____ FT | MAX. ALLOWED DEPTH TO WATER: ____ FT | SAMPLE DEPTH: ____ FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____

WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch ☒ 1"

PURGE DATA

PURGE RATE: 230 ml/min. | PUMP SETTING: low

HISTORICAL PURGE RATE: ____ ml/min. | HISTORICAL PUMP SETTING: ____

	5	10	15	20	25	SAMPLE MEASUREMENTS
TIME (MINS.)	230	230	230	230	230	
PURGE VOLUME (liters)	4.02	4.02	4.02	4.02	4.02	
DEPTH TO WATER (ft.)	5.72	5.81	5.93	5.88	5.87	
TEMP. (°C)	1.617	1.611	1.606	1.606	1.606	
SPECIFIC CONDUCTIVITY (umhos/cm)	6.65	6.48	6.44	6.41	6.39	
pH, (units)	37	30	24	20	21	
TURBIDITY (ntu)	3.60	1.69	1.39	1.47	1.50	
DISSOLVED OXYGEN (ppm)	21.4	1.5	-4.6	-6.2	-8.0	
ORP (mv)						

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS: ☒ CLEAR ☐ COLORED ____ | ☒ CLOUDY ____ ☐ TURBID ____ | ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED: ☐ LIQUI-NOX ☐ DEIONIZED WATER ☐ HNO3/D.I.WATER ☐ POTABLE WATER ☐ TSP SOLUTION ☒ NONE / dedicated ☐ METHANOL SOLUTION ☐ ____

	PURGING	SAMPLING
PERISTALTIC PUMP	☒	☐
REDI FLOW II	☐	☐
BAILER	☐	☐
PVC/SILICON TUBING	☐	☐
TEFLON/SILICON TUBING	☐	☐
AIRLIFT	☐	☐

	PURGING	SAMPLING
ENCLOSED FLOW CELL	☒	☐
HORIBA U-10	☐	☐
WATERRA	☐	☐
IN-LINE FILTER	☐	☐
PRESS/VAC FILTER	☐	☐
____	☐	☐

WATER LEVEL EQUIPMENT USED: ☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: Ø

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	____ / ____ / ____
☐ SVOC	8270	↓	4°		☒	____ / ____ / ____
☐ PCB	8082	↓	↓		☒	____ / ____ / ____
☐ TAL Metals	6010	↓	↓		☒	____ / ____ / ____
☐ ____					☐	____ / ____ / ____

NOTES

SIGNATURE: Kate Shellenberger

RECEIVED BY: ____

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Penn Iron - Lancaster | JOB NUMBER: 212179.2 | DATE: 5/2/05
SAMPLE LOCATION: MW-8 | LOCATION ACTIVITY: START 1345 1545 | END 1615

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: ∅

WATER LEVEL/WELL DATA

WELL DEPTH: 13 FT
DEPTH TO SCREEN TOP: 3 FT
DEPTH TO WATER: 4.05 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED ☒ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

PROTECTIVE CASING STICK-UP (FROM GROUND): ∅ FT
PROTECTIVE CASING/WELL DIFF.: 0.31 FT

☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

L/PURGE VOL
L/TOTAL PURGED

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ____

ALLOWABLE DRAWDOWN: ____ FT
MAX. ALLOWED DEPTH TO WATER: ____ FT
SAMPLE DEPTH: ____ FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____

WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch 1"

PURGE DATA

PURGE RATE: 180 ml/min.
PUMP SETTING: low
HISTORICAL PURGE RATE: ____ ml/min.
HISTORICAL PUMP SETTING: ____

	5	10	15	20	25 (1615)		SAMPLE MEASUREMENTS
TIME (MINS.)							
PURGE VOLUME (liters)	180	180	180	180	180		
DEPTH TO WATER (ft.)	4.08	4.08	4.08	4.08	4.08		
TEMP. (°C)	6.89	7.27	7.28	7.22	7.25		
SPECIFIC CONDUCTIVITY (umhos/cm)	1.412	1.423	1.423	1.424	1.423		
pH, (units)	6.33	6.24	6.22	6.20	6.20		
TURBIDITY (ntu)	55	35	31	32	36		
DISSOLVED OXYGEN (ppm)	4.78	1.88	1.74	1.56	1.45		
ORP (mv)	-58.0	-58.7	-62.0	-62.8	-63.9		

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS
☒ CLEAR ☐ COLORED ____ ☒ CLOUDY ☐ TURBID ____ ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX ☒ NONE / dedicated ☐ METHANOL SOLUTION ☐ ____
☐ DEIONIZED WATER ☐ HNO3/D.I.WATER ☐ POTABLE WATER ☐ TSP SOLUTION

	PURGING	SAMPLING
PERISTALTIC PUMP	☒	☒
REDI FLOW II	☐	☐
BAILER	☐	☐
PVC/SILICON TUBING	☐	☐
TEFLON/SILICON TUBING	☐	☐
AIRLIFT	☐	☐

	PURGING	SAMPLING
ENCLOSED FLOW CELL	☒	☐
HORIBA U-10	☐	☐
WATERRA	☐	☐
IN-LINE FILTER	☐	☐
PRESS/VAC FILTER	☐	☐
____	☐	☐

WATER LEVEL EQUIPMENT USED
☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: ∅

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	____ / ____ / ____
☐ SVOC	8270	↓	4°		☒	____ / ____ / ____
☐ metals	6010		↓		☒	____ / ____ / ____
☐ PCB	8082				☒	____ / ____ / ____
☐					☐	____ / ____ / ____

NOTES

SIGNATURE: [signature]
RECEIVED BY: ____

.09 - REVISION 2/24/98

PROJECT: E Perry Iron - Lancaster | JOB NUMBER: 22179.2 | DATE: 5/3/05

SAMPLE LOCATION: MW-9 | LOCATION ACTIVITY: START | END: 1030

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: MW-9 Dup

WATER LEVEL/WELL DATA

WELL DEPTH: 14 FT | DEPTH TO SCREEN TOP: 4 FT | DEPTH TO WATER: 4.36 FT

☐ MEASURED ☒ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

PROTECTIVE CASING STICK-UP (FROM GROUND): 0 FT | PROTECTIVE CASING/WELL DIFF.: 0.31 FT

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ____

HEIGHT OF WATER COLUMN: ____ FT | LENGTH OF SCREEN: 10 FT | X

☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

____ L/PURGE VOL | ____ L/TOTAL PURGED

ALLOWABLE DRAWDOWN: ____ FT | MAX. ALLOWED DEPTH TO WATER: ____ FT | SAMPLE DEPTH: ____ FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____

WELL DIAMETER: ☐ 2 inch ☐ 6 inch ☒ 1"

PURGE DATA

PURGE RATE: 200 ml/min. | PUMP SETTING: low

HISTORICAL PURGE RATE: ____ ml/min. | HISTORICAL PUMP SETTING: ____

	5	10	15	20	25		SAMPLE MEASUREMENTS
TIME (MINS.)	230	~~230~~ 210	~~230~~ 210	~~230~~ 210	~~230~~ 210		
PURGE VOLUME (liters)	4.63	4.61	4.60	4.62	4.62		
DEPTH TO WATER (ft.)	8.49	8.54	8.47	8.41	8.20		
TEMP. (°C)	0.512	0.538	0.547	0.552	0.559		
SPECIFIC CONDUCTIVITY (umhos/cm)	6.50	~~0~~ 6.29	6.19	6.14	6.13		
pH, (units)	198	101	77	64	53		
TURBIDITY (ntu)	7.03	5.88	4.59	4.25	4.17		
DISSOLVED OXYGEN (ppm)	29.9	42.8	45.3	44.0	43.0		
ORP (mv)							

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS

☒ CLEAR ☐ COLORED ____ | ☒ CLOUDY ____ ☐ TURBID ____ | ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED

☐ LIQUI-NOX ☒ NONE / dedicated ☐ METHANOL SOLUTION ☐ HNO3/D.I.WATER ☐ POTABLE WATER ☐ TSP SOLUTION ☐ ____

PURGING	SAMPLING	
☒	☒	PERISTALTIC PUMP
☐	☐	REDI FLOW II
☐	☐	BAILER
☐	☐	PVC/SILICON TUBING
☐	☐	TEFLON/SILICON TUBING
☐	☐	AIRLIFT

PURGING	SAMPLING	
☒	☐	ENCLOSED FLOW CELL
☐	☐	HORIBA U-10
☐	☐	WATERRA
☐	☐	IN-LINE FILTER
	☐	PRESS/VAC FILTER
☐	☐	____

WATER LEVEL EQUIPMENT USED

☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: 0

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	____ / ____ / ____
☐ SVOC	8270		4°		☒	____ / ____ / ____
☐ PCB	8082				☒	____ / ____ / ____
☐ Metals (TAL)	6010				☒	____ / ____ / ____
☐					☐	____ / ____ / ____

NOTES

SIGNATURE: Kate Shimmers

RECEIVED BY: ____

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Penn Iron - Lancaster | JOB NUMBER: 20179.2 | DATE: 6/3/08
SAMPLE LOCATION: MW-11 | LOCATION ACTIVITY: START | END: 1125

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: Ø

WATER LEVEL/WELL DATA

WELL DEPTH: 14 FT
DEPTH TO SCREEN TOP: 4 FT
DEPTH TO WATER: 5.72 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED ☐ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

X ☐ 0.60 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

PROTECTIVE CASING STICK-UP (FROM GROUND): Ø FT
PROTECTIVE CASING/WELL DIFF.: 0.31 FT

L/PURGE VOL
L/TOTAL PURGED

	YES	NO	N/A
WELL INTEGRITY	☑	☐	☐
PROT. CASING SECURE	☑	☐	☐
CONCRETE COLLAR INTACT	☑	☐	☐
WELL LOCKED	☑	☐	☐

OTHER: ____

ALLOWABLE DRAWDOWN: ____ FT
MAX. ALLOWED DEPTH TO WATER: ____ FT
SAMPLE DEPTH: ____ FT

WELL MATERIAL: ☑ PVC ☐ SS ☐ ____

WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch 1"

PURGE DATA

PURGE RATE: 256 ml/min. | PUMP SETTING: low
HISTORICAL PURGE RATE: ____ ml/min. | HISTORICAL PUMP SETTING: ____

	5	10	15	20	25		SAMPLE MEASUREMENTS
TIME (MINS.)	300	~~300~~ 256	~~360~~ 256	~~300~~ 256	~~300~~ 256		
PURGE VOLUME (liters)	5.73	5.73	5.73	5.73	5.73		
DEPTH TO WATER (ft.)	7.75	7.51	7.91	7.75	7.83		
TEMP. (°C)	1.798	1.808	1.801	1.806	1.799		
SPECIFIC CONDUCTIVITY (umhos/cm)	6.40	6.34	6.29	6.28	6.28		
pH, (units)	171	102	56	44	36		
TURBIDITY (ntu)	8.61	3.14	2.62	2.62	2.61		
DISSOLVED OXYGEN (ppm)	12.1	98	2.7	-0.1	-3.2		
ORP (mv)							

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS

☑ CLEAR ☐ COLORED ____ | ☑ CLOUDY ____ ☐ TURBID ____ | ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX ☑ NONE (dedicated) ☐ METHANOL SOLUTION ☐ ____
☐ DEIONIZED WATER ☐ HNO3/D.I.WATER ☐ POTABLE WATER ☐ TSP SOLUTION

	PURGING	SAMPLING
☑ PERISTALTIC PUMP	☑	☑
☐ REDI FLOW II	☐	☐
☐ BAILER	☐	☐
☐ PVC/SILICON TUBING	☐	☐
☐ TEFLON/SILICON TUBING	☐	☐
☐ AIRLIFT	☐	☐

	PURGING	SAMPLING
☐ ENCLOSED FLOW CELL	☑	☐
☐ HORIBA U-10	☐	☐
☐ WATERRA	☐	☐
☐ IN-LINE FILTER	☐	☐
☐ PRESS/VAC FILTER	☐	☐
☐ ____	☐	☐

WATER LEVEL EQUIPMENT USED
☑ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: Ø

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☑	____ / ____ / ____
☐ SVOC	8270	↓	4°		☑	____ / ____ / ____
☐ PCB	8082		↓		☑	____ / ____ / ____
☐ TAL metals	6010				☑	____ / ____ / ____
☐ ____					☐	____ / ____ / ____

NOTES

SIGNATURE: [signature]
RECEIVED BY: ____

WOODARD & CURRAN ENVIRONMENTAL SERVICES

FIELD DATA RECORD - GROUNDWATER

PROJECT: MW-A
SAMPLE LOCATION: E Percy – Somerset
JOB NUMBER: 212179.2
LOCATION ACTIVITY
DATE: 5/2/05
START: 900
END: 945

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: Ø

WATER LEVEL/WELL DATA

WELL DEPTH: 13.16 FT
DEPTH TO SCREEN TOP: 3 FT
DEPTH TO WATER: 2.05 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED
☒ HISTORICAL
☐ TOP OF RISER
☐ TOP OF CASING
☐ ——

PROTECTIVE CASING STICK-UP (FROM GROUND): Ø FT
PROTECTIVE CASING/WELL DIFF.: 0.37 FT

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ——

X
☐ 0.60 L/FT (2 IN)
☐ 2.46 L/FT (4 IN)
☐ 5.60 L/FT (6 IN)
☐ __ L/FT (__ IN)

L/PURGE VOL
L/TOTAL PURGED

ALLOWABLE DRAWDOWN: FT
MAX. ALLOWED DEPTH TO WATER: FT
SAMPLE DEPTH: FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ——

WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch 1"

PURGE DATA

PURGE RATE: 180 ml/min.
PUMP SETTING: lowest
HISTORICAL PURGE RATE: —— ml/min.
HISTORICAL PUMP SETTING: 9:45

	5	10	15	20	25		SAMPLE MEASUREMENTS
TIME (MINS.)	180	180	180	180	180		
PURGE VOLUME (liters)	~~2.78~~	2.78	2.78	2.78	2.78		
DEPTH TO WATER (ft.)	8.27	8.45	8.54	8.64	8.66		
TEMP. (°C)	1.698	1.215	1.034	0.944	0.852		
SPECIFIC CONDUCTIVITY (umhos/cm)	6.34	6.46	6.41	6.38	6.35		
pH, (units)	55	67	70	66	54		
TURBIDITY (ntu)	~~3.52~~	3.26	3.01	2.55	2.54		
DISSOLVED OXYGEN (ppm) mg/L	192.2	222.6	230.4	232.7	230.1		
ORP (mv)							

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS
☒ CLEAR ☐ COLORED —— ☒ CLOUDY —— ☐ TURBID —— ☐ ODOR —— ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX ☒ NONE / dedicated
☐ DEIONIZED WATER ☐ METHANOL SOLUTION
☐ HNO3/D.I.WATER ☐ ——
☐ POTABLE WATER
☐ TSP SOLUTION

PURGING	SAMPLING	
☒	☒	PERISTALTIC PUMP
☐	☐	REDI FLOW II
☐	☐	BAILER
☐	☐	PVC/SILICON TUBING
☐	☐	TEFLON/SILICON TUBING
☐	☐	AIRLIFT

PURGING	SAMPLING	
☒	☐	ENCLOSED FLOW CELL
☐	☐	HORIBA U-10
☐	☐	WATERRA
☐	☐	IN-LINE FILTER
	☐	PRESS/VAC FILTER
☐	☐	——

WATER LEVEL EQUIPMENT USED
☒ ELECTRIC COND. PROBE ☐ INTERFACE PROBE
☐ FLOAT ACTIVATED ☐ OTHER

NUMBER OF FILTERS USED: Ø

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCl		☒	/ /
☐ SVOC	8270	↓	4°		☒	/ /
☐ PCB	8082		↓		☒	/ /
☐ Metals	6010				☒	/ /
☐					☐	/ /

NOTES

SIGNATURE: Kate Sherman
RECEIVED BY: ——

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Penn Iron - Somerset | JOB NUMBER: 21279.2 | DATE: 5/2/05
SAMPLE LOCATION: MW-B | LOCATION ACTIVITY: START | END: 1040

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: ∅

WATER LEVEL/WELL DATA

WELL DEPTH: 14 FT
DEPTH TO SCREEN TOP: 4 FT
DEPTH TO WATER: 4.14 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED ☐ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ____

PROTECTIVE CASING STICK-UP (FROM GROUND): ∅ FT
PROTECTIVE CASING/WELL DIFF.: FT

X ☐ 0.60 L/FT (2 IN) ☐ 2.45 L/FT (4 IN) ☒ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

L/PURGE VOL
L/TOTAL PURGED

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ____

ALLOWABLE DRAWDOWN: FT
MAX. ALLOWED DEPTH TO WATER: FT
SAMPLE DEPTH: FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____

WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch 1"

PURGE DATA

PURGE RATE: 150 ml/min. | PUMP SETTING: low
HISTORICAL PURGE RATE: ____ ml/min. | HISTORICAL PUMP SETTING: ____

	5	10	15	20	25		SAMPLE MEASUREMENTS
TIME (MINS.)	150	150	150	150	150		
PURGE VOLUME (liters)	4.14	4.10	4.11	4.11	4.11		
DEPTH TO WATER (ft.)	7.88	7.95	7.93	7.88	7.77		
TEMP. (°C)	0.646	0.623	0.617	0.610	0.595		
SPECIFIC CONDUCTIVITY (umhos/cm)	6.96	6.88	6.85	6.79	6.73		
pH. (units)	180	185	221	198	158		
TURBIDITY (ntu)	9.25	7.66	6.71	5.44	4.05		
DISSOLVED OXYGEN (ppm)	119.2	135.8	139.8	145.4	156.0		
ORP (mv)							

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS

☒ CLEAR ☐ COLORED ____ ☒ GLOUDY ____ ☐ TURBID ____ ☐ ODOR ____ ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED

☐ LIQUI-NOX ☒ NONE / dedicated ☐ DEIONIZED WATER ☐ METHANOL SOLUTION ☐ HNO3/D.I.WATER ☐ ____ ☐ POTABLE WATER ☐ TSP SOLUTION

	PURGING	SAMPLING
☒ PERISTALTIC PUMP	☒	☐
☐ REDI FLOW II	☐	☐
☐ BAILER	☐	☐
☐ PVC/SILICON TUBING	☐	☐
☐ TEFLON/SILICON TUBING	☐	☐
☐ AIRLIFT	☐	☐

	PURGING	SAMPLING
☒ ENCLOSED FLOW CELL	☒	☐
☐ HORIBA U-10	☐	☐
☐ WATERRA	☐	☐
☐ IN-LINE FILTER	☐	☐
☐ PRESS/VAC FILTER	☐	☐
☐ ____	☐	☐

WATER LEVEL EQUIPMENT USED

☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: ∅

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	____ / ____ / ____
☐ SVOC	8270	↓	4°		☒	____ / ____ / ____
☐ PCB	8082		↓		☒	____ / ____ / ____
☐ TAL metals	6010				☒	____ / ____ / ____
☐					☐	____ / ____ / ____

NOTES: Had to let pump for 23 minutes initially - very turbid. (Cleaned out flow cell afterwards, let pump w/o connection to flow cell after initial flow w/ flow cell connection)

SIGNATURE: Mark Steiner
RECEIVED BY: ____

.09 - REVISION 2/24/04

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Vesey Ivon - Somerset | JOB NUMBER: 212179.2 | DATE: 5/
SAMPLE LOCATION: MW-C | LOCATION ACTIVITY: START | END: 1150

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: ———

WATER LEVEL/WELL DATA

WELL DEPTH: 15 FT
DEPTH TO SCREEN TOP: 5 FT
DEPTH TO WATER: 4.0 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED
☒ HISTORICAL
☐ TOP OF RISER
☐ TOP OF CASING
☐ ———

X
☐ 0.60 L/FT (2 IN)
☐ 2.46 L/FT (4 IN)
☐ 5.60 L/FT (6 IN)
☐ __ L/FT (__ IN)

PROTECTIVE CASING STICK-UP (FROM GROUND): 0 FT
PROTECTIVE CASING/WELL DIFF.: FT

L/PURGE VOL
L/TOTAL PURGED

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ———

ALLOWABLE DRAWDOWN: FT
MAX. ALLOWED DEPTH TO WATER: FT
SAMPLE DEPTH: FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ———
WELL DIAMETER: ☐ 2 inch ☐ 4 inch ☐ 6 inch 1"

PURGE DATA

PURGE RATE 120 ml/min. | HISTORICAL PURGE RATE ——— ml/min.
PUMP SETTING Slowest | HISTORICAL PUMP SETTING ———

	5	10	15	20	25	30	SAMPLE MEASUREMENTS
TIME (MINS.)	120	120	120	120	120	120	
PURGE VOLUME (liters)	4.0	5.0	5.63	8.15	9.95	10.50	
DEPTH TO WATER (ft.)	11.08	10.18	10.35	10.40	10.06	10.11	
* TEMP. (°C)	0.555	1.219	1.187	1.208	1.183	1.800	
SPECIFIC CONDUCTIVITY (umhos/cm)	7.60	7.15	7.08	7.05	6.97	6.87	
pH, (units)	74	50	54	54	305	498	
TURBIDITY (ntu)	6.93	2.71	2.63	2.46	2.08	1.93	
DISSOLVED OXYGEN (ppm)	79.1	104.3	103.6	104.0	103.8	92.7	
ORP (mv)							

Sun is on our well

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS
☒ CLEAR ☐ COLORED ——— ☒ CLOUDY ☐ TURBID ——— ☐ ODOR ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX
☐ DEIONIZED WATER
☐ HNO3/D.I.WATER
☐ POTABLE WATER
☐ TSP SOLUTION
☒ NONE / dedicated
☐ METHANOL SOLUTION
☐ ———

	PURGING	SAMPLING
PERISTALTIC PUMP	☒	☒
REDI FLOW II	☐	☐
BAILER	☐	☐
PVC/SILICON TUBING	☐	☐
TEFLON/SILICON TUBING	☐	☐
AIRLIFT	☐	☐

	PURGING	SAMPLING
ENCLOSED FLOW CELL	☒	☐
HORIBA U-10	☐	☐
WATERRA	☐	☐
IN-LINE FILTER	☐	☐
PRESS/VAC FILTER		☐
———	☐	☐

WATER LEVEL EQUIPMENT USED
☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: 0

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	——— / ——— / ———
☐ SVOC	8270		4°		☒	——— / ——— / ———
☐ PCB	8082				☒	——— / ——— / ———
☐ TAL Metals	6010				☒	——— / ——— / ———
☐					☐	——— / ——— / ———

NOTES: ~~Pumped well (developed) for 20 mins~~ Had to shut down pump & wait for recharge 1205

SIGNATURE: Kate Skinner
RECEIVED BY: ———

FIELD DATA RECORD - GROUNDWATER

PROJECT: E Petroleum - Somerset | JOB NUMBER: 21279.2 | DATE: 5/2/05
SAMPLE LOCATION: MW-D | LOCATION ACTIVITY: START 1240 END 1325

FIELD QA DATA: ☐ FIELD DUPLICATE COLLECTED ID: ———

WATER LEVEL/WELL DATA

WELL DEPTH: 14 FT
DEPTH TO SCREEN TOP: 4 FT
DEPTH TO WATER: 6.30 FT
HEIGHT OF WATER COLUMN: FT
LENGTH OF SCREEN: 10 FT

☐ MEASURED ☒ HISTORICAL ☐ TOP OF RISER ☐ TOP OF CASING ☐ ———

X ☐ 0.50 L/FT (2 IN) ☐ 2.46 L/FT (4 IN) ☐ 5.60 L/FT (6 IN) ☐ __ L/FT (__ IN)

PROTECTIVE CASING STICK-UP (FROM GROUND): Ø FT
PROTECTIVE CASING/WELL DIFF.: FT

L/PURGE VOL
L/TOTAL PURGED

	YES	NO	N/A
WELL INTEGRITY	☒	☐	☐
PROT. CASING SECURE	☒	☐	☐
CONCRETE COLLAR INTACT	☒	☐	☐
WELL LOCKED	☒	☐	☐

OTHER: ———

ALLOWABLE DRAWDOWN: FT
MAX. ALLOWED DEPTH TO WATER: FT
SAMPLE DEPTH: FT

WELL MATERIAL: ☒ PVC ☐ SS ☐ ———
WELL DIAMETER: ☐ 2 inch ☐ 6 inch ☐ 4 inch ☐ ———

PURGE DATA

PURGE RATE 170 ml/min. | HISTORICAL PURGE RATE ——— ml/min.
PUMP SETTING low | HISTORICAL PUMP SETTING ———

	1305	1310	15	1325		SAMPLE MEASUREMENTS
TIME (MINS.)	5	10	15	20	25	
PURGE VOLUME (liters)	170	170	170	170	170	
DEPTH TO WATER (ft.)	6.30	6.30	6.30	6.30	6.30	
TEMP. (°C)	9.59	9.25	9.19	9.20	9.20	
SPECIFIC CONDUCTIVITY (umhos/cm)	1.108	1.090	1.082	1.068	1.068	
pH, (units)	7.10	6.93	6.88	6.79	6.74	
TURBIDITY (ntu)	99	97	95	75	63	
DISSOLVED OXYGEN (ppm)	2.89	2.17	1.41	1.27	1.40	
ORP (mv)	-68.5	-70.1	-69.4	-68.2	-65.9	

FOR ADDITIONAL READINGS, RECORD ON BACK

SAMPLE OBSERVATIONS
☒ CLEAR ☐ COLORED ——— ☒ CLOUDY ☐ TURBID ——— ☐ ODOR ☐ OTHER (SEE NOTES)

EQUIPMENT DOCUMENTATION

DECON FLUIDS USED
☐ LIQUI-NOX ☒ NONE /dedicated ☐ DEIONIZED WATER ☐ METHANOL SOLUTION ☐ HNO3/D.I.WATER ☐ ——— ☐ POTABLE WATER ☐ TSP SOLUTION

PURGING	SAMPLING	
☒	☒	PERISTALTIC PUMP
☐	☐	REDI FLOW II
☐	☐	BAILER
☐	☐	PVC/SILICON TUBING
☐	☐	TEFLON/SILICON TUBING
☐	☐	AIRLIFT

PURGING	SAMPLING	
☒	☐	ENCLOSED FLOW CELL
☐	☐	HORIBA U-10
☐	☐	WATERRA
☐	☐	IN-LINE FILTER
	☐	PRESS/VAC FILTER
☐	☐	———

WATER LEVEL EQUIPMENT USED
☒ ELECTRIC COND. PROBE ☐ FLOAT ACTIVATED ☐ INTERFACE PROBE ☐ OTHER

NUMBER OF FILTERS USED: Ø

ANALYTICAL PARAMETERS

	METHOD NUMBER	FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
☐ VOC	8260	N	HCL		☒	——— / ——— / ———
☐ SVOC	8270		4°C		☒	——— / ——— / ———
☐ PCB	8082				☒	——— / ——— / ———
☐ TAL Metals	6010				☒	——— / ——— / ———
☐					☐	——— / ——— / ———

NOTES: Pumped well for ——— before filling flow cell.

SIGNATURE: Kate Gilmore
RECEIVED BY: ———

.09 - REVISION 2/24/98

APPENDIX C: ANALYTICAL DATA

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

Report Number: 53950

Revision: Rev. 0

Re: E. Perry Brownfields Site

Enclosed are the results of the analyses on your sample(s). Samples were received on 26 April 2005 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis	Comments
53950-1	04/26/05	B-A (0-4')	EPA 8082 (PCBs only)	
	04/26/05	B-A (0-4')	EPA 8260 Volatile Organics	
	04/26/05	B-A (0-4')	EPA 8270 Acid/Base Neutrals	
	04/26/05	B-A (0-4')	TAL Metals	
53950-2	04/26/05	B-B 0-4'	EPA 8260 Volatile Organics	
	04/26/05	B-B 0-4'	EPA 8270 Acid/Base Neutrals	
	04/26/05	B-B 0-4'	TAL Metals	
53950-3	04/26/05	B-B 4-8'	EPA 8082 (PCBs only)	
53950-4	04/26/05	B-E 0-4'	EPA 8082 (PCBs only)	
	04/26/05	B-E 0-4'	EPA 8260 Volatile Organics	
	04/26/05	B-E 0-4'	EPA 8270 Acid/Base Neutrals	
	04/26/05	B-E 0-4'	TAL Metals	
53950-5	04/26/05	B-C 0-4'	EPA 8082 (PCBs only)	
	04/26/05	B-C 0-4'	EPA 8260 Volatile Organics	
	04/26/05	B-C 0-4'	EPA 8270 Acid/Base Neutrals	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature S. L. Knollmeyer

Stephen L. Knollmeyer Lab. Director

Date 5/13/2005

analytics environmental laboratory LLC

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Portsmouth, New Hampshire 03801
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Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

Report Number: 53950

Revision: Rev. 0

Re: E. Perry Brownfields Site

Enclosed are the results of the analyses on your sample(s). Samples were received on 26 April 2005 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis	Comments
	04/26/05	B-C 0-4'	TAL Metals	
53950-6	04/26/05	B-D 0-4'	EPA 8260 Volatile Organics	
	04/26/05	B-D 0-4'	EPA 8270 Acid/Base Neutrals	
53950-7	04/26/05	B-D 4-8'	Electronic Data Deliverable	
	04/26/05	B-D 4-8'	EPA 8082 (PCBs only)	
	04/26/05	B-D 4-8'	TAL Metals	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature S. L. Knollmeyer

Stephen L. Knollmeyer Lab. Director

Date 5/13/2005

analytics environmental laboratory LLC

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Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

May 5, 2005

SAMPLE DATA

Lab Sample ID: 53950-1
Matrix: Solid
Percent Solid: 84
Dilution Factor: 67
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Analysis Date: 05/03/05

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-A (0-4')

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	67	U	1,3-Dichloropropane	67	U
Bromobenzene	67	U	cis-1,3-Dichloropropene	67	U
Bromochloromethane	67	U	trans-1,3-Dichloropropene	67	U
Bromodichloromethane	51	U	2,2-Dichloropropane	67	U
Bromoform	51	U	1,1-Dichloropropene	67	U
Bromomethane	67	U	Ethylbenzene	67	U
n-butylbenzene	67	U	Hexachlorobutadiene	67	U
sec-butylbenzene	67	U	Isopropylbenzene	67	U
tert-butylbenzene	67	U	p-isopropyltoluene	67	U
Carbon Tetrachloride	67	U	Methylene Chloride	337	U
Chlorobenzene	67	U	Methyl-tert-butyl ether (MTBE)	67	U
Chloroethane	67	U	Naphthalene	67	1460
Chloroform	51	U	n-Propylbenzene	67	U
Chloromethane	67	U	Styrene	67	U
2-Chlorotoluene	67	U	1,1,1,2-Tetrachloroethane	67	U
4-Chlorotoluene	67	U	1,1,2,2-Tetrachloroethane	51	U
Dibromochloromethane	51	U	Tetrachloroethene	67	U
1,2-Dibromo-3-chloropropane	67	U	Toluene	67	U
1,2-Dibromoethane	51	U	1,2,3-Trichlorobenzene	67	U
Dibromomethane	67	U	1,2,4-Trichlorobenzene	67	U
1,2-Dichlorobenzene	67	U	1,1,1-Trichloroethane	67	U
1,3-Dichlorobenzene	67	U	1,1,2-Trichloroethane	51	U
1,4-Dichlorobenzene	67	U	Trichloroethene	67	U
Dichlorodifluoromethane	67	U	Trichlorofluoromethane	67	U
1,1-Dichloroethane	67	U	1,2,3-Trichloropropane	67	U
1,2-Dichloroethane	51	U	1,2,4-Trimethylbenzene	67	U
1,1-Dichloroethene	51	U	1,3,5-Trimethylbenzene	67	U
cis-1,2-Dichloroethene	67	U	Vinyl Chloride	67	U
trans-1,2-Dichloroethene	67	U	o-Xylene	67	U
1,2-Dichloropropane	51	U	m,p-Xylene	67	U
Acetone	675	U	Diethyl ether	67	U
Carbon Disulfide	67	U	2-Hexanone	675	U
Tetrahydrofuran	337	U	Methyl isobutyl ketone	675	U
Methyl ethyl ketone	675	U	Di-isopropyl ether (DIPE)	67	U
t-Butyl alcohol (TBA)	1350	U	Ethyl t-butyl ether (ETBE)	67	U
t-Amyl methyl ether (TAME)	67	U			

Surrogate Standard Recovery

Dibromofluoromethane	66 * %	d4-1,2-Dichloroethane	59 * %	d8-Toluene	59 * %	Bromofluorobenzene	63 * %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035A. Sample did not meet method acceptance criteria for the 1:1 soil to methanol ratio. *Surrogate recoveries outside laboratory acceptance criteria. Sample was reanalyzed with similar results.

Authorized signature Melissa A. Hall

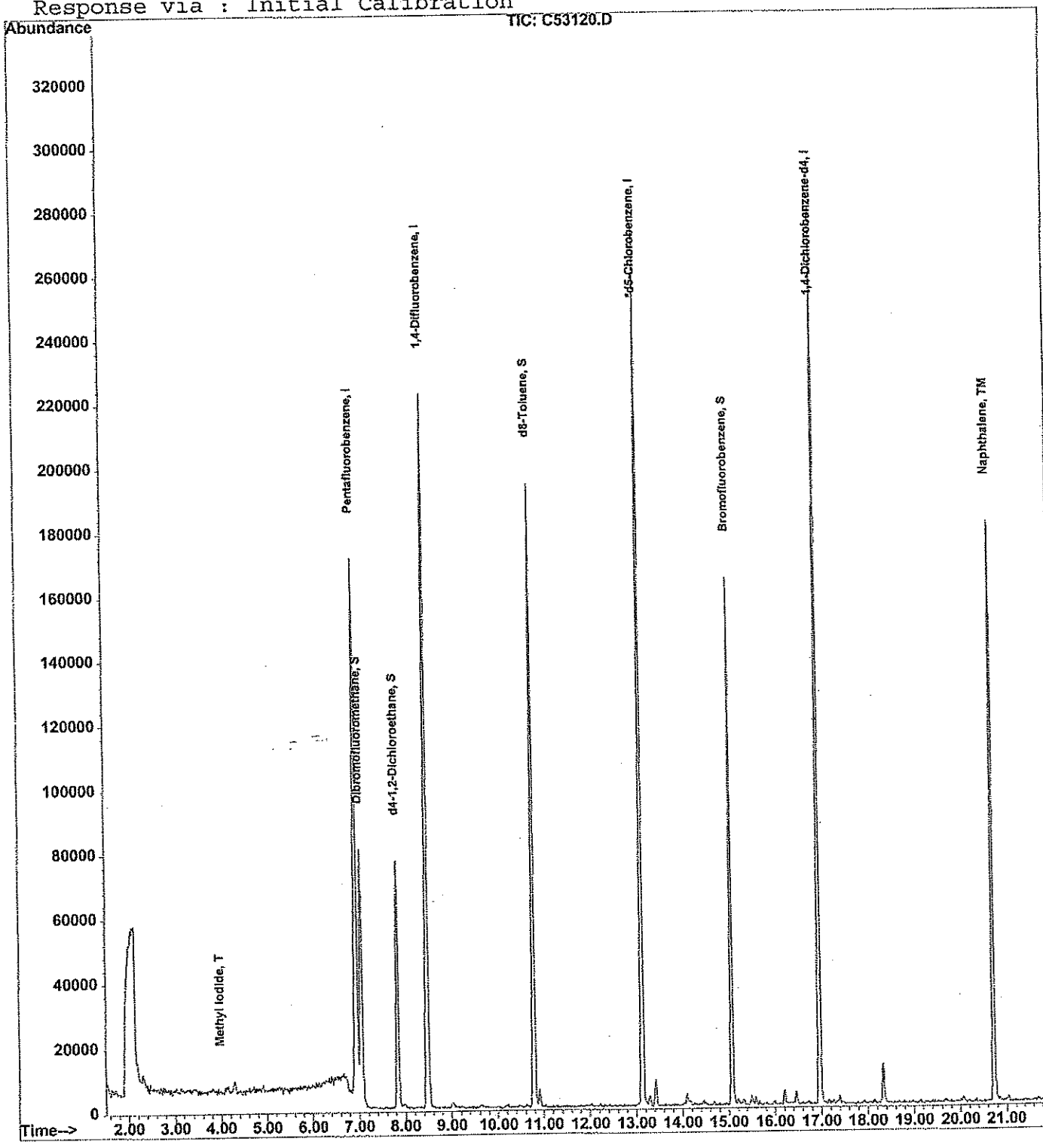
Quantitation Report

Data File : C:\HPCHEM\1\DATA\050305C\C53120.D
Acq On : 3 May 2005 1:48 pm
Sample : 53950-1
Misc : 50,8.85,SOIL
MS Integration Params: rteint.p
Quant Time: May 3 14:10 2005

Vial: 4
Operator:
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V804255C.RES

Method : C:\HPCHEM\1\METHODS\V804255C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Apr 25 12:38:49 2005
Response via : Initial Calibration



analytics environmental laboratory LLC

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800-929-9906

Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

May 10, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-A (0-4')

SAMPLE DATA

Lab Sample ID:	53950-1
Matrix:	Solid
Percent Solid:	84
Dilution Factor:	2.4
Collection Date:	04/26/05
Lab Receipt Date:	04/26/05
Extraction Date:	04/27/05
Analysis Date:	05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	590	U	Pentachlorophenol	590	U
4-Chloro-3-methylphenol	590	U	Phenol	590	U
2,4-Dichlorophenol	590	U	2,4,5-Trichlorophenol	590	U
2,4-Dimethylphenol	590	U	2,4,6-Trichlorophenol	590	U
2,4-dinitrophenol	590	U	Benzoic Acid	590	U
4,6-Dinitro-2-methylphenol	590	U	2-Methylphenol	590	U
2-Nitrophenol	590	U	3+4-Methylphenol	590	U
2,6-Dichlorophenol	590	U	Benzyl Alcohol	590	U
4-Nitrophenol	590	U	2,3,4,6-Tetrachlorophenol	590	U

Acid Surrogate Standard Recovery

2-Fluorophenol	44 %	d5-Phenol	54 %	2,4,6-Tribromophenol	59 %

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	590	U	Hexachlorobenzene	590	U
1,3-Dichlorobenzene	590	U	Benzidine	590	U J
1,4-Dichlorobenzene	590	U	3,3'-Dichlorobenzidine	590	U
2,4-Dinitrotoluene	590	U	Azobenzene	590	U
2,6-Dinitrotoluene	590	U	Bis(2-chloroethoxy)methane	590	U
Nitrobenzene	590	U	bis(2-chloroethyl) ether	590	U
Hexachlorobutadiene	590	U	bis(2-chloroisopropyl)ether	590	U
Dimethyl Phthalate	590	U	4-bromophenyl phenyl ether	590	U
Di-n-butyl phthalate	590	U	Butyl benzyl phthalate	590	U
di-n-octyl-phthalate	590	U	4-Chlorophenyl phenyl ether	590	U
Bis (2-ethylhexyl) phthalate	590	U	Diethyl Phthalate	590	U
1,2,4-Trichlorobenzene	590	U	Hexachlorocyclopentadiene	590	U

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature Melinda Hall

Analytics environmental laboratory LLC

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Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

May 12, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-A (0-4')

SAMPLE DATA

Lab Sample ID: 53950-1
Matrix: Solid
Percent Solid: 84
Dilution Factor: 2.4
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	590	**381 J**	N-nitrosodimethylamine	590	U
Acenaphthylene	590	**399 J**	N-nitroso-di-n-propylamine	590	U
Anthracene	590	**1010**	n-nitrosodiphenylamine	590	U
Benzo[a]anthracene	590	**2400**	Pyridine	590	U
Benzo[a] pyrene	590	**2510**	2-Methylnaphthalene	590	U
Benzo[b] fluoranthene	590	**3170**	2-Chloronaphthalene	590	U
Benzo[k] fluoranthene	590	**2570**	Naphthalene	590	U
Benzo(g,h,i) perylene	590	**859**	Phenanthrene	590	**3510**
Chrysene	590	**2410**	Dibenzofuran	590	U
Dibenz [a,h] anthracene	590	U	Aniline	590	U
Fluoranthene	590	**4580**	4-Chloroaniline	590	U
Fluorene	590	**489 J**	2-Nitroaniline	590	U
Indeno [1,2,3-cd] pyrene	590	**938**	3-Nitroaniline	590	U
Pyrene	590	**3710**	4-Nitroaniline	590	U
Hexachloroethane	590	U	Carbazole	590	**461 J**
Isophorone	590	U			

Base Neutral Surrogate Standard Recovery

2-Fluorobiphenyl	59 %	d5-nitrobenzene	54 %	d14-p-terphenyl	56 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis. Benzidine quantitation limits are estimated due to QC criteria not being met.

Authorized signature Melinda Ball

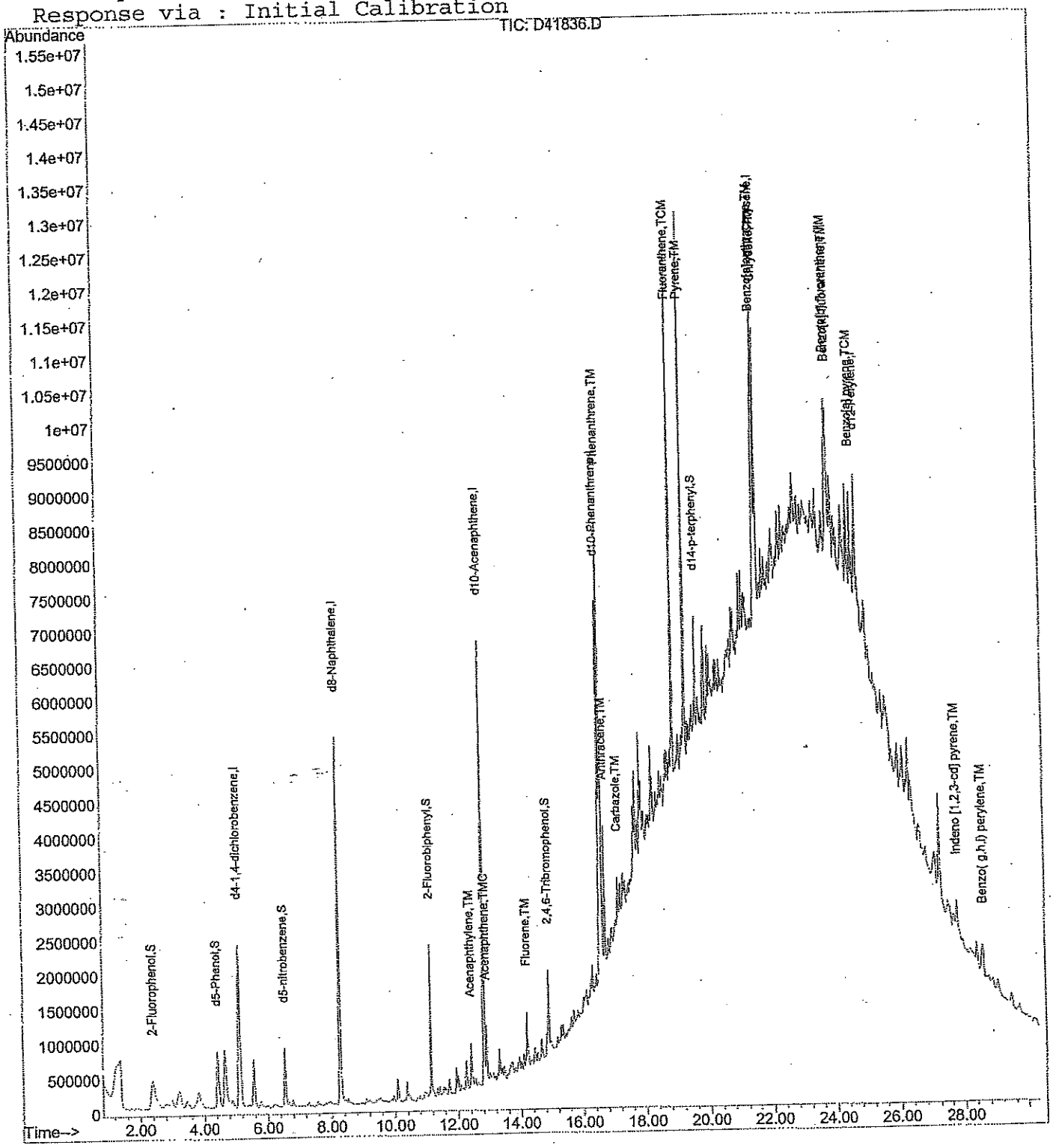
Quantitation Report

Data File : D:\1\DATA\050405-D\D41836.D
Acq On : 5 May 2005 3:25 am
Sample : 53950-1,,1:2
Misc : SOIL
MS Integration Params: RTEINT.P
Quant Time: May 6 0:07 2005

Vial: 8
Operator:
Inst : D Instrum
Multiplr: 1.00

Quant Results File: S05025.RES

Method : D:\1\METHODS\S05025.M (RTE Integrator)
Title : ABN
Last Update : Fri May 06 00:04:39 2005
Response via : Initial Calibration



analytics environmental laboratory LLC

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800-929-9906

Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

May 12, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-A (0-4')

SAMPLE DATA

Lab Sample ID: 53950-1
Matrix: Solid
Percent Solid: 84
Dilution Factor: 29
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 04/28/05

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	440	U
PCB-1221	440	U
PCB-1232	440	U
PCB-1242	440	U
PCB-1248	440	U
PCB-1254	440	U
PCB-1260	440	5540

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis. *The surrogates were diluted out.

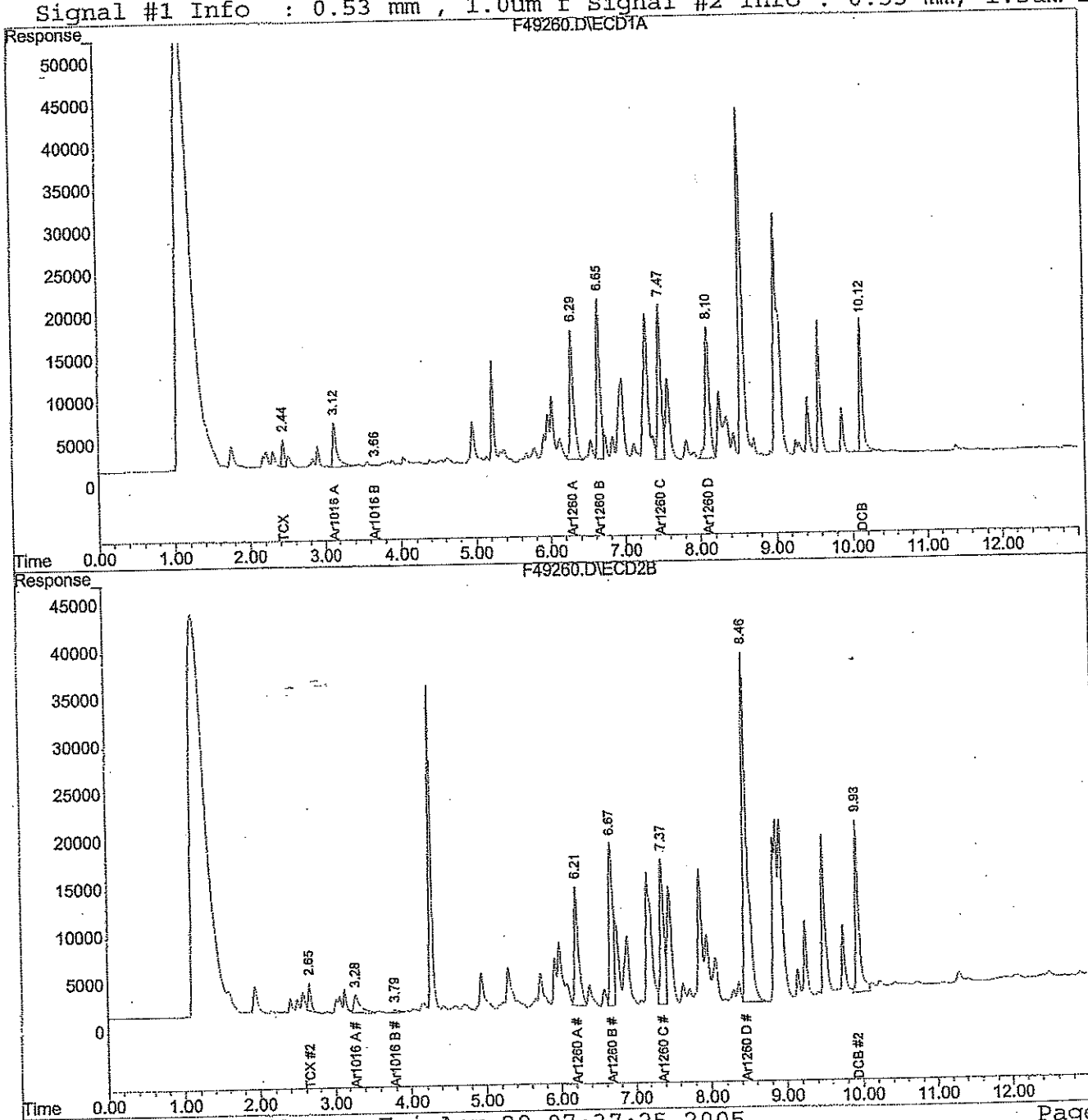
Authorized signature

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\042805-F\F49260.D\ECD1A.CH Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\042805-F\F49260.D\ECD2B.CH
Acq On : 28 Apr 2005 5:18 pm Operator:
Sample : 53950-1, 1;25, A/C Inst : Instrumen
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: PCBINT.E IntFile Signal #2: PCBINT2.E
Quant Time: Apr 29 7:37 2005 Quant Results File: PBQ04215.RES

Quant Method : C:\HPCHEM\2\METHODS\PBQ04215.M (Chemstation Integrator)
Title : Aroclor 1016/1260
Last Update : Fri Apr 29 07:36:08 2005
Response via : Multiple Level Calibration
DataAcq Meth : PSTQUICK.M

Volume Inj. : 3 ul
Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore
Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film



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Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

May 5, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-B 0-4'

SAMPLE DATA

Lab Sample ID: 53950-2
Matrix: Solid
Percent Solid: 78
Dilution Factor: 85
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Analysis Date: 05/03/05

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	85	U	1,3-Dichloropropane	85	U
Bromobenzene	85	U	cis-1,3-Dichloropropene	85	U
Bromochloromethane	85	U	trans-1,3-Dichloropropene	85	U
Bromodichloromethane	63	U	2,2-Dichloropropane	85	U
Bromoform	63	U	1,1-Dichloropropene	85	U
Bromomethane	85	U	Ethylbenzene	85	U
n-butylbenzene	85	U	Hexachlorobutadiene	85	U
sec-butylbenzene	85	U	Isopropylbenzene	85	U
tert-butylbenzene	85	U	p-isopropyltoluene	85	U
Carbon Tetrachloride	85	U	Methylene Chloride	423	U
Chlorobenzene	85	U	Methyl-tert-butyl ether (MTBE)	85	U
Chloroethane	85	U	Naphthalene	85	63 J
Chloroform	63	U	n-Propylbenzene	85	U
Chloromethane	85	U	Styrene	85	U
2-Chlorotoluene	85	U	1,1,1,2-Tetrachloroethane	85	U
4-Chlorotoluene	85	U	1,1,2,2-Tetrachloroethane	63	U
Dibromochloromethane	63	U	Tetrachloroethene	85	U
1,2-Dibromo-3-chloropropane	85	U	Toluene	85	U
1,2-Dibromoethane	63	U	1,2,3-Trichlorobenzene	85	U
Dibromomethane	85	U	1,2,4-Trichlorobenzene	85	U
1,2-Dichlorobenzene	85	U	1,1,1-Trichloroethane	85	U
1,3-Dichlorobenzene	85	U	1,1,2-Trichloroethane	63	U
1,4-Dichlorobenzene	85	U	Trichloroethene	85	U
Dichlorodifluoromethane	85	U	Trichlorofluoromethane	85	U
1,1-Dichloroethane	85	U	1,2,3-Trichloropropane	85	U
1,2-Dichloroethane	63	U	1,2,4-Trimethylbenzene	85	U
1,1-Dichloroethene	63	U	1,3,5-Trimethylbenzene	85	U
cis-1,2-Dichloroethene	85	U	Vinyl Chloride	85	U
trans-1,2-Dichloroethene	85	U	o-Xylene	85	U
1,2-Dichloropropane	63	U	m,p-Xylene	85	U
Acetone	845	U	Diethyl ether	85	U
Carbon Disulfide	85	U	2-Hexanone	845	U
Tetrahydrofuran	423	U	Methyl isobutyl ketone	845	U
Methyl ethyl ketone	845	U	Di-isopropyl ether (DIPE)	85	U
t-Butyl alcohol (TBA)	1690	U	Ethyl t-butyl ether (ETBE)	85	U
t-Amyl methyl ether (TAME)	85	U			

Surrogate Standard Recovery

Dibromofluoromethane	63 * %	d4-1,2-Dichloroethane	58 * %	d8-Toluene	53 * %	Bromofluorobenzene	46 * %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035A. Sample did not meet method acceptance criteria for the 1:1 soil to methanol ratio. *Surrogate recoveries outside laboratory acceptance criteria. Sample was reanalyzed with similar results.

Authorized signature Melissa Gall

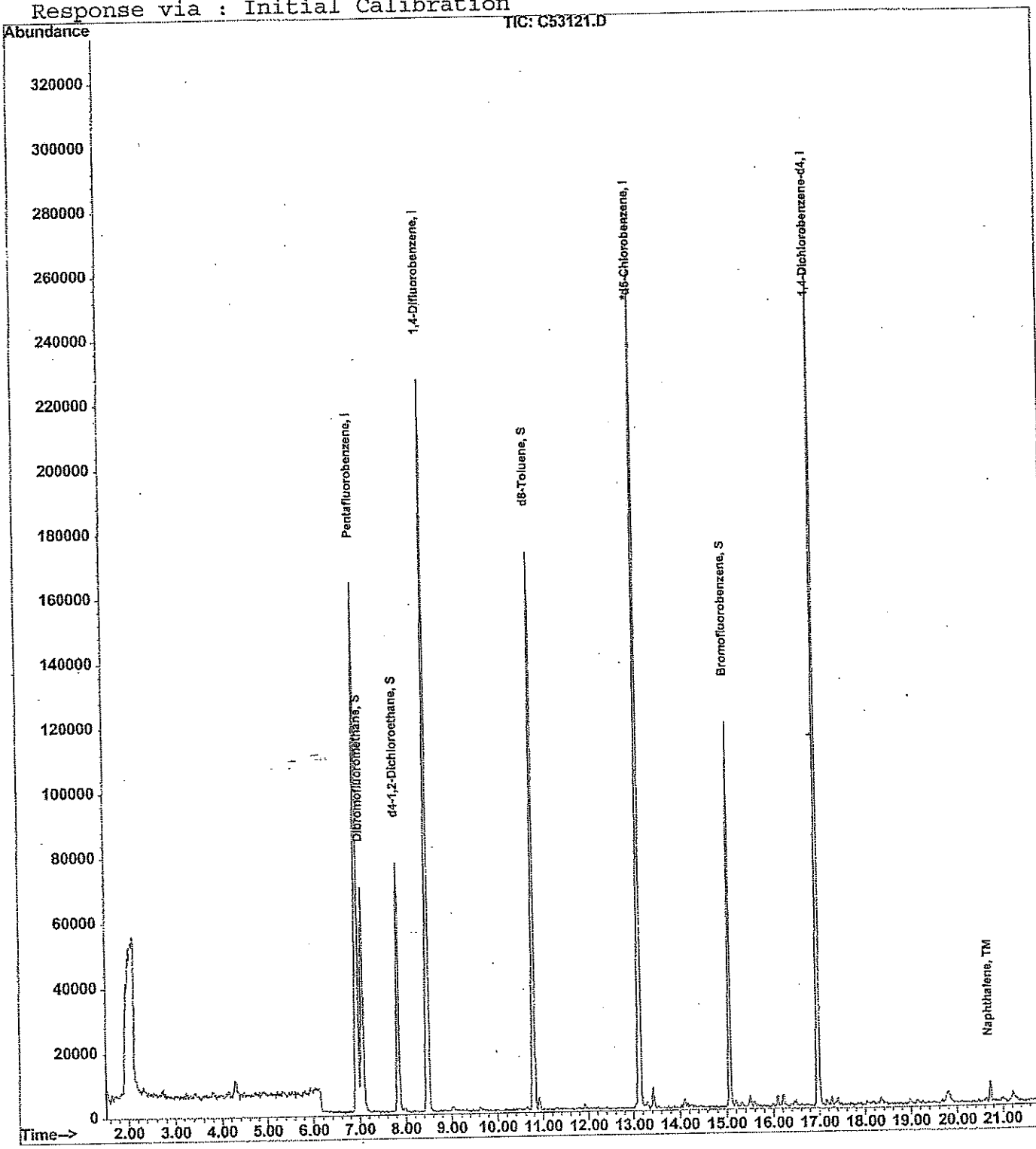
Quantitation Report

Data File : C:\HPCHEM\1\DATA\050305C\C53121.D
Acq On : 3 May 2005 2:49 pm
Sample : 53950-2
Misc : 50,7.54,SOIL
MS Integration Params: rteint.p
Quant Time: May 3 15:11 2005

Vial: 5
Operator:
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V804255C.RES

Method : C:\HPCHEM\1\METHODS\V804255C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Apr 25 12:38:49 2005
Response via : Initial Calibration



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41 Hutchins Drive
Portland ME 04102

May 10, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-B 0-4'

SAMPLE DATA

Lab Sample ID: 53950-2
Matrix: Solid
Percent Solid: 78
Dilution Factor: 2.5
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	630	U	Pentachlorophenol	630	U
4-Chloro-3-methylphenol	630	U	Phenol	630	U
2,4-Dichlorophenol	630	U	2,4,5-Trichlorophenol	630	U
2,4-Dimethylphenol	630	U	2,4,6-Trichlorophenol	630	U
2,4-dinitrophenol	630	U	Benzoic Acid	630	U
4,6-Dinitro-2-methylphenol	630	U	2-Methylphenol	630	U
2-Nitrophenol	630	U	3+4-Methylphenol	630	U
2,6-Dichlorophenol	630	U	Benzyl Alcohol	630	U
4-Nitrophenol	630	U	2,3,4,6-Tetrachlorophenol	630	U

Acid Surrogate Standard Recovery

2-Fluorophenol	57 %	d5-Phenol	73 %	2,4,6-Tribromophenol	85 %

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	630	U	Hexachlorobenzene	630	U
1,3-Dichlorobenzene	630	U	Benzidine	630	U
1,4-Dichlorobenzene	630	U	3,3'-Dichlorobenzidine	630	U
2,4-Dinitrotoluene	630	U	Azobenzene	630	U
2,6-Dinitrotoluene	630	U	Bis(2-chloroethoxy)methane	630	U
Nitrobenzene	630	U	bis(2-chloroethyl) ether	630	U
Hexachlorobutadiene	630	U	bis(2-chloroisopropyl)ether	630	U
Dimethyl Phthalate	630	U	4-bromophenyl phenyl ether	630	U
Di-n-butyl phthalate	630	U	Butyl benzyl phthalate	630	U
di-n-octyl-phthalate	630	U	4-Chlorophenyl phenyl ether	630	U
Bis (2-ethylhexyl) phthalate	630	**810**	Diethyl Phthalate	630	U
1,2,4-Trichlorobenzene	630	U	Hexachlorocyclopentadiene	630	U

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature Milena Adall

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Ms. Kate Skinner
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May 12, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-B 0-4'

SAMPLE DATA

Lab Sample ID: 53950-2
Matrix: Solid
Percent Solid: 78
Dilution Factor: 2.5
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	630	U	N-nitrosodimethylamine	630	U
Acenaphthylene	630	U	N-nitroso-di-n-propylamine	630	U
Anthracene	630	**438 J**	n-nitrosodiphenylamine	630	U
Benzo[a]anthracene	630	**1520**	Pyridine	630	U
Benzo[a] pyrene	630	**1510**	2-Methylnaphthalene	630	U
Benzo[b] fluoranthene	630	**1990**	2-Chloronaphthalene	630	U
Benzo[k] fluoranthene	630	**1930**	Naphthalene	630	U
Benzo(g,h,i) perylene	630	**497 J**	Phenanthrene	630	**1750**
Chrysene	630	**1700**	Dibenzofuran	630	U
Dibenz [a,h] anthracene	630	U	Aniline	630	U
Fluoranthene	630	**2700**	4-Chloroaniline	630	U
Fluorene	630	U	2-Nitroaniline	630	U
Indeno [1,2,3-cd] pyrene	630	**560 J**	3-Nitroaniline	630	U
Pyrene	630	**2380**	4-Nitroaniline	630	U
Hexachloroethane	630	U	Carbazole	630	U
Isophorone	630	U			

Base Neutral Surrogate Standard Recovery

2-Fluorobiphenyl	78	%	d5-nitrobenzene	69	%	d14-p-terphenyl	77 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis. Benzidine quantitation limits are estimated due to QC criteria not being met.

8270/625 layout

Authorized signature

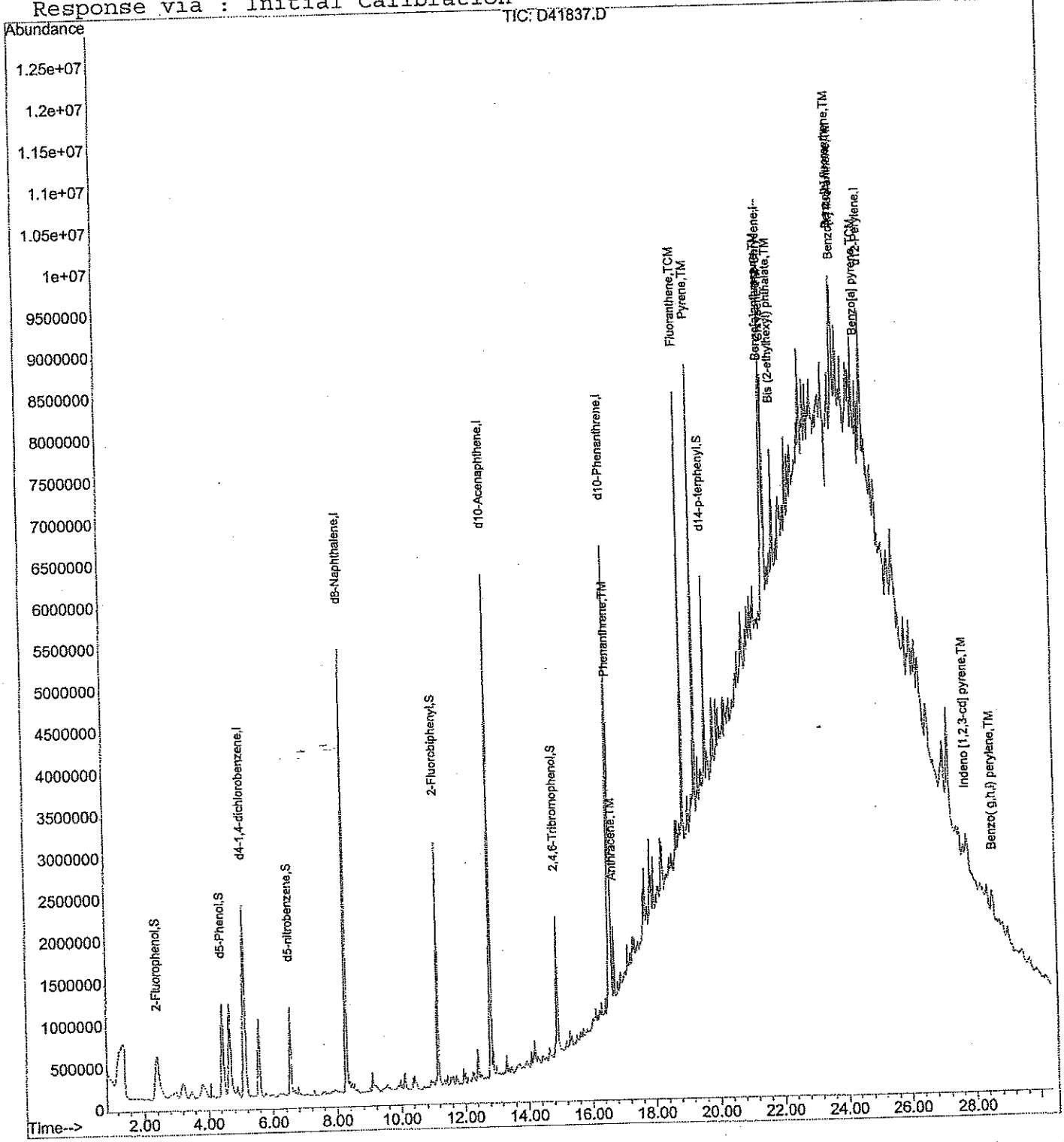
Quantitation Report

Data File : D:\1\DATA\050405-D\D41837.D
Acq On : 5 May 2005 4:00 am
Sample : 53950-2,DL,1:2
Misc : SOIL
MS Integration Params: RTEINT.P
Quant Time: May 6 0:15 2005

Vial: 9
Operator:
Inst : D Instrum
Multiplr: 1.00

Quant Results File: S05025.RES

Method : D:\1\METHODS\S05025.M (RTE Integrator)
Title : ABN
Last Update : Fri May 06 00:04:39 2005
Response via : Initial Calibration



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Portland ME 04102

May 5, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-B 4-8'

SAMPLE DATA

Lab Sample ID: 53950-3
Matrix: Solid
Percent Solid: 84
Dilution Factor: 1.2
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 04/27/05

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	18	U
PCB-1221	18	U
PCB-1232	18	U
PCB-1242	18	U
PCB-1248	18	U
PCB-1254	18	U
PCB-1260	18	U

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene	83	%
Decachlorobiphenyl	61	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.

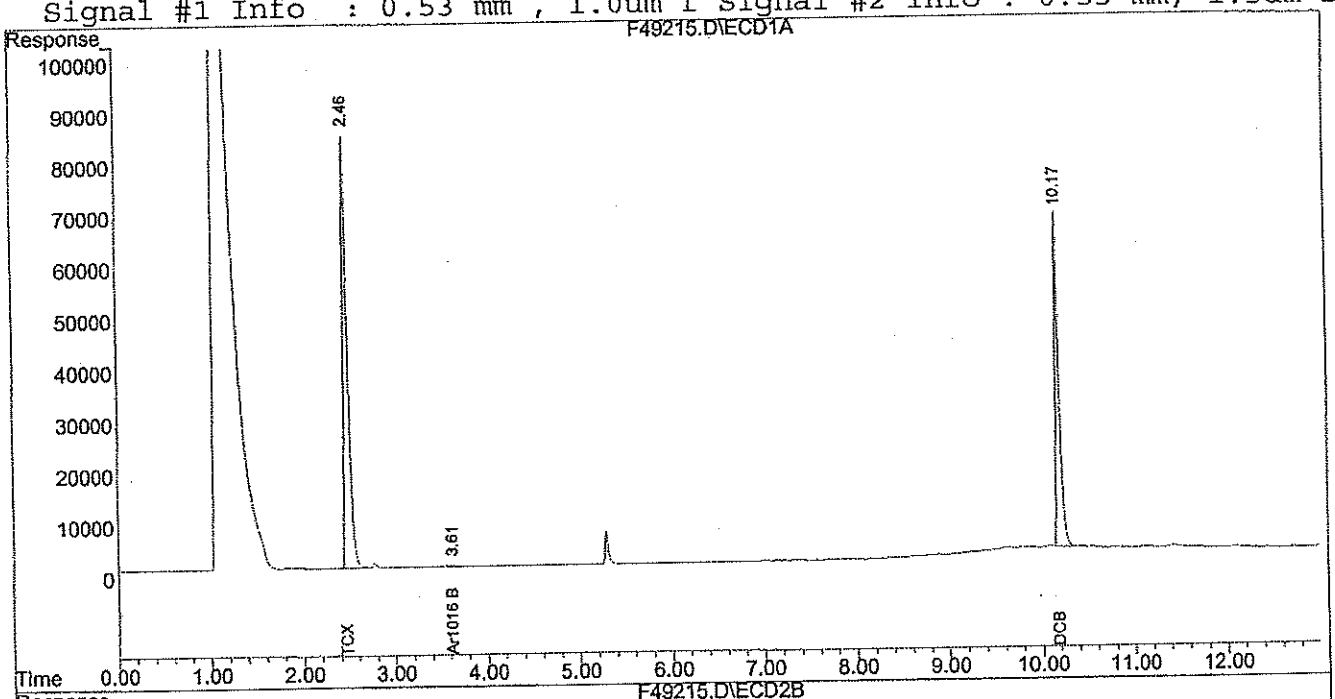
Authorized signature

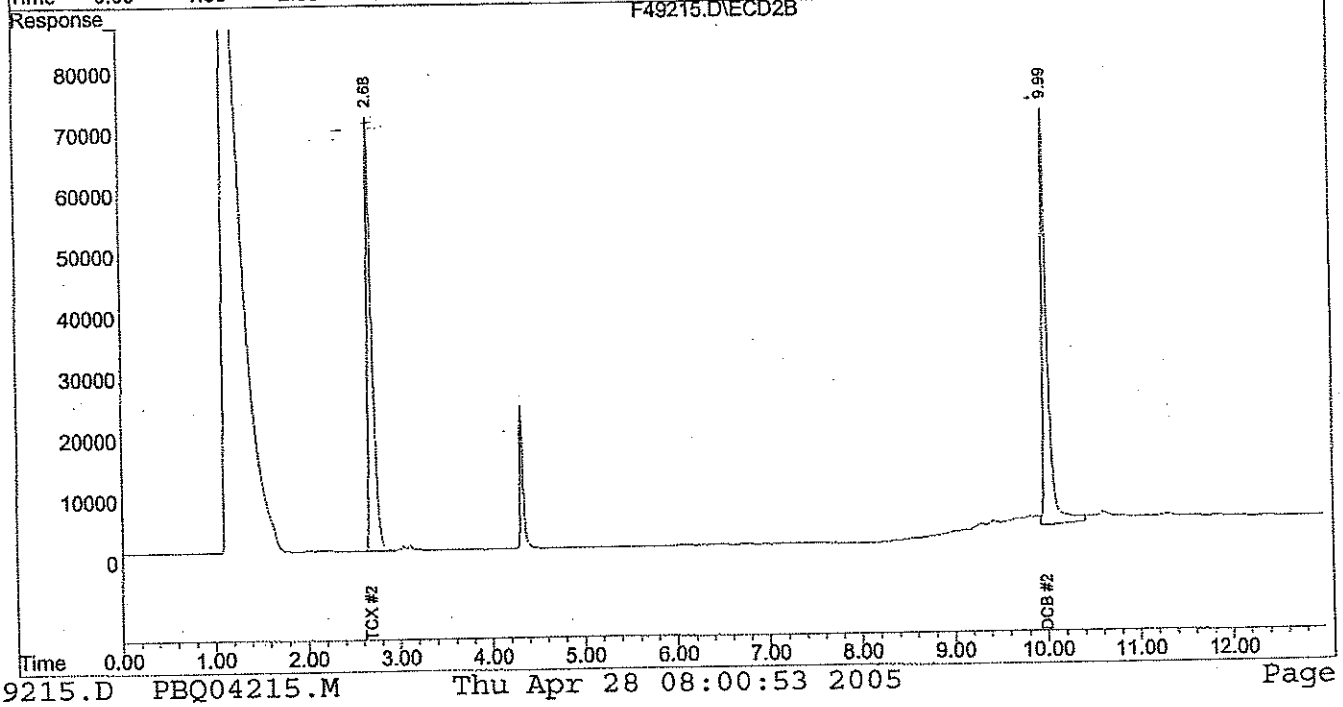
Quantitation Report (Not Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\042705-F\F49215.D\ECD1A.CH Vial: 35
Signal #2 : C:\HPCHEM\2\DATA\042705-F\F49215.D\ECD2B.CH
Acq On : 27 Apr 2005 10:01 pm Operator:
Sample : 53950-3, A/C Inst : Instrumen
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: PCBINT.E IntFile Signal #2: PCBINT2.E
Quant Time: Apr 28 8:00 2005 Quant Results File: PBQ04215.RES

Quant Method : C:\HPCHEM\2\METHODS\PBQ04215.M (Chemstation Integrator)
Title : Aroclor 1016/1260
Last Update : Fri Apr 22 08:09:36 2005
Response via : Multiple Level Calibration
DataAcq Meth : PSTQUICK.M

Volume Inj. : 3 ul
Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore
Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film





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Ms. Kate Skinner
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Portland ME 04102

May 5, 2005

SAMPLE DATA

Lab Sample ID: 53950-4
Matrix: Solid
Percent Solid: 87
Dilution Factor: 60
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Analysis Date: 05/03/05

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-E 0-4'

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	60	U	1,3-Dichloropropane	60	U
Bromobenzene	60	U	cis-1,3-Dichloropropene	60	U
Bromochloromethane	60	U	trans-1,3-Dichloropropene	60	U
Bromodichloromethane	45	U	2,2-Dichloropropane	60	U
Bromoform	45	U	1,1-Dichloropropene	60	U
Bromomethane	60	U	Ethylbenzene	60	U
n-butylbenzene	60	U	Hexachlorobutadiene	60	U
sec-butylbenzene	60	U	Isopropylbenzene	60	U
tert-butylbenzene	60	U	p-isopropyltoluene	60	U
Carbon Tetrachloride	60	U	Methylene Chloride	299	U
Chlorobenzene	60	U	Methyl-tert-butyl ether (MTBE)	60	U
Chloroethane	60	U	Naphthalene	60	33 J
Chloroform	45	U	n-Propylbenzene	60	U
Chloromethane	60	U	Styrene	60	U
2-Chlorotoluene	60	U	1,1,1,2-Tetrachloroethane	60	U
4-Chlorotoluene	60	U	1,1,2,2-Tetrachloroethane	45	U
Dibromochloromethane	45	U	Tetrachloroethene	60	U
1,2-Dibromo-3-chloropropane	60	U	Toluene	60	U
1,2-Dibromoethane	45	U	1,2,3-Trichlorobenzene	60	U
Dibromomethane	60	U	1,2,4-Trichlorobenzene	60	U
1,2-Dichlorobenzene	60	U	1,1,1-Trichloroethane	60	U
1,3-Dichlorobenzene	60	U	1,1,2-Trichloroethane	45	U
1,4-Dichlorobenzene	60	U	Trichloroethene	60	U
Dichlorodifluoromethane	60	U	Trichlorofluoromethane	60	U
1,1-Dichloroethane	60	U	1,2,3-Trichloropropane	60	U
1,2-Dichloroethane	45	U	1,2,4-Trimethylbenzene	60	U
1,1-Dichloroethene	45	U	1,3,5-Trimethylbenzene	60	U
cis-1,2-Dichloroethene	60	U	Vinyl Chloride	60	U
trans-1,2-Dichloroethene	60	U	o-Xylene	60	U
1,2-Dichloropropane	45	U	m,p-Xylene	60	43 J
Acetone	598	U	Diethyl ether	60	U
Carbon Disulfide	60	U	2-Hexanone	598	U
Tetrahydrofuran	299	U	Methyl isobutyl ketone	598	U
Methyl ethyl ketone	598	U	Di-isopropyl ether (DIPE)	60	U
t-Butyl alcohol (TBA)	1200	U	Ethyl t-butyl ether (ETBE)	60	U
t-Amyl methyl ether (TAME)	60	U			

Surrogate Standard Recovery

Dibromofluoromethane	75 %	d4-1,2-Dichloroethane	71 %	d8-Toluene	69 * %	Bromofluorobenzene	67 * %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035A. Sample did not meet method acceptance criteria for the 1:1 soil to methanol ratio. *Surrogate recoveries outside laboratory acceptance criteria. Sample was reanalyzed with similar results.

Authorized signature Melanie Hall

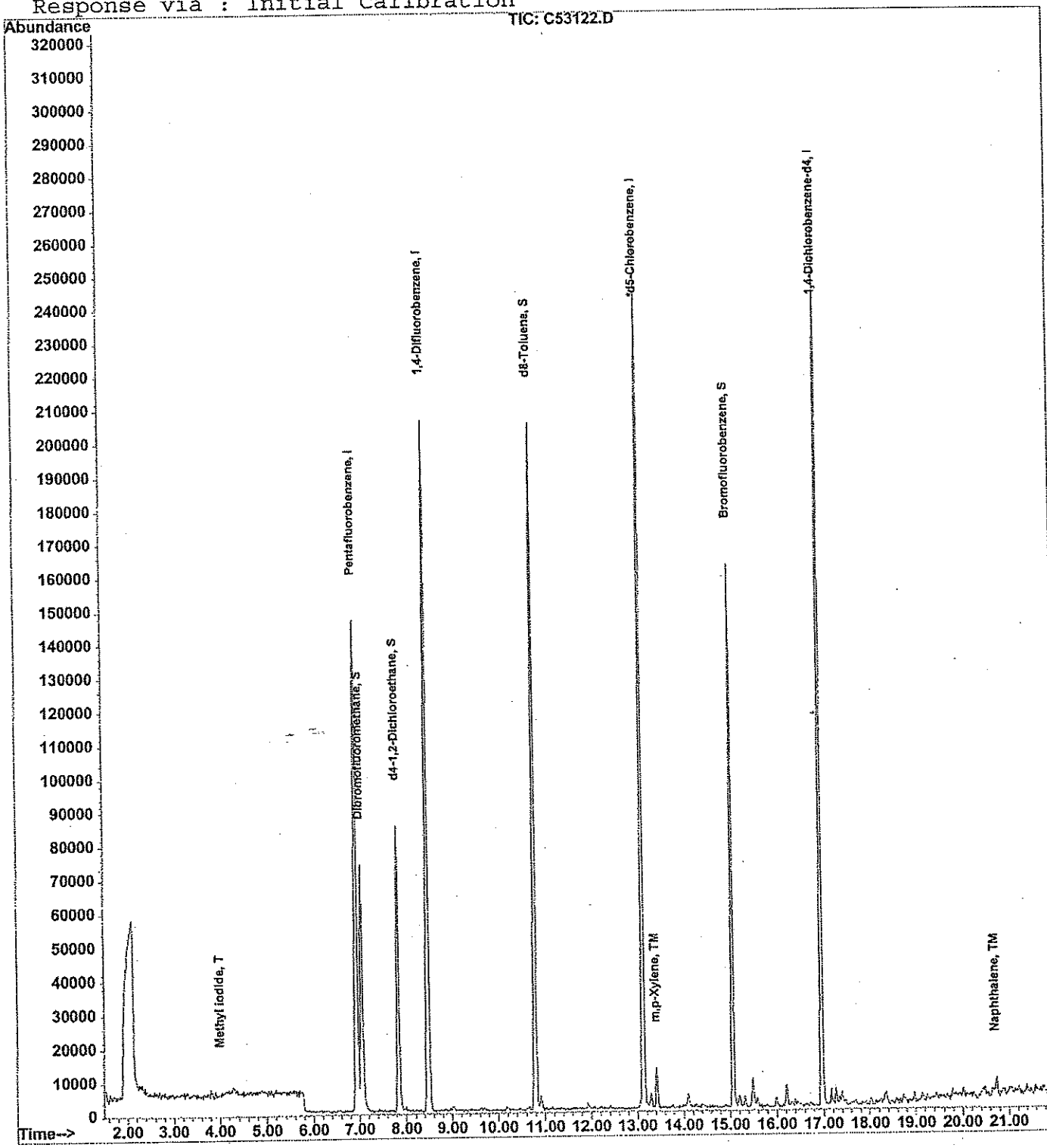
Quantitation Report

Data File : C:\HPCHEM\1\DATA\050305C\C53122.D
Acq On : 3 May 2005 3:21 pm
Sample : 53950-4
Misc : 50,9.60,SOIL
MS Integration Params: rteint.p
Quant Time: May 3 15:43 2005

Vial: 6
Operator:
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V804255C.RES

Method : C:\HPCHEM\1\METHODS\V804255C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Apr 25 12:38:49 2005
Response via : Initial Calibration



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Ms. Kate Skinner
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Portland ME 04102

May 10, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-E 0-4'

SAMPLE DATA

Lab Sample ID: 53950-4
Matrix: Solid
Percent Solid: 87
Dilution Factor: 2.3
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	570	U	Pentachlorophenol	570	U
4-Chloro-3-methylphenol	570	U	Phenol	570	U
2,4-Dichlorophenol	570	U	2,4,5-Trichlorophenol	570	U
2,4-Dimethylphenol	570	U	2,4,6-Trichlorophenol	570	U
2,4-dinitrophenol	570	U	Benzoic Acid	570	U
4,6-Dinitro-2-methylphenol	570	U	2-Methylphenol	570	U
2-Nitrophenol	570	U	3+4-Methylphenol	570	U
2,6-Dichlorophenol	570	U	Benzyl Alcohol	570	U
4-Nitrophenol	570	U	2,3,4,6-Tetrachlorophenol	570	U

Acid Surrogate Standard Recovery

2-Fluorophenol	68 %	d5-Phenol	78 %	2,4,6-Tribromophenol	48 %

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	570	U	Hexachlorobenzene	570	U
1,3-Dichlorobenzene	570	U	Benzidine	570	U J
1,4-Dichlorobenzene	570	U	3,3'-Dichlorobenzidine	570	U
2,4-Dinitrotoluene	570	U	Azobenzene	570	U
2,6-Dinitrotoluene	570	U	Bis(2-chloroethoxy)methane	570	U
Nitrobenzene	570	U	bis(2-chloroethyl) ether	570	U
Hexachlorobutadiene	570	U	bis(2-chloroisopropyl)ether	570	U
Dimethyl Phthalate	570	U	4-bromophenyl phenyl ether	570	U
Di-n-butyl phthalate	570	U	Butyl benzyl phthalate	570	U
di-n-octyl-phthalate	570	U	4-Chlorophenyl phenyl ether	570	U
Bis (2-ethylhexyl) phthalate	570	U	Diethyl Phthalate	570	U
1,2,4-Trichlorobenzene	570	U	Hexachlorocyclopentadiene	570	U

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature Milena Abali

analytics environmental laboratory LLC

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Ms. Kate Skinner
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Portland ME 04102

May 12, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-E 0-4'

SAMPLE DATA

Lab Sample ID: 53950-4
Matrix: Solid
Percent Solid: 87
Dilution Factor: 2.3
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	570	U	N-nitrosodimethylamine	570	U
Acenaphthylene	570	U	N-nitroso-di-n-propylamine	570	U
Anthracene	570	U	n-nitrosodiphenylamine	570	U
Benzo[a]anthracene	570	**292 J**	Pyridine	570	U
Benzo[a] pyrene	570	**328 J**	2-Methylnaphthalene	570	U
Benzo[b] fluoranthene	570	**404 J**	2-Chloronaphthalene	570	U
Benzo[k] fluoranthene	570	**347 J**	Naphthalene	570	U
Benzo(g,h,i) perylene	570	U	Phenanthrene	570	U
Chrysene	570	**343 J**	Dibenzofuran	570	U
Dibenz [a,h] anthracene	570	U	Aniline	570	U
Fluoranthene	570	**526 J**	4-Chloroaniline	570	U
Fluorene	570	U	2-Nitroaniline	570	U
Indeno [1,2,3-cd] pyrene	570	U	3-Nitroaniline	570	U
Pyrene	570	**475 J**	4-Nitroaniline	570	U
Hexachloroethane	570	U	Carbazole	570	U
Isophorone	570	U			

Base Neutral Surrogate Standard Recovery

2-Fluorobiphenyl	83	%	d5-nitrobenzene	61	%	d14-p-terphenyl	85	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis. Benzidine quantitation limits are estimated due to QC criteria not being met.

Authorized signature Melissa Abell

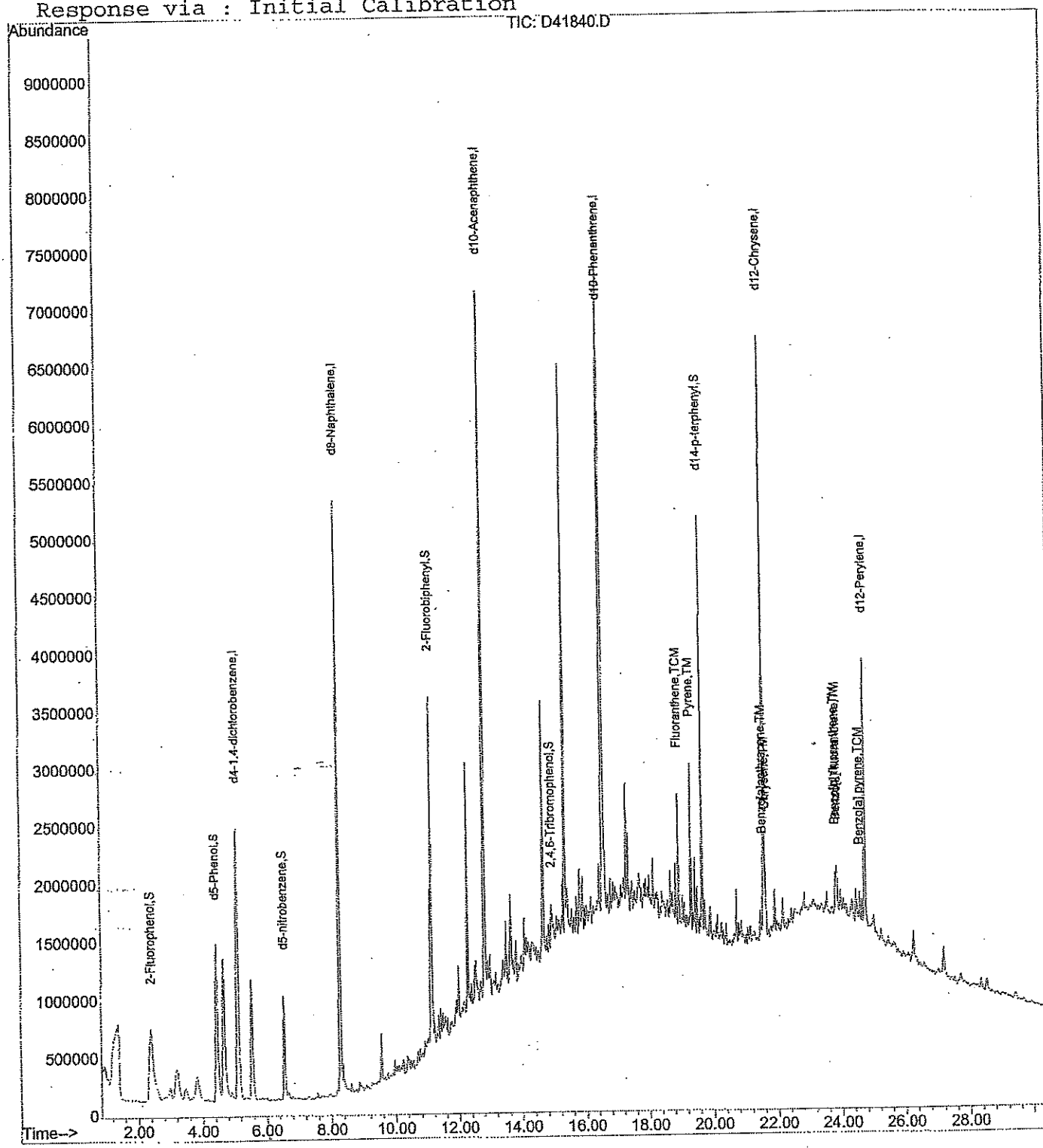
Quantitation Report

Data File : D:\1\DATA\050405-D\D41840.D
Acq On : 5 May 2005 5:46 am
Sample : 53950-4,DL,1:2
Misc : SOIL
MS Integration Params: RTEINT.P
Quant Time: May 6 0:22 2005

Vial: 12
Operator:
Inst : D Instrum
Multiplr: 1.00

Quant Results File: S05025.RES

Method : D:\1\METHODS\S05025.M (RTE Integrator)
Title : ABN
Last Update : Fri May 06 00:16:15 2005
Response via : Initial Calibration



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Ms. Kate Skinner
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Portland ME 04102

May 5, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-E 0-4'

SAMPLE DATA

Lab Sample ID:	53950-4
Matrix:	Solid
Percent Solid:	87
Dilution Factor:	1.1
Collection Date:	04/26/05
Lab Receipt Date:	04/26/05
Extraction Date:	04/27/05
Analysis Date:	04/27/05

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	17	U
PCB-1221	17	U
PCB-1232	17	U
PCB-1242	17	U
PCB-1248	17	U
PCB-1254	17	U
PCB-1260	17	34

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene	68	%
Decachlorobiphenyl	65	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.

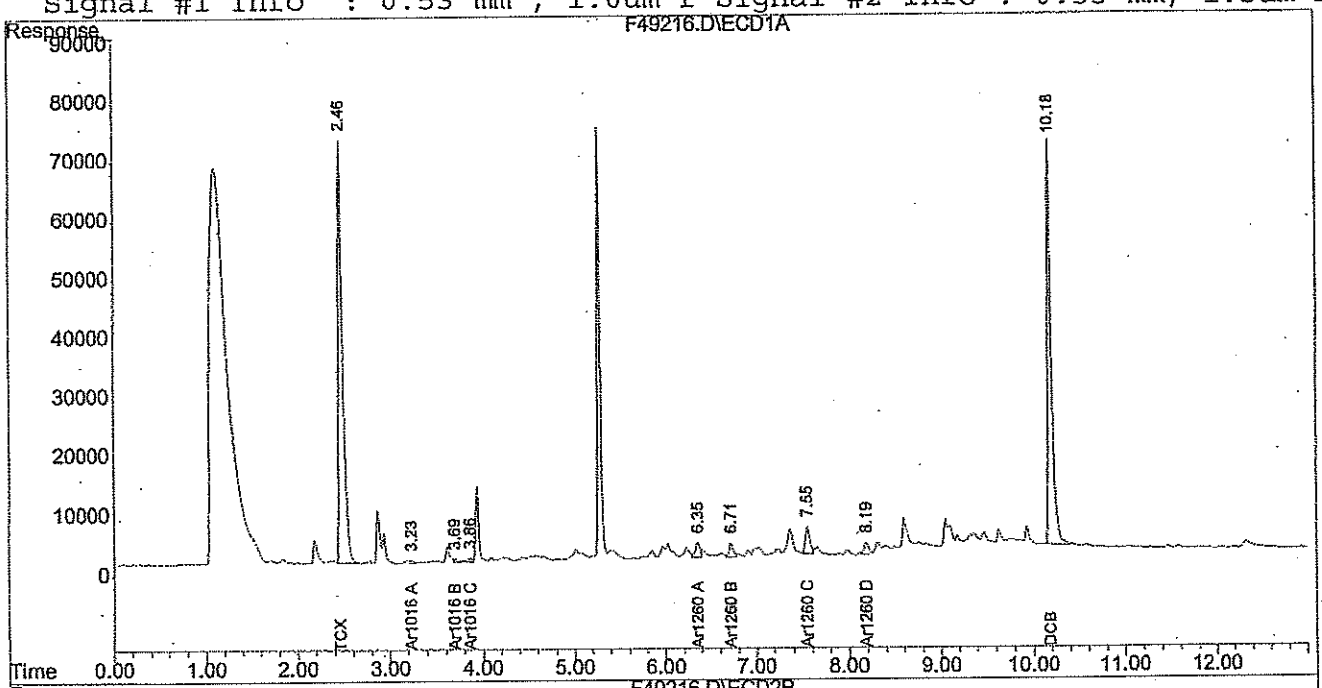
Authorized signature Melissa Hall

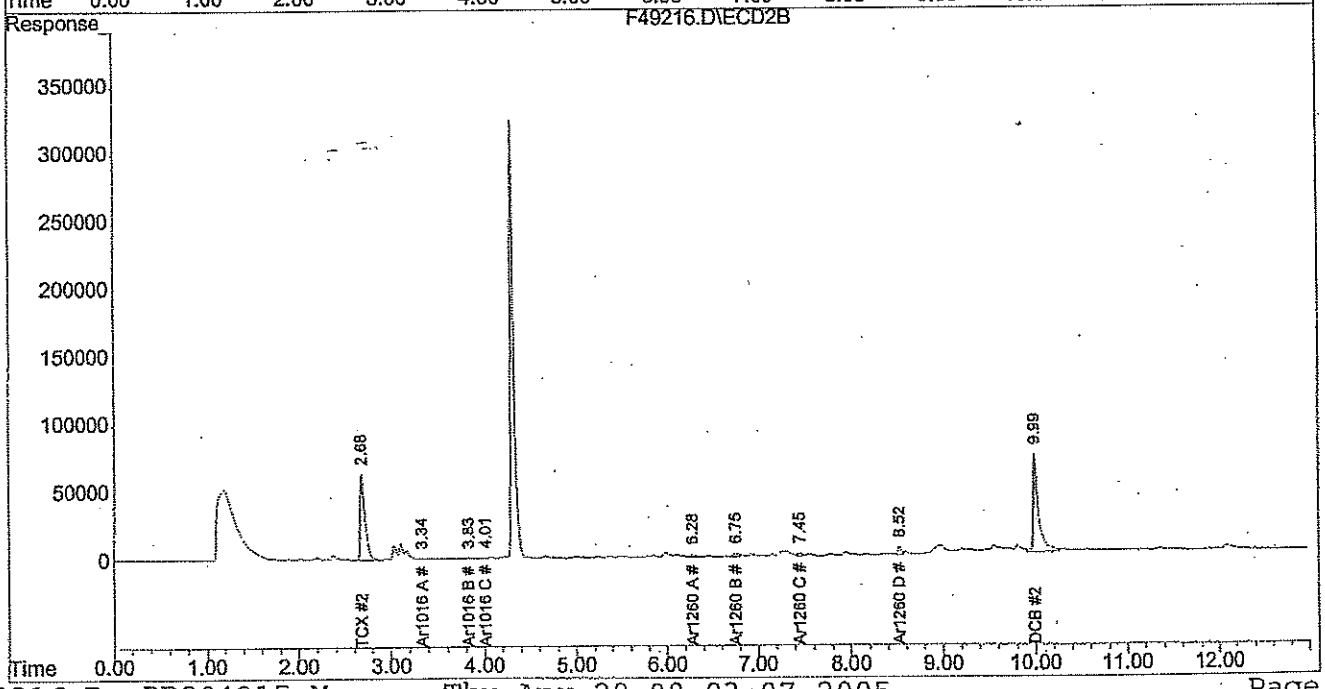
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\042705-F\F49216.D\ECD1A.CH Vial: 36
Signal #2 : C:\HPCHEM\2\DATA\042705-F\F49216.D\ECD2B.CH
Acq On : 27 Apr 2005 10:15 pm Operator:
Sample : 53950-4, A/C Inst : Instrumen
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: PCBINT.E IntFile Signal #2: PCBINT2.E
Quant Time: Apr 28 8:03 2005 Quant Results File: PBQ04215.RES

Quant Method : C:\HPCHEM\2\METHODS\PBQ04215.M (Chemstation Integrator)
Title : Aroclor 1016/1260
Last Update : Fri Apr 22 08:09:36 2005
Response via : Multiple Level Calibration
DataAcq Meth : PSTQUICK.M

Volume Inj. : 3 ul
Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore
Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film





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Ms. Kate Skinner
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41 Hutchins Drive
Portland ME 04102

May 5, 2005

SAMPLE DATA

Lab Sample ID: 53950-5
Matrix: Solid
Percent Solid: 89
Dilution Factor: 66
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Analysis Date: 05/03/05

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-C 0-4'

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	66	U	1,3-Dichloropropane	66	U
Bromobenzene	66	U	cis-1,3-Dichloropropene	66	U
Bromochloromethane	66	U	trans-1,3-Dichloropropene	66	U
Bromodichloromethane	50	U	2,2-Dichloropropane	66	U
Bromoform	50	U	1,1-Dichloropropene	66	U
Bromomethane	66	U	Ethylbenzene	66	U
n-butylbenzene	66	U	Hexachlorobutadiene	66	U
sec-butylbenzene	66	U	Isopropylbenzene	66	U
tert-butylbenzene	66	U	p-isopropyltoluene	66	U
Carbon Tetrachloride	66	U	Methylene Chloride	330	U
Chlorobenzene	66	U	Methyl-tert-butyl ether (MTBE)	66	U
Chloroethane	66	U	Naphthalene	66	**320**
Chloroform	50	U	n-Propylbenzene	66	U
Chloromethane	66	U	Styrene	66	U
2-Chlorotoluene	66	U	1,1,1,2-Tetrachloroethane	66	U
4-Chlorotoluene	66	U	1,1,2,2-Tetrachloroethane	50	U
Dibromochloromethane	50	U	Tetrachloroethene	66	U
1,2-Dibromo-3-chloropropane	66	U	Toluene	66	**50 J**
1,2-Dibromoethane	50	U	1,2,3-Trichlorobenzene	66	U
Dibromomethane	66	U	1,2,4-Trichlorobenzene	66	U
1,2-Dichlorobenzene	66	U	1,1,1-Trichloroethane	66	U
1,3-Dichlorobenzene	66	U	1,1,2-Trichloroethane	50	U
1,4-Dichlorobenzene	66	U	Trichloroethene	66	U
Dichlorodifluoromethane	66	U	Trichlorofluoromethane	66	U
1,1-Dichloroethane	66	U	1,2,3-Trichloropropane	66	U
1,2-Dichloroethane	50	U	1,2,4-Trimethylbenzene	66	**76**
1,1-Dichloroethene	50	U	1,3,5-Trimethylbenzene	66	U
cis-1,2-Dichloroethene	66	U	Vinyl Chloride	66	U
trans-1,2-Dichloroethene	66	U	o-Xylene	66	**59 J**
1,2-Dichloropropane	50	U	m,p-Xylene	66	**100**
Acetone	660	U	Diethyl ether	66	U
Carbon Disulfide	66	U	2-Hexanone	660	U
Tetrahydrofuran	330	U	Methyl isobutyl ketone	660	U
Methyl ethyl ketone	660	U	Di-isopropyl ether (DIPE)	66	U
t-Butyl alcohol (TBA)	1320	U	Ethyl t-butyl ether (ETBE)	66	U
t-Amyl methyl ether (TAME)	66	U			

Surrogate Standard Recovery

Dibromofluoromethane	66 * %	d4-1,2-Dichloroethane	62 * %	d8-Toluene	58 * %	Bromofluorobenzene	50 * %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035A. Sample did not meet method acceptance criteria for the 1:1 soil to methanol ratio. *Surrogate recoveries outside laboratory acceptance criteria. Sample was reanalyzed with similar results.

Authorized signature

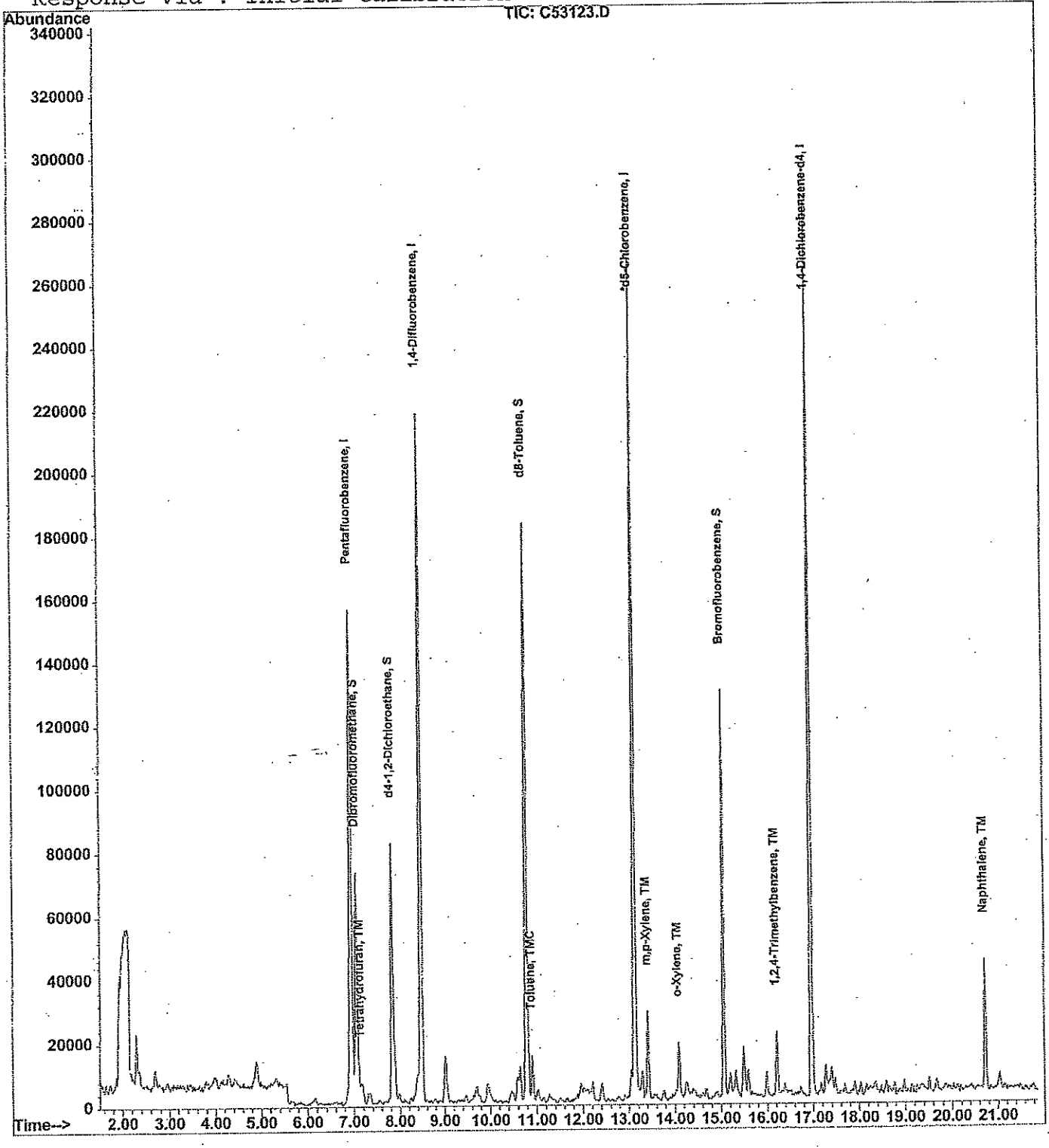
Quantitation Report

Data File : C:\HPCHEM\1\DATA\050305C\C53123.D
Acq On : 3 May 2005 3:52 pm
Sample : 53950-5
Misc : 50,8.54,SOIL
MS Integration Params: rteint.p
Quant Time: May 3 16:14 2005

Vial: 7
Operator:
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V804255C.RES

Method : C:\HPCHEM\1\METHODS\V804255C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Apr 25 12:38:49 2005
Response via : Initial Calibration



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May 10, 2005

Ms. Kate Skinner
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41 Hutchins Drive
Portland ME 04102

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-C 0-4'

SAMPLE DATA

Lab Sample ID: 53950-5
Matrix: Solid
Percent Solid: 89
Dilution Factor: 11
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	2800	U	Pentachlorophenol	2800	U
4-Chloro-3-methylphenol	2800	U	Phenol	2800	U
2,4-Dichlorophenol	2800	U	2,4,5-Trichlorophenol	2800	U
2,4-Dimethylphenol	2800	U	2,4,6-Trichlorophenol	2800	U
2,4-dinitrophenol	2800	U	Benzoic Acid	2800	U
4,6-Dinitro-2-methylphenol	2800	U	2-Methylphenol	2800	U
2-Nitrophenol	2800	U	3+4-Methylphenol	2800	U
2,6-Dichlorophenol	2800	U	Benzyl Alcohol	2800	U
4-Nitrophenol	2800	U	2,3,4,6-Tetrachlorophenol	2800	U

Acid Surrogate Standard Recovery

2-Fluorophenol	* %	d5-Phenol	* %	2,4,6-Tribromophenol	* %

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	2800	U	Hexachlorobenzene	2800	U
1,3-Dichlorobenzene	2800	U	Benzidine	2800	U J
1,4-Dichlorobenzene	2800	U	3,3'-Dichlorobenzidine	2800	U
2,4-Dinitrotoluene	2800	U	Azobenzene	2800	U
2,6-Dinitrotoluene	2800	U	Bis(2-chloroethoxy)methane	2800	U
Nitrobenzene	2800	U	bis(2-chloroethyl) ether	2800	U
Hexachlorobutadiene	2800	U	bis(2-chloroisopropyl)ether	2800	U
Dimethyl Phthalate	2800	U	4-bromophenyl phenyl ether	2800	U
Di-n-butyl phthalate	2800	U	Butyl benzyl phthalate	2800	U
di-n-octyl-phthalate	2800	U	4-Chlorophenyl phenyl ether	2800	U
Bis (2-ethylhexyl) phthalate	2800	U	Diethyl Phthalate	2800	U
1,2,4-Trichlorobenzene	2800	U	Hexachlorocyclopentadiene	2800	U

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature Melanie Hall

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May 10, 2005

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-C 0-4'

Lab Sample ID: 53950-5
Matrix: Solid
Percent Solid: 89
Dilution Factor: 11
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	2800	U	N-nitrosodimethylamine	2800	U
Acenaphthylene	2800	U	N-nitroso-di-n-propylamine	2800	U
Anthracene	2800	**3230**	n-nitrosodiphenylamine	2800	U
Benzo[a]anthracene	2800	**7720**	Pyridine	2800	U
Benzo[a] pyrene	2800	**7430**	2-Methylnaphthalene	2800	U
Benzo[b] fluoranthene	2800	**7050**	2-Chloronaphthalene	2800	U
Benzo[k] fluoranthene	2800	**5300**	Naphthalene	2800	U
Benzo(g,h,i) perylene	2800	**5040**	Phenanthrene	2800	**14900**
Chrysene	2800	**8030**	Dibenzofuran	2800	U
Dibenz [a,h] anthracene	2800	U	Aniline	2800	U
Fluoranthene	2800	**15800**	4-Chloroaniline	2800	U
Fluorene	2800	**1520 J**	2-Nitroaniline	2800	U
Indeno [1,2,3-cd] pyrene	2800	**5020**	3-Nitroaniline	2800	U
Pyrene	2800	**14900**	4-Nitroaniline	2800	U
Hexachloroethane	2800	U	Carbazole	2800	**1730 J**
Isophorone	2800	U			

Base Neutral Surrogate Standard Recovery

2-Fluorobiphenyl	* %	d5-nitrobenzene	* %	d14-p-terphenyl	* %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis. *The surrogates were diluted out. Benzidine quantitation limits are estimated due to QC criteria not being met.

8270/625 layout

Authorized signature Melissa Hall

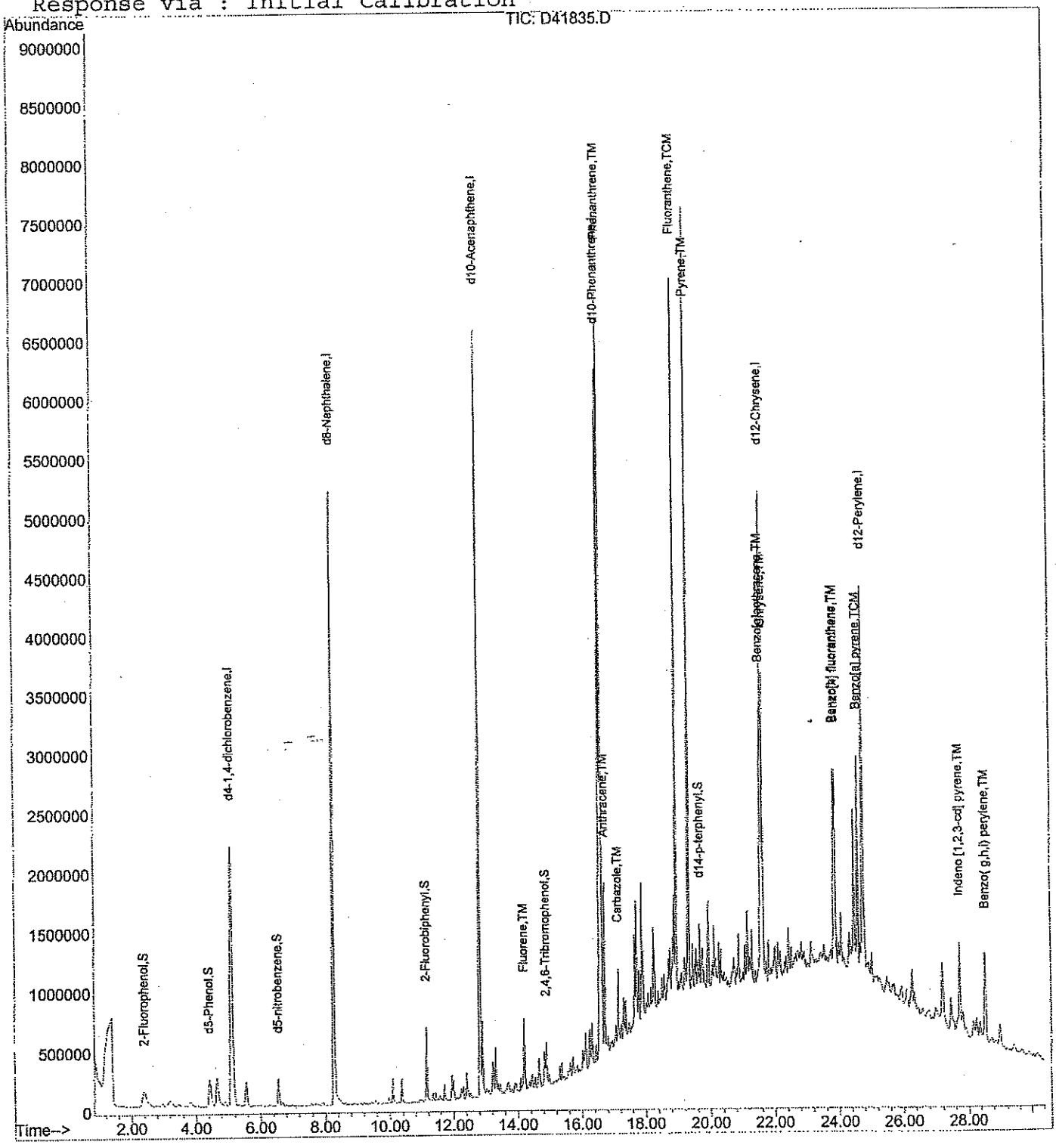
Quantitation Report

Data File : D:\1\DATA\050405-D\D41835.D
Acq On : 5 May 2005 2:49 am
Sample : 53950-5,,1:10
Misc : SOIL
MS Integration Params: RTEINT.P
Quant Time: May 6 0:05 2005

Vial: 7
Operator:
Inst : D Instrum
Multiplr: 1.00

Quant Results File: S05025.RES

Method : D:\1\METHODS\S05025.M (RTE Integrator)
Title : ABN
Last Update : Fri May 06 00:04:39 2005
Response via : Initial Calibration



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Portland ME 04102

May 12, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-C 0-4'

SAMPLE DATA

Lab Sample ID: 53950-5
Matrix: Solid
Percent Solid: 89
Dilution Factor: 11
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 04/28/05

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	170	U
PCB-1221	170	U
PCB-1232	170	U
PCB-1242	170	U
PCB-1248	170	U
PCB-1254	170	U
PCB-1260	170	971

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis. *The surrogates were diluted out.

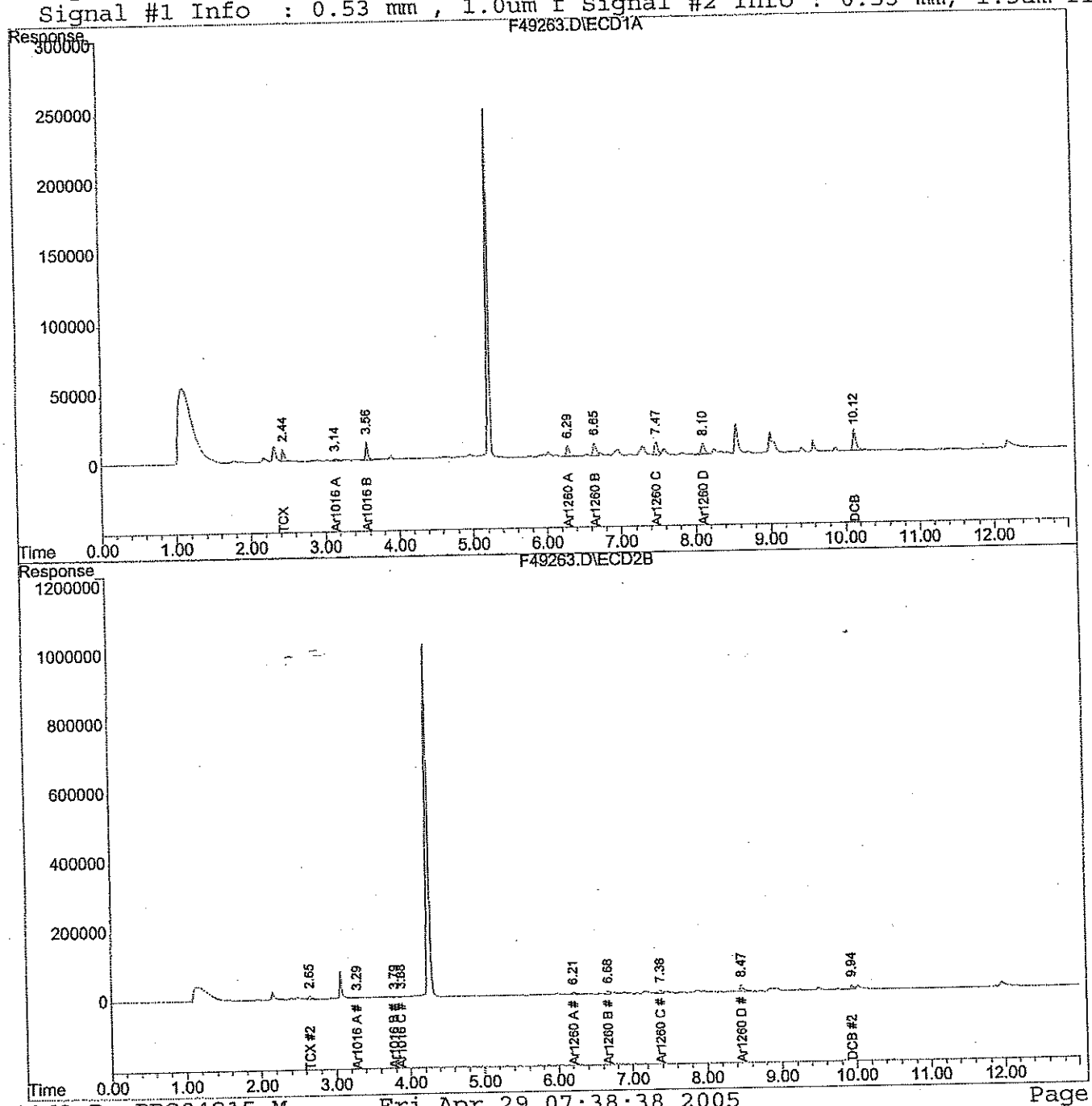
Authorized signature Melissa Valli

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\042805-F\F49263.D\ECD1A.CH Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\042805-F\F49263.D\ECD2B.CH
Acq On : 28 Apr 2005 6:16 pm Operator:
Sample : 53950-5, 1;10, A/C Inst : Instrumen
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: PCBINT.E IntFile Signal #2: PCBINT2.E
Quant Time: Apr 29 7:38 2005 Quant Results File: PBQ04215.RES

Quant Method : C:\HPCHEM\2\METHODS\PBQ04215.M (Chemstation Integrator)
Title : Aroclor 1016/1260
Last Update : Fri Apr 29 07:36:08 2005
Response via : Multiple Level Calibration
DataAcq Meth : PSTQUICK.M

Volume Inj. : 3 ul
Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore
Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film



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Portland ME 04102

May 5, 2005

SAMPLE DATA

Lab Sample ID: 53950-6
Matrix: Solid
Percent Solid: 90
Dilution Factor: 41
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Analysis Date: 05/03/05

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-D 0-4'

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	41	U	1,3-Dichloropropane	41	U
Bromobenzene	41	U	cis-1,3-Dichloropropene	41	U
Bromochloromethane	41	U	trans-1,3-Dichloropropene	41	U
Bromodichloromethane	30	U	2,2-Dichloropropane	41	U
Bromoform	30	U	1,1-Dichloropropene	41	U
Bromomethane	41	U	Ethylbenzene	41	U
n-butylbenzene	41	U	Hexachlorobutadiene	41	U
sec-butylbenzene	41	U	Isopropylbenzene	41	36 J
tert-butylbenzene	41	U	p-isopropyltoluene	203	U
Carbon Tetrachloride	41	U	Methylene Chloride	41	U
Chlorobenzene	41	U	Methyl-tert-butyl ether (MTBE)	41	20 J
Chloroethane	30	U	Naphthalene	41	U
Chloroform	41	U	n-Propylbenzene	41	U
Chloromethane	41	U	Styrene	41	U
2-Chlorotoluene	41	U	1,1,1,2-Tetrachloroethane	30	U
4-Chlorotoluene	30	U	1,1,2,2-Tetrachloroethane	41	U
Dibromochloromethane	41	U	Tetrachloroethene	41	U
1,2-Dibromo-3-chloropropane	30	U	Toluene	41	U
1,2-Dibromoethane	41	U	1,2,3-Trichlorobenzene	41	U
Dibromomethane	41	U	1,2,4-Trichlorobenzene	41	U
1,2-Dichlorobenzene	41	U	1,1,1-Trichloroethane	30	U
1,3-Dichlorobenzene	41	U	1,1,2-Trichloroethane	41	U
1,4-Dichlorobenzene	41	U	Trichloroethene	41	U
Dichlorodifluoromethane	41	U	Trichlorofluoromethane	41	U
1,1-Dichloroethane	30	U	1,2,3-Trichloropropane	41	U
1,2-Dichloroethane	30	U	1,2,4-Trimethylbenzene	41	U
1,1-Dichloroethene	41	U	1,3,5-Trimethylbenzene	41	U
cis-1,2-Dichloroethene	41	U	Vinyl Chloride	41	U
trans-1,2-Dichloroethene	30	U	o-Xylene	41	U
1,2-Dichloropropane	406	U	m,p-Xylene	41	U
Acetone	41	U	Diethyl ether	406	U
Carbon Disulfide	203	U	2-Hexanone	406	U
Tetrahydrofuran	406	U	Methyl isobutyl ketone	41	U
Methyl ethyl ketone	811	U	Di-isopropyl ether (DIPE)	41	U
t-Butyl alcohol (TBA)	41	U	Ethyl t-butyl ether (ETBE)		
t-Amyl methyl ether (TAME)					

Surrogate Standard Recovery

Dibromofluoromethane	68 * %	d4-1,2-Dichloroethane	65 * %	d8-Toluene	61 * %	Bromofluorobenzene	63 * %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035A. Sample did not meet method acceptance criteria for the 1:1 soil to methanol ratio. *Surrogate recoveries outside laboratory acceptance criteria. Sample was reanalyzed with similar results.

Authorized signature

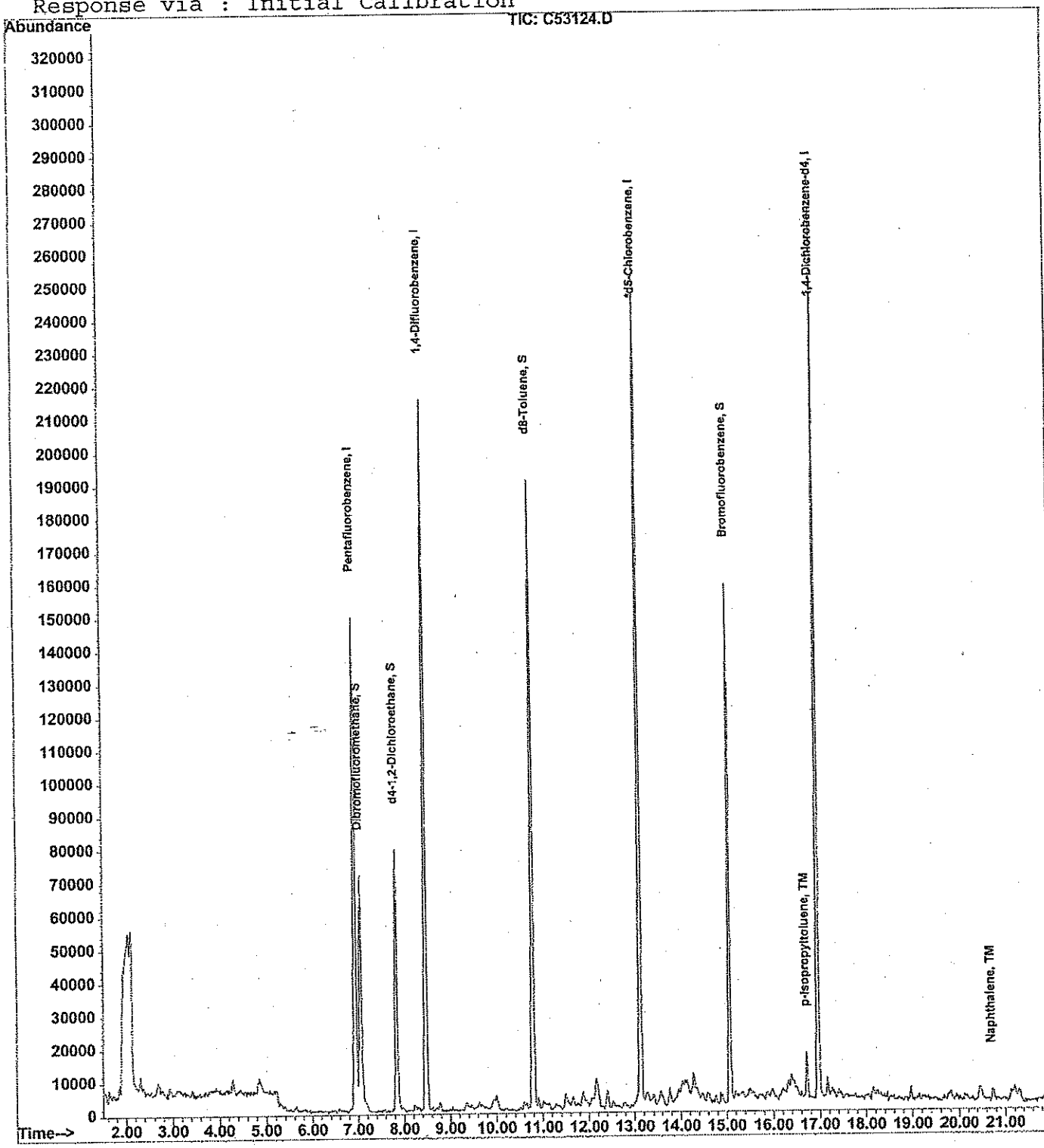
Quantitation Report

Data File : C:\HPCHEM\1\DATA\050305C\C53124.D
Acq On : 3 May 2005 4:22 pm
Sample : 53950-6
Misc : 50,13.70,SOIL
MS Integration Params: rteint.p
Quant Time: May 3 16:45 2005

Vial: 8
Operator:
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V804255C.RES

Method : C:\HPCHEM\1\METHODS\V804255C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Apr 25 12:38:49 2005
Response via : Initial Calibration



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Ms. Kate Skinner
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Portland ME 04102

May 10, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-D 0-4'

SAMPLE DATA

Lab Sample ID: 53950-6
Matrix: Solid
Percent Solid: 90
Dilution Factor: 2.2
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	550	U	Pentachlorophenol	550	U
4-Chloro-3-methylphenol	550	U	Phenol	550	U
2,4-Dichlorophenol	550	U	2,4,5-Trichlorophenol	550	U
2,4-Dimethylphenol	550	U	2,4,6-Trichlorophenol	550	U
2,4-dinitrophenol	550	U	Benzoic Acid	550	U
4,6-Dinitro-2-methylphenol	550	U	2-Methylphenol	550	U
2-Nitrophenol	550	U	3+4-Methylphenol	550	U
2,6-Dichlorophenol	550	U	Benzyl Alcohol	550	U
4-Nitrophenol	550	U	2,3,4,6-Tetrachlorophenol	550	U

Acid Surrogate Standard Recovery

2-Fluorophenol	69 %	d5-Phenol	75 %	2,4,6-Tribromophenol	58 %

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	550	U	Hexachlorobenzene	550	U
1,3-Dichlorobenzene	550	U	Benzidine	550	U J
1,4-Dichlorobenzene	550	U	3,3'-Dichlorobenzidine	550	U
2,4-Dinitrotoluene	550	U	Azobenzene	550	U
2,6-Dinitrotoluene	550	U	Bis(2-chloroethoxy)methane	550	U
Nitrobenzene	550	U	bis(2-chloroethyl) ether	550	U
Hexachlorobutadiene	550	U	bis(2-chloroisopropyl)ether	550	U
Dimethyl Phthalate	550	U	4-bromophenyl phenyl ether	550	U
Di-n-butyl phthalate	550	U	Butyl benzyl phthalate	550	U
di-n-octyl-phthalate	550	U	4-Chlorophenyl phenyl ether	550	U
Bis (2-ethylhexyl) phthalate	550	U	Diethyl Phthalate	550	U
1,2,4-Trichlorobenzene	550	U	Hexachlorocyclopentadiene	550	U

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature Melissa Goldi

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

May 12, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-D 0-4'

SAMPLE DATA

Lab Sample ID: 53950-6
Matrix: Solid
Percent Solid: 90
Dilution Factor: 2.2
Collection Date: 04/26/05
Lab Receipt Date: 04/26/05
Extraction Date: 04/27/05
Analysis Date: 05/05/05

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	550	U	N-nitrosodimethylamine	550	U
Acenaphthylene	550	U	N-nitroso-di-n-propylamine	550	U
Anthracene	550	U	n-nitrosodiphenylamine	550	U
Benzo[a]anthracene	550	**385 J**	Pyridine	550	U
Benzo[a] pyrene	550	**360 J**	2-Methylnaphthalene	550	U
Benzo[b] fluoranthene	550	**410 J**	2-Chloronaphthalene	550	U
Benzo[k] fluoranthene	550	**384 J**	Naphthalene	550	U
Benzo(g,h,i) perylene	550	U	Phenanthrene	550	**585**
Chrysene	550	**373 J**	Dibenzofuran	550	U
Dibenz [a,h] anthracene	550	U	Aniline	550	U
Fluoranthene	550	**923**	4-Chloroaniline	550	U
Fluorene	550	U	2-Nitroaniline	550	U
Indeno [1,2,3-cd] pyrene	550	U	3-Nitroaniline	550	U
Pyrene	550	**776**	4-Nitroaniline	550	U
Hexachloroethane	550	U	Carbazole	550	U
Isophorone	550	U			

Base Neutral Surrogate Standard Recovery

2-Fluorobiphenyl	78	%	d5-nitrobenzene	59	%	d14-p-terphenyl	91	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8270c."

COMMENTS: Results are expressed on a dry weight basis. Benzidine quantitation limits are estimated due to QC criteria not being met. Sample had low recovery of internal standard d12-Perylene.

8270/625 layout

Authorized signature

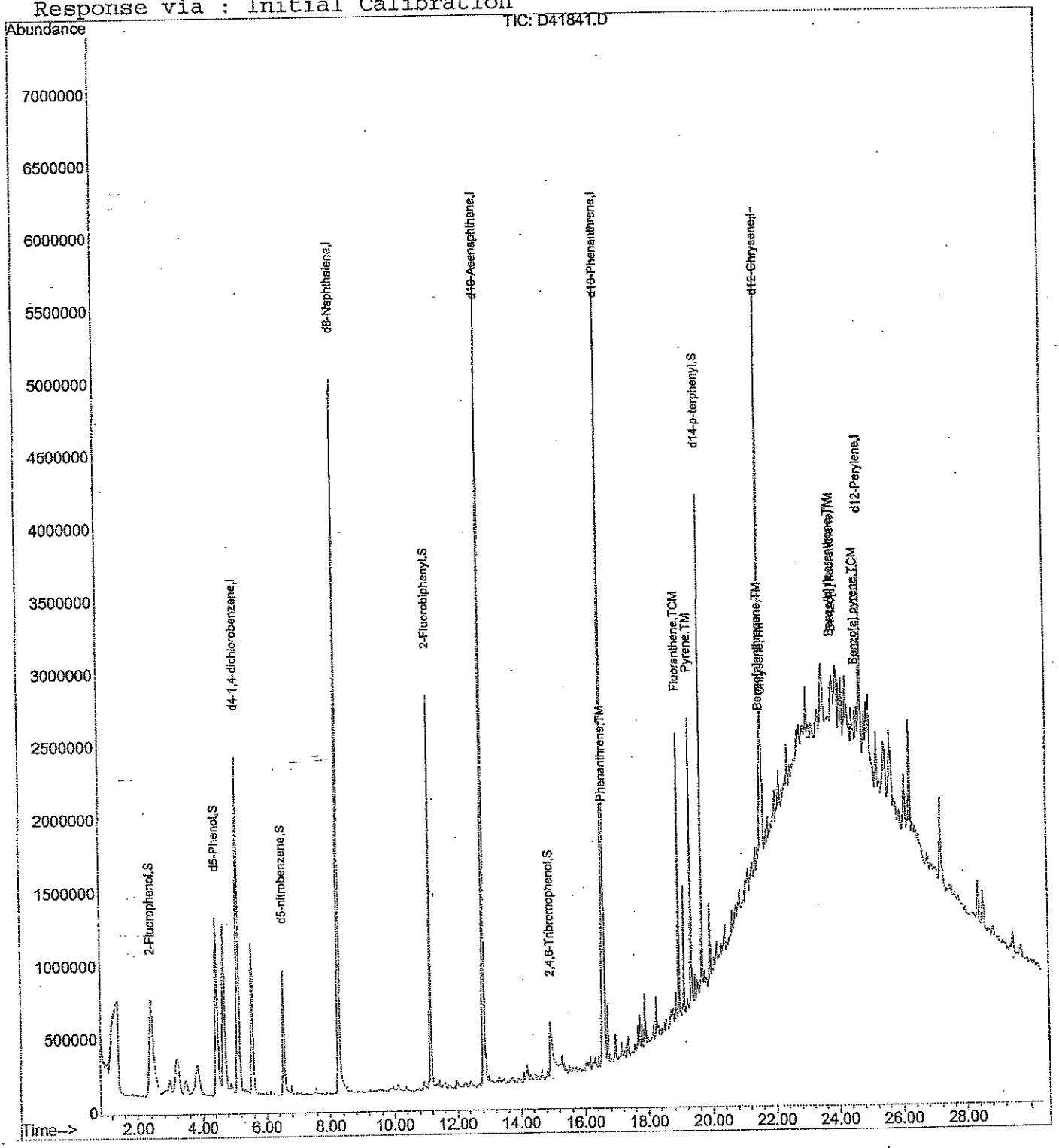
Quantitation Report

Data File : D:\1\DATA\050405-D\D41841.D
Acq On : 5 May 2005 6:22 am
Sample : 53950-6,DL,1:2
Misc : SOIL
MS Integration Params: RTEINT.P
Quant Time: May 6 0:37 2005

Vial: 13
Operator:
Inst : D Instrum
Multiplr: 1.00

Quant Results File: S05025.RES

Method : D:\1\METHODS\S05025.M (RTE Integrator)
Title : ABN
Last Update : Fri May 06 00:16:15 2005
Response via : Initial Calibration



analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

Ms. Kate Skinner
Woodard & Curran
41 Hutchins Drive
Portland ME 04102

May 5, 2005

CLIENT SAMPLE ID

Project Name: E. Perry Brownfields Site

Project Number:

Field Sample ID: B-D 4-8'

SAMPLE DATA

Lab Sample ID:	53950-7
Matrix:	Solid
Percent Solid:	84
Dilution Factor:	1.1
Collection Date:	04/26/05
Lab Receipt Date:	04/26/05
Extraction Date:	04/27/05
Analysis Date:	04/27/05

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	17	U
PCB-1221	17	U
PCB-1232	17	U
PCB-1242	17	U
PCB-1248	17	U
PCB-1254	17	U
PCB-1260	17	U

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene	87	%
Decachlorobiphenyl	65	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.

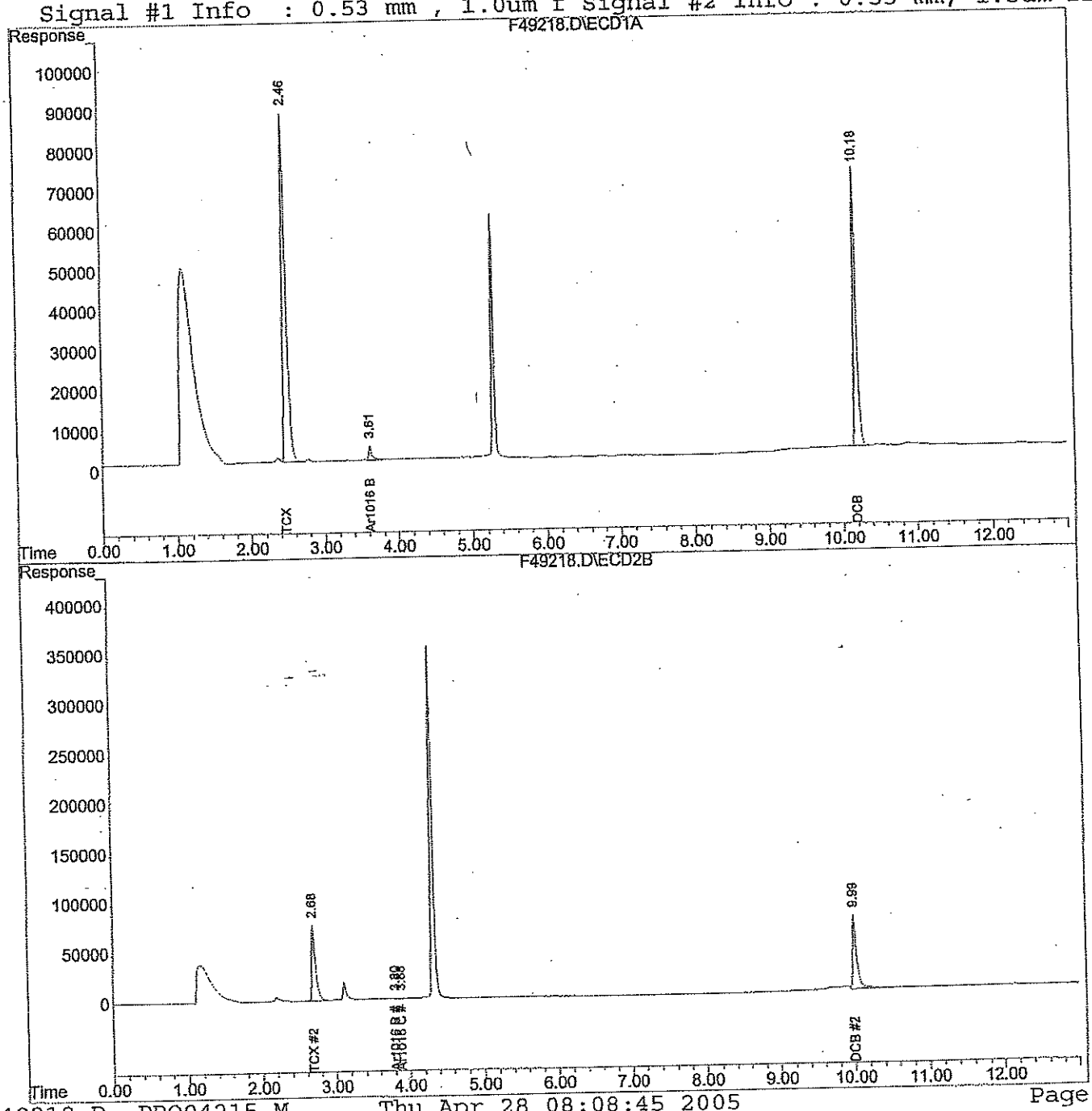
Authorized signature Melissa Valli

Quantitation Report (Not Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\042705-F\F49218.D\ECD1A.CH Vial: 38
Signal #2 : C:\HPCHEM\2\DATA\042705-F\F49218.D\ECD2B.CH
Acq On : 27 Apr 2005 10:59 pm Operator:
Sample : 53950-7, A/C Inst : Instrumen
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: PCBINT.E IntFile Signal #2: PCBINT2.E
Quant Time: Apr 28 8:08 2005 Quant Results File: PBQ04215.RES

Quant Method : C:\HPCHEM\2\METHODS\PBQ04215.M (Chemstation Integrator)
Title : Aroclor 1016/1260
Last Update : Fri Apr 22 08:09:36 2005
Response via : Multiple Level Calibration
DataAcq Meth : PSTQUICK.M

Volume Inj. : 3 ul
Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore
Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film



STL Burlington
Colchester, Vermont

Sample Data Summary Package

SDG: 53950

SEVERN TRENT STL

STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446

Tel: 802 655 1203 Fax: 802 655 1248
www.stl-inc.com

May 9, 2005

Mr. Stephen Knollmeyer
Analytics Environmental Lab LLC
195 Commerce Way
Portsmouth, NH 03801

Re: Laboratory Project No.: 25000
Case: 25000; SDG: 53950

Dear Mr. Knollmeyer:

Enclosed are the analytical results of samples received by STL Burlington on April 27, 2005. This report is sequentially numbered starting with page 0001 and ending with page 0229. Laboratory ID numbers were designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 04/27/05 ETR No: 106800		
617367	B-A	04/26/05	Soil
617368	B-B(0-4)	04/26/05	Soil
617369	B-E(0-4)	04/26/05	Soil
617370	B-C(0-4)	04/26/05	Soil
617371	B-D(4-8)	04/26/05	Soil

Documentation of the condition of the samples at the time of their receipt and any exceptions to the laboratory's Sample Acceptance Policy is included in the Sample Handling section of this submittal.

Batch quality control samples, derived from samples that were not included in this submittal, were performed with the analysis of these samples.

The analytical results presented in this data report were generated under a quality system that adheres to the requirements specified in the NELAC standard. This report shall not be reproduced, except in full, without the written approval of the laboratory. The release of the data in this report is authorized by the Laboratory Director or his designee, as verified by the following signature.

If there are any questions regarding this submittal, please contact Lori Arnold at (802) 655-1203.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director

Enclosure

STL Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified in project QA plan, the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

Analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev. 1, 10/1/02

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C _____
3) Received in good condition Y or N
4) pH checked by: _____
5) Labels checked by: _____

Received By: | Received By: UPS | Received By: 4/27/05 1000

Project#: Proj. Name: E. Perry Brownfields Site

Company: ANALYTICS Environmental Laboratory LLC

Contact: Stephen Knollmeyer

Address: 195 COMMERCE WAY
PORTSMOUTH, NH 03801

Phone: 603-436-5111 PO# Quote #

Sampler (Signature): K. Skinner

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO3	H2SO4	HCL	Methanol	Other*	Matrix	Container number/type		pH	Analytics Sample #
B-A	4.26.05	1355	TAL Metals 6010		✓						S	1	G		63950-1
B-B 0-4'	4.26.05	1415	↓		✓						↓	↓	↓		-2
B-E 0-4'	4.26.05	1015			✓										-4
B-C 0-4'	4.26.05	1145			✓										-5
B-D 4-8'	4.26.05	1300			✓										-7

Time: | Time: 1750 | Time:

Date: | Date: 4/26/05 | Date:

Relinquished By Sampler:

Relinquished By: | Relinquished By:

FAX RESULTS? (YES) NO
Fax #: 603-430-2151

Turnaround Request
Standard ✓ Due Date 2
Priority ✓ Due Date 5.6.05

Comments / Instructions:
Please reference Station ID number and AEL Lab number on report(s).
Level II QC
GISKEY EDD

SEVERN TRENT STL

Sample Data Summary Package For Wet Chemistry

WET CHEMISTRY

Sample Report Summary

Client Sample No.: B-D(4-8)

Lab Name: STL BURLINGTON
Contract:
SDG No.: 53950

Lab Code: STLVT
Case No.: 25000
Lab Sample ID: 617371

Matrix: SOIL
Client: ANAENV
Date Received: 04/27/05

% Solids: 81.3

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	04/28/05	N/A	%	1.0		81.3	

Printed on: 04/29/05 01:27 PM

WET CHEMISTRY

Sample Report Summary

Client Sample No.

B-B(0-4)

Lab Name: STL BURLINGTON

Lab Code: STLVT

Matrix: SOIL

% Solids: 79.2

Contract:

Case No.: 25000

Client: ANAENV

SDG No.: 53950

Lab Sample ID: 617368

Date Received: 04/27/05

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	04/28/05	N/A	%	1.0		79.2	

USEPA-CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

b Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: _____ SDG No.: 53950

W No.: _____

EPA Sample No.	Lab Sample ID.
B-A	617367
B-B(0-4)	617368
B-C(0-4)	617370
B-D(4-8)	617371
B-E(0-4)	617369

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: _____

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

Signature: _____ Name: _____

Date: _____ Title: _____

WET CHEMISTRY

Sample Report Summary

Client Sample No.
B-C(0-4)

Lab Name: STL BURLINGTON
Contract:
SDG No.: 53950

Lab Code: STLVT
Case No.: 25000
Lab Sample ID: 617370

Matrix: SOIL
Client: ANAENV
Date Received: 04/27/05

% Solids: 88.5

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	04/28/05	N/A	%	1.0		88.5	

Printed on: 04/29/05 01:27 PM

USEPA-CLP FORMS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
B-B(0-4)

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Matrix (soil/water): SOIL Lab Sample ID: 617368

Level (low/med): LOW Date Received: 04/27/05

% Solids: 79.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4960			P
7440-36-0	Antimony	17.6			P
7440-38-2	Arsenic	69.9			P
7440-39-3	Barium	370			P
7440-41-7	Beryllium	0.25	B		P
7440-43-9	Cadmium	10.0			P
7440-70-2	Calcium	1280			P
7440-47-3	Chromium	62.0			P
7440-48-4	Cobalt	29.1			P
7440-50-8	Copper	997			P
7439-89-6	Iron	283000			P
7439-92-1	Lead	2880			P
7439-95-4	Magnesium	1930			P
7439-96-5	Manganese	1330			P
7439-97-6	Mercury	1.4			CV
7440-02-0	Nickel	61.6			P
7440-09-7	Potassium	596			P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	0.82	B		P
7440-23-5	Sodium	320	B		P
7440-28-0	Thallium	11.5			P
7440-62-2	Vanadium	41.5			P
7440-66-6	Zinc	3320			P

Color Before: brown Clarity Before: Texture: medium

Color After: yellow Clarity After: cloudy Artifacts:

Comments:

SEVERN TRENT STL

Sample Data Summary Package
For Metals

USEPA-CLP FORMS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B-D(4-8)

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Matrix (soil/water): SOIL Lab Sample ID: 617371

Level (low/med): LOW Date Received: 04/27/05

% Solids: 81.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20000			P
7440-36-0	Antimony	1.5	B		P
7440-38-2	Arsenic	8.7			P
7440-39-3	Barium	134			P
7440-41-7	Beryllium	0.74			P
7440-43-9	Cadmium	0.082	U		P
7440-70-2	Calcium	1470			P
7440-47-3	Chromium	45.7			P
7440-48-4	Cobalt	8.7			P
7440-50-8	Copper	24.1			P
7439-89-6	Iron	21600			P
7439-92-1	Lead	42.5			P
7439-95-4	Magnesium	6460			P
7439-96-5	Manganese	273			P
7439-97-6	Mercury	0.87			CV
7440-02-0	Nickel	34.5			P
7440-09-7	Potassium	3300			P
7782-49-2	Selenium	4.3	U		P
7440-22-4	Silver	0.18	U		P
7440-23-5	Sodium	339	B		P
7440-28-0	Thallium	1.8			P
7440-62-2	Vanadium	36.5			P
7440-66-6	Zinc	473			P

Color Before: brown Clarity Before: Texture: medium

Color After: yellow Clarity After: cloudy Artifacts:

Comments:

USEPA-CLP FORMS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B-A

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Matrix (soil/water): SOIL Lab Sample ID: 617367

Level (low/med): LOW Date Received: 04/27/05

% Solids: 85.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5610			P
7440-36-0	Antimony	51.7			P
7440-38-2	Arsenic	30.1			P
7440-39-3	Barium	604			P
7440-41-7	Beryllium	0.21	B		P
7440-43-9	Cadmium	24.2			P
7440-70-2	Calcium	2970			P
7440-47-3	Chromium	69.1			P
7440-48-4	Cobalt	14.4			P
7440-50-8	Copper	973			P
7439-89-6	Iron	122000			P
7439-92-1	Lead	2780			P
7439-95-4	Magnesium	2890			P
7439-96-5	Manganese	673			P
7439-97-6	Mercury	3.6			CV
7440-02-0	Nickel	78.7			P
7440-09-7	Potassium	1030			P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	0.51	B		P
7440-23-5	Sodium	394	B		P
7440-28-0	Thallium	5.4			P
7440-62-2	Vanadium	25.9			P
7440-66-6	Zinc	4040			P

Color Before: brown Clarity Before: Texture: medium

Color After: yellow Clarity After: cloudy Artifacts:

Comments:

USEPA-CLP FORMS

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Initial Calibration Source: Inorganic Ventures/Fisher

Continuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.91	97.0	5.0	5.17	103.4	5.03	100.6	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B-C(0-4)

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Matrix (soil/water): SOIL Lab Sample ID: 617370

Level (low/med): LOW Date Received: 04/27/05

% Solids: 88.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3680			P
7440-36-0	Antimony	44.4			P
7440-38-2	Arsenic	73.4			P
7440-39-3	Barium	516			P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	10.6			P
7440-70-2	Calcium	3620			P
7440-47-3	Chromium	123			P
7440-48-4	Cobalt	37.2			P
7440-50-8	Copper	1200			P
7439-89-6	Iron	420000			P
7439-92-1	Lead	2850			P
7439-95-4	Magnesium	946			P
7439-96-5	Manganese	2060			P
7439-97-6	Mercury	2.5			CV
7440-02-0	Nickel	104			P
7440-09-7	Potassium	427	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	0.54	B		P
7440-23-5	Sodium	337	B		P
7440-28-0	Thallium	17.7			P
7440-62-2	Vanadium	116			P
7440-66-6	Zinc	2460			P

Color Before: brown Clarity Before: Texture: medium

Color After: yellow Clarity After: cloudy Artifacts:

Comments:

USEPA-CLP FORMS

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Initial Calibration Source: Inorganic Ventures/Fisher

Continuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.87	95.7	5.0	5.09	101.8	5.06	101.2	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA-CLP FORMS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B-E(0-4)

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Matrix (soil/water): SOIL Lab Sample ID: 617369

Level (low/med): LOW Date Received: 04/27/05

% Solids: 88.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11000			P
7440-36-0	Antimony	2.6	B		P
7440-38-2	Arsenic	11.8			P
7440-39-3	Barium	98.0			P
7440-41-7	Beryllium	0.49			P
7440-43-9	Cadmium	1.1			P
7440-70-2	Calcium	2220			P
7440-47-3	Chromium	28.2			P
7440-48-4	Cobalt	8.2			P
7440-50-8	Copper	92.3			P
7439-89-6	Iron	35000			P
7439-92-1	Lead	165			P
7439-95-4	Magnesium	4280			P
7439-96-5	Manganese	355			P
7439-97-6	Mercury	3.6			CV
7440-02-0	Nickel	22.6			P
7440-09-7	Potassium	3530			P
7782-49-2	Selenium	3.9	U		P
7440-22-4	Silver	0.17	U		P
7440-23-5	Sodium	361	B		P
7440-28-0	Thallium	1.1			P
7440-62-2	Vanadium	28.0			P
7440-66-6	Zinc	435			P

Color Before: brown Clarity Before: Texture: medium

Color After: yellow Clarity After: cloudy Artifacts:

Comments:

USEPA-CLP FORMS

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Initial Calibration Source: Inorganic Ventures/Fisher

Continuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	29810.00	98.7			P
Antimony				300.0	298.70	99.6			P
Arsenic				100.0	99.99	100.0			P
Barium				200.0	199.80	99.9			P
Beryllium				100.0	100.60	100.6			P
Cadmium				100.0	97.40	97.4			P
Calcium				30200.0	29930.00	99.1			P
Chromium				200.0	200.90	100.4			P
Cobalt				200.0	197.10	98.6			P
Copper				200.0	201.70	100.8			P
Lead				400.0	389.50	97.4			P
Manganese				200.0	198.30	99.2			P
Nickel				200.0	196.10	98.0			P
Potassium				30200.0	30420.00	100.7			P
Sodium				30200.0	29380.00	97.3			P
Vanadium				200.0	197.10	98.6			P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA-CLP FORMS

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Initial Calibration Source: Inorganic Ventures/Fisher

Continuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Mercury				5.0	5.13	102.6	5.16	103.2	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA-CLP FORMS

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 25000

Lab Code: STLVT Case No.: 25000 SAS No.: SDG No.: 53950

Initial Calibration Source: Inorganic Ventures/Fisher

Continuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Iron				30200.0	29580.00	97.9			P
Magnesium				30200.0	29410.00	97.4			P
Selenium				100.0	97.24	97.2			P
Silver				100.0	101.50	101.5			P
Thallium				100.0	97.46	97.5			P
Zinc				200.0	198.60	99.3			P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115