

Port of Rochester Environmental Management Plan

Location:

Port of Rochester Rochester, New York 14612

Prepared For:

City of Rochester Division of Environmental Quality 30 Church Street Room 300B Rochester, New York 14614

LaBella Project No. 205182

July 2005

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1.0 INTRODUCTION

The Port of Rochester has experienced a broad range of commercial, industrial, marine, and recreational development and redevelopment. Over the years these properties have left subsurface environmental impacts at the Site. Recent subsurface investigations were completed at the Port of Rochester in conjunction with the Port of Rochester Harbor Improvement and Harbor Ferry Terminal Project (2000-2004). These subsurface investigations identified:

- Various but limited areas of petroleum impacted soil and groundwater, and
- Widespread iron manufacturing ash/cinder and slag waste, and widespread miscellaneous fill materials such as bricks, concrete, and railroad ties.

During development and construction, the presence of these subsurface impacts and fill materials will require special handling procedures that are detailed in this Environmental Management Plan (EMP).

The Port of Rochester encompasses an area bounded on the north by Lake Ontario Beach State Park, on the east by the Genesee River, on the west by Lake Avenue, and on the south by land owned by CSX Transportation. In addition the Monroe County Boat Launch (likely to be purchased by the City of Rochester) will be included in this EMP. The City of Rochester is the owner of most of the parcels within the Port of Rochester. The location of the properties where this EMP applies is depicted on Figure 1.

The majority of the Port of Rochester Site is listed as a suspect fill site by the Monroe County Environmental Management Council (MCEMC), as it reportedly contains ash, cinder, and slag fill. Figure 2 depicts the approximate boundary of this MCEMC waste disposal site. The designation of the Port of Rochester Site as a waste disposal site by the MCEMC may impact future development as any new re-development plan may need to be reviewed and approved of by a state, county, and/or local governing body. Figure 3 depicts the Port of Rochester EMP study area. Developers and Contractors disturbing the subsurface at the Port of Rochester Site shall follow the procedures outlined in this EMP. No solid waste generated from the Port of Rochester Site may be physically removed from the Port of Rochester Site without the expressed written permission from the City of Rochester Division of Environmental Quality (DEQ) Project Manager. This procedure is presented in detail in Section 4.5.

2.0 OBJECTIVE

This EMP is intended to provide guidance regarding the characterization and management of subsurface impacted soil, groundwater, and man-made industrial derived fill materials generated during development activities at the Port of Rochester Site.

2.1 Applicability of Environmental Management Plan

This EMP applies to any owner, Planner, Developer, Contractor, utility Contractor, and municipal agency that disturb the subsurface at the Port of Rochester Site.

3.0 BACKGROUND AND SUPPORTING ANALYTICAL DATA

This EMP utilizes data gathered from the previous subsurface investigative reports and observations made during construction of the Port of Rochester Harbor Improvement and Harbor Ferry Terminal project. The reports utilized for reference are as follows:

- Phase I Environmental Site Assessment Charlotte Port of Rochester, New York by Galson dated April 1999.
- Port of Rochester Harbor Improvement and Harbor Ferry Terminal Phase II Environmental Site Assessment, Preliminary Site Characterization Report by LaBella Associates, P.C. dated May 31, 2001.
- Phase III Environmental Site Assessment: Remediation Closure Report NYSDEC Spill Number 990601 Area #1 by LaBella Associates, P.C. dated October 2002.
- Geotechnical Site Characterization, Port of Rochester Harbor Improvement and Harbor Ferry Terminal by Haley & Aldrich of New York dated January 22, 2001.

In addition to the above reports prepared for the Port of Rochester, several miscellaneous environmental documents were generated by LaBella Associates and the City of Rochester during construction of the Port of Rochester Harbor Improvement and Harbor Ferry Terminal project in regard to New York State Department of Environmental Conservation (NYSDEC) Spill #990601. The documents are:

- Phase II Environmental Site Assessment: Underground Storage Tank Closure Report Soil Sampling and Analysis: Port of Rochester Orphan Tank Discovered September 2003 by LeCesse Constriction.
- Underground Storage Tank Removal, Excavation Closure Sampling and Groundwater Sampling Report North Warehouse, Port of Rochester; Rochester New York: Remediation Closure Report dated January 2003;
- Memo January 15, 2003, Vortex Excavation Port of Rochester Parking Lot Improvements;
- Memo February 17, 2004, Groundwater Sample Results Future Underground Storage Tank Excavation, Port of Rochester Fast Ferry Terminal, Rochester, New York;
- Memo September 11, 2002, Questionable wastewater discharge relating to groundwater encountered and pumped at the South 24" sewer outfall trench; Beach Avenue and North Parking Lot Improvements Project Port of Rochester; and
- Drawing showing approximate areas where these issues were addressed.
- Letter from the City of Rochester of NYSDEC Active Spill #990601 to the NYSDEC dated May 6, 2004.
- Letter from the NYSDEC of Spill #990601 to the City of Rochester dated June 14, 2004.

The documents were submitted to the NYSDEC in a letter from the City of Rochester Division of Environmental Quality ("City DEQ") to the NYSDEC dated May 6, 2004, requesting No Further Remedial Action regarding the above listed issues and that the NYSDEC close NYSDEC Spill #990601. The NYSDEC responded to the City DEQ in a letter dated June 14, 2004 and indicated the NYSDEC does not require further remedial work regarding Spill #9970601 at this time. A copy of this NYSDEC No Further Action letter is included in Appendix 1. It should noted that this letter applies only to previously identified petroleum releases at the Port of Rochester; and it does not apply to slag or any manmade fill materials.

These reports and miscellaneous environmental documents may be reviewed at the City of Rochester's Department of Environmental Services located at City Hall, Room 300B. These reports detail locations of impacted soil and groundwater and areas where man-made fill materials have been identified.

3.1 Supporting Analytical Data

Representative samples of slag material from the Port of Rochester have been analyzed for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), eight (8) Resource Conservation and Recovery Act (RCRA) Metals, cyanide, and Polychlorinated Biphenyls (PCBs). Results of analysis indicate that the slag material is not representative of hazardous waste. The only compounds detected in these slag samples were arsenic, cadmium, and barium. Arsenic was the only compound that appeared to be consistently elevated above eastern USA background levels as published in the NYSDEC Technical and Administrative Guidance Manual (TAGM) 4046. Appendix 2 contains tables summarizing analytical results of the slag and man-made fill materials from samples referenced in the Port of Rochester Harbor Improvement and Harbor Ferry Terminal - Phase II Environmental Site Assessment, Preliminary Site Characterization Report by LaBella Associates, P.C. dated May 31, 2001.

In approximately 20 percent of the soil samples analyzed the levels of arsenic were elevated above the NYSDEC TAGM #4046 Eastern USA background levels and above the New York State Department of Health (NYSDOH) recommended level of 20 part per million (ppm). In addition to the elevated concentrations of arsenic there is the potential presence for elevated levels of additional heavy metals and SVOCs.

Table 1 below details sample locations and the associated arsenic concentrations that were considered representative of slag fill in areas in the area of the Port of Rochester Harbor Improvement and Harbor Ferry Terminal Project (2000-2004).

Table 1
Arsenic Concentration of Slag Fill Material at the Port of Rochester

Sample Location	Arsenic Concentration (mg/Kg)	Exceed USA Eastern Background Concentration (2-12 mg/Kg)
Bourne TP #1	20.6	Yes
LBA TP #1	3.1	No
LBA TP #6 (4')	17.8	Yes
LBA TP #6 (white slag)	<6.23	No
LBA TP #6 (black slag)	17.5	Yes
LBA TP #8	52	Yes
LBA TP #9	<4.90	No
LBA TP #10	51.1	Yes
LBA TP #15	7.12	No
LBA TP #18	<4.40	No
HA #114	3.91	No
HA #116	2.81	No

Petroleum hydrocarbon related compounds from ash/cinders have been detected at the Port of Rochester Site. Analyses of the ash/cinders have typically detected low-levels of petroleum related SVOCs. In addition, petroleum hydrocarbon related compounds were detected in the soil and groundwater (not from ash/cinders) at intermittent locations in the vicinity of petroleum storage tanks, potential historical spills

from former railroad activities (e.g. locomotives and historical operations) at the Port of Rochester. Samples have typically detected low levels of VOCs and SVOCs.

In general, test results from soil samples taken as part of the Phase II Environmental Site Assessment; Preliminary Site Characterization Report prepared for the Port of Rochester Harbor Improvement and Harbor Ferry Terminal may be considered sufficient for waste characterization of slag, coal, cinders, railroad ballast, and ash (fill) that is present at the Port of Rochester Site.

Test results from subsurface Petroleum Impacted Media, not including slag, coal, cinders, railroad ballast, and ash, are included as Part of the Phase II Environmental Site Assessment. Tables summarizing the analytical results from the Phase II Environmental Site Assessment are included in Appendix 2. Existing test results are likely not sufficient for waste characterization of subsurface Petroleum Impacted Media.

The cumulative findings of these reports indicate a large portion of the Port of Rochester Site contains slag, ash and foundry waste. The layer of slag and foundry waste is found in an approximately 625,000 square foot area (Figure 4) and averages approximately 4-feet thick (Figures 4 and 5). Estimates of the total volume of slag, ash, and foundry waste indicate that approximately 93,000 cubic yards of this material is present at the Port of Rochester Site. The depth of current ground surface elevation to the slag layers varies widely over the Port of Rochester Site. The depth from ground surface to the slag layers in the outlying portions of the Port of Rochester Site ranges from 3 to 5-feet below ground surface, whereas depth from ground surface to slag layers in the center portion range from as little as 1-foot below the ground surface (Figure 5).

NYSDEC regulations regarding management of solid waste are contained in NYCCR Part 360. A provision has been included in Part 360 that allows for non-hazardous solid waste to be properly managed and replaced within the confines of an inactive solid waste site with NYSDEC approval. Proper management requires that care be taken in planning, monitoring, and testing of excavated waste and fill material to confirm that it is non-hazardous, and to allow proper replacement and re-use on-site. A letter from LaBella Associates, P.C. to the NYSDEC dated January 21, 2002 documented the NYSDEC's acceptance of the re-use of the man-made fill materials at the Port of Rochester Site. The NYSDEC approval of re-use of man-made fill materials was specifically for the Port of Rochester Harbor Improvement and Harbor Ferry Terminal project. A copy of this letter in included in Appendix 1.

4.0 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

This EMP has been designed for development and construction activities at the Port of Rochester Site. This EMP pertains to earthwork activities that will disturb the subsurface at the Port of Rochester.

4.1 Identification of Solid Waste Impacted Media

Solid waste layers are present throughout the Port of Rochester as depicted on Figure 4 and cross sections of the slag fill material is depicted on Figure 5. The solid waste is generally present at depths immediately below the "topsoil" layer or pavement/sub-base layer, which varies in depth from 6 inches to 24 inches below ground surface. The logs of the borings, test pits, and monitoring wells depicted on Figure 4 are included in Appendix 3.

Fill materials present at the Port of Rochester Site include but are not limited to the following:

- Slag
- Railroad ties
- Railroad ballast
- Construction and Demolition debris from industrial uses
- Ash
- Cinders
- Railroad lines
- Coal

The presence of these fill man-made fill materials is generally from historical activities at the Port of Rochester Site. Figure 6 depicts historical buildings and structures formerly located at the Port of Rochester.

These fill materials are considered by the NYSDEC as solid waste that cannot be treated as Construction and Demolition (C&D) solid waste, due to the nature of its origin as a solid waste derived from an industrial source. The NYSDEC has indicated during prior re-development activities at the Port of Rochester that the NYSDEC would not approve of the disposal of this material at C&D debris landfills. The NYSDEC indicated during the previous Port of Rochester re-development activities that excavating the fill materials containing slag, coal, ash, cinders, railroad ties, railroad ballast, railroad lines, and C&D debris from industrial uses and placing these solid wastes into similar filled areas within the same site would be acceptable to the NYSDEC and in accordance with 6 NYCRR Part 360-1.7(b)(9). Alternatively, these materials can be disposed off site in a New York State (NYS) Part 360 permitted landfill.

Solid Waste Impacted Media can typically be visually identified by the presence of slag waste ranging in size from approximately 1 inch to 10 inches in diameter. A photographs taken of the slag waste during the Port of Rochester Harbor Improvement and Harbor Ferry Terminal project is included in Appendix 4.

The media containing slag may also exhibit a sulfur odor. The off-gas from the disturbance of this slag waste has been sampled and analyzed. The analytical results indicate that the off-gasses do not represent a worker health and safety concern from Hydrogen Sulfide or VOCs for construction workers at the Site. Refer to letter report issued by LaBella Associates, P.C. to the City of Rochester dated January 24, 2004 and test results included in Appendix 1.

The presence of coal, cinders, railroad ballast and ash can be visually identified during excavation. If questions arise during identification of the solid waste the City DEQ and the Environmental Project Monitor (EPM) shall make the final determination, for the classification on how the spoils generated during the construction activities at the Site will be managed.

4.2 Identification of Petroleum Impacted Media

Petroleum Impacted Subsurface Media are known to be located at the Port of Rochester at locations depicted on Figure 4. There is a potential for additional areas of Petroleum Impacted Subsurface Media to be present at the Port of Rochester.

Petroleum Impacted Subsurface Media can be identified by the media exhibiting a petroleum-like odor, gray to black staining, and elevated readings of total VOCs on a Photo-Ionization Detector (PID). Groundwater impacted by petroleum may exhibit a petroleum odor or sheen. If questions arise during identification of Petroleum Impacted Media, the City DEQ and the EPM will make the final determination, for the classification on how the spoils generated during the construction activities at the Site will be managed.

The volatilization of contaminants present in Petroleum Impacted Media may represent a worker health and safety concern for construction workers at the Site. Refer to Section 8.0 of this EMP.

4.3 On-Site Management of Solid Waste Impacted Media and Petroleum Impacted Media

Solid Waste Impacted Media that is excavated should not be used as backfill in utility trenches. Solid Waste Impacted Media may be relocated on-site or legally disposed of at a NYS Part 360 Landfill. The re-location area of Solid Waste Impacted Media will be approved by the City DEQ and the EPM.

The staging of Solid Waste Impacted Media should be performed in a manner where it is segregated from non-Solid Waste Impacted Media. Staging locations of Solid Waste Impacted Media will be approved by the City DEQ and the EPM.

Prior to excavating in areas where solid waste is anticipated, the Contractor should remove the top layer of non–Solid Waste Impacted Media (i.e. topsoil, asphalt, etc.) as practicable and keep the material segregated from any Solid Waste Impacted Media. If the material is to be relocated for re-use on site, the Solid Waste Impacted Media should be covered with an impervious material (e.g. asphalt or concrete) or with a minimum of 24-inches of non-impacted soil or fill at residential locations or 12-inches of non-impacted soil or fill at commercial locations.

Subsurface Solid Waste Impacted Media is not allowed to leave the Port of Rochester work area without expressed written consent from the City DEQ and the EPM.

Solid (non-aqueous) Petroleum Impacted Media which cannot be separated shall be segregated into separate stockpiles and staged on and covered with one layer of 6-mil thick polyethylene sheeting at the end of each work day. The Contractor shall implement reasonable care to secure sheeting and maintain such stockpiles' integrity.

If necessary, liquid or aqueous Petroleum Impacted Media (i.e. groundwater) shall be pumped into a holding tank, approved of by the EPM.

Petroleum Impacted Media is not allowed to leave the Port of Rochester work area without expressed written consent from the City DEQ and the EPM.

Table 2 below details requirements and re-use of Solid Waste and Petroleum Impacted Media at the Port of Rochester Site.

Table 2
On-Site Re-Use Requirements

Material	Material Description	Disposal / Re-use	On-Site Cover
Classification	-	_	Requirements
Class 1	 Man-made fill materials including but not limited to slag, ash, cinders, railroad ballast and ties, etc. (Railroad ties cannot be re-used on-site in most situations) Petroleum hydrocarbon related compounds that are less than the NYSDEC TAGM 4046 RSCO. 	 Can be re-used at the Port of Rochester Site with NYSDEC approval. If cannot be re-used at the Port of Rochester Site, must be legally disposed of at a NYS Part 360 landfill 	Must be covered with 12 (commercial) or 24 (residential) inches with non-impacted soil or fill, or with asphalt or concrete paving.
Class 2	Petroleum hydrocarbon related compounds that are above the NYSDEC TAGM 4046 RSCO.	Cannot be re-used at the Port of Rochester Site without treatment. Must be legally disposed of at a permitted NYS Part 360 landfill.	Cannot be re-used on- Site. Must be staged on and covered with 6-mil polyethylene sheeting pending disposal at a NYS Part 360 landfill.

NOTE: NYSDEC TAGM RSCO 4046 denotes New York State Department of Environmental Conservation Technical and Administrative Guidance Manual 4046 Recommended Soil Cleanup Objective

4.4 Off-Site Disposal of Solid Waste and Petroleum Impacted Media

The City DEQ, as property owner, shall approve of all proposed Treatment, Storage and Disposal (TSD) facilities and waste transporters prior to use. Removal of any site materials shall be approved in writing by the City DEQ, including submission of completed Waste Profiles and Waste Manifests for signature by the City DEQ.

Copies of all waste disposal manifests, and landfill receipts shall be submitted to the City DEQ and the EPM by the Contractor within two (2) calendar days upon removal from the project location.

Solid Waste Impacted Media that cannot be re-used on-site and solid (non-aqueous) Petroleum Impacted Media that will not be treated on-site shall be transported off-site by a NYS Part 364 permitted vehicles to a NYS Part 360 Permitted Landfill approved by the City DEQ. The EPM shall perform all characterization testing.

Liquid or non-aqueous Petroleum Impacted Media shall be legally disposed of at a location approved of by the City DEQ. The EPM shall perform all characterization testing.

The Contractor shall not dispose of Solid Waste or Petroleum Impacted Media, environmental impacted media, C&D debris, or any on-site derived subsurface material without expressed written permission from the City DEQ Project Manager and the EPM.

4.5 Waste Stream Tracking

The EPM shall track the off-site disposal of each waste stream on an appropriate spread sheet tracking log to allow for accurate material quantification. An example of a Material Tracking spread sheet is included in Appendix 5.



4.6 Unknown Environmental Issues

This EMP includes procedures and protocols to manage known environmental subsurface impacts at the Port of Rochester. If unknown subsurface environmental impacts are encountered, the City DEQ and EPM will determine procedures and protocols to manage any additional environmental impacts.

5.0 IMPLEMENTATION OF EMP

During earthwork phases of construction activities at the Port of Rochester, it is recommended that an EPM be assigned to implement the EMP on a part time or full time basis. The responsibilities of the EPM with regard to the EMP are as follows:

- Working with the Developers and Construction Manager, and the City of Rochester Department of Environmental Services or City DEQ to pre-determine off-site disposal locations.
- Working with construction manager and City DEQ to determine re-location areas of Solid Waste Impacted Media.
- Working with Contractors to identify Solid Waste Impacted Media and Petroleum Impacted Solid Waste.
- Work with the City DEQ to characterize and approve off-site disposal of Solid Waste and Petroleum Impacted Media.
- Work with the Contractors to monitor excavations for evidence of environmental impairment.
- Direct the construction manager as to proper staging, covering, and containment of Petroleum Impacted Media.
- Sampling, analysis, and any additional waste stream profiling as required by a receiving NYS Part 360 landfill, or the NYSDEC.
- Implementation of the Health and Safety Plan (HASP) for the EPM and City DEQ personnel at the site. Contractors and other personnel working at the site are responsible for their own HASP (see Section 7.0).
- Implementation of the Community Air Monitoring Plan (CAMP) for the site (see Section 8.0).

6.0 DECONTAMINATION OF EQUIPMENT

All equipment used at the Site that comes in contact with Petroleum Impacted Media will require decontamination using clean water to wash off soil and water residue from construction activities. The Contractor shall construct a temporary decontamination pad that will be used to decontaminate the earthwork related equipment.

The decontamination pad shall be constructed of two layers of 6-mil reinforced polyethylene sheeting (or equivalent), with a sump, for the purposes of collecting wash water. Wash water shall be stored in 55-gallon drums, storage tanks or incorporated into tanks for treatment and proper disposal as determined by the EPM. Accumulated sediments shall be legally disposed of in accordance with all applicable regulations at a location approved by the City DEQ and the EPM.

The Contractor shall be responsible for all costs relating to legally disposing of the decontamination pad materials at a facility approved by the City DEQ and the EPM. All permits and waste disposal manifests shall be submitted to the City DEQ and the EPM for review and signature prior to shipment. All permits, waste disposal manifest, and receipts associated with decontamination pad materials disposal shall be submitted to the City DEQ and the EPM.

The Contractor shall provide potable water and high-pressure sprayers for decontamination activities.

Personal decontamination procedures shall follow the procedures set forth in the HASP and the Contractor shall supply a suitable container for disposal of personal protective equipment, such as a steel drum. Disposal of PPE is the responsibility of the Contractor.

7.0 HEALTH AND SAFETY PLAN (HASP)

This EMP contains a Site Specific HASP for the Port of Rochester developed by LaBella Associates, P.C. This HASP is designated for the EPM and City DEQ personnel only. A copy of this HASP is included in Appendix 6.

The LaBella Associates, P.C. HASP is included as an example, and contractors disturbing the subsurface at the Port of Rochester will need to develop and rely on their own HASP to manage health and safety issues associated with potential exposure to site chemicals of concern and any other potential issues.

8.0 COMMUNITY AIR MONITORING PLAN (CAMP)

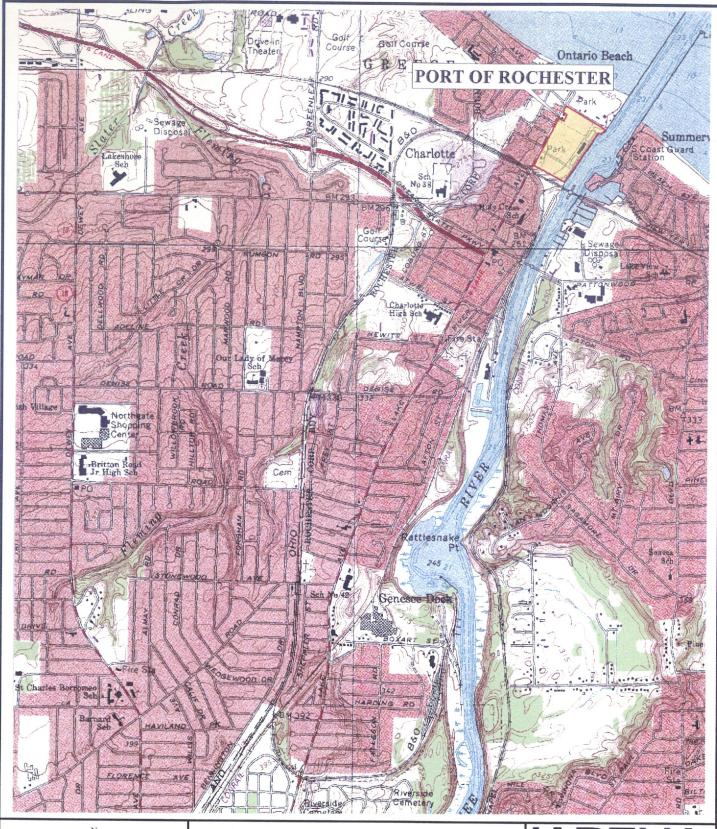
This EMP contains a CAMP for earthwork portions of the Site development. This CAMP should be implemented when the subsurface media (i.e. Solid Waste and Petroleum Impacted Media) at the Port of Rochester Site has the potential to be disturbed. A copy of this CAMP is included in Appendix 7.

The EPM will be responsible to implement the CAMP and will direct the Contractor disturbing the subsurface at the Port of Rochester when abatement measures are required to mitigate particulate and VOC emissions. The Contractor shall implement these measures as directed by the EPM. The Contractor will be required to have a sufficient amount of water trucks, polyethylene sheeting, and other mitigative supplies staged and readily available at the site.

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Figures





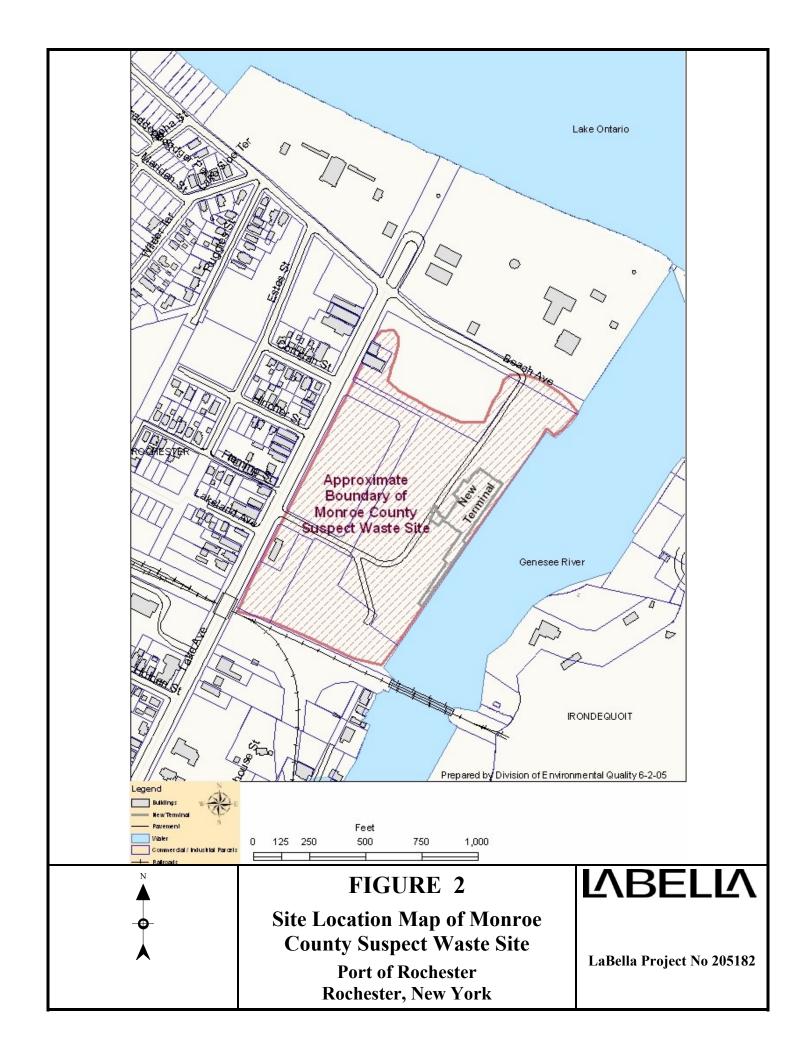
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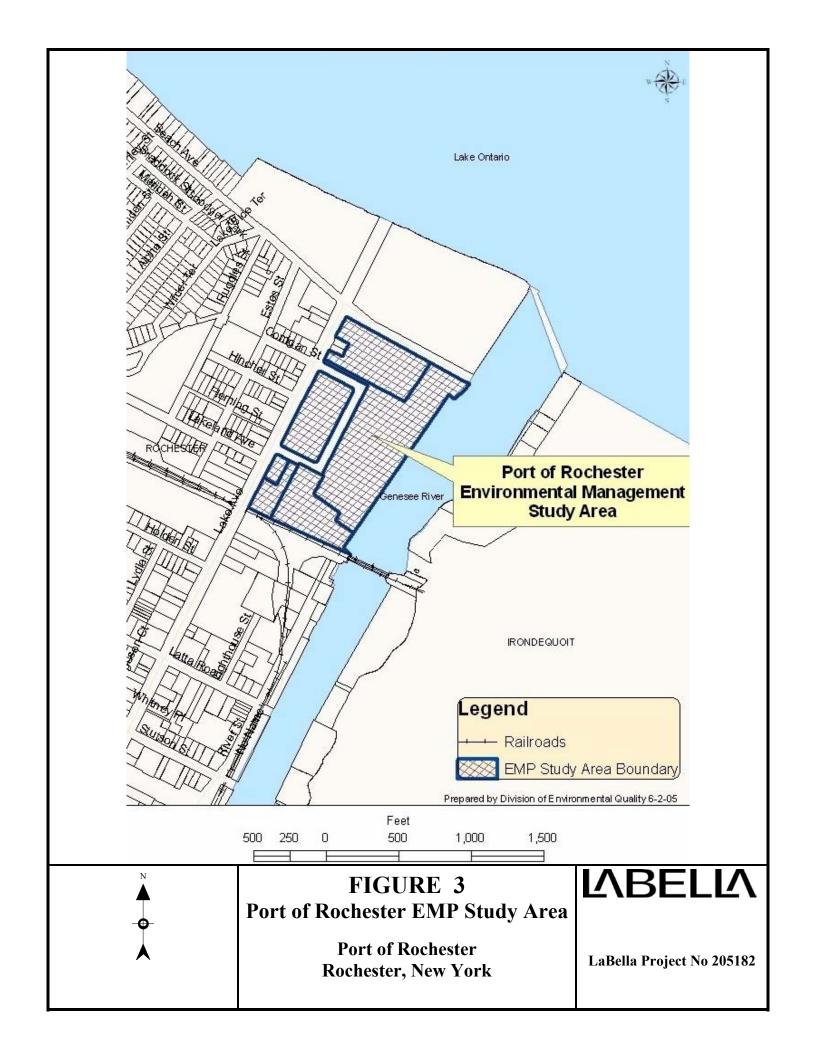
FIGURE 1 Site Location Map

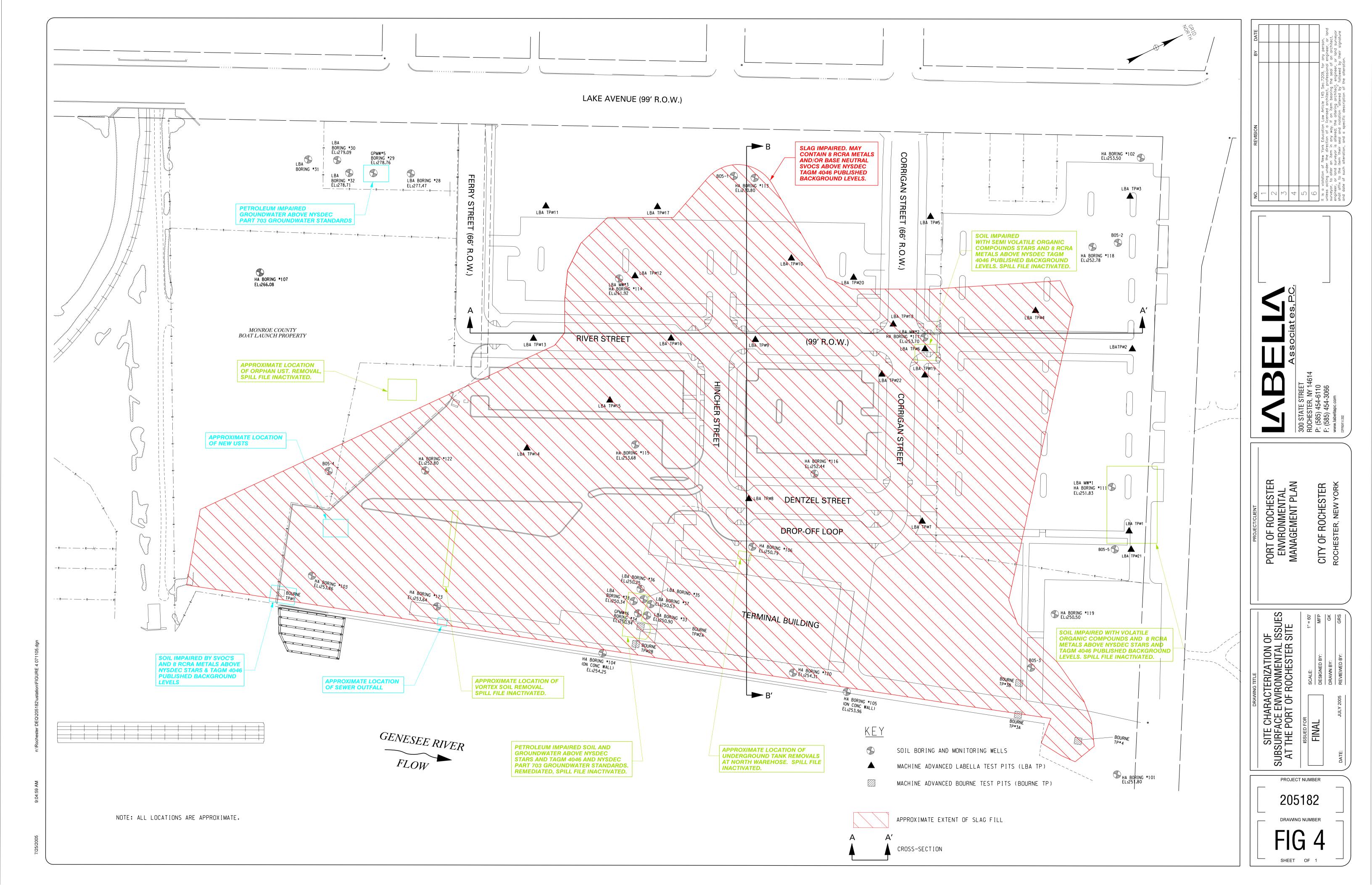
Port of Rochester Rochester, New York

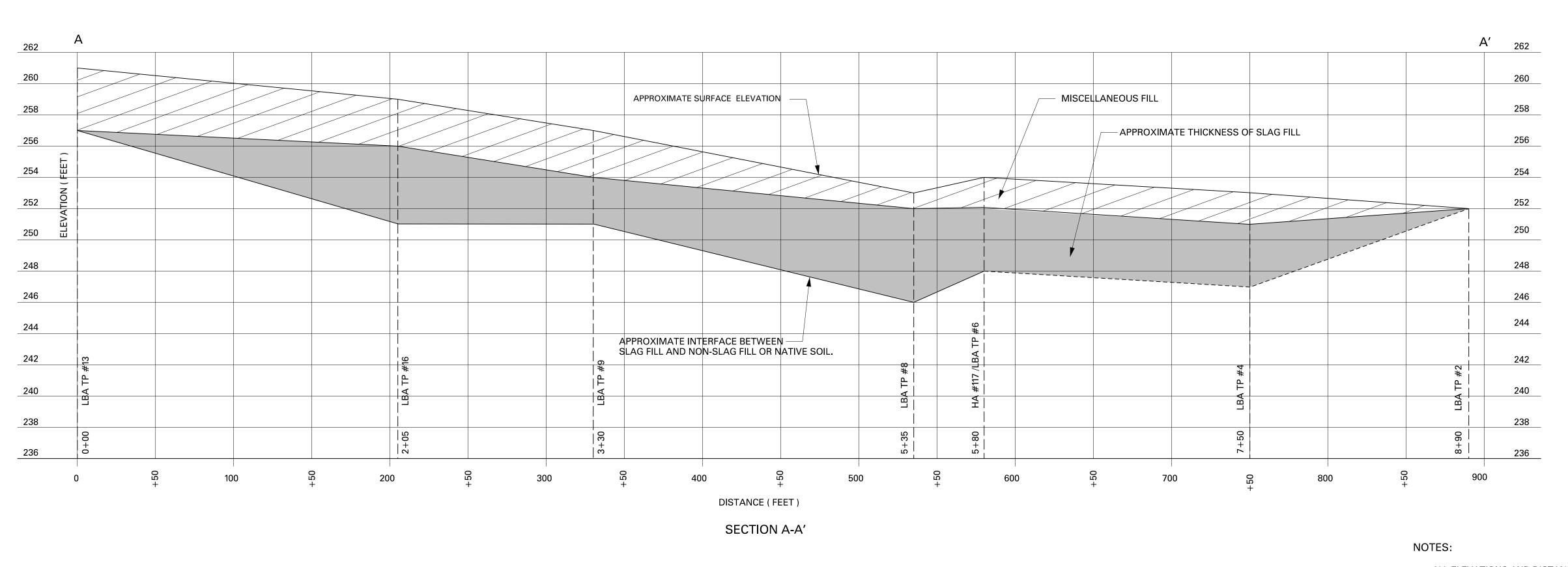
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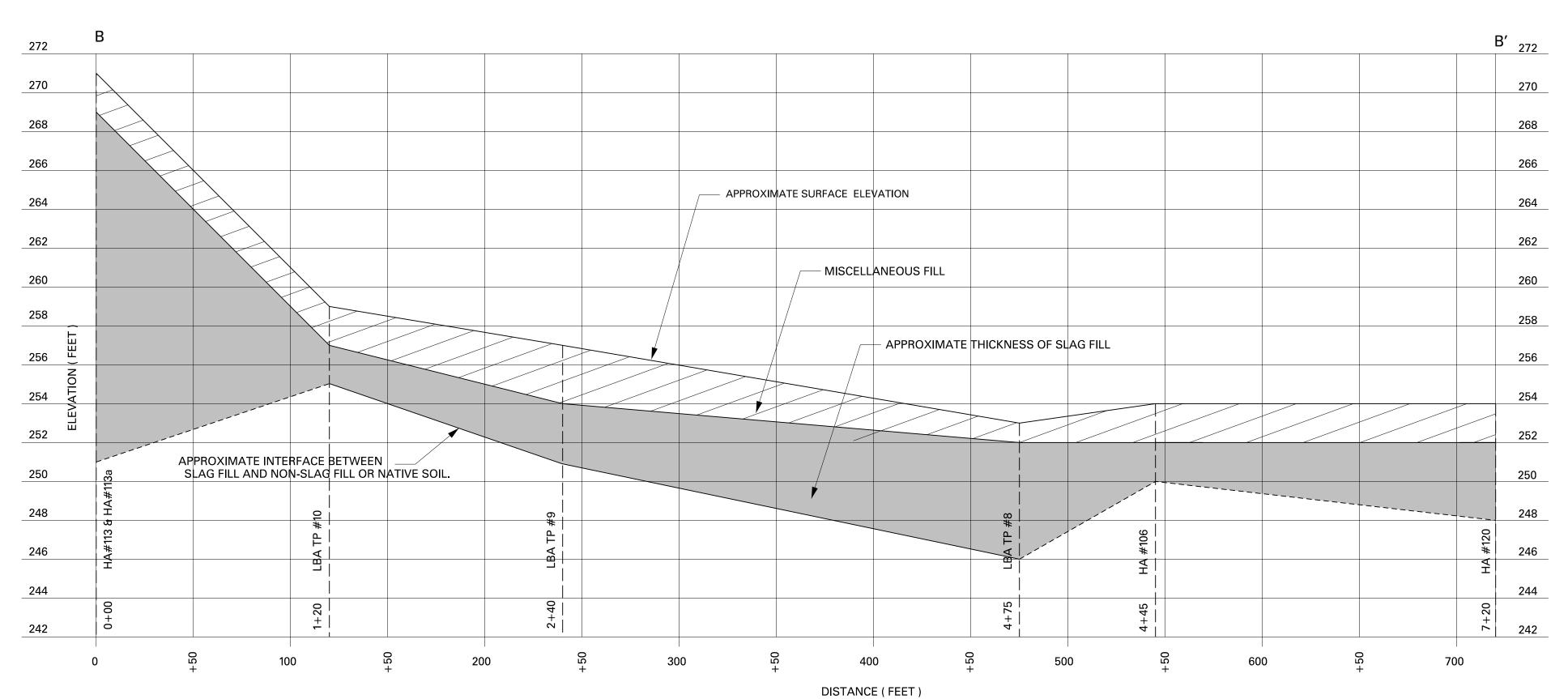
LaBella Project No 205182





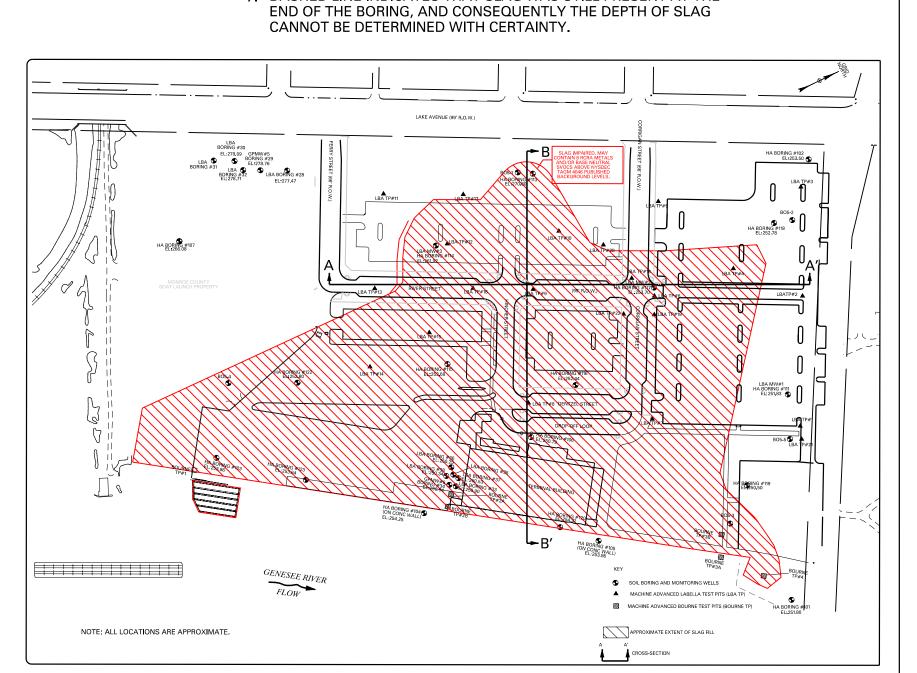


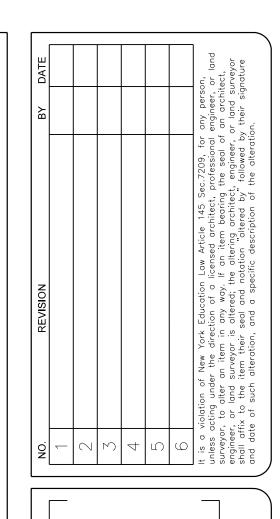




SECTION B-B'

- 1. ALL ELEVATIONS AND DISTANCES ARE APPROXIMATE.
- 2. THICKNESS OF SLAG WAS DETERMINED FROM INFORMATION REFERENCED IN THE PORT OF ROCHESTER HARBOR IMPROVEMENT AND HARBOR FERRY TERMINAL PHASE II ENVIRONMENTAL SITE ASSESSMENT BY LABELLA ASSOCIATES, P.C. DATED MAY 31, 2001.
- 3. THICKNESS AND LOCATION OF SLAG FILL SHALL BE CONSIDERED APPROXIMATE, ESPECIALLY BETWEEN TEST BORINGS WHERE THICKNESS OF SLAG WAS INTERPOLATED.
- 4. THE APPROXIMATE THICKNESS OF SLAG FILL DOES NOT INCLUDE CONSTRUCTION AND DEMOLITION DEBRIS OR OTHER "NON-SLAG" FILL MATERIALS.
- 5. ELEVATIONS ARE REFERENCED TO THE CITY OF ROCHESTER DATUM.
- 6. DRAWINGS OF CROSS-SECTIONS ARE NOT INTENDED TO REPRESENT SUBSURFACE CONDITIONS BENEATH SLAG FILL.
- 7. DASHED LINE INDICATES THAT SLAG WAS STILL PRESENT AT THE END OF THE BORING, AND CONSEQUENTLY THE DEPTH OF SLAG







PORT OF ROCHESTER ENVIRONMENTAL MANAGEMENT PLAN CITY OF ROCHESTER ROCHESTER

OF SLAG FILL MATERIAL

SSUED FOR

SCALE:

FINAL

DRAWN BY:

DRAWN BY:

GK/RCN

JULY 2005

REVIEWED BY:

GR/RCN

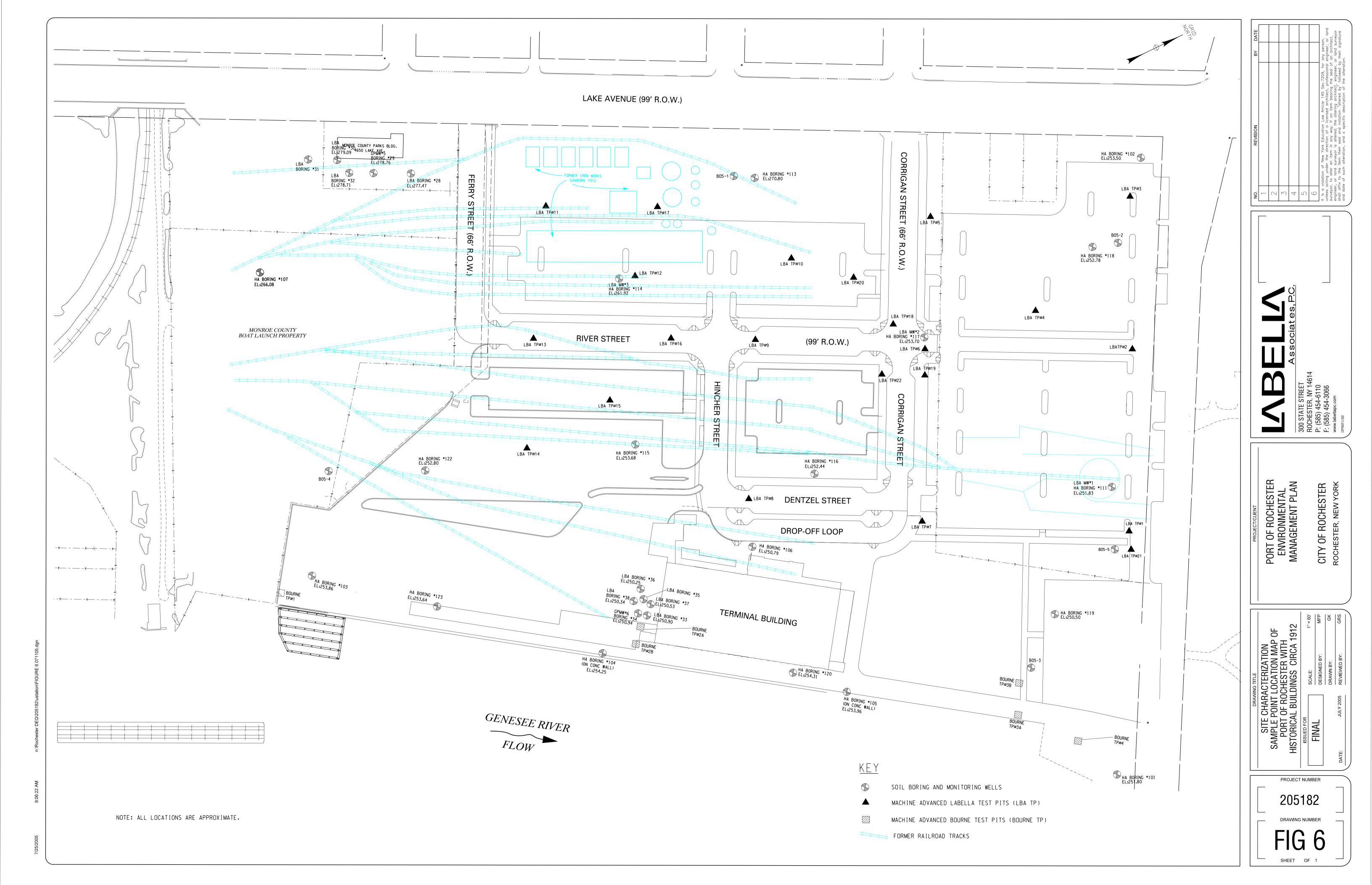
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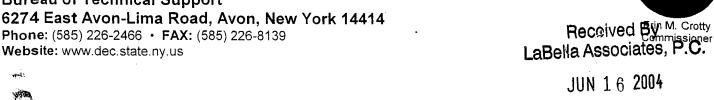


Appendix 1

Miscellaneous Letters

New York State Department of Environmental Conservation

Division of Environmental Remediation Bureau of Technical Support



Client:_____ June 14, 2004 Proj.#:_____

Mr. Joseph J. Biondolillo Sr. Environmental Specialist City of Rochester Division of Environment Quality 30 Church Street Room 300B Rochester, New York 14614

Dear Mr. Biondolillo:

Re: NYSDEC Spill # 9970601

Port of Rochester Lake Avenue

Rochester (C), Monroe County

Let this letter serve as follow up to both your May 24, 2004 submission and the June 8. 2004 meeting and site visit attended by this Department, the City of Rochester and LaBella Associates, regarding the above referenced spill location. Based upon the remedial work completed at the site, the information contained in the May 24, 2004 submission, previously submitted information and the current and expected future use of the property, the Department does not require any additional remedial work at this time. This spill has been removed from the Department's active files. However, be aware that this ruling does not preclude reactivation of this case should new information become available and/or an impact to receptors be discovered in the future.

If there are any questions or comments, feel free to contact me at either the above address or by telephone at 585-226-5438.

Sincerely.

Michael F. Zamiarski, P.E. Environmental Engineer II

Bureau of Technical Support

Division of Environmental Remediation

Greg Senecal, LaBella Associates, P.C.

VBELLY

January 21, 2002

Dan David, P.E. New York State Department of Environmental Conservation Region 8 Solid Waste Division 6274 East Avon Lima Road Avon, New York 14414

LaBella Associates, P.C. Engineering, Architecture, Environmental Consulting, and Surveying

Seroio Esteben, P.E. Michael W. Haley, L.S. Robert A. Hasty, A.I.A. Salvatoro A. LaBella, P.E. James R. McIntosh, P.E. Michael S. Schaltion, P.E.

RE:

Port of Rochester, North Parking Lot/Beach Avenue Pedestrian Improvements

Northern Street Design and Construction 1 Northern Street Design and Construction Project

Port of Rochester, Rochester, New York LaBella Project # 99150 Phase 2320

JAN 2 3 2002

Dear Mr. David:

90UD HAZARDOUS MATERIALS

This letter is a follow up to our conversation on Monday, January 14, 2002, regarding the above referenced construction project.

During our conversation, we discussed the management of fill materials containing slag, coal, cinders, railroad ballast, and ash at the City of Rochester-Port of Rochester Redevelopment Project Site. This area of solid waste/fill encompasses approximately 13 acres on the north portions of the Site, and appears to be from historical filling associated with railroad terminals and sidings and a large iron foundry and blast furnace. The Port of Rochester Redevelopment Plan envisions paved parking lots and commercial development pads in this area of the project Site. See attached Figure.

I indicated to you that the fill materials containing slag, coal, cinders, railroad ballast, and ash had been sampled and analyzed, and that the material contained levels of arsenic above NYSDEC TAGM #4046 published Eastern USA background levels. Representative samples were submitted for TCLP analysis for metals. No TCLP failures were realized in the samples of slag and ash fill that were exposed to the toxicity leaching procedure. A copy of the Phase II Environmental Assessment: Preliminary Site Characterization Report was submitted to the NYSDEC Spills Group in 2001.

In two discreet areas, this material also contained levels of NYSDEC regulated Semi Volatile Organic (Polycyclic Aromatic Hydrocarbons) at levels slightly above NYSDEC TAGM #4046 guidance values. This condition was previously reported to the NYSDEC Region 8 Spills Group. The NYSDEC added the information to the existing spill file; NYSDEC Spill #990601. LaBella is currently addressing issues associated with these two areas with the NYSDEC Spills Group.

Upcoming construction activities that are anticipated to occur within the next year may disturb this layer of solid waste/fill are the re-grading and repaving of the Northern parking lots, and the construction of new roadways, parking lots, and associated utilities in the north central portion of the Site. See attached Figure.

You indicated that the department considers the above referenced materials as solid waste that could not be treated as a Construction and Demolition solid waste, due to the nature of its origin as a solid waste derived from an industrial source. Furthermore you indicated that the department would not approve of the disposal of this material at Construction and Demolition debris landfills.

> 300 State Street, Rochester, NY 14614 20 Seneca Street, Hornell, NY 14843 403 E. Main Street, Elkland, PA 16920

(716) 454-6110 (607) 324-0222 (814) 258-5673 FAX (716) 454-3066 FAX (607) 324-7665 FAX (814) 258-7116 Dan David, P.E. January 21, 2002 Page 2

We discussed the option of excavating the fill materials containing slag, coal, cinders, railroad ballast, and ash and placing these solid wastes into other similar filled areas of the Site for use as additional fill. You indicated that this solid waste management option was acceptable to the Department and in accordance with 6 NYCRR Part 360-1.7(b)(9) You also indicated that the department would recommend particulate airmonitoring and dust suppression measures as necessary during construction activities.

At this time, we anticipate proceeding with the on Site management of the above referenced solid waste in accordance with 6NYCRR Part 360-1.7(b)(9).

If you feel that this letter represents an accurate representation of our conversation and agreement, please sign in the space provided and return a copy of this letter to me via fax (585) 454-3066 to serve as documentation of our conversation and agreement.

Thank you for your assistance in this matter. If you have any questions, please do not hesitate to contact me at (585)-454-6110.

Sincerely.

LABELLA ASSOCIATES, P.C.

Gregory Senecal, CHMM

Phase I & II Program Manager

Attachments

cc: S. Esteban; LaBella

S. Metzger; LaBella

R. VenVertloh; LaBella

C. Ecklund; LaBella

J. Biondolillo; City of Rochester

B. Price; City of Rochester

J2A21D81

Engineering Architecture

Elivio amental

LABELLA,
Associates, P.C.

300 State Street, Suite 201, Rochester, NY 14614

January 24, 2002

Phone 585.454.6110 Fax 585.454.3066 www.labellapc.com

William M. Price, RLA
Project Manager
City of Rochester
DES/Engineering and Architecture
30 Church Street, Room 300B
Rochester, NY 14614-1279

Ře:

Worker Health and Safety Related to Excavation of Slag-Containing Materials

Port of Rochester Harbor Improvement and Harbor Ferry Terminal

City of Rochester ID #99021

NYSDOT PIN 4752.60 and 4752.62

LaBella Project No. 99150

Dear Mr. Price:

We have conducted testing to evaluate the potential for exposure to hazardous gases and vapors as a result of disturbing subsurface slag-containing materials during trenching operations.

Three test pits were excavated to a depth of approximately 6 feet. Slag-containing materials were encountered in each test pit. The sampling procedure consisted of placing an evacuated Silco Canister at the bottom of the pit immediately upon reaching the desired depth, and opening the sample valve. Sample duration was approximately 1 minute or less. The odor of hydrogen sulfide was detected in each test pit.

The Silco Canisters were sent to Performance Analytical, Inc. for sample analysis. The analytical methods applied to the samples include EPA Method TO-15 by GC/MS for Tentatively Identified Compounds (TICs) and GC/SCD Analysis for 20 sulfur compounds. Laboratory results are attached.

The sample results indicate that no sulfur or sulfide compounds were present above the method detection limit, which is in the part per billion range. Hydrogen sulfide is obviously present at concentrations above the odor threshold, but below the method detection limit. A series of light-weight organic com-pounds was detected in each sample. The detected compounds probably represent ambient concentrations of vehicle combustion emissions. They are present at concentrations well below hazardous levels.

Planned excavations of these soils will not present an inhalation hazard to construction workers in the vicinity of excavating.

As noted, the <u>odor</u> of hydrogen sulfide is detectable during active excavation and subsequent disturbance of the slag. As a result there is a possibility that the odor of hydrogen sulfide may present a community nuisance during construction but it is not expected to present a health hazard.

Very truly yours,

LABELLA ASSOCIATES, P.C.

Richard K. Rote, CIH

RKR/deh Attachments

Car

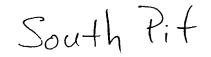
Sergio Esteban, LaBella Associates, P.C.

LaBella Project File No. 99150, Nos. 1 and 9

N/J2A24RR1



Air Quality Laboratory A Division of Columbia Analytical Services, Inc. An Employee Owned Company



RESULTS OF ANALYSIS

Page 1 of 1

Client:

LaBella Associates, PC

Client Sample ID:

South Pit

Client Project ID:

99150-2320

PAI Project ID: P2102852

PAI Sample ID: P2102852-001

Tentatively Identified Compounds

Test Code:

EPA TO-15

Date Collected: 12/11/01

Instrument ID:

HP5972/Tekmar AUTOCan Elite

Date Received: 12/12/01

Analyst:

Wade Henton

Date Analyzed: 12/14/01

Sampling Media:

Silco Canister

Volume(s) Analyzed: 0.50 Liter(s)

Test Notes: Canister ID:

T

#01194

0.1 Pi 1 =

Pf 1 = 3.5

D.F. = 1.23

GC / MS	Compound Identification	Concentration	Data
Ret. Time		μg/m³	Qualifier
4.49	Propane	60	
4.90	Isobutane	20	
5.21	n-Butane	50	
6.30	2-Methylbutane	40	
6.82	n-Pentane	70	
6.98	C ₅ H ₁₀ Compound	20	
8.69	2-Methylpentane	20	
9.16	3-Methylpentane	20	
9.74	n-Hexane	30	
12.82	3-Methylhexane	10	
13.87	n-Heptane	20	
18.46	n-Octane	10	
20.91	m- & p-Xylenes	9	
26.60	C ₁₀ H ₁₄ Aromatic Compound	10	
27.25	C ₁₀ H ₁₄ Aromatic Compound	10	

T = Analyte is a tentatively identified compound, result is estimated.

Verified By: RG



An Quality Laboratory A Division of Columbia Analytical Services, Inc.

An Employee Owned Company

RESULTS OF ANALYSIS

South Pit

Page 1 of 1

Client:

LaBella Associates, PC

Client Sample ID: South Pit

Client Project ID: 99150-2320

PAI Project ID: P2102852

PAI Sample ID: P2102852-001

Test Code:

ASTM D5504-98

Instrument ID:

HP5890A/SCD #5

Analyst:

Annie Calvagna

Sampling Media: Test Notes:

Container ID:

Silco Canister

#01194

Date Collected: 12/11/01

Time Collected: 10:45 Date Received: 12/12/01

Date Analyzed: 12/13/01

Time Analyzed: 15:20

Volume(s) Analyzed:

1.0 ml

Pi 1 = 0.1 Pf 1 = 3.5

D.F.= 1.23

		Result	MRL	Result	MRL	Data
CAS#	Compound					Qualifier
		μg/m³	μg/m³	ppbV	ppbV	
7783-06-4	Hydrogen Sulfide	ND	7.00	ND	5.00	
463-58-1	Carbonyl Sulfide	ND	12.0	ND	5.00	
74-93-1	Methyl Mercaptan	ND	9.80	ND	5.00	
75-08-1	Ethyl Mercaptan	ND	13.0	ND	5.00	
75-18-3	Dimethyl Sulfide	ND	13.0	ND	5.00	
75-15-0	Carbon Disulfide	ND	7.80	ND	2.50	
75-33-2	Isopropyl Mercaptan	ND	16.0	ND	5.00	
75-66-1	tert-Butyl Mercaptan	ND	18.0	ND	5.00	
107-03-9	n-Propyl Mercaptan	ND	16.0	ND	5.00	
624-89-5	Ethyl Methyl Sulfide	ND	16.0	ND	5.00	
110-02-1	Thiophene	ND	17.0	ND	5.00	
513-44-0	Isobutyl Mercaptan	ND	18.0	ND	5.00	
352-93-2	Diethyl Sulfide	ND	18.0	ND	5.00	
109-79-5	n-Butyl Mercaptan	ND	18.0	ND	. 5.00	
624-92-0	Dimethyl Disulfide	ND	9.60	ND	2.50	
616-44-4	3-Methylthiophene	ND	20.0	ND	5.00	
110-01-0	Tetrahydrothiophene	ND	18.0	ND	5.00	
638-02-8	2,5-Dimethylthiophene	ND	23.0	ND	5.00	
872-55-9	2-Ethylthiophene	ND	23.0	ND	5.00	
110-81-6	Diethyl Disulfide	ND	12.0	ND	2.50	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

Verified By: RG



Air Quality Laboratory A Division of Columbia Analytical Services, Inc. An Employee Owned Company

Middle Pit

RESULTS OF ANALYSIS

Page 1 of 1

Client:

LaBella Associates, PC

Client Sample ID:

West Pit

Client Project ID:

99150-2320

PAI Project ID: P2102852

PAI Sample ID: P2102852-002

Tentatively Identified Compounds

Test Code:

EPA TO-15

Date Collected: 12/11/01

Instrument ID:

HP5972/Tekmar AUTOCan Elite

Date Received: 12/12/01

Analyst:

Date Analyzed: 12/14/01

Sampling Media:

Wade Henton Silco Canister

Volume(s) Analyzed: 0.50 Liter(s)

Test Notes: Canister ID:

T

#01203

0.1 Pi1 =

Pf 1 = 3.5

D.F. = 1.23

GC/MS	Compound Identification	Concentration	Data
Ret. Time		μg/m³	Qualifier
4.50	Propane	60	
4.90	Isobutane	20	
5.22	n-Butane	50	
6.29	2-Methylbutane	30	
6.81	n-Pentane	50	
8.69	2-Methylpentane	10	
9.15	3-Methylpentane	10	
9.73	n-Hexane	20	ļ
13.84	n-Heptane	10	
19.30	Hexamethylcyclotrisiloxane (Possible Artifact)	40	
20.91	m- & p-Xylenes	8	
24.79	Unidentified Siloxane (Possible Artifact)	10	
26.58	C ₁₀ H ₁₄ Aromatic Compound	10	
27.24	C ₁₀ H ₁₄ Aromatic Compound	10	
27.72	Unidentified Siloxane (Possible Artifact)	10	<u> </u>

T = Analyte is a tentatively identified compound, result is estimated.

erified By:_	RU-	Date:_	12/27/01
			Page No.:

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Air Quality Laboratory A Division of Columbia Analytical Services, Inc. An Employee Owned Company

RESULTS OF ANALYSIS

Page 1 of 1

Middle Pit

Client:

LaBella Associates, PC

Client Sample ID: West Pit

Client Project ID: 99150-2320

PAI Project ID: P2102852

PAI Sample ID: P2102852-002

Test Code:

ASTM D5504-98

Instrument ID:

HP5890A/SCD #5

Analyst:

Annie Calvagna Silco Canister

Sampling Media: Test Notes:

Container ID:

#01203

Date Collected: 12/11/01

Time Collected: 11:00 o Date Received: 12/12/01

Date Analyzed: 12/13/01

Time Analyzed: 15:40

Volume(s) Analyzed:

1.0 ml

Pi 1 = 0.1 Pf 1 = 3.5

D.F.= 1.23

		Result	MRL	Result	MRL	Data
CAS#	Compound					Qualifier
	•	μg/m³	μg/m³	ppbV	ppbV	
7783-06-4	Hydrogen Sulfide	ND	7.00	ND	5.00	
463-58-1	Carbonyl Sulfide	ND	12.0	ND	5.00	
74-93-1	Methyl Mercaptan	ND	9.80	ND	5.00	
75-08-1	Ethyl Mercaptan	ND	13.0	ND	5.00	
75-18-3	Dimethyl Sulfide	ND.	13.0	ND	5.00	
75-15-0	Carbon Disulfide	ND	7.80	ND	2.50	<u> </u>
75-33-2	Isopropyl Mercaptan	ND	16.0	ND	5.00	<u> </u>
75-66-1	tert-Butyl Mercaptan	ND	18.0 -	ND	5.00	
107-03-9	n-Propyl Mercaptan	ND	16.0	ND	5.00	<u> </u>
624-89-5	Ethyl Methyl Sulfide	ND	16.0	ND	5.00	
110-02-1	Thiophene	ND	17.0	ND	5.00	
513-44-0	Isobutyl Mercaptan	ND	18.0	ND	5.00	
352-93-2	Diethyl Sulfide	ND	18.0	ND	5.00	<u> </u>
109-79-5	n-Butyl Mercaptan	ND	18.0	ND	5.00	
624-92-0	Dimethyl Disulfide	. ND	9.60	ND	2.50	╝
616-44-4	3-Methylthiophene	ND	20.0	ND	5.00	
110-01-0	Tetrahydrothiophene	ND	18.0	ND	5.00	<u> </u>
638-02-8	2,5-Dimethylthiophene	ND	23.0	ND	5.00	
872-55-9	2-Ethylthiophene	ND	23.0	ND	5.00	
110-81-6	Diethyl Disulfide	ND	12.0	ND	2.50	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.



Air Quality Laboratory

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An Employee Owned Company

North Pit

RESULTS OF ANALYSIS

Page 1 of 1

Client:

LaBella Associates, PC

Client Sample ID:

North Pit

Client Project ID:

99150-2320

PAI Project ID: P2102852

PAI Sample ID: P2102852-003 -

Tentatively Identified Compounds

Test Code:

EPA TO-15

Date Collected: 12/11/01

HP5972/Tekmar AUTOCan Elite

Date Received: 12/11/01

Instrument ID: Analyst:

Wade Henton

Date Analyzed: 12/14/01

Sampling Media: Silco Canister

Volume(s) Analyzed:

0.50 Liter(s)

Test Notes:

Т

Canister ID:

#00600

Pi 1 = 0.3

Pf 1 = 3.5

D.F. = 1.21

GC / MS Ret. Time	Compound Identification	Concentration μg/m³	Data Qualifier
4.49	Propane	10	
4.91	Isobutane	6	
5.21	n-Butane	10	
6.29	2-Methylbutane	10	
6.82	n-Pentane	10	

T = Analyte is a tentatively identified compound, result is estimated.

erified By: RG Date: 1212701

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Air Quality Laboratory

A Division of Columbia Analytical Services, Inc.

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RESULTS OF ANALYSIS

Page 1 of 1

Client: LaBella Associates, PC

Client Sample ID: North Pit Client Project ID: 99150-2320 PAI Project ID: P2102852 PAI Sample ID: P2102852-003

Worth Pit

Test Code: Instrument ID: ASTM D5504-98 HP5890A/SCD #5 Date Collected: 12/11/01 Time Collected: 11:20 Date Received: 12/12/01 Date Analyzed: 12/13/01

Analyst: Sampling Media: Annie Calvagna Silco Canister

Time Analyzed: 15:59

Test Notes: Container ID:

#00600

Volume(s) Analyzed:

I.0 ml

Pi 1 = 0.3

Pf 1 = 3.5

D.F.= 1.21

		Result	MRL	Result	MRL	Data
CAS #	Compound					Qualifier
		μg/m³	μg/m²	ppbV	ppbV	<u> </u>
7783-06-4	Hydrogen Sulfide	ND	7.00	ND	5.00	
463-58-1	Carbonyl Sulfide	ND	12,0	ND	5.00	
74-93-1	Methyl Mercaptan	ND	9.80	ND	5.00	
75-08-1	Ethyl Mercaptan	ND	13.0	ND	5.00	
75-18-3	Dimethyl Sulfide	ND	13.0	ND	5.00	
75-15-0	Carbon Disulfide	ND	7.80	ND.	2.50	
75-33-2	Isopropyl Mercaptan	ND	16.0	ND	5.00	
75-66-1	tert-Butyl Mercaptan	ND	18.0	ND	5.00	
107-03-9	n-Propyl Mercaptan	ND	16.0	ND	5.00	
624-89-5	Ethyl Methyl Sulfide	ND	16.0	ND	5.00	
110-02-1	Thiophene	ND	17.0	ND	5.00	
513-44-0	Isobutyl Mercaptan	ND.	18.0	ND	5.00	
352-93-2	Diethyl Sulfide	ND	18.0	ND	5.00	
109-79-5	n-Butyl Mercaptan	ND	18.0	ND	5.00	
624-92-0	Dimethyl Disulfide	ND	9,60	ND	2.50	
616-44-4	3-Methylthiophene	ND	20.0	ND	5.00	
110-01-0	Tetrahydrothiophene	ND	18.0	ND	5.00	·
638-02-8	2,5-Dimethylthiophene	ND	23.0	ND	5.00	
872-55-9	2-Ethylthiophene	ND	23.0	ND	5,00	
110-81-6	Diethyl Disulfide	ND	12.0	ND	2.50	₩

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

Verified By: RC Date: 12402



Air Quality Laboratory A Division of Columbia Analytical Services, Inc. An Employee Owned Company

RESULTS OF ANALYSIS

Page 1 of 1

Blank

Client:

LaBella Associates, PC

Client Sample ID:

Method Blank

Client Project ID:

99150-2320

PAI Project ID: P2102852

PAI Sample ID: P011214-MB

Tentatively Identified Compounds

Test Code:

EPA TO-15

Date Collected: NA

Instrument ID:

HP5972/Tekmar AUTOCan Elite

Date Received: NA

Analyst:

Wade Henton

Date Analyzed: 12/14/01

Sampling Media:

Silco Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

D.F. = 1.00

GC / MS	Compound Identification	Concentration	Data
Ret. Time		μg/m³	Qualifier
	No Compounds Detected		



Air Quality Laboratory A Division of Columbia Analytical Services, Inc. An Employee Owned Company



RESULTS OF ANALYSIS

Page 1 of 1

Client:

LaBella Associates, PC

Client Sample ID: Method Blank

Client Project ID: 99150-2320

PAI Project ID: P2102852 PAI Sample ID: P011213-MB

Test Code:

ASTM D5504-98

Instrument ID:

HP5890A/SCD #5

Analyst:

Annie Calvagna

Sampling Media:

Silco Canister

Test Notes:

Date Collected: NA

Time Collected: NA

Date Received: NA

Date Analyzed: 12/13/01 Time Analyzed: 11:36

Volume(s) Analyzed:

1.0 ml

D.F.=1.00

		Result	MRL	Result	MRL	Data
CAS#	Compound					Qualifier
Ì		μg/m³	μg/m³	. ppbV	ppbV	
7783-06-4	Hydrogen Sulfide	ND	7.00	ND	5.00	
463-58-1	Carbonyl Sulfide	ND	12.0	ND	5.00	
74-93-1	Methyl Mercaptan	ND	9.80	ND	5.00	
75-08-1	Ethyl Mercaptan	ND	13.0	ND	5.00	
75-18-3	Dimethyl Sulfide	ND	13.0	ND	5.00	
75-15-0	Carbon Disulfide	ND	7.80	ND	2.50	<u> </u>
75-33-2	Isopropyl Mercaptan	ND	16.0	ND	5.00]
75-66-1	tert-Butyl Mercaptan	ND	18.0	ND	5.00	
107-03-9	n-Propyl Mercaptan	ND	16.0	ND	5.00	
624-89-5	Ethyl Methyl Sulfide	ND	16.0	ND	5.00	
110-02-1	Thiophene	ND	17.0	ND	5.00	
513-44-0	Isobutyl Mercaptan	ND	18.0	ND	5.00	
352-93-2	Diethyl Sulfide	ND	18.0	ND	5.00	
109-79-5	n-Butyl Mercaptan	ND	18.0	ND	5.00	
624-92-0	Dimethyl Disulfide	ND	9.60	ND	2.50	
616-44-4	3-Methylthiophene	ND	20.0	ND	5.00	
110-01-0	Tetrahydrothiophene	ND	18.0	ND	5.00	
638-02-8	2,5-Dimethylthiophene	ND	23.0	ND	5.00	
872-55-9	2-Ethylthiophene	ND	23.0	ND	5.00	
110-81-6	Diethyl Disulfide	ND	12.0	ND	2.50]

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

Verified By: <u>C</u> Date: 12/27/01



Air Quality Laboratory A Division of Columbia Analytical Services, Inc. An Employee Owned Company

LABORATORY REPORT

Client:

LABELLA ASSOCIATES, PC

Date of Report:

12/27/01

Address:

300 State Street, 2nd Floor

Date Received:

12/12/01

Rochester, NY 14614

PAI Project No:

P2102852

Contact:

Mr. Richard Rote

Purchase Order:

Verbal

Client Project ID: 99150-2320

New York ELAP ID: 11221

Three (3) Silco Canister Samples labeled:

"South Pit"

"West Pit"

"North Pit"

The samples were received at the laboratory under chain of custody on December 12, 2001. The samples were received intact. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory.

Sulfur Analysis

The samples were analyzed for twenty sulfur compounds per modified SCAQMD Method 307-91 and ASTM D 5504-98 using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD). All compounds with the exception of hydrogen sulfide and carbonyl sulfide are quantitated against the initial calibration curve for methyl mercaptan.

JAN 97 7007

Reviewed and Approved:

Reviewed and Approved:

Wade Henton

Senior Chemist

John Yoko√ama Operations Manager

Page 1 of <u>12</u>



Air Quality Laboratory A Division of Columbia Analytical Services, Inc. An Employee Owned Company

Tentatively Identified Compounds Analysis

The samples were also analyzed by combined gas chromatography/mass spectrometry (GC/MS) for tentatively identified compounds. The analyses were performed according to the methodology outlined in EPA Method TO-15. The analyses were performed by gas chromatography/mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of a Hewlett Packard Model 5972 GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator. A 100% Dimethylpolysiloxane capillary column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation

The results of analyses are given on the attached data sheets.

Performance Analytical Inc. Sample Acceptance Check Form

Chenit	t: LaBella Associates, Pe		pie Acceptance	Work order:	P2102852			
	/ 99150-2320							
-		2/12/01	Date opened:	12/12/0	l by	SM		
Note: This form is used for all samples received by PAI. The use of this form for custody seals is strictly meant to indicate presence absence and not as an indication of								
compliance o	r nonconformity. Thermal preserval	ion and pH will on	ly he evaluated either at the	request of the client of	or as required by th	ie method/S(OP.	
						Yes	<u>No</u>	<u>N/A</u>
1	Were custody seals on outs	ide of cooler/B	ox?				\boxtimes	
	Location of seal(s)?			Sealing Lid?				\square
	Were signature and date incl	uded?	: 					X
	Were seals intact?							\boxtimes
	Were custody seals on outside	of sample conta	iner?				⊠ □	
	Location of seal(s)?			Sealing Lid?				\boxtimes
	Were signature and date inci	uded?						X
	Were seals intact?							\boxtimes
2	Were sample containers marked with client sample ID?					×		
3	Did sample containers arrive in good condition?					\boxtimes		
4	Were chain-of-custody papers used and filled out?					×		
5	Did sample container labels and/or tags agree with custody papers?					×		
6	Was sample volume received adequate for analysis?					×		
7						\mathbf{x}		
8	8 Was proper temperature (thermal preservation: of cooler at receipt adhered to?							\boxtimes
	Co	oler Temperatu	ıre NA	°C				
		ank Temperatu		°C		_		
9	9 Is pH (acid) preservation necessary, according to method/SOP or Client specified information						\boxtimes	
Is there a client indication that the submitted samples are pH (acid) preserved?								\boxtimes
Were <u>VOA vials</u> checked for presence/absence of air bubbles?								\boxtimes
Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?							X	
	1.10 1.00		D 2-4			777)A Heads	Dace
	Lab Sample ID		Required	pH (as received, a			sence/Ab	
			pН	(as reticiven.)	r terimon)	(11)	sente an	sciroc
P2102852-001 South Pit						NA NA		
P2102852-002 West 7: † P2102852-003 Nostle 9: †					NA NA			
P2102852-003 North Vit								
 				ļ		 		
			·	 		 	,	
				-		 		
				 		 		
Explain any discrepancies: (include lab sample ID numbers):								
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Appendix 2

Analytical Summary Tables from Phase II Environmental Site Assessment

The analytical data from the these characterization samples is detailed in the table below:

Bourne Test Pit Soil Sample Results (ug/kg) USEPA Method 8270 Table 4

	Bourne TP#1 (Typical Fill)	Bourne TP#1 (Slag Waste)	NYSDEC TAGM 4046 Soil Cleanup Objective to Protect Groundwater Quality	NYSDEC STARS TCLP Alternative Guidance Value
Benzyl Alcohol	ND<890	ND<762	N/A	N/A
Bis (2-chloroethyl) ether	ND<356	ND<305	N/A	N/A
Bis (2-chloroisopropyl) ether	ND<356	ND<305	N/A	N/A
2-Chlorophenol	ND<356	ND<305	800	N/A
1,3-Dichlorobenzene	ND<356	ND<305	1,550	N/A
1,4-Dichlorobenzene	ND<356	ND<305	8,500	N/A
1,2-Dichlorobenzene	ND<356	ND<305	7,900	N/A
Hexachloroethane	ND<356	ND<305	N/A	N/A
2-Methylphenol	ND<356	ND<305	100	N/A
4-Methylphenol	ND<356	ND<305	900	N/A
N-Nitrosodimethylamine	ND<356	ND<305	N/A	N/A
N-Nitroso-di-n-propylamine	ND<356	ND<305	N/A	N/A
Phenol	ND<356	ND<305	30	N/A
Benzoic Acid	ND<890	ND<762	2,700	N/A
Bis (2-chloroethoxy) methane	ND<356	ND<305	N/A	N/A
4-Chloroaniline	ND<356	ND<305	220	N/A
4-Chloro-3-methylphenol	ND<356	ND<305	240	N/A
2,4-Dichlorophenol	ND<356	ND<305	400	N/A
2,6-Dichlorophenol	ND<356	ND<305	N/A	N/A
2,4-Dimethylphenol	ND<356	ND<305	N/A	N/A
Hexachlorobutadiene	ND<356	ND<305	N/A	N/A
Isophorone	ND<356	ND<305	4,400	N/A
2-Methylnapthalene	ND<356	ND<305	36,400	N/A
Napthalene	945	ND<305	13,000	200
Nitrobenzene	ND<356	ND<305	200	N/A
2-Nitrophenol	ND<356	ND<305	330	N/A
1,2,4-Trichlorobenzene	ND<356	ND<305	3,400	N/A
2-Chloroaphthalene	ND<356	ND<305	N/A	N/A
Acenaphthene	ND<356	ND<305	90,000	400
Acenaphthylene	ND<356	ND<305	41,000	N/A
4-Chlorophenyl phenyl ether	ND<356	ND<305	N/A	N/A
Dibenzofuran	ND<356	ND<305	6,200	N/A

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Bourne Test Pit Soil Sample Results (continued) USEPA Method 8270

	Bourne TP#1 (Typical Fill)	Bourne TP#1 (Slag Waste)	NYSDEC TAGM 4046 Soil Cleanup Objective to Protect Groundwater Quality	NYSDEC STARS TCLP Alternative Guidance Value
Diethyl phthalate	ND<356	ND<305	7,100	N/A
Dimethyl phthalate	ND<890	ND<762	2,000	N/A
2,4-Dinitrophenol	ND<356	ND<305	200	N/A
2,4-Dinitrotoluene	ND<356	ND<305	N/A	N/A
2,6-Dinitrotoluene	ND<356	ND<305	1,000	N/A
Flourene	365	ND<305	350,000	1,000
Hexachlorocyclopentadiene	ND<356	ND<305	N/A	N/A
2-Nitroaniline	ND<890	ND<762	430	N/A
3-Nitroaniline	ND<890	ND<762	500	N/A
4-Nitroaniline	ND<890	ND<762	N/A	N/A
4-Nitrophenol	ND<890	ND<762	100	N/A
2,4,6-Trichlorophenol	ND<356	ND<305	N/A	N/A
2,4,5-Trichlorophenol	ND<890	ND<762	100	N/A
4-Bromophenyl phenyl ether	ND<356	ND<305	N/A	N/A
Di-n-butyl phthalate	ND<356	ND<305	8,100	N/A
4,6-Dinitro-2-methylphenol	ND<890	ND<762	N/A	N/A
Flouranthene	1,900	ND<305	1,900,000	1,000
Hexachlorobenzene	ND<356	ND<305	1,400	N/A
N-nitrosodiphenylamine	ND<356	ND<305	N/A	N/A
Pentachlorophenol	ND<890	ND<762	1000	N/A
Anthracene	495	ND<305	700,000	1,000
Phenanthrene	ND<356	ND<305	220,000	1,000
Benzidine	ND<890	ND<762	N/A	N/A
Benzo (a) anthracene	835	ND<305	3,000	0.04
Bis (2-ethylhexyl) phthalate	ND<356	ND<305	435,000	N/A
Butylbenzylphthalate	ND<356	ND<305	122,000	N/A
Chrysene	856	ND<305	400	0.04
3,3'-Dichlorobenzidine	ND<356	ND<305	N/A	N/A
Pyrene	1,530	ND<305	665,000	1,000
Benzo (b) flouranthene	954	ND<305	1,100	0.04
Benzo (k) flouranthene	1,470	ND<305	1,100	0.04
Benzo (g,h,I) perylene	580	ND<305	800,000	0.04
Benzo (a) pyrene	919	ND<305	11,000	0.04
Dibenz (a,h) anthracene	ND<356	ND<305	165,000,000	1,000
Di-n-octylphthalate	ND<356	ND<305	120,000	N/A
Indeno (1,2,3-cd) pyrene	576	ND<305	3,200	0.04

All sample results and guidance values are listed in ug/kg =ppb

N/A - Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values

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Phase II Environmental Site Characterization: Soil and Shallow Groundwater Investigation City of Rochester Harbor Ferry Terminal Project LaBella Project No. 99150 As noted in the table above there were levels of NYSDEC regulated SVOC's detected in the fill sample from Bourne TP-1. The suite of SVOC's that were detected in the fill sample are consistent with the Polycyclic Aromatic Hydrocarbons. These levels and types of SVOC's may be beneath NYSDEC Soil Inactivation Site Specific Risk Based Guidance Valves, based on the fact that they all have very low volatilization factors. These risk-based calculations could be completed when more detailed development plans (i.e., final elevations, depth of filling, and future use of this portion of the Site) have been arrived at.

Bourne Test Pit Soil Sample Results (mg/kg) 8 RCRA Metals Table 5

	Bourne TP#1 (Typical Fill)	Bourne TP#2 (Slag Waste)	NYSDEC TAGM 4046 Eastern USA Background	NYSDEC TAGM 4046 Recommended Cleanup Objectives
Arsenic	20.6	0.875	3-12	7.5 or SB
Barium	188	511	15-600	300 or SB
Cadmium	191	2.84	0.1-1	1 or SB
Chromium	43	<1.96	1.5-40	10 or SB
Lead	191	<9.80	*200-500	SB
Mercury	< 0.103	< 0.0690	0.001-0.2	0.1
Selenium	<1.08	< 0.980	0.1-3.9	2 or SB
Silver	<1.08	< 0.980	N/A	SB

^{*} Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

All sample results and guidance values are listed in mg/kg=ppm

N/A - Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values SB= Site Background

Bourne Test Pit Soil Sample Results (mg/kg) Cyanide Reactivity Table 6

	Bourne TP#1 (Slag Waste)	Bourne TP#1 (Typical Fill)
Cyanide Reactivity	ND<1, Non-Reactive	ND<1, Non Reactive

All sample results and guidance values are listed in mg/kg=ppm

Bold denotes constituents above NYSDEC Guidance Values

ND = Not Detected

N/A = Not Applicable

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As detailed in the table above no 8 RCRA metals were detected in the samples above method detection limits with the exception of cadmium and low levels of arsenic and chromium. The samples also tested non-reactive for cyanide reactivity.

Cadmium was elevated well above background levels in the fill sample, however the remaining 8 RCRA Metals were at or near Eastern USA Background levels in the fill and slag sample.

Fill and soil encountered in Bourne TP#2a exhibited evidence of petroleum hydrocarbon impairment, and was sampled and analyzed for petroleum related VOC's by USEPA Method 8021 STARS and for SVOC's by USEPA Method 8270 STARS. Bourne TP#2b was advanced approximately 20'-30'east, presumed to be hydraulically downgradient of Bourne TP#2a to aid in preliminary delineation of the discovered petroleum impairment. Evidence of petroleum impairment was not observed in Bourne TP#2b, indicating that the aerial extent of petroleum impacted soil and groundwater observed in the vicinity of Bourne TP#2a is limited.

The analytical data from the petroleum characterization sample from Bourne TP#2a is detailed in the table below:

Bourne Test Pit Sample Results (ug/kg)
USEPA Method 8021
Table 7

	Bourne TP#2a (5')	NYSDEC STARS TCLP Alternative Guidance Value	NYSDEC TAGM 4046 Soil Cleanup Objective to Protect Groundwater Quality
Methyl tert-Butyl Ether	ND<726	200	120
Benzene	3,140	14	60
Toluene	992	100	1,500
Ethylbenzene	7760	100	5,500
m,p-Xylene	25,600	100	1,200
o-Xylene	5,910	100	1,200
Isopropylbenzene	1,680	100	4,000
n-Propylbenzene	6,770	100	1,400
1,3,5-Trimethylbenzene	13,500	100	17,000
tert-Butylbenzene	ND<726	100	N/A
1,2,4-Trimethylbenzene	48,000	100	13,000
sec-Butylbenzene	1,210	100	24,000
p-Isopropyltoluene	815	100	10,000
n-Butylbenzene	ND<726	100	17,000
Naphthalene	9,030	200	13,000

All sample results and guidance values are listed in ug/kg = ppb

ND = Not Detected

N/A = Not Available

Bold denotes constituents above NYSDEC Guidance Values

Bourne Test Pit Soil Boring Sample Results (ug/kg) USEPA Method 8270 Table 8

	Bourne TP#2a (5')	NYSDEC STARS TCLP Alternative Guidance Value	NYSDEC TAGM 4046 Soil Clean Up Objectives to Protect Groundwater Quality
Napthalene	3640	200	13,000
Acenaphthene	ND<813	1000	90,000
Flourene	ND<813	1000	350,000
Flouranthene	ND<813	1000	1,900,000
Anthracene	ND<813	400	700,000
Phenanthrene	ND<813	1000	220,000
Benzo (a) anthracene	ND<813	0.04*	3,000
Chrysene	ND<813	0.04*	400
Pyrene	ND<813	1000	665,000
Benzo (b) flouranthene	ND<813	0.04*	1,100
Benzo (k) flouranthene	ND<813	0.04*	1,100
Benzo (g,h,l,)perylene	ND<813	0.04*	800
Benzo (a) pyrene	ND<813	0.04*	11,000
Dibenz (a,h) anthracene	ND<813	1000	165,000,000
Indeno (1,2,3-cd)pyrene	ND<813	0.04*	3,200

All sample results and guidance values are listed in ug/kg=ppb

N/A = Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above no SVOC's were detected in the sample above method detection limits. Petroleum related VOC's were detected at levels well above NYSEC recommended levels for VOC's in soils. Interpretation of the laboratory results by Paradigm Environmental Services, indicated that results were consistent with weathered kerosene, gasoline, or mineral spirits.

This area at the Site is referred to as Area #1 and is depicted in Figure 8.

Analytical data from the shared Bourne Test Pitting Study is included as Appendix 2.

Due to the desire not to delay Bourne's schedule, and because of repaving concerns, it was decided to continue characterization of this area of petroleum impaired soil and fill, during the geoprobe soil boring phase of the Site characterization.

The analytical data for 8 RCRA metals from the these characterization samples is detailed in the tables below:

LaBella Test Pit Soil Sample Results (mg/kg) 8 RCRA Metals (Total)

Ί	a	b	le	1	U

	LBA TP#1 (0'-2')	LBA TP#6 (4')	LBA TP#6 (White Slag)	LBA TP#6 (Black Slag)	LBA TP#8 (2'-3')	LBA TP#9 (Red Slag)	LBA TP#10 (3')	LBA TP#15 (6'-8')	LBA TP#18 (Green Slag)	NYSDEC TAGM 4046 Eastern USA Background	NYSDEC TAGM 4046 Recommended Cleanup Objectives
Arsenic	3.1	17.8	<6.23	17.5	52	<4.90	51.1	7.12	<4.40	3-12	7.5 or SB
Barium	909	91.4	81	193	165	177	22.2	657	80.2	15-600	300 or SB
Cadmium	< 0.483	0.64	< 0.623	< 0.535	0.584	< 0.490	0.604	< 0.382	<0.440	0.1-1	1 or SB
Chromium	5.9	6.77	2.24	11.8	15.4	3.04	3.72	17.8	1.41	1.5-40	10 or SB
Lead	38.6	76.3	< 0.623	4.18	62.8	< 0.490	5.33	3.29	< 0.440	*200-500	SB
Mercury	< 0.0735	0.141	< 0.0878	0.0774	< 0.0787	< 0.0981	0.24	< 0.593	< 0.0760	0.001-0.2	0.1
Selenium	<4.83	<4.58	<6.23	<5.35	1.15	<4.90	<5.03	<3.82	<4.40	0.1-3.9	2 or SB
Silver	<1.93	<1.83	3.74	<2.15	<2.34	<1.96	<2.01	<1.53	1.76	N/A	SB

^{*} Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm.

Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

All sample results and guidance values are listed in mg/kg=ppm

N/A - Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values

SB - Site Background

LaBella Test Pit Soil Sample Results (mg/L) 8 RCRA Metals (TCLP) Table 11

	LBA TP#6 (White Slag)	LBA TP#6 (Black Slag)	LBA TP#8 (2'-3')	LBA TP#9 (Red Slag)	LBA TP#10 (5')	LBA TP#18 (Green Slag)	LBA TP#10 (13')	LBA TP#17 (8')	LBA TP#16 (2')	LBA TP#15 (6'-8')	NYSDEC Hazardous Waste Regulatory Levels for Toxicity Characteristic (mg/L)
Arsenic	< 0.025	< 0.025	< 0.025	< 0.025	0.05	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	5
Barium	0.1	0.25	0.2	0.3	0.2	0.75	0.2	0.4	0.6	0.35	100
Cadmium	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	1
Chromium	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	5
Lead	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	5
Mercury	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.2
Selenium	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	1
Silver	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	5

All guidance values results are listed in mg/L = ppm

ND = Not Detected

N/A = Not Applicable

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above the levels of the 8RCRA Metals in the slag and ash fill samples was generally within Eastern USA Background Ranges as Published in NYSDEC TAGM #4046. In addition, none of the samples of slag and ash fill that were analyzed via the toxicity leaching procedure (TCLP) test exceeded NYSDEC Regulatory Levels.

The laboratory results for total metals from these slag and ash fill samples were consistently low. This is somewhat unusual because slag and ash fill typically contain elevated levels of metals. In order to verify that Paradigm Laboratories analytical results were accurate, one slag and ash fill sample was split and was submitted to Columbia Analytical Services, Rochester, New York for analysis. The results of this quality control analysis are as follows:

Split Soil Sample Results (HA Boring # 116, 2'-4') (mg/kg) 8 RCRA Metals (Total) Table 12

	Paradigm Environmental Services	Columbia Analytical	NYSDEC TAGM 4046 Eastern USA Background	NYSDEC TAGM 4046 Soil Cleanup Objectives
Arsenic	2.81	<1.09	3-12	7.5 or SB
Barium	238	212	15-600	300 or SB
Cadmium	< 0.390	< 0.544	0.1-1	1 or SB
Chromium	3.75	3.45	1.5-40	10 or SB
Lead	< 0.389	<1.09	*200-500	SB
Mercury	< 0.053	< 0.0544	0.001-0.2	0.1
Selenium	4.77	1.5	0.1-3.9	2 or SB
Silver	2.73	<1.09	N/A	SB

^{*} Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

All sample results and guidance values are listed in mg/kg=ppm
N/A - Not Applicable
All test pits are 0"-12" depth
ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values
SB - Site Background

The levels of metals detected in the split sample from both laboratories are similar, and verify that the levels of metals reported in the samples from the Site are not caused or skewed by laboratory error.

During the excavation of LBATP #6 a petroleum like sheen was observed emanating from the layers of slag and floating on the standing groundwater in the test pit. No odor could be detected from this groundwater or the slag. In addition, no elevated PID readings were detected from either the water or the slag. One grab sample of the groundwater and a sample of the slag that appeared to be leaching the sheen to the groundwater were obtained for laboratory analysis. The slag grab sample was analyzed for SVOC's by USEPA Method 8270. The groundwater grab sample from the test pit was analyzed for Total Petroleum Hydrocarbons by NYSDOH Method 310.13. The analytical result for total petroleum hydrocarbons analysis was non-detect.

Two additional samples from the test pitting study were submitted for laboratory analysis. Both of these samples were obtained from shallow layers of black cinder like fill. The first sample was obtained from LBATP #1 at a depth of 0'-2'. The second sample was obtained from LBATP #10 at a depth of 3'.

The SVOC results for the three samples are detailed in the following table.

LaBella Test Pit Soil Sample Results (ug/kg) USEPA Method 8270

Table 13

			nc 13		
	LBA TP#1 (0'-2')	LBA TP#10 (3')	LBA TP#6 (4')	NYSDEC TAGM 4046 Soil Cleanup Objective to Protect Groundwater Quality	NYSDEC STARS TCLP Alternative Guidance Value
Benzyl Alcohol	ND<908	ND<795	ND<921	N/A	N/A
Bis (2-chloroethyl) ether	ND<363	ND<318	ND<368	N/A	N/A
Bis (2-chloroisopropyl) ether	ND<363	ND<318	ND<368	N/A	N/A
2-Chlorophenol	ND<363	ND<318	ND<368	800	N/A
1,3-Dichlorobenzene	ND<363	ND<318	ND<368	1550	N/A
1,4-Dichlorobenzene	ND<363	ND<318	ND<368	8500	N/A
1,2-Dichlorobenzene	ND<363	ND<318	ND<368	7900	N/A
Hexachloroethane	ND<363	ND<318	ND<368	N/A	N/A
2-Methylphenol	ND<363	ND<318	ND<368	100	N/A
4-Methylphenol	ND<363	ND<318	ND<368	900	N/A
N-Nitrosodimethylamine	ND<363	ND<318	ND<368	N/A	N/A
N-Nitroso-di-n-propylamine	ND<363	ND<318	ND<368	N/A	N/A
Phenol	ND<363	ND<318	ND<368	30	N/A
Benzoic Acid	ND<363	ND<795	ND<921	2700	N/A
Bis (2-chloroethoxy) methane	ND<363	ND<318	ND<368	N/A	N/A
4-Chloroaniline	ND<363	ND<318	ND<368	220	N/A
4-Chloro-3-methylphenol	ND<363	ND<318	ND<368	240	N/A
2,4-Dichlorophenol	ND<363	ND<318	ND<368	400	N/A
2,6-Dichlorophenol	ND<363	ND<318	ND<368	N/A	N/A
2,4-Dimethylphenol	ND<363	ND<318	ND<368	N/A	N/A
Hexachlorobutadiene	ND<363	ND<318	ND<368	N/A	N/A
Isophorone	ND<363	ND<318	ND<368	4400	N/A
2-Methylnapthalene	ND<363	ND<318	ND<368	36,400	N/A
Napthalene	945	ND<318	ND<368	13,000	200
Nitrobenzene	ND<363	ND<318	ND<368	200	N/A
2-Nitrophenol	ND<363	ND<318	ND<368	330	N/A
1,2,4-Trichlorobenzene	ND<363	ND<318	ND<368	3400	N/A
2-Chloroaphthalene	ND<363	ND<318	ND<368	N/A	N/A
Acenaphthene	ND<363	ND<318	ND<368	90,000	400
Acenaphthylene	ND<363	ND<318	ND<368	41,000	N/A
4-Chlorophenyl phenyl ether	ND<363	ND<318	ND<368	N/A	N/A
Dibenzofuran	ND<363	ND<318	ND<368	6200	N/A
Diethyl phthalate	ND<363	ND<318	ND<368	7100	N/A
Dimethyl phthalate	ND<908	ND<795	ND<921	2000	N/A
2,4-Dinitrophenol	ND<363	ND<318	ND<368	200	N/A
2,4-Dinitrotoluene	ND<363	ND<318	ND<368	N/A	N/A
2,6-Dinitrotoluene	ND<363	ND<318	ND<368	1000	N/A
Flourene	365	ND<318	ND<368	350,000	1,000
Hexachlorocyclopentadiene	ND<363	ND<318	ND<368	N/A	N/A
2-Nitroaniline	ND<908	ND<795	ND<921	430	N/A

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LaBella Test Pit Soil Sample Results (continued) USEPA Method 8270

				NYSDEC TAGM 4046	NYSDEC STARS TCLP
				Soil Cleanup Objective	Alternative
	LBA TP#1	LBA TP#10	LBA TP#6	to Protect	Guidance
	(0'-2')	(3')	(4')	Groundwater Quality	Value
3-Nitroaniline	ND<908	ND<795	ND<921	500	N/A
4-Nitroaniline	ND<908	ND<795	ND<921	N/A	N/A
4-Nitrophenol	ND<908	ND<795	ND<921	100	N/A
2,4,6-Trichlorophenol	ND<363	ND<318	ND<368	N/A	N/A
2,4,5-Trichlorophenol	ND<908	ND<795	ND<921	100	N/A
4-Bromophenyl phenyl ether	ND<363	ND<318	ND<368	N/A	N/A
Di-n-butyl phthalate	ND<363	ND<318	ND<368	8100	N/A
4,6-Dinitro-2-methylphenol	ND<908	ND<795	ND<921	N/A	N/A
Flouranthene	1900	ND<318	2590	1,900,000	1,000
Hexachlorobenzene	ND<363	ND<318	ND<368	1400	N/A
N-nitrosodiphenylamine	ND<363	ND<318	ND<368	N/A	N/A
Pentachlorophenol	ND<908	ND<795	ND<921	1000	N/A
Anthracene	495	ND<318	ND<368	700,000	1,000
Phenanthrene	1900	ND<318	554	220,000	1,000
Benzidine	ND<908	ND<795	ND<921	N/A	N/A
Benzo (a) anthracene	835	ND<318	1990	3000	0.04
Bis (2-ethylhexyl) phthalate	ND<363	ND<318	ND<368	435,000	N/A
Butylbenzylphthalate	ND<363	ND<318	ND<368	122,000	N/A
Chrysene	856	ND<318	1950	400	0.04
3,3'-Dichlorobenzidine	ND<363	ND<318	ND<368	N/A	N/A
Pyrene	1530	ND<318	2970	665,000	1,000
Benzo (b) flouranthene	954	ND<318	3790	1100	0.04
Benzo (k) flouranthene	1470	ND<318	2610	1100	0.04
Benzo (g,h,I) perylene	580	ND<318	2240	800,000	0.04
Benzo (a) pyrene	919	ND<318	1700	11,000	0.04
Dibenz (a,h) anthracene	ND<363	ND<318	630	165,000,000	1,000
Di-n-octyl phthalate	ND<363	ND<318	ND<368	120,000	N/A
Indeno (1,2,3-cd) pyrene	576	ND<318	2220	3200	0.04

All sample results and guidance values are listed in ug/kg = pbb

ND = Not Detected

N/A = Not applicable

Bold denotes constituents above NYSDEC Guidance Values

As noted in the table above there were levels of NYSDEC regulated SVOC's detected in the soil samples from LBATP #1 at 0'-2' and from LBATP #6 at 4' that exceed NYSDEC STARS Guidance values for SVOC's. The suite of SVOCS that were detected are the Polycyclic Aromatic Hydrocarbons. These levels and types of SVOC's may be beneath NYSDEC Spill Inactivation Site Specific Risk Based Guidance Values, based on the fact that they all have very low volatilization factors, and some are even solids at ambient temperatures. These risk-based calculations could be completed when more detailed development plans (ie. Final elevations, depth of filling, and future use of this portion of the Site) have been arrived at.

With the exception of layers of slag, ash, and cinders no other visible contamination, elevated PID readings, or other indications of evidence of impairment were encountered during the soil-boring program.

The analytical data from the shallow characterization samples analyzed for the 8 RCRA Metals is detailed in the table below:

Haley & Aldrich Soil Boring Sample Results (mg/kg) 8 RCRA Metals (Total) Table 15

	HA Boring #102 (0'-2')	HA Boring #107 (0'-2')	HA Boring #109 (0'-2')	HA Boring #110 (0'-2')	HA Boring #111 (2'-4')	HA Boring #112 (0'-2')	HA Boring #114 (2'-4')	HA Boring #116 (2'-4')	HA Boring #121 (0'-2')	NYSDEC TAGM 4046 Eastern USA Background	NYSDEC TAGM 4046 Recommended Soil Cleanup Objectives
Arsenic	3	4.19	10.3	6.19	1.95	52.5	3.91	2.81	5.76	3-12	7.5 or SB
Barium	77.8	23.3	82.6	106	27.8	92.1	245	238	42.8	15-600	300 or SB
Cadmium	0.651	< 0.599	1.39	0.7	0.434	1.7	< 0.575	< 0.39	<1.01	0.1-1	1 or SB
Chromium	8.7	8.6	17.6	12.2	8.3	29.9	5.06	3.75	12.5	1.5-40	10 or SB
Lead	5.04	26.4	129	79	7.51	102	19	< 0.389	15.6	*	SB
Mercury	< 0.047	< 0.066	< 0.073	0.173	< 0.080	0.169	< 0.089	< 0.053	< 0.0908	0.001-0.2	0.1
Selenium	< 0.407	< 0.375	< 0.534	< 0.5	< 0.361	1.43	2.65	4.77	< 0.522	0.1-3.9	2 or SB
Silver	1.06	1.8	1.94	1.7	1.08	3.23	2.76	2.73	1.25	N/A	SB

^{*} Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm.

Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

All sample results and guidance values are listed in mg/kg=ppm

N/A - Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values

SB - Site Background

As detailed in the table above shallow soil samples from the boring generally exhibited low levels of the 8 RCRA metals, that are consistent with Eastern USA Background Levels as published in NYSDEC TAGM #4046. One sample exhibited elevated arsenic well above TAGM Cleanup Objectives and background, and two soil samples slightly exceeded TAGM Cleanup Objectives for Cadmium.

The analytical data from the shallow characterization samples analyzed for VOC's by USEPA Method 8260 + STARS is detailed in the table below:

Haley & Aldrich Soil Boring Sample Results (continued) USEPA Method 8260

	HA Boring #109 (0'-2')	HA Boring #110 (0'-2')	NYSDEC TAGM 4046 Soil Cleanup Objective to Protect Groundwater Quality	NYSDEC STARS TCLP Alternative Guidance Value
sec-Butylbenzene	ND<10.2	ND<8.07	24,910	100
p-Isopropyltoluene	ND<10.2	ND<8.07	10,570	100
n-Butylbenzene	ND<10.2	ND<8.07	17,620	100
Naphthalene	ND<25.4	ND<20.2	13,000	200

All sample results and guidance values are listed in ug/kg=ppb

ND = Not Detected

N/A = Not Available

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above shallow soil samples from the soil borings that were analyzed for VOC's by USEPA 8260+STARS did not exhibit levels of the targeted analytes above method detection limits.

The analytical data from the shallow characterization samples analyzed for PCB's by USEPA Method 8080 is detailed in the table below:

Haley & Aldrich Soil Boring Sample Results (ug/L)
PCB Analysis (USEPA Method 8080)
Table 17

	HA Boring #110 (0'-2')	HA Boring #111 (2'-4')	HA Boring #114 (2'-4')	HA Boring #117 (2'-4')	NYSDEC TAGM 4046 Soil Clean Up Objective to Protect Groundwater Quality
PCB 1016	ND	ND	ND	ND	10,000
PCB 1221	ND	ND	ND	ND	10,000
PCB 1232	ND	ND	ND	ND	10,000
PCB 1242	ND	ND	ND	ND	10,000
PCB 1248	ND	ND	ND	ND	10,000
PCB 1254	ND	ND	ND	ND	10,000
PCB 1260	ND	ND	ND	ND	10,000

All sample results and guidance values are listed in ug/L=ppb

ND= Not Detected

N/A = Not Applicable

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above shallow soil samples from the soil borings that were analyzed for PCB's by USEPA 8080 did not exhibit levels of the targeted analytes above method detection limits.

The analytical data from the shallow characterization samples analyzed for SVOC's by USEPA Method 8270 STARS is detailed in the table below:

Haley & Aldrich Soil Boring Sample Results (ug/kg)
USEPA Method 8270
Table 18

				·	NYSDEC STARS TCLP	NYSDEC TAGM 4046 Soil Cleanup
	HA Boring #109 (0'-2')	HA Boring #110 (0'-2')	HA Boring #111(2'-4')	HA Boring #114 (2'-4')		Objectives to Protect Groundwater Quality
Napthalene	585	ND<1590	ND<327	ND<343	200	13,000
Acenaphthene	ND<360	ND<1590	ND<327	ND<343	1000	90,000
Flourene	369	ND<1590	ND<327	ND<343	1000	350,000
Flouranthene	5590	ND<1590	ND<327	ND<343	1000	1,900,000
Anthracene	958	ND<1590	ND<327	ND<343	400	700,000
Phenanthrene	3460	ND<1590	ND<327	ND<343	1000	220,000
Benzo (a)						
anthracene	3480	ND<1590	ND<327	ND<343	0.04*	3,000
Chrysene	4050	ND<1590	ND<327	ND<343	0.04*	400
Pyrene	10,200	ND<1590	ND<327	ND<343	1000	665,000
Benzo (b)						
flouranthene	5240	ND<1590	ND<327	ND<343	0.04*	1,100
Benzo (k)						
flouranthene	2990	ND<1590	ND<327	ND<343	0.04*	1,100
Benzo (g,h,i)	1270	NID -1500	NID -227	NID -242	0.04*	900,000
perylene	1270	ND<1590	ND<327	ND<343	0.04*	800,000
Benzo (a) pyrene	2980	ND<1590	ND<327	ND<343	0.04*	11,000
Dibenz (a,h) anthracene	444	ND<1590	ND<327	ND<343	1000	165,000,000
Indeno (1,2,3-cd) pyrene	1260	ND<1590	ND<327	ND<343	0.04*	3,200

All sample results and guidance values are listed in ug/kg=ppb

N/A = Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table three of the four shallow soil samples from the soil borings that were analyzed for SVOC's by USEPA 8270+STARS did not exhibit levels of the targeted analytes above method detection limits.

One shallow sample from SB #109 exhibited elevated levels of NYSDEC regulated SVOC's above NYSDEC Guidance Values for soils. SB #109 was advanced in the south portion of the Site to the east of River Street along the Genesee River. The general area where SB #109 was advanced consists of a cinder and grass covered area that is used to store boats. The levels of SVOC's in this area are present at levels, which could represent a human health concern during construction activities. This area may warrant further characterization and possible remedial measures and/or engineering controls if future development plans involve this portion of the Site.

This area is designated as Area #4 and is depicted on Figure 9.

Analytical data generated from the Haley & Aldrich shared Soil Boring Study is included as Appendix 6.

VId. Groundwater Monitoring Wells

Fieldwork:

During the shared geotechnical and environmental soil boring program three of the soil borings were converted groundwater monitoring wells. Monitoring well locations were chosen based on the location of REC's from the Phase I ESA and on information that was gathered as a part of the test pitting study.

The location for the three monitoring wells were as follows:

- Location of historical railroad turntable from Phase I ESA; LBAMW #1
- In the area where slag had exhibited a sheen during the test pitting study; LBAMW #2
- Immediately topographically downgradient of former foundary at the Site; LBAMW #3

Monitoring wells were constructed in accordance with the monitoring well methodology section of the report. All of the wells were constructed with 10' screen sections, and were screened to intersect with the top of the water table (approximately 5'-10' below ground surface).

Monitoring well construction diagrams are included as Appendix 5.

Groundwater flow direction in this northern area (north of the east/west CSX Row) of the Site is to the east with a horizontal gradient of 0.028.

The analytical data from the groundwater samples analyzed for the 8 RCRA Metals is detailed in the table below:

Groundwater Monitoring Well Results (mg/L) 8 RCRA Metals Table 19

	LBA MW#1	LBA MW#2	LBA MW#3	NYSDEC Part 703 Groundwater Standard
Arsenic	< 0.005	0.009	0.019	0.025
Barium	1.11	0.178	0.233	1
Cadmium	< 0.005	< 0.005	< 0.005	0.01
Chromium	0.028	0.026	0.036	0.05
Lead	0.038	0.022	0.029	0.025
Mercury	< 0.0002	< 0.0002	< 0.0002	0.002
Selenium	< 0.005	0.015	< 0.005	0.01
Silver	< 0.010	< 0.010	< 0.01	0.05

All sample results and guidance values are listed in mg/L = ppm

N/A = Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Standards

As detailed in the table above, groundwater samples from the three monitoring wells exhibited low levels of the 8 RCRA metals that are generally below the NYSDEC Part 703 Groundwater Standards or exceed the standard only by a very small concentration.

The analytical data from the groundwater samples analyzed for VOC's by USEPA Method 8260 + STARS is detailed in the table below:

Groundwater Monitoring Well Results (ug/L) USEPA Method 8260 Table 20

	LBA MW#1	LBA MW#2	LBA MW#3	NYSDEC Part 703 Groundwater Standard
Bromodichloromethane	ND<2.00	ND<2.00	ND<2.00	50*
Bromomethane	ND<2.00	ND<2.00	ND<2.00	5
Bromoform	ND<2.00	ND<2.00	ND<2.00	50*
Carbon Tetrachloride	ND<2.00	ND<2.00	ND<2.00	5
Chloroethane	ND<2.00	ND<2.00	ND<2.00	5
2-Chlorotheyl Vinyl Ether	ND<2.00	ND<2.00	ND<2.00	N/A
Chloroform	ND<2.00	ND<2.00	ND<2.00	7
Dibromochloromethane	ND<2.00	ND<2.00	ND<2.00	50*
1,1-Dichloroethane	ND<2.00	ND<2.00	ND<2.00	5
1,2-Dichloroethane	ND<2.00	ND<2.00	ND<2.00	5
1,1-Dichloroethene	ND<2.00	ND<2.00	ND<2.00	N/A
trans-1,2-Dichloroethene	ND<2.00	ND<2.00	ND<2.00	N/A
1,2-Dichloropropane	ND<2.00	ND<2.00	ND<2.00	5
cis-1,3-Dichloropropene	ND<2.00	ND<2.00	ND<2.00	5
trans-1,3-Dichloroethene	ND<2.00	ND<2.00	ND<2.00	5
Methylene chloride	ND<5.00	ND<5.00	ND<5.00	5
1,1,2,2-Tetrachloroethane	ND<2.00	ND<2.00	ND<2.00	5
Tetrachloroethene	ND<2.00	ND<2.00	ND<2.00	N/A
1,1,1-Trichloroethane	ND<2.00	ND<2.00	ND<2.00	5
1,1,2-Trichloroethane	ND<2.00	ND<2.00	ND<2.00	5
Trichloroethene	ND<2.00	ND<2.00	ND<2.00	N/A
Vinyl Chloride	ND<2.00	ND<2.00	ND<2.00	2
Benzene	ND<0.700	ND<0.700	ND<0.700	1.0
Chlorobenzene	ND<2.00	ND<2.00	ND<2.00	5
Ethylbenzene	ND<2.00	ND<2.00	ND<2.00	5
Toluene	ND<2.00	ND<2.00	ND<2.00	5
m,p-Xylene	ND<2.00	ND<2.00	ND<2.00	5
o-Xylene	ND<2.00	ND<2.00	ND<2.00	5
Sytrene	ND<2.00	ND<2.00	ND<2.00	5
Acetone	ND<10.0	ND<10.0	ND<10.0	50*
Vinyl Acetate	ND<5.00	ND<5.00	ND<5.00	N/A
2-Butanone	ND<5.00	ND<5.00	ND<5.00	N/A
4-Methyl-2-pentanone	ND<5.00	ND<5.00	ND<5.00	N/A

Groundwater Monitoring Well Results (continued) USEPA Method 8260

	LBA MW#1	LBA MW#2	LBA MW#3	NYSDEC Part 703 Groundwater Standard
2-Hexanone (MEK)	ND<5.00	ND<5.00	ND<5.00	50*
Carbon Disulfide	ND<2.00	ND<2.00	ND<2.00	N/A
Methyl tert-Butyl Ether	ND<2.00	ND<2.00	ND<2.00	10
Isopropylbenzene	ND<2.00	ND<2.00	ND<2.00	5
n-Propylbenzene	ND<2.00	ND<2.00	ND<2.00	5
1,3,5-Trimethylbenzen	ND<2.00	ND<2.00	ND<2.00	5
tert-Butylbenzene	ND<2.00	ND<2.00	ND<2.00	5
1,2,4-Trimethylbenzene	ND<2.00	ND<2.00	ND<2.00	5
sec-Butylbenzene	ND<2.00	ND<2.00	ND<2.00	5
p-Isopropyltoluene	ND<2.00	ND<2.00	ND<2.00	5
n-Butylbenzene	ND<2.00	ND<2.00	ND<2.00	5
Naphthalene	15.2	ND<5.00	ND<5.00	10

All sample results and guidance values are listed in ug/L=ppb

ND = Not Detected

N/A = Not Available

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above groundwater samples from the three monitoring wells that were analyzed for VOC's by USEPA 8260+STARS did not exhibit levels of the targeted analytes above method detection limits. One exception was the compound napthalene in LBA MW #1. Napthalene was detected in this sample at 15 ug/L, however; the level of napthalene in the sample only exceeds the NYS Section 703 Groundwater standard by 5 ug/l. This low level of napthalene detected most likely corresponds to the detected level of napthalene in shallow soils from LBA TP#1, and may be associated with the historical use of this area of the Site as a railroad turntable.

This level of naphthalene will be well below NYSDEC Spill Inactivation Site Specific Criteria. These risk-based calculations can be completed for this area of the Site when more definite redevelopment plans have been arrived at for the Site.

The analytical data from the groundwater samples analyzed for PCB's by USEPA Method 8080 is detailed in the table below:

^{* =} Guidance Value

Groundwater Monitoring Well Results (ug/L) PCB Analysis (USEPA Method 8080) Table 21

	LBA MW#1	LBA MW#3	NYSDEC Part 703 Groundwater Standard
PCB 1016	ND	ND	0.1
PCB 1221	ND	ND	0.1
PCB 1232	ND	ND	0.1
PCB 1242	ND	ND	0.1
PCB 1248	ND	ND	0.1
PCB 1254	ND	ND	0.1
PCB 1260	ND	ND	0.1

All sample results and guidance values are listed in ug/L=ppb ND= Not Detected N/A = Not Applicable

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above groundwater samples from the two monitoring wells that were analyzed for PCB's by USEPA 8080 did not exhibit levels of the targeted analytes above method detection limits.

The analytical data from the groundwater samples analyzed for NYSDEC regulated Semi VOC's by USEPA Method 8270 STARS is detailed in the table below:

Groundwater Monitoring Well Results (ug/L) USEPA Method 8270 Table 22

	LBA MW#1	LBA MW#2	LBA MW#3	NYSDEC Part 703 Groundwater Standard
Napthalene	11.2	ND<10.0	ND<10.0	10
Acenaphthene	ND<10.0	ND<10.0	ND<10.0	20
Flourene	ND<10.0	ND<10.0	ND<10.0	50
Flouranthene	ND<10.0	ND<10.0	ND<10.0	50
Anthracene	ND<10.0	ND<10.0	ND<10.0	50
Phenanthrene	ND<10.0	ND<10.0	ND<10.0	50
Benzo (a) anthracene	ND<10.0	ND<10.0	ND<10.0	0.002 (ND)
Chrysene	ND<10.0	ND<10.0	ND<10.0	0.002 ND)
Pyrene	ND<10.0	ND<10.0	ND<10.0	50
Benzo (b) flouranthene	ND<10.0	ND<10.0	ND<10.0	0.002 (ND)

Groundwater Monitoring Well Results (ug/L) USEPA Method 8270 Table 22 (continued)

	LBA MW#1	LBA MW#2	LBA MW#3	NYSDEC Part 703 Groundwater Standard
Benzo (k) flouranthene	ND<10.0	ND<10.0	ND<10.0	0.002
Benzo (g,h,I) perylene	ND<10.0	ND<10.0	ND<10.0	5
Benzo (a) pyrene	ND<10.0	ND<10.0	ND<10.0	.002(ND)
Dibenz (a,h) anthracene	ND<10.0	ND<10.0	ND<10.0	50
Indeno (1,2,3-cd) pyrene	ND<10.0	ND<10.0	ND<10.0	0.002

All sample results and guidance values are listed in ug/L=ppb

N/A - Not Applicable

ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above groundwater samples from the three monitoring wells that were analyzed for SVOC's by USEPA 8270 did not exhibit levels of the targeted analytes above method detection limits, with the exception of the presence of naphthalene detected in MW#1. Napthalene was detected in MW#1 at a level of 11.2 ug/L.

This low level of Napthalene most likely corresponds to the detected level of Napthalene in shallow soils from LBA TP#1, and may be associated with the historical use of this area of the Site as a railroad turntable.

This exceeds NYSDEC Part 703groundwater standards by 1.2ug/L, but will be well below NYSDEC Spill Inactivation Site Specific Criteria. These risk-based calculations can be completed for this area of the site when more definitive redevelopment plans have been arrived at for the site.

Based on the analytical results from the monitoring well study in the northern portion of the Site there does not appear to be a Site wide impairment or remedial concern with regard to groundwater and future development of the Site.

Analytical data from the groundwater monitoring study is included as Appendix 7.

VIe. Hand Tool Advanced Test Pit Shallow Soil Sampling Study

Fieldwork:

In July and August 2000 LaBella Associates P.C. excavated ten shallow test pits, across the southern portion of the Site. These shallow test pit locations were selected to begin characterization of shallow soils along CSX Railroad property and other cinder base parking lot areas. Test pits were advanced at approximate 200'-250' intervals along these areas

LaBella excavated the shallow test pits and gathered information from the test pits in accordance with the Hand tool advanced Test Pits and soil sampling methodology detailed in Section IV of the report.

Direct-Push Geoprobe Soil Borings (continued)

Soil Boring Number	Location	Observation/Evidence of Impairment	Sample and Analytical Method
B -42 (GPMW -8) destroyed	West of CSXROW; East of RG&E Substation;	Medium sand and gravel, cinders to 4' BGS Compacted silt and clay to 14' BGS Saturated at 9'-10' BGS No Evidence of impairment or elevated PID readings	B-42-(0'-4'BGS) 8 RCRA Totals by USEPA 6010;PCB's by USPEA 8080

The analytical data from the geoprobe soil boring samples analyzed for the 8RCRA Metals is detailed in the table below:

LaBella Geoprobe Soil Sample Results (mg/kg) 8 RCRA Metals (Total) Table 26

	B-13 (4'-8')	B-19 (0'-1')	B-20 (0'-1)						B-23 (1'-4')		B-41 (0'-4')	B-42 (0'-4')		NYSDEC TAGM 4046 Recommended Soil Cleanup Objectives
Arsenic	4.51	217	20.4	8.88	140	16.5	91.2	55.1	5.57	< 0.367	6.97	6.8	3-12	7.5 or SB
Barium	60.6	109	129	61.9	63.1	72.9	179	72.1	93.8	12.7	80.2	59.4	15-600	300 or SB
Cadmium	0.564	<0.508	1.45	< 0.480	<0.503	<0.554	<0.558	< 0.507	<0.416	13.1	0.655	<.414	0.1-1	1 or SB
Chromium	18.4	9.32	11.8	10.2	15.7	7.41	15.5	7.98	14.2	9.38	17.4	9.44	1.5-40	10 or SB
Lead	73.4	107	177	77.4	91.3	80.9	127	496	10.2	15	14.8	7.51	*	SB
Mercury	0.357	0.164	0.06	< 0.054	0.233	<0.045	0.138	1.08	< 0.060	0.088	0.06667	< 0.0881	0.001-0.2	0.1
Selenium	< 0.502	3.06	1.36	0.664	<0.503	1.31	2.31	6.44	0.542	< 0.367	< 0.518	<.414	0.1-3.9	2 or SB
Silver	4.7	2.11	3.02	1.49	2.65	<1.11	2.22	2.46	1.22	1.79	1.94	1.21	N/A	SB

^{*} Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

All sample results and guidance values are listed in mg/kg=ppm
N/A - Not Applicable
All test pits are 0"-12" depth
ND = Not Detected

Bold denotes constituents above NYSDEC Guidance Values

Soil samples selected for laboratory analysis were generally selected at a depth at or in close proximity to the water table. As detailed in the table above the soil samples from the soil borings that were analyzed for VOC's by USEPA 8260 plus STARS did not exhibit levels of the targeted analytes above method detection limits with the exception of chlorbenzene in sample B-18 at a depth of 4'-8' BGS. This compound was detected at a level of 55.1 ug/kg, the corresponding soil cleanup objective as published in NYSDEC TAGM 4046 is 1700 ug/kg. As such, the detection of chlorobenzene in this soil sample does not appear to represent a remedial concern at this portion of the Site.

Additional samples were analyzed for NYSDEC STARS Memo #1 VOC's at several areas of the Site where previous investigation indicated the presence of a gasoline release, and at areas where REC's identified in the Phase I ESA were related to gasoline tanks. The analytical data from the geoprobe soil boring samples analyzed for gasoline related VOC's by USEPA Method 8021 is detailed in the table below:

LaBella Geoprobe Sample Results (ug/kg) USEPA Method 8021 Table 28

	B-15 (4'-8')	B-25 (4'-8')	B-27 (4'-8')	B-31 (8'-12')	B-33 (4'-8')	B-34 (4'-5.5')	B-36 (4'-5.5')	B-37 (4'-8')	NYSDEC STARS TCLP Alternative Guidance Value	NYSDEC TAGM 4046 Soil Clean Up Objective to Protect Groundwater Quality
Methyl tert-Butyl Ether	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	200	120
Benzene	ND<11.3	ND<8.38	ND<12.3	10.1	ND<10.1	ND<1,330	ND<10.2	ND<10.1	14	60
Toluene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	1,500
Ethylbenzene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	5,500
m,p-Xylene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	1,200
o-Xylene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	1,200
Isopropylbenzene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	4,000
n-Propylbenzene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	14,000
1,3,5-Trimethylbenzene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	17,000
tert-Butylbenzene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	N/A
1,2,4-Trimethylbenzene	16.4	ND<8.38	ND<12.3	ND<8.33	ND<10.1	32,300	ND<10.2	ND<10.1	100	13,000
sec-Butylbenzene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	24,000
p-Isopropyltoluene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	ND<1,330	ND<10.2	ND<10.1	100	10,000
n-Butylbenzene	ND<11.3	ND<8.38	ND<12.3	ND<8.33	ND<10.1	2,730	ND<10.2	ND<10.1	100	17,000
Naphthalene	ND<56.7	' ND<41.9	ND<61.7	ND<41.7	ND<50.3		ND<50.8	ND<50.7	200	13,000

All sample results and guidance values are listed in ug/kg = ppb

ND = Not Detected

N/A = Not Available

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above the soil samples from the soil borings that were analyzed for PCB's by USEPA 8080 did not exhibit levels of the targeted analytes above method detection limits.

The analytical data from the geoprobe soil boring samples analyzed for SVOC's by USEPA Method 8270 STARS is detailed in the table below:

LaBella Geoprobe Soil Boring Sample Results (ug/kg) USEPA Method 8270 Table 30

	B-1 (8'12')	B-4 (8'-12')	B-13 (4'-8')	B-15 (4'-8')	B-25 (4'-8')	B-27 (4'-8')	B-31 (8'-12')	B-40 (8'-12')	NYSDEC STARS TCLP Alternative Guidance Value	NYSDEC TAGM 4046 Soil Cleanup Objectives to Protect Groundwater Quality
Napthalene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	200	13,000
Acenaphthene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	1000	90,000
Flourene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	1000	350,000
Flouranthene	ND<318	ND<335	490	ND<372	ND<348	ND<387	ND<349	ND<352	1000	1,900,000
Anthracene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	400	700,000
Phenanthrene	ND<318	ND<335	460	ND<372	ND<348	ND<387	ND<349	ND<352	1000	220,000
Benzo (a) anthracene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	0.04*	3,000
Chrysene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	0.04*	400
Pyrene	ND<318	ND<335	542	ND<372	ND<348	ND<387	ND<349	ND<352	1000	665,000
Benzo (b) flouranthene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	0.04*	1,100
Benzo (k) flouranthene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	0.04*	1,100
Benzo (g,h,I) perylene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	0.04*	800,000
Benzo (a) pyrene	ND<318	ND<335	ND<333	ND<372	ND<348	ND<387	ND<349	ND<352	0.04*	11,000
Dibenz (a,h) anthracene Indeno (1,2,3-cd) pyrene							ND<349 ND<349		1000 0.04*	165,000 3,200

All sample results and guidance values are listed in ug/kg= ppb $N/A = Not \ Applicable$ $ND = Not \ Detected$ Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above only one of the soil samples from the soil borings that were analyzed for SVOC's by USEPA 8270+STARS exhibited levels of the targeted analytes above method detection limits.

were flouranthene at 490 ug/kg, phenanthrene at 460 ug/kg, and chrysene at 542 ug/kg. The corresponding soil guidance value as published in NYSDEC STARS Memo #1 is 1000 ug/kg for all three compounds. As such, the detected level of these compounds in this soil sample do not appear to represent a remedial concern at this portion of the Site.

Analytical data generated from the LaBella geoprobe soil boring study are included as Appendix 11.

VIg. Geoprobe Groundwater Monitoring Wells

Fieldwork:

During the geoprobe soil boring program eight of the soil borings were converted groundwater monitoring wells. Monitoring well locations were chosen based on the location of REC's from the Phase I ESA and on information that was gathered during previous portions of the investigation.

The location for the eight monitoring wells were as follows:

GPMW# 1. Latta Road ROW Adjacent to Erdle Tool & Die

GPMW# 2. River Street ROW Adjacent to Tapecon

GPMW# 3. River Street ROW Adjacent to Pelican Marina UST Field

GPMW# 4. 490 River Street Adjacent to UST

GPMW# 5. Ontario Park Maintenance Bldg. Adjacent to UST's

GPMW# 6. In between City Warehouses

GPMW# 7. West of CSX ROW/East of RG&E Substation

GPMW# 8. West of CSX ROW/East of RG&E Substation (destroyed)

The locations of the eight monitoring wells are depicted on Figures 2 & 3.

Monitoring wells were constructed in accordance with the monitoring well methodology section of the report. All of the wells were screened to intersect with the top of the water table.

Geoprobe monitoring well construction diagrams are included as Appendix 10.

Groundwater flow direction in the northern area of the Site is to the east with a horizontal gradient of 0.028. Groundwater flow direction in the southern area of the Site is to the east with a horizontal gradient of 0.018.

Groundwater elevations, flow directions, and contours are illustrated on Figures 6&7.

The analytical data from the groundwater samples analyzed for VOC's by USEPA Method 8260 + STARS is detailed in the table below:

LaBella Geoprobe Groundwater Monitoring Well Results (ug/L) USEPA Method 8260 Table 31

	GP MW-1/B-2 46 Latta	GP MW-2/B-8 465 River Street	GP MW-5/B-29 4650 Lake Ave	GP MW-7/B-39	NYSDEC Part 703 Groundwater Standard
Bromodichloromethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	50*
Bromomethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Bromoform	ND<2.00	ND<2.00	ND<2.00	ND<2.00	50*
Carbon Tetrachloride	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Chloroethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5

LaBella Geoprobe Groundwater Monitoring Well Results (continued) USEPA Method 8260

	GP MW-1/B-2 46 Latta	GP MW-2/B-8 465 River Street	GP MW-5/B-29 4650 Lake Ave	GP MW-7/B-39	NYSDEC Part 703 Groundwater Standard
2-Chlorotheyl Vinyl Ether	ND<2.00	ND<2.00	ND<2.00	ND<2.00	N/A
Chloroform	ND<2.00	ND<2.00	ND<2.00	ND<2.00	7
Dibromochloromethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	50*
1,1-Dichloroethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
1,2-Dichloroethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
1,1-Dichloroethene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	N/A
trans-1,2-Dichloroethene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	N/A
1,2-Dichloropropane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
cis-1,3-Dichloropropene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
trans-1,3-Dichloroethene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Methylene chloride	ND<5.00	ND<5.00	ND<5.00	ND<5.00	5
1,1,2,2-Tetrachloroethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Tetrachloroethene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	N/A
1,1,1-Trichloroethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
1,1,2-Trichloroethane	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Trichloroethene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	N/A
Vinyl Chloride	ND<2.00	ND<2.00	ND<2.00	ND<2.00	2
Benzene	ND<0.700	ND<0.700	1.25	ND<0.700	1.0
Chlorobenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Ethylbenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Toluene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
m,p-Xylene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
o-Xylene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Sytrene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Acetone	109	ND<10.0	ND<10.0	ND<10.0	50*
Vinyl Acetate	ND<5.00	ND<5.00	ND<5.00	ND<5.00	N/A
2-Butanone	50.1	ND<5.00	ND<5.00	ND<5.00	N/A
4-Methyl-2-pentanone	ND<5.00	ND<5.00	ND<5.00	ND<5.00	N/A
2-Hexanone (MEK)	24.6	ND<5.00	ND<5.00	ND<5.00	50*
Carbon Disulfide	ND<2.00	ND<2.00	ND<2.00	ND<2.00	N/A
Methyl tert-Butyl Ether	ND<2.00	ND<2.00	ND<2.00	ND<2.00	10
Isopropylbenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
n-Propylbenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
1,3,5-Trimethylbenzen	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5

LaBella Geoprobe Groundwater Monitoring Well Results (continued) USEPA Method 8260

	GP MW-1/B-2 46 Latta	GP MW-2/B-8 465 River Street	GP MW-5/B-29 4650 Lake Ave	GP MW-7/B-39	NYSDEC Part 703 Groundwater Standard
tert-Butylbenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
1,2,4-Trimethylbenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
sec-Butylbenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
p-Isopropyltoluene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
n-Butylbenzene	ND<2.00	ND<2.00	ND<2.00	ND<2.00	5
Naphthalene	ND<5.00	ND<5.00	ND<5.00	ND<5.00	10

All sample results and guidance values are listed in ppb=ug/L

ND = Not Detected

N/A = Not Available

Bold denotes constituents above NYSDEC Guidance Values

* = Guidance Value

As detailed in the table above groundwater samples from the four monitoring wells that were analyzed for VOC's by USEPA 8260+STARS in general did not exhibit levels of the targeted analytes above method detection limits.

One exception consisted of the compounds acetone, 2-butanone, and 2-hexanone (MEK) in GPMW #1. None of these compounds are regulated groundwater contaminants in New York State. There are recommended levels for acetone and 2-Hexanone (MEK) for drinking water. Because the groundwater at the Site is not used a source of potable water, and because the compounds present are not otherwise regulated, the presence of these compounds does not appear to represent a remedial concern at the Site.

Benzene was detected in the groundwater sample from GPMW #5 at a level of 1.25 ug/l. This level of Benzene in the sample only exceeds the NYSDEC Part 703 Groundwater standard by 0.25 ug/l. This level of benzene will be well below NYSDEC Spill Inactivation Site Specific Criteria. These risk-based calculations can be completed for this area of the Site when more definite redevelopment plans have been arrived at for the Site.

Additional groundwater samples were analyzed for limited NYSDEC VOC's associated with gasoline releases at several areas of the Site. This limited VOC scan was selected at areas where previous investigation indicated the presence of a gasoline release, and at areas where REC's identified in the Phase I ESA were related to gasoline tanks. The analytical data from the geoprobe monitoring well groundwater samples analyzed for gasoline related VOC's by USEPA Method 8021 is detailed in the table below:

LaBella Geoprobe Groundwater Monitoring Well Results (ug/kg) USEPA Method 8021

Ta	ы	e	32
14	V.	•	24

	GP MW-3/B-17	GP MW-4/B-26	GP MW-6/B-34	NYSDEC Part 703 Groundwater Standards
Methyl tert-Butyl Ether	81.5	ND<2.00	ND<20.0	10
Benzene	ND<0.70	ND<0.70	100.0	1.0
Toluene	ND<2.00	ND<2.00	ND<20.0	5
Ethylbenzene	ND<2.00	ND<2.00	309.0	5
m,p-Xylene	ND<2.00	ND<2.00	90.5	5
o-Xylene	ND<2.00	ND<2.00	22.7	5
Isopropylbenzene	ND<2.00	ND<2.00	79.0	5
n-Propylbenzene	ND<2.00	ND<2.00	190.0	5
1,3,5-Trimethylbenzene	ND<2.00	ND<2.00	55.8	5
tert-Butylbenzene	ND<2.00	ND<2.00	ND<20.0	5
1,2,4-Trimethylbenzene	ND<2.00	ND<2.00	1160.0	5
sec-Butylbenzene	ND<2.00	ND<2.00	33.1	5
p-Isopropyltoluene	ND<2.00	ND<2.00	ND<20.0	5
n-Butylbenzene	ND<2.00	ND<2.00	99.2	5
Naphthalene	ND<5.00	ND<5.00	200.0	10

All sample results and guidance values are listed in ug/kg=ppb

ND = Not Detected

N/A = Not Available

Bold denotes constituents above NYSDEC Guidance Values

As detailed in the table above, numerous gasoline constituents were detected in the groundwater sample from GPMW #6. These compounds were detected at levels well above the Part 703-Groundwater Standards as published in NYSDEC STARS Memo #1. This monitoring well was installed to add definition to the petroleum release discovered at this area of the Site during the Bourne Test Pitting Study see Section (VIa).

Methyl tert-Butyl Ether (MTBE) was detected in the groundwater sample from GPMW #3. This level of MTBE is 71.5 ug/L above the Part 703 groundwater standards as published in NYSDEC STARS Memo #1. This level of MTBE will be well below NYSDEC Spill Inactivation Site Specific Criteria. These risk-based calculations can be completed for this area of the Site then more definite redevelopment plans have been arrived at for the Site.

The presence of MTBE in this well suggests a potential release from the nearby Pelican Marina underground storage tank field. This privately owned tank field is located approximately 40 feet to the west and hydraulically upgradient of GPMW #3.

The analytical data from the geoprobe monitoring well groundwater samples analyzed for SVOC's by USEPA Method 8270 STARS is detailed in the table below:



Appendix 3

Boring, Test Pit, and Monitoring Well Logs

LABEL	LA ASS	OCIAT	ES, P.C.	TEST PIT #1
300 STATI	E STREET			PROJECT # 99150
Rochester	, New York	14614		DATE: 1/11/00
PROJECT	:	Port of Ro	ochester	
LOCATION	N:	South Te	st Pit for Bourne	ELEVATION:
CLIENT:		City of Ro	ochester	
CONTRAC	CTOR:	Hickory H	lills	LABELLA REP: DEP
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
		i ;	Blacktop	0 ppm no odor
1			Gravel/Sub-base	0
				0 ppm no odor
2			·	
			cinders/fill mixed with foundry slag byproducts (blue with sulfur odor)	0 ppm no odor
3			Cinderstill mixed with foundry stag pyproducts (blue with suital odor)	о рри но осо
			·	
4				0 ppm no odor
5				
6	•		beginning of angled pour	0 ppm no odor
7	i		tie-back	0 ppm no odor
			groundwater level up to approx 7.5'	
8			concrete deck	0 ppm no odor
9				0 ppm no odor
10			concrete deck	0 ppm no odor
11				0 ppm no odor
			Test pit terminated at approx. 11'+/-	
12				
}				
13	<u> </u>	1		
	WATER LEV		GENERAL NOTES	
DATE	TIME*	DEPTH	20'x20'x11'	
	 	-	-	
-	 	1	-	
	J	1		
* Hrs. aft	er completio	n		TEST PIT #1

LABEI	LLA ASS	OCIAT	ES, P.C.	TEST PIT #2a
	E STREET			PROJECT # 99150
Rocheste	r, New York	14614		DATE: 1/12/00
PROJECT		Port of Ro	ochester	
LOCATIO	N:	Bourne T	est Pit #2a	ELEVATION:
CLIENT:		City of Ro		
CONTRAC	CTOR:	Hickory H	lills	LABELLA REP: DEP
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
			Blacktop	0 ppm no odor
1	:		Gravel/Sub-base	
				0 ppm no odor
2				
			silt/cinders and misc. fill	
3				0 ppm no odor
1				
4		;	start of petroleum odor in fill	.
				no instrument medium/strong odor
5				
			tie- back/concrete dead man	
6			groundwater at approx 5.5'	no instr stronger petrol. Odor
				on west side of sheet piles
7				
8			test pit terminated at approximately 7.5'-8'	no instrument no odor
9				
10				
11		}		
12				
13	<u> </u>			
	WATER LEV	EL T	GENERAL NOTES	
DATE	TIME*	DEPTH	20'x20'x11'	
ļ				
ļ	 	ļ		
<u></u>	<u> </u>	<u></u>		
* Hrs. afte	er completion			TEST PIT #2a

LADE	11 4 400	CLAT	EC DC	TEST DIT #0b
į		OCIAI	ES, P.C.	TEST PIT #2b
	E STREET			PROJECT # 99150
	r, New York	,		DATE: 1/12/00
PROJECT		Port of Ro		
LOCATIO	•		est Pit #2b	ELEVATION:
CLIENT:		City of Ro		
CONTRAC	<i>; ,</i>	Hickory H	ills	LABELLA'REP: DEP
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE	• • • <u>-</u>	
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
			Blacktop	0 ppm no odor
1				
			gravel	0 ppm no odor
2				
			silt/cinders	
3			with some gravel	0 ppm no odor
		Ì	foundry slag	
4			·	0
				0 ppm no odor
5				
				0 ppm no odor
6				0 ppm no odor
_			the standard and the standard standard of standing water	
7			saturated zone at 6.5-7' but test pit stayed ahead of standing water	
				slight odor but no screen 0 ppm
8			test wit terminated at approximately 9.5'	signi odor but no screen o ppm
			test pit terminated at approximately 8.5'	
9				
40				
10				
11]
12				
14				
				· ·
13	L	1	OFFICIAL MOTEO	
	WATER LEV		GENERAL NOTES 20'x20'x11'	
DATE	TIME*	UEPIH		
		 		
	<u> </u>			
<u> </u>	L	l		
Hrs. afte	er completion			TEST PIT #2b

LARE	ΙΙΔ Δ S S	SOCIAT	ES, P.C.	TEST PIT #	3A
	TE STREET	JOULA	20,1.0.	PROJECT #	İ
	er, New York	14614		DATE: 1/12	
PROJECT		Port of Re	ochester		
LOCATIO			Test Pit #3A	ELEVATION	J:
CLIENT:		City of Ro	:		
CONTRA		Hickory F		LABELLA'R	EP: DEP
EQUIPME		Backhoe			
SCALE		SAMPLE	,		1
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS		REMARKS
FEET	NUMBER	RANGE			
				0 ppm	no odor
1			former rail lines still in place under blacktop		
	·			0 ppm	no odor
2					
			fine sand fill		
3				0 ppm	no odor
4					
				0 ppm	no odor
5			fine sand fill		
6				0 ppm	no odor
7					
	,				
8			last 3" +/- of sand is darkly stained (gray/black)	0 ppm	no odor
			concrete slab		
9			concrete slab		
			concrete slab		
10			concrete slab	Ì	
11					ļ
12				1	
12					
		ļ			
13	I WATER LEVI	i =₁	GENERAL NOTES		
DATE	TIME*	DEPTH	GENERAL NOTES	1	
DATE	I IIVIC	DEPIN			
	 	 			
		-	1		
• Um -#-		i		TEST PIT #	3
I IIIS. ATG	er completion		<u> </u>	IIESI PII #	<u> </u>

LABELLA AS	SOCIAT	ES, P.C.	TEST PIT	Г#3В	\neg
300 STATE STREET			PROJECT	T # 99150	
Rochester, New York	14614		DATE: 1/1	12/00	
PROJECT:	Port of R	ochester			\neg
LOCATION:	Bourne 1	Test Pit #3B	ELEVATION	ON:	
CLIENT:	City of Ro	ochester .			-
CONTRACTOR:	Hickory H	fills	LABELLA	REP: DEP	f
EQUIPMENT:	Backhoe				╝
SCALE	SAMPLE				
IN SAMPLE	DEPTH	DESCRIPTION OF MATERIALS		REMARKS	t
FEET NUMBER	RANGE				_
		Blacktop	0 ppm	creosote odor	
1		former rail lines still in place under blacktop			
		former/active electrical conduit	0 ppm	no odor	1
2					
		tayer of concrete			
3			0 ppm	no odor	ı
[fine sand - light brown			
4					
_			0 ppm	no odor	
5					
			0 ppm	no odor	
6			Оррии	no odoi	
7		+			
8		last 3" +/- of sand is darkly stained (gray/black)	0 ppm	no odor	ļ
		concrete slab	1.4		1
9		concrete slab			
		concrete slab			ļ
10		concrete slab		•	Ì
		14' west of retaining wall		,	
11			İ		-
12				-	
13	<u></u>				
WATER LEV	EL	GENERAL NOTES			
DATE TIME*	DEPTH	20'x20'x11'			
	· .				-
	<u> </u>				.
					\Box
* Hrs. after completion	1		TEST PI	T#3	

LABE	LABELLA ASSOCIATES, P.C.				
			PROJECT # 99150		
Rochester, New York 14614				DATE: 1/12/00	
PROJECT: Port of Rochester					
		Bourne 1	Fest Pit #4	ELEVATION:	
		City of Ro	ochester		
		Hickory H		LABELLA REP: DEP	
EQUIPMENT: Backhoe					
SCALE		SAMPLE			
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS	
FEET	NUMBER	RANGE			
			grass	0 ppm no odor	
1			silt and topsoil		
				0 ppm no odor	
2			fine sand and silt with some foundry slag		
3				0 ppm no odor	
4			fine sand and silt with some foundry slag		
,				0 ppm no odor	
5					
6			fine sand and silt with some foundry slag	0 ppm no odor	
7	<u> </u> 				
_			6	0 ppm no odor	
8			fine sand and silt with some foundry slag	0 ppm no odor	
			·		
9					
10					
10					
11					
<u>''</u>		'			
12					
''-					
13					
	WATER LEVEL GENERAL NOTES				
DATE	TIME*	1	20'x20'x11'		
		·			
* Hrs. afte	er completion	•		TEST PIT #3	
				·	

LABEI	LABELLA ASSOCIATES, P.C.				
i				PROJECT # 99150	
				DATE: 2/28/00	
PROJECT: Port of Rochester					
				ELEVATION:	
CLIENT:					:
CONTRAC	CTOR:	Hickory H	lills		LABELLA REP: DEP
EQUIPME	NT:	Backhoe			
SCALE		SAMPLE			
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERI	ALS	REMARKS
FEET	NUMBER	RANGE			
		i .	blacktop		0 ppm no odor
1			red/black cinders, misc. fill		
					0 ppm no odor
2			medium/coarse brown s	ano	
			railroad ties		0 ppm no odor
3			Tamoau nes		lo ppin no odoi
4			· ·		
		,	water infiltration (perched? Actual water table?)		0 ppm no odor
5			•		
6		,	running sand/GW at 6'	1	0 ppm no odor
				•	
7		ļ			
					<u> </u>
8					
9					
10	}				
11	1				
12	1				
1					
13 WATER LEVEL			GENERAL NOTES		
DATE	TIME*	DEPTH	SEITE PE NOTES		
DATE	TITIL	<u> </u>	1		
	 		1		
* Hrs. ette	er completion	·	1		TEST PIT #1

LABELLA ASSOCIATES, P.C. TEST PIT #2 PROJECT # 99150 300 STATE STREET DATE: 2/28/00 Rochester, New York 14614 Port of Rochester PROJECT: ELEVATION: LOCATION: CLIENT: LABELLA REP: DEP Hickory Hills CONTRACTOR: Backhoe EQUIPMENT: SAMPLE SCALE REMARKS DESCRIPTION OF MATERIALS DEPTH IN SAMPLE RANGE FEET NUMBER no odor 0 ppm blacktop red silt/sand with gravel 0 ppm no odor gray medium/coarse sand 2 0 ppm no odor medium gravel 3 perched?/actual groundwater 0 ppm no odor 5 standing groundwater 0 ppm no odor 6 7 8 9 10 11 12 13 GENERAL NOTES WATER LEVEL TIME* DEPTH DATE

* Hrs. after completion

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TEST PIT #2

LABEI	LABELLA ASSOCIATES, P.C. TEST PIT #3				
			ROJECT # 99150		
			DATE: 2/28/00		
	PROJECT: Port of Rochester				
			ELEVATION:		
CUENT:					
CONTRAC	CTOR:	Hickory H	iills	LABELLA REP: DEP	
EQUIPME		Backhoe			
SCALE		SAMPLE			
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS	
FEET	NUMBER	RANGE			
			blacktop	0 ppm no odor	
1			red silt/sand with gravel		
			brown/gray sand	0 ppm no odor	
2			,		
			•		
3				0 ppm no odor	
4					
				0 ppm no odor	
5					
6			some gravel	0 ppm no odor	
				0 ppm no odor	
7			running sand/groundwater		
8				0 ppm no odor	
			·		
9	-				
10	-				
11	-				
12	-				
1 '					
13	13				
	WATER LEV	1	GENERAL NOTES		
DATE	TIME*	DEPTH	-		
-	_	 	-		
-	 	 	-{		
	<u> </u>	1	-		
* Hrs. af	* Hrs. after completion			TEST PIT #3	

LABELLA ASSOCIATES, P.C.			TEST PIT #4	
1			PROJECT # 99150	
				DATE: 2/28/00
PROJECT	 `:	Port of Ro	ochester	
LOCATION:				ELEVATION:
CLIENT:				
CONTRACTOR: Hickory Hills			LABELLA REP: DEP	
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		0 ppm no odor
			blacktop	ррт по очо
			white concrete miscellaneous fill	0 ppm no odor
			ITHISCENIANGUUS TIII	- re / - re
2		[some blue slag (sulfur odor)	
3			red silt/sand	0 ppm no odor
4			brown medium sand	
			layer of dense slag	0 ppm no odor
5		1		
	İ			
6			standing water	0 ppm no odor
7				
	ŀ			
8	-		·	
9				
10				
11	1			
12				
12	1			
13_			·	
WATER LEVEL		/EL	GENERAL NOTES	
DATE	TIME*	DEPTH		
]	
			_[
· Hrs. et	ter completio	n		TEST PIT #4

LABE	LLA ASS	OCIATE	ES, P.C.	TEST PIT #5
300 STAT	E STREET	PROJECT # 99150		
Rocheste	r, New York	DATE: 2/28/00		
PROJECT	T:	Port of Ro	chester	
LOCATIO	N:			ELEVATION:
CUENT:				
CONTRA	CTOR:	Hickory H	ils	LABELLA REP: DEP
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS .	REMARKS
FEET	NUMBER	RANGE		0 ppm no odor
		1 1	grass	о ррп но одо
1			sit/sand with some gravel	0 ppm no odor
			brown sand	
2			BIOWIT SAITS	
3	}			0 ppm no odor
	1			
4			silt/sand with some clay	
				0 ppm no odor
5				
6				0 ppm no odor
7				0 ppm no odor
88	-		day I	0 ppm no odor
9	-		fine sand with some gravel	0 ppm no odor
				о ррш но одог
10	1		some sandstone	
11			Some salidations	0 ppm no odor
 	1			
12				
	1			
13	<u></u> .			
	WATER LE	/EL	GENERAL NOTES	
DATE	TIME*	DEPTH	·	
		<u> </u>		
	ļ			
	<u>L</u>			
+ Hrs. at	ter completio	n		TEST PIT #5

300 STATE STREET PROJECT: PORT of Rochester Rochester, New York 14614 PROJECT: PORT of Rochester LOCATION: CUENT: CONTRACTOR: Hickory Hills COURTER: 22800 LABELLA REP: DEP SCALE IN SAMPLE IN SAMPLE IN INJURE RANGE 1 1 2 2 3 4 4 5 5 6 6 8 7 7 8 8 8 9 9 10 0 8 9 10 0 8 10 10 10 10 10 10 10 10 10 10 10 10 10	LABEL	LA ASS	OCIAT	ES, P.C.	TEST PIT #6
Rochester, New York 14614 PROJECT: Port of Rochester LOCATION: CUENT: COURT COURT Backhoe SCALE IN SAMPLE IN PERT NUMBER PANSE 1 PROJECT: Backhoe 1 PORT of SAMPLE IN SA			PROJECT # 99150		
PROJECT: Port of Rochester LOCATION: CUENT: CONTRACTOR: Hickory Hills COUTRACTOR: Backhoe SCALE IN SAMPLE IN SAMPLE IN RANGE 1 OPEN DEPTH DESCRIPTION OF MATERIALS REMARKS			DATE: 2/28/00		
COLENT: CONTRACTOR: Hickory Hills COURTACTOR: Backhoe SCALE IN SAMPLE DEPTH DESCRIPTION OF MATERIALS PEET NUMBER PANGE 1 Draws red sitt gravel miscellaneous fill blue suffur slag miscellaneous fill blue suffur slag miscellaneous white slag at third location groundwater with sheen 7 8 9 10 10 11 10 11 11 11 11 11 11 11 11 11					
CUENT: CONTRACTOR: Hickory Hills COURMENT: Backhoe SCALE IN SAMPLE IN SAMPLE IN PERT NUMBER PANSE 1 2					ELEVATION:
CONTRACTOR: Hickory Hills EQUIPMENT: Backhoe SCALE IN SAMPLE IN SAMPLE IN NUMBER RANGE 1 DESCRIPTION OF MATERIALS FEET NUMBER RANGE 2 Miscellaneous fill blue suffur slag miscellaneous fill blue suffur slag miscellaneous white slag 4 Fermination at 4' due to slag 5 Grown discellaneous white slag 6 Grown discellaneous white slag 7 Range 10 Grown discellaneous white slag 11 Grown discellaneous white slag 12 Grown discellaneous white slag 13 Au Hermination at 4' due to slag 14 Grown discellaneous white slag 15 Grown discellaneous white slag 16 Grown discellaneous white slag 17 Grown discellaneous white slag 18 Grown discellaneous white slag 19 Grown discellaneous white slag 10 Grown discellaneous white slag 11 Grown discellaneous white slag 12 Grown discellaneous white slag 13 Grown discellaneous white slag 14 Grown discellaneous white slag 15 Grown discellaneous white slag 16 Grown discellaneous white slag 17 Grown discellaneous white slag 18 Grown discellaneous white slag 19 Grown discellaneous white slag 10 Grown discellaneous white slag 11 Grown discellaneous white slag 12 Grown discellaneous white slag 13 Grown discellaneous white slag 14 Grown discellaneous white slag 15 Grown discellaneous white slag 16 Grown discellaneous white slag 17 Grown discellaneous white slag 18 Grown discellaneous white slag 19 Grown discellaneous white slag 10 Grown discellaneous white slag 10 Grown discellaneous white slag 11 Grown discellaneous white slag 12 Grown discellaneous white slag 13 Grown discellaneous white slag 14 Grown discellaneous white slag 15 Grown discellaneous white slag 16 Grown discellaneous white slag 17 Grown discellaneous white slag 18 Grown discellaneous white slag 19 Grown discellaneous white slag 10 Grown discellaneous white slag 10 Grown discellaneous white slag 10 Grown discellaneous white slag 10 Grown discellaneous white slag 17 Grown discellaneous white slag 18 Grown discellaneous white slag 19 Grown discellaneous white slag 10 Grown discella					
EQUIPMENT: Backhoe SCALE SAMPLE SAMPLE DESCRIPTION OF MATERIALS REMARKS FEET NUMBER FANGE Orass red silt gravel miscellaneous fill 1		CTOR:	Hickory H	ills	LABELLA REP: DEP
SCALE IN SAMPLE DEPTH DESCRIPTION OF MATERIALS REMARKS PREST NUMBER PANGE grass red silt gravel miscellaneous fill blue sulfur slag miscellaneous fill blue sulfur slag miscellaneous white slag termination at 4' due to slag termination at 4' due to slag at third location groundwater with sheen groundwater with sheen 10 11 11 11 12 13 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18					
N SAMPLE DEPTH DESCRIPTION OF MATERIALS REMARKS PREST NUMBER RANGE grass red silt gravel miscellaneous fill blue sulfur slag miscellaneous fill termination at 4' due to slag miscellaneous white slag at third location groundwater with sheen production groundwater with sheen					
FEET NUMBER RANGE grass red sitt grave! miscellaneous fill blue suffur stag miscellaneous fill termination at 4' due to slag miscellaneous white slag groundwater with sheen groundwater with sheen 10 11 11 11 11 11 11 11 11 1	- 1	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
red silt gravel miscellaneous fill blue suffur slag miscellaneous fill termination at 4' due to slag miscellaneous white slag at third location groundwater with sheen 7 8 9 10 11			RANGE		
miscellaneous fill blue sulfur slag miscellaneous fill termination at 4' due to slag miscellaneous white slag at third location groundwater with sheen 7 8 9 10 11				grass	
blue suffur slag miscellaneous fill termination at 4' due to slag miscellaneous white slag at third location groundwater with sheen 7 8 9 10	11			red silt gravel	
miscellaneous fill termination at 4' due to slag miscellaneous white slag at third location groundwater with sheen 7 8 9 10				miscellaneous fill	
termination at 4' due to slag miscellaneous white slag at third location groundwater with sheen 7 8 9 10	2			blue suffur slag	
termination at 4' due to slag miscellaneous white slag at third location groundwater with sheen 8 9 10 11				miscellaneous fill	
miscellaneous white slag at third location groundwater with sheen 8 9 10	3				
miscellaneous white slag at third location groundwater with sheen 8 9 10					
at third location groundwater with sheen 8 9 10 11	4			termination at 4' due to slag	
at third location groundwater with sheen 8 9 10 11					
groundwater with sheen 7 8 9 10	5				
7 8 9 10 11 11 11 1 1 1 1 1 1 1 1 1 1 1 1 1					
8 9 10	6		[groundwater with sheen	
8 9 10					
	7				
10 11	8	1	}		
10 11	_		İ		
11	<u> </u>	}			
11		1			
	10	1			
	,				
12	<u> </u>	1		·	
	12				• •
	- <u></u> -	1			
13	13				
WATER LEVEL GENERAL NOTES		WATER LEV	EL.	GENERAL NOTES	
DATE TIME* DEPTH	1	T	i i		
		T .	1		
]	
*Hrs. after completion TEST PIT #6	* Hrs. aft	er completion	1		TEST PIT #6

LABE	LLA ASS	TEST PIT #7		
1	E STREET	PROJECT # 99150		
Rocheste	r, New York	DATE: 2/28/00		
PROJECT		Port of Ro	ochester	
LOCATIO	N:			ELEVATION:
CLIENT:			·	İ
CONTRAC	CTOR:	Hickory H	titls	LABELLA REP: DEP
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
			grass	0 ppm sulfur odor
1			miscellaneous silt/gravel	
				0 ppm sulfur odor
2			blue slag	
			miscellaneous fill- brick/slag/concrete	10
3				0 ppm sulfur odor
4			black layer	0 ppm sulfur odor
			Lugtor	o ppini suliui odol
5			water	
6				0 ppm sulfur odor
6				
7			miscellaneous fill	0 ppm sulfur odor
<u> </u>				
8				
	1			
9				
	1			
10				
]			
11	}			
12				
13	<u></u>	<u> </u>		
WATER LEVEL		EL	GENERAL NOTES	
DATE	TIME*	DEPTH		
<u> </u>		<u> </u>	_	
<u></u>		ļ		
		<u> </u>	_	
· Hrs. aft	er completion			TEST PIT #7

LABE	LLA ASS	SOCIAT	ES, P.C.	TEST PIT #8
300 STAT	E STREET	PROJECT # 99150		
Rocheste	r, New York	DATE: 2/28/00		
PROJECT	Г:	Port of Ro		
LOCATIO	N:		•	ELEVATION:
CLIENT:				
CONTRA	CTOR:	Hickory F	lills	LABELLA REP: DEP
EQUIPME	NT:	Backhoe		
SCALE	ı	SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
			grass	0 ppm sulfur odor
1			miscellaneous fill - slag/brick	
			4	0 ppm sulfur odor
2			hts. t. fine pah (oil)	
_			black fine ash/silt	0 ppm sulfur odor
3		,	slag miscellaneous fill	o ppin Sandroden
		İ	say miscenarieous iii	
4				0 ppm sulfur odor
5]		groundwater	''
	ŧ			
6				0 ppm sulfur odor
	1		<u> </u>	
7			miscellaneous fill	0 ppm sulfur odor
]			
8				
9				
10				
11	-			
12	-			
13				
	WATER LEV		GENERAL NOTES	
DATE	TIME*	DEPTH	-	
ļ	 	 	-	
-	-	 	-	
	<u>L</u>	<u> </u>	-	TEAT 0.7
* Hrs. af	ter completion	1		TEST PIT #8

LABEL	LA ASS	OCIATI	ES, P.C.	_	TEST PIT #	•
00 STATE STREET						99150
Rochester, New York 14614						00
PROJECT	:	Port of Ro	chester			
OCATIO	V :				ELEVATION	ł:
CLIENT:						
CONTRAC	CTOR:	Hickory H	ills		LABELLA R	EP: DEP
QUIPME	NT:	Backhoe				
SCALE		SAMPLE				
IN	SAMPLE	DEPTH		DESCRIPTION OF MATERIALS		REMARKS
FEET	NUMBER	RANGE			0 ppm	sulfur odor
		1	grass		ррш	sunui odoi
11			sand		0 ppm	sulfur odor
2						
3			red slag - miscella	aneous fill	0 ppm	sulfur odor
		ļ	and blue slag			
4	!					
					0 ppm	sulfur odor
5						,
6			ash		0 ppm	sulfur odor
7					0 ppm	sulfur odor
8			•		0.000	sulfur odor
	ļ				0 ppm	Sullui Odol
9	-					
40					0 ppm	sulfur odor
10	1		standing water (♦ no sheen)		
11				•	0 ppm	sulfur odor
<u> </u>	1					
12						
	1					
13						
	WATER LE	/EL	_	GENERAL NOTES		
DATE	TIME*	DEPTH	_		İ	
	<u> </u>		_			
	ļ		4			
	<u> </u>		1			
Hrs. af	ter completio	n	<u> </u>		TEST PIT	49

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LARELI	ABELLA ASSOCIATES, P.C.							
							PROJECT # 99150	
	300 STATE STREET						DATE: 2/2	
Rochester, I		Port of Ro						
PROJECT:		Port of Ho	cnester				ELEVATIO	on:
LOCATION:						•		
CLIENT:			illo				LABELLA	REP: DEP
CONTRACTO		Hickory H	uis					
EQUIPMENT	1:	Backhoe SAMPLE				<u> </u>		
SCALE	0.4.4B(5			DESCRIPTION	OF MATERIALS			REMARKS
	SAMPLE	DEPTH RANGE	Attempt 1	Attempt 2	Attempt 3	Attempt 4		
FEET N	NUMBER		grass	grass	grass		0 ppm	sulfur odor
			sand/silt	sand/silt	gravel	silt/fill	, ,	
1			Sandrain	red and blue slag	9 ,	red silt/fill	0 ppm	sulfur odor
		.		Tod and one one	concrete		' '	
2								
3			concrete slab	1		black cinders/fill	0 ppm	sulfur odor
			001101010	large frags				
4								
							0 ppm	sulfur odor
5				concrete slab		brown sand		
					•			:
6							0 ppm	no odor
		ļ						
7						gray fine sand	0 ppm	no odor
		ļ				very firm		
8			ļ			brown sand		
9		}					0 ppm	no odor
							-	
10						İ	0 ppm	no odor
11			1			no standing water	0 ppm	no odor
12								
							0 ppm	no odor
13		<u> </u>				hard sand/till	-	
			WATER LE	VEL	 	GENERAL NOTE	<u>s</u>	
DATE	TIME*	DEPTH						
			_					
			_				<u></u>	
* Hrs. after	completion				<u> </u>		TEST P	T#10

LABE	LLA ASS	OCIATI	S, P.C.	TEST PIT #11
	E STREET	PROJECT # 99150		
	r, New York	14614		DATE: 2/28/00
PROJECT		Port of Ro	chester	
LOCATIO	N:	•		ELEVATION:
CLIENT:				
CONTRA	CTOR:	Hickory Hi	ls	LABELLA REP: DEP
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE		
iΝ	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		0 ppm no odor
		1	grass sitt/sand - brown (some debris and concrete slabs)	о рриг по одог
1				0 ppm no odor
2				
3				0 ppm no odor
4				
	<u> </u>			0 ppm no odor
5				
				0 ppm no odor
6				o ppint no odor
7				0 ppm no odor
<u>'</u>				
8	}			
				0 ppm no odor
9				
10	_		↓	0 ppm no odor
1			gray silt (dense) and clay I	0
11	1			0 ppm no odor
12	1			0 ppm no odor
13			↓	,,,
	WATER LEV	/EL	GENERAL NOTES	
DATE	TIME	DEPTH		
		<u> </u>		
ļ	<u></u>	<u> </u>		
* Hrs. at	ter completio	n		TEST PIT #11

LABE	LLA ASS	OCIAT	ES, P.C.	•	TEST PIT #12
300 STAT	E STREET	PROJECT # 99150			
Rocheste	r, New York	DATE: 2/28/00			
PROJECT	·:	Port of Re	ochester		
LOCATIO	N:				ELEVATION:
CLIENT:			•		
CONTRAC	CTOR:	Hickory H	Hills		LABELLA REP: DEP
EQUIPME	NT:	Backhoe			
SCALE		SAMPLE			
IN	SAMPLE	DEPTH	DESCRIPTION	OF MATERIALS	REMARKS
FEET	NUMBER	RANGE	1st attempt	2nd attempt	
			grass	grass .	
1			brick/rock fragments	silt	
				miscellaneous slag	
2			miscellaneous fill		
3			blue/red slag		
					,
4					
]				brick	
5			concrete slab	concrete slab	
]			
6		ļ			
7					
8					
9]				
	ļ				
10]				
	1				
11]				
12		1			
13					
		W	VATER LEVEL	GENERAL NOTES	
DATE	TIME*	DEPTH	7		
		1			
		1			
	1				
· Hra aft	er completion				TEST PIT #12

TEST PIT #13 LABELLA ASSOCIATES, P.C. PROJECT # 99150 300 STATE STREET DATE: 2/29/00 Rochester, New York 14614 Port of Rochester PROJECT: ELEVATION: LOCATION: CLIENT: LABELLA REP: DEP CONTRACTOR: Hickory Hills Backhoe EQUIPMENT: SAMPLE SCALE DEPTH DESCRIPTION OF MATERIALS REMARKS SAMPLE IN FEET NUMBER RANGE gravel/sub-base 0 ppm no odor silt/sand with gravel no odor 0 ppm firm/dense hard fine sand 2 0 ppm no odor brick/concrete 3 brown sand 0 ppm no odor 5 0 ppm no odor 6 0 ppm no odor 7 black cinders 8 0 ppm no odor 9 0 ppm no odor 10 concrete slab 11 12 13 GENERAL NOTES WATER LEVEL DEPTH DATE TIME* TEST PIT #13 * Hrs. after completion

LAREI	LA ASS	TEST PIT #14		
1		PROJECT # 99150		
l	E STREET r, New York	DATE: 2/29/00		
PROJECT		Port of Ro		
LOCATIO		. 011 01 110		ELEVATION:
CLIENT:				
CONTRAC	CTOR:	Hickory Hi	lis	LABELLA REP: DEP
EQUIPME		Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
		1	gravel/sub-base	0 ppm no odor
1	!	ļ	niscellaneous fill (blue slag, gravel, sand, brick)	
				0 ppm sulfur odor
2				
				0 ppm sulfur odor
3				, , , , , , , , , , , , , , , , , , ,
4			·	
-				0 ppm sulfur odor
5	į			
	ĺ			
6	<u> </u>			0 ppm sulfur odor
]			
7_		ļ	standing water	0 ppm sulfur odor
8	_			
9	-			
10	1			
11	1			
12				
<u>''</u> -	1			
13				
	WATER LEV	'EL	GENERAL NOTES	
DATE	TIME*	DEPTH		
* Hrs. af	ter completion	1		TEST PIT #14

LAREI	LA ASS	CLATI	FS P.C.	TEST PIT #15
		PROJECT # 99150		
	E STREET	DATE: 2/29/00		
PROJECT	r, New York	Port of Ro		
LOCATIO		T OIL OI TIO	Wild Control of the C	ELEVATION:
CLIENT:			:	
CONTRAC	CTOR:	Hickory H	ills	LABELLA REP: DEP
EQUIPME		Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
			gravel/sub-base	
1			silt/sand gravel (fill)	
•				
2			concrete slab	
3		1 1	miscellaneous slag (white)	
			miscellaneous slag (iron)	
4				
5				
6				
7				
8	İ			
9				
			water	
10				
11_	_			
İ				
12	-			
13	<u> </u>	1		
	WATER LEV		GENERAL NOTES	
DATE	TIME*	DEPTH	1	
	 	 	1	
-	 	<u> </u>	-	
	<u> </u>	L	1	TEST DIT #15
* Hrs. af	ter completion	<u> </u>	<u></u>	TEST PIT #15

I ARFI	ΙΔΔSS	OCIATI	FS. P.C.		TEST PIT #16
ADELLA AGGOCIATES, 110.					PROJECT # 99150
		DATE: 2/29/00			
	r, New York	Port of Ro	ochooter .		
PROJECT		POR UI NO	Chester		ELEVATION:
LOCATION	N:				
CLIENT: CONTRAC	TOB:	Hickory H	lills		LABELLA REP: DEP
EQUIPME		Backhoe			
SCALE		SAMPLE			
IN	SAMPLE	DEPTH	DESCRIPTION	OF MATERIALS	REMARKS
FEET	NUMBER	RANGE			
			gravel	fill	0 ppm sulfur odor
1			silt/sand		
					0 ppm sulfur odor
2					
			miscellaneous slag		
3					0 ppm sulfur odor
4					
					0 ppm sulfur odor
5					
					0 ppm sulfur odor
6					o ppini sandi sasi
_					0 ppm sulfur odor
7			↓		
8			silty-clay (native)	↓	
<u> </u>		Ì	1		0 ppm no odor
9					
	1				0 ppm no odor
10					
11]				0 ppm no odor
12					
					0 ppm no odor
13	<u>.</u>	<u></u>	+		
	WATER LEV	EL .	GENE	RAL NOTES	
DATE	TIME*	DEPTH	_		
		<u> </u>	4		
	<u> </u>	<u> </u>	4		
 	<u> </u>		_		
" Hrs. at	er completion	1	<u> </u>		TEST PIT #16

LABE	LLA ASS	SOCIAT	S, P.C.	TEST PIT #17
	E STREET	PROJECT # 99150		
i	r, New York	DATE: 2/29/00		
PROJECT		Port of Ro	chester	
LOCATIO	N:			ELEVATION:
CLIENT:			•	
CONTRA	CTOR:	Hickory H	ls	LABELLA REP: DEP
EQUIPME	NT:	Backhoe		
SCALE		SAMPLE		
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
FEET	NUMBER	RANGE		
			grass	
1		:	opsoil/silt	0 ppm no odor
			nedium brown sand/silt	
2				0 ppm no odor
			ar the co	
3			gray-blue silty clay	0 ppm no odor
				рри по одог
4		}		
_		1		0 ppm no odor
5	1			1
6				
			·	0 ppm no odor
7				
	1			0 ppm no odor
8				
]			0 ppm no odor
9]			
				0 ppm no odor
10				
11				0 ppm no odor
12	_			
				0 ppm no odor
13		<u> </u>	▼	
-	WATER LEV		GENERAL NOTES	
DATE	TIME*	DEPTH		
		+		
	 	-		
ļ	<u></u>	1		
* Hrs. af	ter completio	n		TEST PIT #17

LABELLA ASSOCIATES, P.C. TEST PIT #18 PROJECT # 99150 300 STATE STREET DATE: 2/29/00 Rochester, New York 14614 PROJECT: Port of Rochester ELEVATION: LOCATION: CLIENT: LABELLA REP: DEP Hickory Hills CONTRACTOR: EQUIPMENT: Backhoe SAMPLE SCALE REMARKS SAMPLE DEPTH DESCRIPTION OF MATERIALS IN FEET NUMBER RANGE gravel 0 ppm sulfur odor silt/sand - gravel 0 ppm suffur odor 2 miscellaneous slag white, blue and green 3 0 ppm sulfur odor 4 0 ppm sulfur odor 6 0 ppm sulfur odor standing water 0 ppm sulfur odor 8 9 10 11 12 13 **GENERAL NOTES** WATER LEVEL DATE TIME" DEPTH TEST PIT #18 Hrs. after completion

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LABEL	LA ASS	OCIAT	ES, P.C.	TEST PIT #19
300 STATE	ESTREET			PROJECT # 99150
Rochester	, New York			DATE: 2/29/00
PROJECT:		Port of Ro	ochester	
LOCATION	4:			ELEVATION:
CLIENT:				
CONTRAC		Hickory H	ills	LABELLA REP: DEP
EQUIPMEN	NT:	Backhoe		
SCALE	_	SAMPLE	DESCRIPTION OF MATERIALS	REMARKS
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS	NEWARKS
FEET	NUMBER	RANGE	grass	
1			silt/sand	
 '				
2				
3				
			ig	
4			dense slag - white/blue	
5			standing water - some sheen	
66				
7				
8				
9				
10	•			
11				
''				
12				
13				
	WATER LEV	EL	GENERAL NOTES	
DATE	TIME*	DEPTH		
			·	
Hrs. afte	ar completion	1		TEST PIT #19

LABELI	LA ASS	OCIAT	ES, P.C.	TEST PIT #20	
300 STATE	STREET	PROJECT # 991	PROJECT # 99150		
Rochester,	New York	DATE: 2/29/00	DATE: 2/29/00		
PROJECT:		Port of Ro	chester		
OCATION:				ELEVATION:	
CLIENT:					
CONTRACT	OR:	Hickory F	fls	LABELLA REP:	DEP
QUIPMEN	T:	Backhoe			
SCALE		SAMPLE			5141DV0
	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS		EMARKS
FEET !	NUMBER	RANGE		0 ppm	no odor
			grass	Горрии	110 0001
			sill/sand/topsoil red coarse sand - waste fill	0 ppm	no odor
2			I		
			Ì	0 ppm	no odor
3					
				0 ppm	no odor
4					
			+		
5			0 ppm	no odor	
6			no slag (rocks)		
}				0 ppm	no odor
7					
8				0 ppm	no odor
9				0.000	no odor
				0 ppm	no odoi
10				0 ppm	no odor
				у рр	110 020
11				0 ppm	no odor
12			*		
13					
	VATER LEV	EL	GENERAL NOTES		
DATE	TIME*	DEPTH			
· Hrs. after	r completion	1		TEST PIT #20	

LABE	LLA ASS	OCIATI	ES, P.C.	TEST PIT #21	i
	E STREET			PROJECT # 9	9150
	r, New York	14614		DATE: 2/29/0	0
PROJECT		Port of Ro	chester		
LOCATIO	N:			ELEVATION:	
CLIENT:					
CONTRAC	CTOR:	Hickory H	ills	LABELLA RE	P: DEP
EQUIPME	NT:	Backhoe			
SCALE		SAMPLE			
IN	SAMPLE	DEPTH	DESCRIPTION OF MATERIALS		REMARKS
FEET	NUMBER	RANGE			
			asphalt - 2*	0 ppm	no odor
1			gravel		
			gray medium-fine sand	0 ppm	no odor
2				0 ppm	Creosote odor
				ррш	Oreosole odor
3				0 ppm	Creosote odor
4	-				
5			railroad ties	0 ppm	Creosote odor
6			concrete slab		
				0 ppm	Creosote odor
7					
8					
9					
10					
İ					
11	1				
12	1				
13		<u> </u>	GENERAL NOTES		
f	TIME*	DEPTH	GENERAL NOTES		
DATE	TIME	DEFIN			
-	 	-			
		1	1		
* Hre st	ter completion	-1	· · ·	TEST PIT #	21

LABELLA AS	SSOCIAT	ES, P.C.	TEST PIT #22	
300 STATE STREE	PROJECT # 99	150		
Rochester, New Yo	DATE: 2/29/00	ATE: 2/29/00		
PROJECT:	Port of R	ochester		
LOCATION:			ELEVATION:	
CLIENT:		•		
CONTRACTOR:	Hickory h	fills	LABELLA REP:	DEP
EQUIPMENT:	Backhoe			
SCALE	SAMPLE	_		25114016
IN SAMPL		DESCRIPTION OF MATERIALS		REMARKS
FEET NUMBE	R RANGE		0 ppm	no odor
		gravel	о рри	110 0001
1		sit/sand fill	0 ppm	no odor
			, , , , , , , , , , , , , , , , , , ,	
2		miscellaneous slag fragments (blue/white)	0 ppm	sulfur odor
3				
			0 ppm	šulfur odor
4				
5	-		0 ppm	sulfur odor
6		concrete/slag layer - hoe ram		
		standing water with sheen	0 _. ppm	sulfur odor
7				
8				
9				
10				
11			-	
12				
10				
13 WATER	EVEL	GENERAL NOTES		
DATE TIME		┪		
DATE INVIC	52, 11			
		1		
*Hrs. after comple	etion		TEST PIT #22	!

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CORE BORING REPORT

BORING NO.

ALDI	KICH	1			JKL	D	LAU	110	KE	LIONI		L		-101
										 			age 1	of 1
PROJEC	T	PORT OF									FILE NO.	70819-0		
LOCATIO		ROCHEST									ECT MGR.		ENTINE	
CLIENT		LABELLA								FIELD) REP.	R. DED		
CONTRA	CTOR	GEOLOGI	C ENTER	PRISE						DATE	STARTED	30-May		
DRILLE		L. TODD				_				DATE	FINISHED	30-May	-00	
Elevation		£	Datum			Borin	g Location							
Item		Casing	Sampl	ler Co	re Barrel	Rig M	lake & Mod						Drill Mu	
Туре		HAS	SS		NX	<u> </u>	Truck [Tripod		Cat-Head	Hammer			Sentonite
Inside Diaz		3-1/4	1-3/	· · · · · · · · · · · · · · · · · · ·	2		ATV [Geopr		Winch		afety		olymer
Hammer W		-	140			_	Track [Skid [] Air Tr	ack .	Roller Bit Cutting Hea		Oughnut	Driven	lone Spun
Hammer F			30 Reco	overy		띡	Stratum		1	L.J CHIMING FICE	- I		ul	շիալ
Depth (ft)	Drilling Rate	Core No.		overy QD	Weathe	ring	Change			Visual Cla	assification and R	temarks		
	(min/ft)	Depth (ft)	(in)	(%)]		(ft)							
		50.5			- 	 ∓			_ 					
					1	$\equiv \downarrow$		Co=		istone with interbed	ded man and de			
			3.4/5.0	68	1			competen	ea sand					
l i										QUEEN	STONE FORMA	TION		
ļ l	Avg. 3-4				1				 -					
i i	minutes			ļ	+									
5						二				····				
1	per foot	<u> </u>	l	ļ	+									
			7 1212		1	二		Hierr .	Chief J B 2	0 ft. to 10.0 ft.				
		<u> </u>	3.45/5.0	69				agnty fra	ca 8.(- ι- ιυ ιυ. υ π.				
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10	ļ	60.5		+	+	\dashv		<u> </u>						
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		<u> </u>	1											······································
30				1			 	ļ		····				
		<u> </u>	Water Leve	el Data	W-22	12:			Sam	ple ID	0	Sumi		
Date	Time	Elapsed I (hrs)		ing (ft)	Bottom of E	oring	Water (ft)	ТТ	pen End hin Wall	Tube	Overburden (Lin Rock Cored (lin	car ft)	50.5 10	
		1						1 υ ι	Indisturbe	ed Sample en Sample	Samples		148	100
<u> </u>	 	 	\dashv				 	G	jeoprobe jeoprobe	ar sample	BORING N	Ю.	HA-	102

HALEY &	T
ALDRICH	Ī

TEST BORING REPORT

BORING NO. HA-101a

					V							Pa		4 (of 3
PROJECT	·	PORT OF RO	CHESTER	\				_		H&A FILE	NO.	70819-000	0		
LOCATIO	N .	ROCHESTER	, NEW YO)RK				_		PROJECT	MGR.	M. VALE	NTIN	Ε	
CLIENT	-	LABELLA AS								FIELD REI		R. DEDRI			
CONTRAC	-	GEOLOGIC E								DATE STA		7-Jun-00			
	-							—		DATE STA		7-Jun-00			
DRILLER		L. TODD						_		-ALE FIN		,-,wi-vv			
Elevation	251.8	8 ft Dat	tuma Cit			ing Locatio		rin	g Locat	tion Plan					
Item		Casing			Rig	Make & M	lodel	_					Drill N		
Туре		HSA	SS	NX	1	Truck	Tripod		=	at-Head	Hammer				onite
Inside Diam	eter (iu)	3-1/4	1-3/8	2		ATV	Geoprobe	L		Vinch	☑ S:			Poly	
Hammer We			140			Track	Air Track	Π	_	oller Bit	□₽	oughnut	Ø	None	
Hammer Fa			30			Skid	<u> </u>	L	□ c	Cutting Head	Casing		Driven		Spun
	Casing	Sampler	Sample		.pet	Stratum	1								
Depth (ft)	- 1	Blows per 6	Number é	α l (ft)	-"	Change	1		,	Visual Classifica	ation and R	cemarks			
	ft	iu	Recovery	Y	4	(ft)	·								
- 0 -		\	<u> </u>			\ -	ļ								
1 1	<u> </u>	<u> </u>			士										
1					\Box	'	l			Augere	d to 5.0 ft.				
∖	 		<u> </u>				ļ								
ļ ļ								_							
1 1			L		\exists										
ļ .	-	}	 			\ <u> </u>	t								
_ 5 _	<u> </u>			1			<u></u>			Ji H 1					
- ' - 		5	<u>\$6</u>	5.0	二		Loose gray brown	fin	e to me	aum SAND, tra	ce silt, orga	nucs, moist.			
ļ ļ	 	3	ļ			\ i	l			ALL	UVIUM				
1 1			14"/24"		7.0			_							
		L			_	\	ļ			Angere	d to 10.0 ft.				
ļ ŀ		١	 			\									
1 I					二										
1		\	ļ		}	\	ļ								
10		4	87	10.0	\dashv	·	Same, except wet.								
<u> </u>		4	\		\Box	<u>' </u>	ļ								
, l		3 2	16"/24"		12.0	\	l								
¦ ŀ		<u> </u>						_							
			<u> </u>		\neg	\									
		 	ļ		\dashv	ļ———	 								
15	 	<u> </u>	S8	15.0		ļ	Medium dense gra	ıy F	nown 6	ne to coarse CA	ND, some c	oarse gravel	wet		
	L \	9			_						B Some C				
[7 ,	5482		777	L	-								
,	 	ļ	23"/24"		17.0	 	 								
	L	<u> </u>		1		<u> </u>		_							
[7			ļ								
į l	 	[-	 	 								
20	<u> </u>						I								
	!	11	\$9	20.0	\Box	 	Same.								
		10 11	 			 	t								
[[}]		14	20"/24"	'	22.0										
1				_	<u> </u>	 	 								
j i	<u> </u>	 	 			t									
Į l	[ļ	ļ				 								
25 —	 	12	810	25.0		 	Same, except loos	se.							
Į		3					1								
		4 3	20"/24"		27.0	1	 						···		
		 	20 /24		٠,٠٠	\	1								
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1	[ļ	+								
1	 	 	 		 -	 	 			-,,					
30	1_		<u> </u>												
			-				+		le ID			0			
l	1	Water Elapsed Time	Level Data		TOT	T	A Ones Car			Over	burden (Lir	Summa nearft) li			
Date	Time	(pre)	Casing (1		Water (ft	T Thin Wal	ll To	Tube	Rock	Cored (Lin	nearft) -	-		
			Ш.				U Undisturt	bed	i Sample	e Num	ber of Sam	ples 18			
							S Split Spo	on :	Sample		BORING N		HA	-101	la

TEST BORING REPORT

BORING NO.
HA-101a

Page 3 of 5

						rage 3 of 5
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		9	SII	30.0		Loose gray brown silty fine to coarse SAND, trace gravel, wet.
ŀ		4				ALLUVIUM
ŀ		3	22"/24"	32.0		ALLUYIUM
			22 124	32.0		
1						
1						
35	-	2	S12	35.0		Same, except very loose.
		1				
1		2				
1		2	23"/24"	37.0		
l	1			 		
l						
1						
				ļ		
40	4	- 	\$13	40.0		Very loose gray brown fine sandy SILT, little clay, organics, wet.
		- <u>-</u>			·····	
l	ļ	2				
•		3	224/244	42.0		
}						
						
1				†		
1	†					
45				45.0		Same, except no organics.
	İ	2	S14	43.0		Same, except no organics.
1		2				
		3	18"/24"	47.0		
l						
ŀ			4			
50				(0.0		D
		1 2	\$15	50.0	ļ	Same.
j		2	ļ			
1		2	20"/24"	52.0		
1				 		
į	1			- 		<u> </u>
į						
55_				55 h		Same.
	1	2	S16	55.0	ļ	Sauc.
ł		3	 	 		
	ļ	- 3	204/244	57.0		
1				ļ	ļ	
1		}	 	- 	ļ	
1	1		1	1	·	
ł	1	 	<u> </u>	1		
60_				100	ļ	Loose gray brown SILT, little clay, trace sand, wet.
1		1 3	\$17	60.0	 	LOUSE RIBY DIOWH DID 1, HILLE CLAY, HACE SAIRO, WEL.
1	ļ	- 3 4	 	 	 	
1	i i	1	20"/24"	62.0		
1		1]	
1		ļ	J		 	
i			 	-	 	
1			 	 	 	
	1	}	1		<u> </u>	
65-		1	S18	65.0	1	Same.
I	ļ	2 2				
1	1		23"/24"	67.0	d	
1		-{	23 124	 	┧	
1				1	1	(Augered to bedrock)
1	1	1	1			
1	ı				ļ	
I .				i	1	•
			- 		 	
70 _						FILE NO. 70819-000 BORING NO. HA-101a

TEST BORING REPORT

BORING NO.
HA-101a

						Page 4 of
	Casing	Sampler	Sample		Stratum	
epth (ft)	Blows per ft	Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Change (ft)	Visual Classification and Remarks
						(Augered to bedrock - No samples recovered)
- 75				l		
				<u> </u>		
- 80						
		<u> </u>				
		<u> </u>				
- 85						
		<u> </u>	 	 	 	A THE RESIDENCE AND A SECOND COLOR OF THE PROPERTY OF THE PROP
		<u></u>	 	 		
- 90						
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 105	 		1			
					 	
	<u></u>				1	
			.	<u> </u>		
<u> </u>					 	FILE NO. 70819-000 BORING NO. HA-101a
					~	- TIPE IN. INC. INC. INC. INC. INC. INC. INC.

TEST BORING REPORT

BORING NO.
HA-101a

age 5 of

Depth (ft)	Casing	Sampler				
	Blows per	Blows per 6	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
						(Encounter Change in drilling conditions)
_115						(Auger refusal) Bottom of Exploration of 115.0 ft.
_120 -						
- 125						
- 130 -						
- 135						
- 140						
– 145						
	·					
 150						FILE NO. 70819-000 BORING NO. HA-101a

HA	ME	Y &
AL	DR	ICH

TEST BORING REPORT

BORING NO.
HA-102

										P	age	1	of 2
PROJECT	,	PORT OF RO	CHESTER					H&A FILE	NO.	70819-0			
LOCATIO		ROCHESTER		RK				PROJECT		M. VAL		ſΕ	
CLIENT		LABELLA A						FIELD RE		R. DEDI			
CONTRAC		GEOLOGIC I						DATE STA		30-May-			
			SIN DELTICE					DATE FIN			-		
DRILLER	<u></u>	L. TODD								30-May-			
Elevation	253.				oring Locati			ation Plan			T= :-	7.	
[tem		Casing			ig Make & N		5 - Truck		Iri-	T-	Drill	Mud	4- 1-
Туре		HSA	SS		Truck	☐ Tripod	! =	Cat-Head Winch		er Type Safety	- □		tonite
Inside Diam		3-1/4	1-3/8	2] ATV] Track	Geoprobe Air Track		Winch Roller Bit		Safety Doughnut		Poly Non	ymer ne
Hammer We Hammer Fa			140 30	L] I rack] Skid	☐ AII HECK		Cutting Head	Casing		Drive		Spun
- tanmer Fa	ll (in) Casing	Sampler	Sample	C C	I Stratum			o . wau	1 ~~ing		, 2,17(<u>^hmt</u>
Depth (ft)	Blows per	Blows per 6	Number &	Sample Dept (ft)	Change			Visual Classific	ation and	Remarks			_
	ft	in	Recovery	(11)	(ft)								
_ • _		28	\$1	0.0	+	Medium dense bro	WIL STATE	lack silty fine to	XORES CA	ND lime	frem	ent.	
' i	<u></u>	19	J.		1	dry.				, anue 10Cl	aRu		
' İ		16 14	16"/24"	2	٠	ļ			FILL				
· }		9	S2	2.0	1	Medium dense bro	wn silty i	fine to coarse SA	VD, trace	coarse gravel.	dry.		
1		8 6			1								
ļ		5	14"724"	4.	<u>d</u>								
' 		5	S3	4.0		Same, rock obstrue	tion in b	ottom of spoon.					
_ 5 _		3			+	 							
' [!	3	2"/24"	6.	6.0	1222	Er.	Anna Citra					
		1 2	S4	6.0		Loose gray brown	ine to co	wase SAND, wet.					
ŀ		3						ALL	UVIUM				
'		4	15"/24" S5	8.0	<u> </u>	Medium dense gra	y brown	fine to coarse CA	ND. some	gravel wet			
		18		1	_	wine kit		- June un					
		15 17	17"/24"	10	0	ļ							
10		22	S6	10.0	1	Very dense brown	fine to co	oarse SAND, moi	st.				
		48 58			+	 							
		38 45	2"/24"	12	0								
					1								
	ļ	<u> </u>			<u> </u>	1							
	ļ				<u> </u>								
15	<u> </u>				15.0	<u> </u>							
"		1007,4	87 87/11*	15.0	i	Very dense gray b	rown silt		AND, som		st.		
		1007,4	6 /11"	13	当	<u> </u>		GLAC	ane Illi				
	ļ												
	ļ :		 		1								
			ļ		- 								
	 	 	 		1	 							
20	 	1007.4		30.0		Verification	ile P	No com- Pitter		avel D. ?			
]	1	1007.4	S8 4"/5"	20.0	 	bottom of spoon,		e to coarse SAND	, some gr	avei. Ked san	usione i	4	
]]	l												
	 	 	 			 							
ļ						 							
	<u> </u>	ļ	 		- 	 							
			<u> </u>										
25	 	19	S 9	25.0	4	Very dense	TOWN AT	ty fine to coarse S	<u> </u>	ne oravel	st		
		91	1			gray (, sul				
	[1007.3	[2"/18"	26	.3	<u> </u>							
!		L	<u> </u>			<u> </u>							
I		<u> </u>				ļ							
1	1		 										· · · · · · · · · · · · · · · · · · ·
l			1		1								
30	 	 	 			- 							
			Level Data				ple ID			Sumn			
Date	Time	Elapsed Time	4			t) O Open End T Thin Wal			rburden (L k Cored (1		50.5 10		
30-May	1	(hrs)	Casing (ft	t) Boring (ft	17.3	U Undisturi	ed Samp	ole Num	k Corea (1 aber of Sa		148		
						S Split Spo	on Sampl		BORING			LA-10	02

TEST BORING REPORT

BORING NO.
HA-102

Page 2 of 2

	Casing		Seme!-	<u></u>	Stratum	
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Change (ft)	Visual Classification and Remarks
		10	\$10 7"/10"	30.0		Very dense gray brown silty fine to coarse SAND, little rock fragments, wet.
ļ		100/.3	7"/10"	30.8		GLACIAL TILL
			,			
l				ļ		
					.,	
35		19	S11	35.0		Very dense silty fine to coarse SAND, some gravel, trace clay, wet.
		60	w			
		1007.3	16"/16"	36.3		
ł	,		, <u></u>			
1						
40		15	S12	40.0	<u></u>	Same.
		1007.4	10"/11"	40.9		
i						
ŀ		L		ļ	<u> </u>	
						
						
45		20	S13	45.0	- 45.0 -	Very dense red brown silty fine to coarse SAND, trace clay, moist.
İ		1007.1	6"78"	45.6		Very dense red brown silty fine to coarse SAND, trace clay, moist. WEATHERED ROCK
				ļ		
	L				ļ	
50		18372	~~~~	60.0		Same, with little clay.
		1007.5	S14	50.0 50.5	50.5	Began rock coring at 50.5 ft.
					ļ	
		L		ļ	 	
				<u> </u>		Competent, red sandstone with interbedded grav sandstone.
				 		Competent, red sandstone with interbedded gray sandstone. QUEENSTONE FORMATION
55						
	Ì			<u> </u>		
	 	<u> </u>				
	ļ			ļ	ļ	
]	 		 	 	
					<u> </u>	
	ļ	ļ		 	 	Highly fractured 58.8 ft. to 60.5 ft.
60	<u> </u>				1	
	1				<u> </u>	Bottom of Exploration at 60.5 ft.
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65	 				1	
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					 	FILE NO. 70819-000 BORING NO. HA-102

TEST BORING REPORT

BORING NO.
HA-103

		-										Pa	ge	1 of	3
PROJECT		PORT OF RO	CHESTER					H&A FI	ILE N	iO.	708	319-00			
LOCATIO		ROCHESTER		UK.				PROJE					NTIN		
		LABELLA A						FIELD					RANT		
CLIENT								DATE S				May-C			
CONTRAC		GEOLOGIC I	ER LEKPRIS	ES				_							
DRILLER	<u> </u>	L. TODD						DATE I	6171A	neu	31-	May-(~		
Elevation	253.8	6 ft Dat	tum City		ring Locatio			ation Plan							
Item		Casing		Core Barrel Rig	g Make & M	fodel CME-5	-	k Mount					Drill !		
Type		HSA	SS		Truck	Tripod	<u> </u>	Cat-Head		_	mer Type			Benton	
Inside Diam		3-1/4	1-3/8	1-7/8	ATV	Geoprobe	ᄔ	Winch	_][Polym	сг
Hammer W					Track	Air Track	1 1	Roller Bit	, }	بب	Doughn	aut	Day	None	6-
Hammer Fa		Sompler	- 1000		Skid Stratum	<u></u>	للا	Cutting Head		Casin	E	<u> </u>	Driver	<u>. Lj</u>	Spun
Depth (ft)	Casing Blows per	Sampler Blows per 6	Sample Number &	Sample Depth	Change	1		Visual Class	sificat	ion an	ıd Remar	ks			
rw (It)	ft ft	in in	Recovery	(ft)	(ft)	<u>L</u>						_			_
			————				2210			12	7=				
		8	SI	0.0	 	Medium dense gra	velly co	arse to line sa	na, litt	uç Silt,	ury.				
	ļ —	п	<u> </u>		1				FI	LL					
! !	ļi	13	15"/24" S2	2.0	2.0	Medium dense dar	k brown	1 coarse to fine	SANI	D. 70	10 grave	- 			
	<u> </u>	18		<u> </u>		uu							<u>, -, j.</u>		
		11 7	10"/24"	4.0	ļ	ļ			FI	LL					
	 	9 7	10"/24" S3	4.0	<u>L</u>	Same.									
s		8				Moist to wet begin	ning at	5.5 ft.	E4	LL					
I 7	,	4 6	 	6.0	 										
1		3	S4	6.0	<u> </u>	Same, wet.				LL					
	<u> </u>	5	ļ		 	Noted refusal and	suspect	ed cobble at 7.		<u>uL</u>					
		507.0	4"/18"	7.3	1										
j i		5 7	S5	8.0	 	Same, except black	ĸ		FI	LL					
1	 	, 9			1										
10	ļ	1-7	6"/24" \$6	10.0	4	Medium dense bla	ck coar	se to fine sand	y GR A	VEI	little sili	wet			
	L	9	t		<u> </u>					LL L	orth				
		10	ļ	12.0	d										
1	 	62	S7	12.0	<u> </u>	Same, except very	dense,	gray-black.							
	L	26			4	Driller noted sulph	ur-lit-	odor in came		LL					
1		29	12"724"	14.0		See Note on Page									
1					1			Auge			14.0 ft.	locari-	n.		
15	 	 	 	1	1			INOVERIE	at. '	U	611181				
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— ³⁰ —	<u> </u>	<u> </u>			<u> </u>										
			r Level Data	of Bottom of			aple II I Rod	,	(m)	1000	(Linear f	Suma			
Date	Time	Elapsed Tim (hrs)	Casing (ft			T Thin Wa	ll Tube		Rock	Cored	l (Linear f	lt) -	14		
	1		1			U Undistur	bed San	mple			Samples	7	7S		
						S Split Spo	on Sea	aple	В	ORIN	IG NO.		H	IA-103	3

TEST BORING REPORT

BORING NO.
HA-103a

ALDI	(ICH		1.	F21	D	UK	TT4,	UU	Ľľ	UK	. 1			^{,,,,}	LAX=1	UJ	a
														Page	2	of	3
PROJECT	Γ	PORT OF RO	CHESTER							H&	A FILE	NO.	70819	-000			
LOCATIO		ROCHESTER		K						_ PRO	ЈЕСТ	MGR.	M. V	ALEN	TINE		
CLIENT		LABELLA A								- FIE	LD RE	P.	R. DE	DRIC	K		
CONTRA	CTOR	GEOLOGIC I		ES						DAT	TE STA	RTED	31-Ma	ay-00			
DRILLER		L. TODD								DAT	TE FIN	ISHED	1-Jun-	-00			
								C D-		ti Di-							=
Elevation Item	253.8	6 ft Dat				ng Locatio Make & M				ocation Pla ick Mount	at			D	rill Mud		
Туре		HSA	SS	NX			Tri		I 🖸	Cat-Head	d	Hamme	r Type			ntonite	<u> </u>
Inside Diam	eter (in)	3-1/4	1-3/8	2		ATV	☐ G∞	probe		Winch			Safety		∏ Po	lymer	
Hammer W		_	140		□ 1	Track	☐ Air	Track		Roller B			Doughnut		√ No	_	
Hammer Fa			30			Skid	<u> </u>			Cutting l	Head	Casing		D	riven	□ s	рип
Depth (ft)	Casing Blows per	Sampler Blows per 6	Sample Number &	Sample De	pth	Stratum Change				Visual (Classific	ation and	Remarks				
Depta (it)	ft	in in	Recovery	(ft)	1	(ft)											
_ 。_							725.54			11 2 3							_
		A					(Uffset	18 west of	origina	I location)							
		U															
			See Samples		-												
			for 0-14 ft.		\dashv												
		Е	in Boring HA-103	ļ	_												
		R			7												
5		Tr		5.0	\exists		Mediun	n dense bro	wn bla	ck fine to c	oarse S	ND, little	silt, dry.				
		14 7		-	<u>-</u> T							FILL					
					7.0												
		A		ļ													
		ט			二												
		G E															
10		R 9		10.0	4		Dence	lack brow	n fire "	o coarse S	AND II	le silt, slag	fragments	wef			
		19		10.0	士		JUNE 1	AUN OIUW	., ((, 1111	- Jane, Stag		,			
		22 20			2.0												
				<u> </u>													
					\dashv		<u></u>										
				14.6	二		č		::===					· · · · · · · · · · · · · · · · · · ·			
		7	S8	14.0			same,	xcept med	uum dei	usc.							
15		15 12	14"/24"		6.0												
		8		16.0	<u> </u>												
	ļ	3 6	No Recovery		\dashv							····					
	<u></u>	7			8.0		17-11					6774	4				
	[8	S9	18.0	-		wearm	n acuse bla	ICK DTO	wn sury fin		se SAND,	₩CL.				
		8 6	6"/24"	ļ,	20.0						ALI	LUVIUM					
20	 	°	0"/24"	1	.0.0												
	<u></u>				\Box												
		<u> </u>	<u> </u>				L										
[ļ	7												
	 				士												
•		5	S10	24.0			Loose	gray brown	fine sa	nd SILT, v	wet.						
25		3		[· · · · · · · · · · · · · · · · · · ·									
		3-4	247244	ļ;	26.0		 						····				
]				†												······································	
	ļ	<u> </u>		 			 										
1					二												
			 	ļ			 	 									
1		2	511	29.0			Loose	gray fine s	and SIL	T, some c	ay, orga	nice, moiet					
30		3 3	12"/18"	ļ	30.3		 										
			Level Data						uple ID		Ļ	A		umary			
Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom Boring (Water (ft)	T	Open End Thin Wal	l Tube		Rock	rburden (Li k Cored (Li	near ft)	-			
		()					Ū	Undistur	ed Sam	nple	Nun	ber of San	ples	198			
	ļ	 		ļ	\dashv		S	Split Spo Geoprobe	on Sum ;	pie		BORING I	Ю.		HA-10	3a	
1	i		<u> </u>		1			.,									_

TEST BORING REPORT

BORING NO.
HA-103a

Page 3 of

		<u> </u>		· · · · · · · · · · · · · · · · · · ·			·		Page	3 of	3
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Vis	ual Classificatio	n and Remarks			
i											
											
		T 3	S12	34.0		Loose gray fine sand SILT, some	e clay, organics, i	noist			
35		3		ļ			ALLUV	IUM			
		4	12"/24"	36.0							
				.,,							
							 				
		2	S13	39.0		Loose gray silty fine to coarse S	AND, trace ograr	ics, moist.			
40		2									
-		4	23"/24"	40.0		m=					
	L				ļ						
	•	2 4	S14	44.0		Loose gray brown fine to mediu	m sandy SILT, li	ttle clay, organics,	moist.		
45		4	AAH 6 14		·		·····				
			22"/24"	46.0							
					ļ						
	i	2	S13	49.0		Same.					
50		3									
		3	22"/24"	51.0				······································			
		<u> </u>			ļ						
		2	\$16	54.0		Same.					
55		2		37.0		I value				·	
33		3	23"/24"	56,0							
								·····			
		ļ	 	 				· · · · · · · · · · · · · · · · · · ·			
					ļ		·				
	l			 	 						
		2	\$17	59.0		Same.					
60		3	<u> </u>	<u> </u>	 						
		ļ	22"/24"	61.0	4						
			ļ		<u> </u>						
				<u> </u>	 						
	 		1		 						
		4	S18	64.0	 	Medium dense gray brown fine	to medium sand	SILT, little clay.	organics, n	noist.	
65	 	4	1		 						
	1	7	22"/24"	66.0	<u> </u>						
									···		
	 -	 		 		<u> </u>					
			 		1						
					1						
		7	S19	69.0		1	Bottom of Explo	ration at 71.0 ft.			
70 <u></u>	f	То				FILE NO.	70819-000	BORING NO		HA-103	
		10	17"/24"	71.0	0/	<u> </u>			-		-

TEST BORING REPORT

BORING NO.
HA-104

			_		:										Pa	ge	1	of	2
PDATE	T	PORT OF RO	CHESTER						—	H&A F	TLE	۷ 0.		7081	9-000	_			
PROJEC LOCATI		ROCHESTER		RK						PROJE					ALE		1E		
CLIENT		LABELLA AS	· · · · · · · · · · · · · · · · · · · 						—	FIELD					EDRI				
CONTRA		GEOLOGIC E					· 			DATE)		un-00				
DRILLE		L. TODD								DATE				13-J	un-00)			
				1_			6. 5		<u></u>					_					
Elevation Item	254,2				oring Location			_	_	cation Plan Truck Mount						Drill	Mud		
Туре		Casing HSA	SS		Truck	_	Fripod	_	Ū	Cat-Head		Ham	ımer	Туре				ntonit	te
	meter (in)	3-1/4	1-3/8		ATV		Geoprobe		<u>ŏ</u>	Winch		V	-	efety			Pol	ymer	г
	Weight (lb)		140		Track		Air Track	П		Roller Bit				oughnu		v	No	_	
Hammer l	Fall (in)		30	C C	Skid	<u> </u>		Ш		Cutting Head	d	Casi	ng			Drive	n		Spun
Death (fr)	Casing Blows per	Sampler Blows per 6	Sample Number &	Sample Dep	th Change					Visual Clas	ssificat	ion s	nd R	emark	5				
rebig (1)	ft ft	in in	Recovery	(ft)	(ft)	1			_										
_ 0 _								_	_	Mudline 19.	.0 It be	low to	op ot	scawal	l.				
]			······································			+-													
					1	Sunk	augers 4.0 ft	belo	ow E	nudline.									
	}	 				<u> </u>													
					1														
	1	<u> </u>			1														
		WOR WOR	SI	4.0		Very	loose gray br	owi	n sili	ty coarse to fi	ine SA	ND.							
5 _	 	WOR				=													
		1	11*/24*	- 6	.0	 					ALLU	VIUN	и						
						1_													
]						 -													
	·					<u> </u>	······································												
	 	WOR	S2	9.0	 	Same	e as above.												
10		WOR				二	***************************************												
I	1	WOR WOR	20"/24"	11	.0	1						<u> </u>							
I																			
l	1					1													
1				-		1													
Ī		<u> </u>		1,,,,		1		_		Spa 45 FFF T	, en ~		mi-	Wad					
		3	S3	14.0	-	Loos	se gray brown	san	ay 1	ane to mediun	OIL I	, orga	aucs,	# CL					
15	1	3	- 318A78		7	1													
		 5	24"/24"	16	<u>''</u>	1-													
1						 													
	1	J				士													
						+-													
[3	S4	19.0	1	Sam	ie as above.	_											
20	4	5 5			4	+-													
[- 9	20"/24"	21	1.0	1													
1			ļ			 													
1					7	1_													
1	 		l																
1	ļ			24.0	4	Te-	ie as above.	_											
		2 2	S5			- San	audve.												
25 -	1	4 6	24*/24*		6,0	 													
1	 	<u> </u>	27 /24"			1													
1			ļ			4													
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-	 					1													
30	 		ļ			1-													
		Water	Level Data			士	San	npk	e ID						umma 31				
Date	Time	Elapsed Time (hrs)	Bottom o Casing (fo			0 1	Open End Thin Wal				Overb Rock				31				
	<u> </u>	(013)	CHOINE (I		1] (Undisturt	bed :	Sam		Numb	er of	Samp	oles	65				
							S Split Spo G Geoprobe	on S	2mil	ple	B	ORIN	G N	0.		F	[A-1	04	

TEST BORING REPORT

BORING NO.
HA-104

Page 2 of 2

						Page 2 of 2
Pepth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Recovery	Sample Depth (ft)	(ft)	Visual Classification and Remarks
		2	S6 24"/24"	29.0 31.0		Loose gray fine to medium sandy SILT, organics, wet. ALLUVIUM
i		2 4	24 724	31.0		Bottom of Exploration at 31.0 ft.
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BORING NO.

ALDR	ÎCH		Tl	EST B	OR	ING R	EPORT	•	H	IA-105
									Page	1 of 2
PROJECT		PORT OF RO	CHESTER				H&A F	TLE NO. 700	319-000	
LOCATIO		ROCHESTER	, NEW YOR	K			PROJE	CT MGR. M.	VALEN	TINE
CLIENT		LABELLA A	SSOCIATES				FIELD		DEDRIC	<u>K</u>
CONTRAC	TOR	GEOLOGIC I	ENTERPRISE	S			DATE		Jun-00	
DRILLER		L. TODD					DATE	FINISHED 13-	Jun-00	
Elevation	253.9	6 ft Dat	tuma Ci	ity Bor	ing Locatio	n See Bo	ring Location Plan			
Item		Casing			Make & M		E 55 Truck Mount			rill Mud
Туре		HSA	SS			Tripod	✓ Cat-Head	Hammer Type		Bentonite
Inside Diame		3-1/4	1-3/8	CONTRACTOR CONT		Geoprobe Air Track	Winch Roller Bit	Safety Dough		☐ Polymer ✓ None
Hammer We			140 30	NAME OF TAXABLE PARTY OF TAXABLE	Track Skid		Roller Bit Cutting Head		<u></u>	iven Spun
Hammer Fal	Casing	Sampler	Sample	Sample Depth	Stratum	<u></u>				
Depth (ft)	Blows per	Blows per 6	Number &	(ft)	Change		Visual Clas	sification and Remai	rks	
	ft	in	Recovery		(ft)		15.0 ft to Mu	dline from Top of Sea	wall	
- • -						-Sunk augers 3.0 f	below mudline-			
[_										
		·								
Ī.		WOR WOR	\$1	3.0		Very loose gray br	own sandy SILT, we			
ŀ		WOR						ALLUVIUM		
_ 5 _		WOR	14"/24"	5.0						
		WOR		6.0		Very loose may be	own silty coarse to fi	ne SAND, wet		
		WOR	52	0.0		very loose gray or	own sitty coatse to the	ino Di inte, wot		
		WOR WOR	14"/24"	8.0			······································			
-		WOR	\$3	8.0		Same as above.				
}		WOR WOR								
10		WOR	16"/24"	10.0						
Ī									·	
}										
— 15 —		WOR WOR	34	15.0		Loose gray brown	silty coarse to fine S.	AND, wet.		
1		3								
		7	15"/24"	17.0						
[
[<u> </u>		 	 				
	,									
20		2	S5	20.0		Loose gray brown	sandy SILT, organic	s		
		2 7			 					
		7	24"/24"	22.0						
		 			 	<u> </u>				
					ļ					
			<u> </u>							
25		WOH	\$6	25,0	1	Same as above.				
]		2	<u> </u>							
		3	20"/24"	27.0						
		 	 	1		 				
	<u></u>				1					
30				<u> </u>						
JU]	Level Data	1		San	iple LD		Summary	
	Tt	Elapsed Time	Bottom of	Bottom of	Water (ft	O Open End	Rod	Overburden (Linear f	32	
Date	Time	(hrs)	Casing (ft)	Boring (ft)	***************************************	I F THIN ALM	l Tube ed Sample	Rock Cored (Linear f Number of Samples	t) <u></u> 78	
 	 		 	 	1	S Split Spo	on Sample	BORING NO.	- 10	HA-105
 	 	 	1	1	1	G Geoprobe	·	5014110110.		

TEST BORING REPORT

BORING NO.
HA-105

						Page 2 of	2
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	RECUTELY	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks	
		3	S7	30.0		Loose gray brown sandy SILT, organics.	
ŀ		3				ALLUVIUM	
		6		32.0			
Ī						Bottom of Exploration at 32.0 ft.	
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TEST BORING REPORT

BORING NO. HA-106

Page of 70819-000 H&A FILE NO. PORT OF ROCHESTER PROJECT M. VALENTINE PROJECT MGR. LOCATION ROCHESTER, NEW YORK R. DEDRICK FIELD REP. CLIENT LABELLA ASSOCIATES DATE STARTED 1-Jun-00 GEOLOGIC ENTERPRISES CONTRACTOR 1-Jun-00 DATE FINISHED L. TODD DRILLER See Boring Location Plan ft Datum Boring Location 250.79 Elevation Drill Mud Rig Make & Model CME 55 - Truck Mount Sampler | Core Barrel Item Casing Нашшег Туре Bentonite 7 Truck Tripod Ø Cat-Head NX **HSA** SS Type ✓ Safety Polymer Winch ☐ ATV ☐ Geoprobe П 3-1/4 1-3/8 Inside Diameter (in) Air Track Roller Bit Doughnut \Box None Track 140 Hammer Weight (lb) Spun Skid **Cutting Head** Casing Driven П 30 Hammer Fall (in) Stratum Casing Sampler Sample Sample Depth Visual Classification and Remarks Depth (ft) Blows per Number & Change Blows per 6 (ft) (ft) in Recovery ft Augered Medium dense brown silty fine to coarse SAND, some rock fragments, dry. SI 11*718* Medium dense red brown silty fine to coarse SAND, trace rock fragments, moist. 12"/24" Medium dense black brown fine to coarse SAND, litte silt, wet. **S3** ALLUVÍUM 16"/24" Same, except very dense 20 31 8.0 12"724" Same. \$5 28 24 6"/24" 10 Loose gray brown fine to coarse SAND, little silt, wet. 10.0 36 12.0 8"/24" Same, except trace rock fragments. \$7 12"/24" 14.0 Medium dense gray brown fine to coarse SAND, little silt, wet. 58 12 14 16.0 11"724" Loose gray fine sand SILT, little clay, moist. 19.0 20 21.0 3"/24" same, except very loose. 25 26.0 15"/24" Loose gray brown fine to medium sand SILT, little clay, organics, moist. SIT 29.0 30 17"/24" 31.0 Sample ID Open End Rod Water Level Data Summary 41 Overburden (Linear ft) Bottom of Elapsed Time Bottom of Water (ft) Time Date Thin Wall Tube Rock Cored (Linear ft) Casing (ft) Boring (ft) (hrs) **T3S Undisturbed Sample** Number of Samples U Split Spoon Sample S BORING NO. HA-106

Geoprobe

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TEST BORING REPORT

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Page 2 of 2

- 35	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth	Stratum Change	Visual Classification and Remarks
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_ 35			S12	34.0		Loose gray brown fine to medium sand SILT, little clay, organics, moist,
- 33		3				
		3				ALLUVIUM
į.		4	20"/24"	36.0		
						namoutos la Parigrapa na parigrapa de la Constantina de Carlo de C
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Ī		T	\$13	39.0	ļ	Same.
_ 40		2				
l	1	3 4	22"/24"	41.0		
┟		ļ	1-7		 	Bottom of Exploration at 41.0 ft.
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,,						FILE NO. 70819-000 BORING NO. HA-106

BORING NO.

TEST BORING REPORT HA-107 Page 70819-000 H&A FILE NO. PROJECT PORT OF ROCHESTER PROJECT MGR. M. VALENTINE ROCHESTER, NEW YORK LOCATION FIELD REP. R. DEDRICK CLIENT LABELLA ASSOCIATES DATE STARTED 26-May-00 GEOLOGIC ENTERPRISES CONTRACTOR DATE FINISHED 26-May-00 DRILLER L. TODD ft Datum See Boring Location Plan 266.08 City Boring Location Elevation Drill Mud Rig Make & Model CME 55 - Truck Mount Sampler Core Barrel Casing Item ✓ Cat-Head Hammer Type Bentonite ✓ Truck Tripod HSA SS NX Type √ Safety Winch Polymer ☐ ATV ☐ Geoprobe 1-3/8 Inside Diameter (in) 3-1/4 Doughnut Air Track Roller Bit Ø None Track 140 Hammer Weight (lb) Casing **Cutting Head** Driven Spun Hammer Fall (in) Skid П 30 Stratum Casing Sampler Sample Sample Depth Visual Classification and Remarks Depth (ft) Blows per Blows per 6 Number & Change (ft) Recovery (ft) ft ASPHALT 0.5 Medium dense black brown fine to coarse SAND, some gravel, dry. SI m Medium dense brown fine to coarse SAND, damp. 52 2.0 16"/24" 4.0 Dense brown black fine to coarse SAND, little silt, brick, damp. 4 0 \$3 17"/24" 6.0 Same, except medium dense 14 8,0 20"724" 8.0 Medium dense brown orange fine to coarse SAND, moist. 33 18"724" 10.0 Loose brown gray fine sand SILT, trace to little clay, trace organics, moist. 13.0 ALLUVIUM 21"/24" 18.0 Same 37 24"/24" 20.0 20 Very dense gray brown silty SAND, some gravel. Pockets of brown fine to coarse SAND, wet. GLACIAL TILL 22"/24" 25.0 25 22 39 Same. 26 30,0 20"/24" 30 Water Level Data Sample ID Summary 49.0 Overburden (Linear ft) Bottom of Open End Rod Elapsed Time Water (ft) Date 3.0 T Thin Wall Tube Rock Cored (Linear ft) Boring (ft) Casing (ft) (hrs) Ü **Undisturbed Sample** Number of Samples **13S** 26-May 03 Split Spoon Sample S

Geoprobe

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Page

Stratum Sample Sample Depth Sampler Visual Classification and Remarks Number & Change Depth (ft) Blows per Blows per 6 in (ft) Recovery Very dense gray brown fine silty sand, little gravel, wet. 510 33.0 GLACIAL TILL 35.0 19"/24" - 35-SII Same. 40.0 17"/24" Very dense gray brown fine sandy SILT, trace clay, little gravel, wet. 43.0 \$12 44.4 1007.4 16"/17" Same, except pocket of red brown fine to coarse SAND, some rock fragments, wet. S13 11"/12" 100/.5 49.0 49.0 Began Rock Coring at 49.0 ft. Competent red sandstone with interbedded gray sandstone. 54.0-Bottom of Exploration at 54.0 ft. 60-BORING NO. HA-107 FILE NO. 70819-000

CORE BORING REPORT

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PROJEC	T	PORT OF	ROCHES	TER						H&A F	TLE NO.	70819-000)		
LOCATI		ROCHEST	ER, NEW	/ YORK						PROJE	CT MGR.	M. VALE	NTINE		
CLIENT		LABELLA								- FIELD	REP.	R. DEDRI	CK		
CONTRA	CTOR	GEOLOGI								DATE	STARTED	26-May-0			
DRILLE		L. TODD					,			_	FINISHED	26-May-0			
														_	
Elevation			Datum	. 1 =			ng Location	151					Drill M	v.d	
ltem		Casing	Samp		re Barrel		Make & Mod Truck [[J	Cat-Head	Hammer	Type		ua Bento	nite
Type		HAS	SS		NX 2	_		Tripod Geoprobe	目岩	Winch		afety	=	Poly m	
Inside Dia: Hammer V		3-1/4	1-3/	223242		4 ===		Air Track	片片	Roller Bit		oughnut	=	None	
Hammer V		-	30			9 ==	Skid [=	ΙĦ	Cutting Head			Driven		Spun
Hannacii	Drilling			overy	The second second second	1	Stratum								
Depth (ft)	Rate	Core No.		QD	Weathe	ring	Change			Visual Clas	ssification and F	Remarks			
	(min/ft)	Depth (ft)	(in)	(%)]		(ft)				 	* .			
		49.5		 				0-2 ft. Highly frac	ured						
	 	<u> </u>													
	Avg. 4 ft.		1.9/5.0	38				Competent red san	dstone	with interhedd	ed gray sandstor	ıc.			
	per		1.9/3.0	1 30				- Janpoiem Iou san							
										QUEENS	STONE FORMA	TION			
	minute	 		 											
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		Elapsed I	Water Lev		Bottom of	Borin	21		aple ID I Rod	,	Overburden (Lis	Summa sear ft)	гу		
Date	Time	(hrs)		ing (ft)	(ft)		Water (ft)	T Thin Wel	l Tube	1-	Rock Cored (lin	car ft)			
							 	U Undisturt S Split Spo			Samples			14-	
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TEST BORING REPORT

BORING NO.

HA-111

		<u> </u>									Pa	ge 1	of 3	
PROJECT	ſ	PORT OF RO	CHESTER						H&A F	ILE NO.	70819-00	0		
LOCATIO		ROCHESTER		RK				-	 PROJE	CT MGR.	M. VALE	NTINE		
	, · ·								- FIELD					
CLIENT	_	LABELLA A							_		R. DEDRI			
CONTRA	CTOR	GEOLOGIC	ENTERPRIS	SES					_ DATE S	STARTED	23-May-0	U		
DRILLER	ł	L. TODD							DATE FINISHED 23-May-00					
_		. 4 -			. ·	-1								
Elevation	251.8				_	g Location		_	ocation Plan		 	D.: 11 3.7		
[tem		Casing				lake & M			ck Mount	1	- m	Drill Me		
Туре		HSA	SS	NX	Ø Ti	-	Tripod		Cat-Head	Hamme			Bentonite	
Inside Diam	ieter (in)	3-1/4	1-3/8	2	-	TV [Geoprobe	Щ	Winch	_ =	Safety	_	Polymer	
Hammer W	eight (lb)		140		□ Tı	rack [Air Track		Roller Bit		Doughnut	1	None	
Hammer Fa	dl (in)	_	30		SI	kid [<u></u>		Cutting Head	Casing		Driven	Spun	
	Casing	Sampler	Sample	Sample De	met. S	Stratum								
Depth (ft)	Blows per		Number &	(fe)	*"	Change			Visual Clas	sification and	Remarks			
	ft	in	Recovery	(-4)		(ft)								
						7				4881147 P				
			No sample		\dashv	0.5			CR	ASPHALT USHED STON	E			
		3	SI	1.0		1.0	oose gray brown	ilty fu	ne to coarse SA	ND, pocket of	black fine to co	parse		
1 1		3	5"712"		2.0	1	AND, dry.				, ., .			
		3	S2	2.0	\Box		Medium dense gra	brow	n fine to coarse		silt, wet.			
		6 7	<u></u>							FILL				
		' 6	8"/24"		4.0									
		9	\$3	4.0	一		Medium dense gra	brow	n green (mottle	d) silty fine to	coarse SAND,	some fin	e	
_ 5 _		4					gravel, wood, mois	t. Wal	ter in borehole	at 3.9 ft.				
		19 21	12"/24"		6.0			·						
1 1	·	19	12 724 S4	6.0	U.V	₁	Dense gray brown	gravel	y SAND, wet.	Rock Obstruct	ion in shoe.			
		19												
		27	17847											
1		32 21	16"/24" S5	8.0	8.0		Very dense gray br	own fi	ne to coarse S	ND, some fine	gravel wet			
	ľ	24	ļ	15.5	-		, and gray ti	H		, ount all	not.			
		26												
10	 	25	20"/24"		10.0	10.0	Valium dana	r brow	n fine to one	CAND				
	ł	10	\$6	10.0			Medium dense gra	y DXOW	11 Time to coarse	OMILD.				
	<u> </u>	14			\dashv					ALLUVIUM				
1		19	17"/24"		12.0									
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15		1	S7	15.0			Loose gray brown	fine to	coarse SAND	some fine to c	oarse oravel	oist		
1	1		 	13.0	-+		Louis gray brown		June onito,		Brater, III			
	<u> </u>	3				1				······································				
		3	14"/24"		17.0									
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20	 	 	S8	20.0			Very loose gray bi	own fi	ne sand SILT.	wood, natural l	aminations in s	oils, moi	st.	
		1	 											
1		2												
		2	18"/24"		22,0					·				
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25	4	 	<u> </u>	25.0	 -		Very loose gray b	own f	ine sand SILT	little clay woo	d.			
	1	 	 	- 	\dashv		, 5, 0.				-			
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1	ļ		24"/24"		27.0									
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 		Water	Level Data		-, <u>l</u>		San	ple II)		Summu	NTY		
 	7	Elapsed Time		f Bottom	of J.	Water (ft)	O Open End			Overburden (L	inear ft) 38	1.5		
Date	Time	(hrs)	Casing (f	t) Boring	(n)		T Thin Wall	Tube		Rock Cored (L	incarft) 3			
23-May	10	0.75			\Box	3,9	U Undisturb		-	Number of Sau	nples 74			
			 				S Split Spor		ple	BORING	NO.	HA	-111	

TEST BORING REPORT

BORING NO.
HA-111

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						Pa	ge 2 of	3
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Kecovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks		
		2	S10	30.0		Very loose gray brown fine sand SILT, little clay, root structures, wood	, moist.	
		2	24"/24"	32.0				
						ALLUVIUM		
35					, m. m. m. m. m. m. m. m. m. m. m. m. m.			
_ 55		2	SII	35.0		Same, except some clay.		
		2	24"/24"	37.0				
40			S12	40.0		Very loose gray-green fine sand SILT, root structures, red fine to coars	e sand in	
		2 2	512	40.0		shoe, moist.		
		2	24"/24"	42.0	42.0 —			
						GLACIAL TILL		
45		70	<u>S13</u>	45.0		Dense red brown SILT, little clay, gray green fractured sandstone.		
		33 8			46.0 —			
		12	16"/24"	47.0				
50 `		1007.2				No Recovery.		
 55 		1007.2	S14 2"/3"	55.0	55.0	Very dense red, brown fractured sandstone, red brown silt, wet.		_
			273	35,3]		WEATHERED BEDROCK		
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			ļ			Auger Refusal at 58.5 ft.; began rock coring.		
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TEST BORING REPORT

						Page 3 of 3
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
						Competent red sandstone with interbedded gray sandstone.
						QUEENSTON FORMATION
						Bottom of Exploration at 63,5 ft.
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65						Monitoring well installed in adjacent borehole. See Installation Report for LBA-MW1
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CORE BORING REPORT

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PROJECT	r	PORT OF F	ROCHEST	ER							H&A FI	ILE NO.	70819-000	
LOCATIO		ROCHEST	ER, NEW	YORK							PROJEC	CT MGR.	M. VALE	NTINE
		LABELLA									FIELD I	REP.	R. DEDRI	CK
CLIENT											-	TARTED	23-May-0	
CONTRA		GEOLOGIC	ENTER	KISE							-	INISHED		
DRILLER	ł	L, TODD									DATER	INISHED	23-May-0	<u> </u>
Elevation		ft	Datum			Borin	g.Location							
Item		Casing	Sample	r Core	Barrel		lake & Mod	el						Drill Mud
		HAS	SS		NX			Tri	pod	V	Cat-Head	Hamme	r Type	Bentonite
Туре		3-1/4	1-3/8		2	_	ATV [probe		Winch	[7] 8	afety	Polymer
Inside Dian			140				Track [Track		Roller Bit		Doughnut	✓ None
Hammer W						_	Skid [,	ΙĦ	Cutting Head			Driven Spum
Hammer F		ļ <u>-</u>	30		5000 NO.	<u> []</u>	Stratum							
Depth (ft)	Drilling	l l	Recov RQ		Weathe	rine	Change				Visual Class	sification and	Remarks	
Deptil (11)	Rate	Core No.			1		(ft)							
	(mia/ft)	Depth (ft)	(in)	(%)										
	5	 			 									
<u> </u>		11						Compe	tent red san	dstone	with interbedde	ed gray sandsto	ne.	······································
1	5				ļ						OUFFNS	TONE FORMA	TION	
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 	1		Water Leve	Data						mple II)	O-2	Summ	ary
Date	Time	Elapsed T		om of	sottom of	Boring	Water (ft) ?	Open End Thin Wal			Overburden (L. Rock Cored (li	inear ft)	
—	 	(hrs)	Casi	ng (ft)	(ft)		1	- i	Undistur	bed Sar	nple	Samples		·····
							1		Split Spo	on San	aple	BORING	NO.	HA-111

OBSERVATION WELL Well No. LBA-MW1 Boring No. INSTALLATION REPORT HA-111* 70819-000 PORT OF ROCHESTER H&A FILE NO. PROJECT M. VALENTINE PROJECT MGR. ROCHESTER, NEW YORK LOCATION R. DEDRICK FIELD REP. LABELLA ASSOCIATES CLIENT GEOLOGIC ENTERPRISE DATE INSTALLED 5/24/2000 CONTRACTOR WATER LEVEL L. TODD DRILLER **Guard Pipe** North Parking Lot Ground El. Not Surveyed Location Ø EL Datum Not Surveyed Roadway Box **BOREHOLE** Type of protective cover/lock Roadway Box SOIL/ROCK BACKFILL CONDITIONS Height/Depth of top of guard pipe/roadway box above/below ground surface Height/Depth of top of riser pipe 0.3 above/below ground surface Type of protective casing: Length ft **Inside Diameter** in Depth of bottom of guard pipe/roadway box ft Top of Seal (ft) Thickness (ft) Type of Seals Concrete 0.0 1.0 1.0 2.5 Bentonite Seal 1.1 Type of riser pipe: Gray brown silty Inside diameter of riser pipe 2.0 Sand/Grout fine to coarse SAND. Type of backfill around riser Quartz Sand Some gravel, wood, wet. 4-1/4 Diameter of borehole Depth to top of well screen 3.0 ft **SCHEDULE 40 PVC** Type of screen 0.010 Screen gauge or size of openings in 2.0 Diameter of screen in **Quartz Sand** Type of backfill around screen Depth of bottom of well screen 13.0 ft L3 Bottom of Silt trap ft 14.0 Depth of bottom of borehole ft (Bettem of Exiperation) (Not to Scale) (Numbers refer to depth from ground surface 10 ft = 13 ft A +

Length of screen (L2)

Well installed 4 ft. west of Boring HA-111. Hole was blind augered to 14.0 ft. per Greg Senegal of Labella Associates

Length of silt trap (L3)

Pay length

COMMENTS:

HALEY	'&E
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70819	Pag		1	of	2
M. VA			3		
R. DE					
7-Jun-	00				
8-Jun-	00				
		Drill N			
ner Type	_			toni	
Safety		님	Poly Non		ſ
Doughnut E		<u>[√]</u> Driven			Spun
d Remarks	ents,	slag, d	ry.		
k fragments,	slag,	dry.			

H&A FILE NO. PROJECT PORT OF ROCHESTER PROJECT MGR. ROCHESTER, NEW YORK LOCATION FIELD REP. LABELLA ASSOCIATES CLIENT DATE STARTED GEOLOGIC ENTERPRISES CONTRACTOR DATE FINISHED L. TODD DRILLER See Boring Location Plan ft Datum Boring Location 270.8 City Elevation CME 55 - Truck Mount Rig Make & Model Core Barrel Casing Sampler [tem ✓ Cat-Head Ham ✓ Truck Tripod HSA SS NX Турс Winch V ☐ ATV Geoprobe 1-3/8 3-1/4 Inside Diameter (in) Track Roller Bit Air Track 140 Hammer Weight (lb) **Cutting Head** Casin Skid Hammer Fall (in) 30 Stratum Sample Sampler Casing Sample Depth Visual Classification an Change Depth (ft) Blows per Blows per 6 Number & (ft) (ft) in Recovery fŧ Loose brown silty fine SAND, organics, dry. 0 31 0.0 2.0 16*/24* Very loose brown red silty fine to coarse SAND, little 2.0 4.0 14"724" No Recovery No Recovery 6.0 Loose brown red silty fine to coarse SAND, little roo 15"/24 8.0 Same. S4 4"/24" 1007.4 8.9 Obstruction at 8.3 ft. Note: Moved 4.0 ft. to south. Blind augered to 10.0 ft. and hit auger refusal again. Moved again 10.0 ft. south of second boring. See Boring HA-113a. 25 30 Summary Sample ID Water Level Data Open End Rod Overburden (Linear ft) 27,0 ft. Elapsed Time Bottom of Water (ft) Rock Cored (Linear ft) Thin Wall Tube Undisturbed Sample Casing (ft) Boring (ft) Number of Samples 88 U Split Spoon Sample Geoprobe HA-113 BORING NO.

HALEY &
TIMELIC
ALDRICH
PALIDICIT

BORING NO.
HA-113a

ALDR	UCH		1.1	791	DC	IXI	NG K		OKI			ILA	-11	LJa
											[Page	2 0	f 2
PROJECT		PORT OF RO	CHESTER						H&A F	ILE NO.	70819-	000		
LOCATIO		ROCHESTER		ζ			·		– PROJE	CT MGR.	M. VA	LENTIN	E	
CLIENT		LABELLA AS							- FIELD	REP.	R. DEI	DRICK		
CONTRAC		GEOLOGIC E		S					- DATES	STARTED	7-Jun-	00		
DRILLER		L. TODD							DATE	FINISHED	8-Jun-(00		
DRILLER														
Elevation	270.					Location			ocation Plan ick Mount			Drill	Mad	
Item		Casing			True	ke & Me	Tripod	[]	Cat-Head	Hammer	Type		Bento	nnite
Туре		HSA	SS	NX 2	☐ AT] Geoprobe	lä	Winch		afety	ᅥᅢ	Polyt	
Inside Diam		3-1/4	1-3/8		Trac	_	Air Track	片片	Roller Bit		oughnut	1 17	None	
Hammer W Hammer Fa			30		Skic			١Ħ	Cutting Head			Drive	n [Spun
riammer ra	Casing	Sampler	Sample	Camala Da	Sti	ratum								*
Depth (ft)	Blows per	Blows per 6	Number &	Sample De (ft)	՝ լս	hange			Visual Clas	sification and R	lemarks			
	ft	in	Recovery	(44)		(ft)								
_ 0 _				·										
										1. 18.5	и ,			
ľ				·						augered to 10.0 Boring HA-113				
¦														
		 												
5														
i														
	-													
									 					
				ļ										
10		1	S5	10.0			Loose brown red s	ilty fin	e to coarse SA	ND, little rock fr	agments,	slag, mois	t.	
		2 3								FILL	-			_
	ŀ	3	3º/24º		12.0									
					-									
	ļ	 	<u> </u>											
	1						(Slag obstruction	in spoo	on)					
15		7	\$6	15.0										
	ļ	n		 										
1		14	1"/24"		17.0								····	
1			ļ	 										
Į.	 				工									
1			 	-	\dashv					····				
20	<u>.</u>			<u> </u>		20.0	.,			UAND		nokete -F	100000	
		3 14	S7	20.0	-		Very dense gray silt, moist.	orown !				OLACIS UI	Liayey	
1		36		1						GLACIAL TILL				
		50	22"/24"	 	22.0		ļ							
į.														
i							<u> </u>							
Į.	 		 				<u> </u>							
25				177.6			Cama as abase							
<u> </u>	I	30 76	28	25.0			Same as above.							
1	 	98												
1	 	100/	22"/24"	27.0	-		 		Bottom	of Exploration a	1 27.0 ft.	· 		
1				1										
1					$ \bot$		 							
1			 											
L 30 _				1			1							
	1	Wafe	Level Data					mple I		1	Su	mmary		
-	T ==	Elapsed Tim				Vater (ft	O Open En	d Rod		Overburden (L	near ft)	27.0 A.		
Date	Time	(hrs)	Casing (ft)	Boring	(ft) Y	(11	T Thin Wa	ui Tubo bed S=	e umple	Rock Cored (L. Number of San		 8S		
	-	 					S Split Sp	oon Sai		BORING			A-11	3.
	- 	 	+	+			G Geoprot	¢	•	DOMING		n	W-11	

TEST BORING REPORT

BORING NO. HA-114

Page 1 of 2

PROJECT		PORT OF RO	CHESTER					H&A FILE NO. 70819-000					
LOCATIO		ROCHESTER		(T MGR.	M. VALENTI				
CLIENT		LABELLA A					FIELD F	REP.	R. DEDRICK				
CONTRAC		GEOLOGIC I		S			DATE S	TARTED	25-May-00				
DRILLER		L. TODD					DATE F	INISHED	25-May-00				
						C D	ing Location Plan						
Elevation	261.9				ng Locatio Make & M		5 - Truck Mount		Dri	ll Mud			
Item		Casing	Sampler Co			Tripod	✓ Cat-Head	Hammer	Туре	Bentonite			
Туре	-tor (to)	HSA 3-1/4	1-3/8			Geoprobe	Winch	√ S	afety	Polymer			
Inside Diam Hammer W		3-1/4	140			Air Track	Roller Bit		oughnut [-	None			
Hammer Fa			30	And the second second	Skid	<u> </u>	Cutting Head	Casing	Dri	ven 🗌 Spun			
T. T.	Casing	Sampler	Sample	Sample Depth	Stratum			· · · · · · · · · · · · · · · · · · ·	1 a ml-a	· ·			
Depth (ft)	Blows per	Blows per 6	Number &	(ft)	Change		Visual Class	ification and F	Kemark3	1			
	ft	in	Recovery		(ft)								
├ ° ┯┤		-1	SI	0.0		Medium dense bro	wn sandy SILT, brick,	dry.					
j l		7 12						FILL					
i 1		6	6*/24*	2.0									
!	i	6	S2	2.0		Medium dense bro	wn black sandy SILT,	brick, stag, dry	·				
		7-3											
		3	8"/24"	4.0		Same.							
		8 15	S3	4.0		Cally.	· · · · · · · · · · · · · · · · · · ·						
<u></u> 5 −		7		7.0				,,					
1		35	10"/24" S4	6.0	::	Medium dense bro	wn black silty SAND,	brick, slag, dry	',				
		22											
1		16 507.3	12"/24"	8.0				·					
	<u> </u>	12	S5	8.0		Same, except some	rock fragments.						
İ	<u> </u>	17007.4											
10			9"/24"	10.0		Concrete Obstruct							
· · · -		1007.3	S6	10.0		(offset 6' south of	nitial location, see log	HA-114a)					
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1													
30	- 		-	_	- 								
			r Level Data				mple ID	Orientaria - 7	Summary				
Date	Time	Elapsed Tin			Water (f	O Open En		Overburden (L Rock Cored (L	inear ft)				
		(hrs)	Casing (ft)	DOTTEE (II)	1	U Undistur	bed Sample	Number of Sar					
1							oon Sample	BORING	NO.	HA-114			
		1	_	1	1	C Geobrop	·						

HALEY	Sz
ALDRIC	H

BORING NO. HA-114a

		<u> </u>											2 of	f 2
PROJECT	r	PORT OF RO	CHESTER						H&A FIL	E NO.	70819-00	Ю		
LOCATIO		ROCHESTER							PROJECT	r MGR.	M. VALI	ENTINE	3	
	٠.١	LABELLA AS					·····		FIELD RI		R. DEDR	JCK		
CLIENT	OTE OTE	GEOLOGIC I							DATE ST		25-May-			
CONTRA			LITICKIKI	ULN					DATE FI		25-May-			
DRILLER	.	L. TODD												
Elevation	261.9	92 ft Dat		City		ing Locatio			ocation Plan]-		
Item		Casing		Core Barrel	Rig N	Make & M	lodel CME 5:		uck Mount			Drill N		-
Туре		HSA	SS	NX		•	☐ Tripod	[J		<u> </u>	er Type		Bento	
Inside Diam	ueter (in)	3-1/4	1-3/8	2		_	Geoprobe				Safety		Polym	
Hammer W			140		g —		Air Track				Doughnut		None	
Hammer Fa			30	100	8 <u> </u>	Skid [<u> </u>		Cutting Head	Casing		Driven		Spun
	Casing	Sampler	Sample		ienthi	Stratum					 `De			
Depth (ft)	Blows per		Number &	cc (ft)		Change	į		Visual Classif	ication and	nemarks			
	ft	ia	Recovery	<u>'</u>	_	(ft)			<u> </u>	, 	·	····		
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1	1				士									
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10 —			<u> </u>											
1	 .						ļ							
1	1	ļ				·	L							
		20	87	12.0			Very dense gray b	lack b	olue gravelly SANI), slag, wet	- <u></u>			
1	ļ	97				L	ļ			FILL				
1	1	90			14.0									
1		3	S8	14.0	二	14.0	Medium dense gri	y bro	wn clayey SILT, π	ioist.				
15	4	5 8	 			ļ	 		A	LLUVIUM				
1	1	8 12	2 16"/24"		16.0									
ı						l	<u> </u>							
1	 		- 			ļ	1							
J	L	<u></u>	1											
1			1			ļ								
1	 	- -	S9	19.0		19.0 -	Medium dense bro	own s	ilty fine to coarse	SAND, som	e gravel, wet.			
20		17	1											
	1	20	1 18"/24"	*-	21.0	ļ	 							
I .	 		1 10 /24						GL	ACIAL TII	L			
1				1										
1	i				I	ļ	 							
1			<u> </u>											
			I			ļ	Ven de	500	i fine to coarse SA	ND som-	Tavel was			
1	1	100/.4	S10 10"/24		24.9	ļ	very dense gray	J. UWN						
25			1 10 129						Bottom of	Exploration	at 25.0 ft.			
i			1											
i						 		install	led in completed be	orehole. Se	c Installation 1	Report fo	r_	
1	 		1			1	LBA-MW3.							
i	L													
1		<u> </u>				+								
i	 	 	1											
30	4		T			ļ								
			r Level Data	1				mple				mary		
-		L Clansed Tim		n of Botto		Water (f	O Open En	d Rod	1 0	verburden ((Linear ft)	25		
Date	Time	(hrs)	Casing	1		Trater (I	T Thin Wa	ill Tub	be R	lock Cored (lumber of S		108		
			4				U Undistur S Split Spe						A 44	40
I	1	1	_L			1	T a abur ab	ال ااب		BORING	U NO.	H	A-114	42

HALEY & ALDRICH		OBS	ER	VATION WELL	1	Well No. LBA-MW:	
ALDRICH	II	NSTA	LI	ATION REPOR	RT	Boring No. HA-114a	
PROJECT	PORT OF ROCHEST					819-000	
	ROCHESTER, NEW				_	VALENTINE	
_	LABELLA ASSOCIA			FIEL		DEDRICK	
	GEOLOGIC ENTER	PRISE				25/2000	
DRILLER 1	L. TODD			WA'	TER LEVEL		
Ground El. N	lot Surveyed R	Location	North	Parking Lot	Guard	-	
EL Datum N	lot Surveyed				_	vay Box	
SOIL/ROCK	BOREHOLE	Ì	<u></u>	Type of protective cover/lock	R	oadway Box	_
CONDITIONS	BACKFILL	_					
				Height/Depth of top of guard pi above/below ground surface	ipe/roadway box		ft
				Ì			
		1+1	П	Height/Depth of top of riser pip	ne.	0.3	ſŧ
				above/below ground surface		· - ·	
1				Type of protective casing:		None	
				Length			ft
				Inside Diameter			io
	1						
				Depth of bottom of guard pipe/	roadway box		u
				Type of Sea	als Top of Seal	(ft) Thickness (ft)
	. a			Concrete		1.0	•
				Bentonite S	eal 1.0	12.0	_
		LI					
,							
Gray brown silty				Type of riser pipe:		PVC	 .
SAND, slag, brick	Bentonite/			Inside diameter of riser pip		2.0	i
1	Quartz Sand			Type of backfill around rise	er <u>B</u>	entonite Chips	
				Diameter of homebale		4-1/4	íı
İ				Diameter of borehole			
		1+		Depth to top of well screen		15.0	f
1							
		11		Type of screen	SCH	IEDULE 40 PVC	
				Screen gauge or size of ope	nings	0.010	i
		1,2		Diameter of screen		2.0	i
1				Type of backfill around screen	ı	Quartz Sand	
						05.0	
:				Depth of bottom of well screen	1	25.0	'
		13		Bottom of Silt trap			4
=							

Depth of bottom of borehole

0

Length of silt trap (L3)

<u>ft</u> +

10 Length of screen (L2)* 25.0

ft

24.7 Pay length

COMMENTS:

(Bottom of Extporation)
(Numbers refer to depth from ground surface in feet)

14.7 Riser Pay Length (L1)

n +

TEST BORING REPORT

		1	_			_	-							ł	Pag	e i	1 (of	i
PDOTECT	,	PORT OF RO	CHESTER							H&A FI	ILE N	O.	7	70819-				<u> </u>	
PROJECT LOCATIO	-	ROCHESTER,								PROJE			-	M. VA			3		
LOCATIO	-	LABELLA AS								FIELD			-	R. DEI					
CLIENT	-	GEOLOGIC E								DATE S		TED	_	25-May					-
CONTRAC DRILLER	-	L. TODD	KI							_ DATE S			_	25-May	<u> </u>				
DRILLER				Ye.	<u></u>					-			=		<u> </u>	===			
Elevation Item	253.6			City Core Barre		ing Location Make & Mo				ocation Plan ick Mount					Ţ	Drill M	fud		
		Casing HSA	Sampler SS	Core Barre		Make & Me	Tripod			Cat-Head		Hamn	ner Ty	уре	+			tonite	
Type Inside Diam	eter (i=)	3-1/4	1-3/8	2		ATV [Geoprobe		₫	Winch	_ f	Ø			\dashv		Poly		
Inside Diam Hammer W		3-1/4	1-3/8			Track [Air Track	十	Ō	Roller Bit	\neg	<u> </u>		ghnut		<u> </u>	None	e	
Hammer Fa	all (in)		30			Skid [1		Cutting Head	<u></u> i	Casin	ε		<u></u>	Driven		Sp	ш
	Casing	Sampler	Sample		Depth	Stratum				Visual Class	qifi	 	 	n=-1	_				
Depth (ft)	Blows per	Blows per 6	Number & Recovery	∞ l c(tr)		Change (ft)	1			v isuai Clas	iicati	.va 20	.u Ket	ne K5					
						<u>/</u>					7//		<u></u>						_
- °				1						CR	USHED	STO د	NE						
l	 		\		+		<u> </u>												
[14	SI	2.0			Very dense black	Ын-	c pro-	y silty fine to	CORFE C	יועאַ;	, brick	c, slao	drv				_
[34	31		+		018C	u					اناد						
1		34 42	16"724"	-	4.0		1				FIL	<u></u>							
1		28	16"/24" S2	4.0			Same, except mo	oist.											
5		48 23	<u> </u>				<u> </u>												
1		20			6.0		Media	FC-		-Least No.	<u> </u>	CAL NAME	নুদৰ	net.					
[12	S3	6.0			Medium dense b	, owi	Diac	BERICH KOC	rkA	-ME	5, \	.,uL.					_
1		13 12	A11 /4																
1	ļ	- B	7"/24" S4	8.0	8.0	·	Same.				<u></u>								
1				1	二														
		7			10.0	<u>'</u>													
10	1	10 5	85	10.0	=	`	Same.												
1		6	<u>t </u>			·													
1		12	4"/24" S6	12.0	12.0	<u>'</u>	Same.												
		8	1				1												
]	1	12	6"/24"	_	14.0	<u></u>	<u></u>												
ł		1					L												
15 —	 	<u></u>				<u> </u>													
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1				—		<u> </u>													
						t													_
1		2	57	19.0			Loose brown-gr	ay F	andv '	SILT, organice	s, wet				_				
20	_	2	3/	1.5.0			orowii-g	., s. 	<u>v</u>		·								
		3 3	3 10"/24"	*	. 21.0		 				ALLU	AIUX	<u>"</u>						
1	 		13 124				1												
1	ļ		 																
1															_				
1			+				<u></u>												
1		3	28	24.0			Same.										_		
25 —	 	4 3	4			 													
1		3	3 10"/24"	*	26.0	1	1			D-2		Dec.	n	50 P			_		_
1						 	<u></u>			Bottom	or expl	or atio	at 2	II.					
1																			
i		+					1												
1						1													
]						1	1												
30			1				1			<u></u>									
		Water Elapsed Time	r Level Data	* • Bo**	iom of		O Open I	End R					(Line	er ft)	<u>тта</u> 26	;			
Date	Time	(hrs)	Casing (ng (ft)	Water (ft	⁽⁾ T Thin W	Vall 1	Tube	nele	Rock (Cored	l (Line	arft)	=		_	_	_
			+			+	U Undistr				Numbe		_		88	_		15	
	4	+	+			+	S Split S		Justi	p.c	B	ORIN	ig no).		H	A-11	15	

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BORING NO.

HA-116

BORING NO.

TEST BORING REPORT **HA-116** Page 1 of 1 H&A FILE NO. 70819-000 PORT OF ROCHESTER PROJECT M. VALENTINE PROJECT MGR. ROCHESTER, NEW YORK LOCATION R. DEDRICK FIELD REP. LABELLA ASSOCIATES CLIENT DATE STARTED 2-Jun-00 GEOLOGIC ENTERPRISES CONTRACTOR DATE FINISHED 2-Jun-00 L. TODD DRILLER See Boring Location Plan 252.4 ft Datum City Boring Location Elevation Drill Mud Core Barrel Rig Make & Model CME 55 - Truck Mount Casing Sampler Item Hammer Type Bentonite Tripod Cat-Head ✓ Truck SS NX HSA Турс ✓ Safety Polymer ☐ ATV Geoprobe Winch 3-1/4 1-3/8 2 Inside Diameter (in) Ō None Roller Bit ☐ Doughnut Track Air Track Hammer Weight (lb) 140 Cutting Head Driven Spun Casing Skid Hammer Fall (in) 30 Sample Stratum Sampler Casing Sample Depth Visual Classification and Remarks Number & Change Depth (ft) Blows per Blows per 6 (ft) in Recovery 0.4 ft. TOPSOIL Medium dense black blue silty fine to coarse SAND, slag, dry. SI 0.0 2.0 11"/24" Same, except wet. 22 **S2** 12"/24" 4.0 Same. 42 6.0 8"/24" Medium dense brown fine to coarse SAND, slag. 54 14 104/244 8.0 Medium dense gray brown fine to coarse SAND, some gravel, wet. 10.0 8"724" Same. S6 ALLUVIUM 12.0 8"/24" Loose gray brown fine sand SILT, organics, moist. 15 . 17.0 3"724" Very loose gray brown fine sand SILT, little clay, organics, moist. 20 22.0 16"/24" 25 . Same. **S9** 27.0 18"724" Bottom of Exploration at 27.0 ft. 30 Sample ID Summary Water Level Data Overburden (Linear ft) 27 Open End Rod Bottom of Bottom of Elapsed Time Water (ft) Thin Wall Tube Rock Cored (Linear ft) Date T Casing (ft) Boring (ft) (hrs) 98 Ū **Undisturbed Sample** Number of Samples

Split Spoon Sample Geoprobe

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F	AL	ΕY	&±
A	LD	RIC	$^{\circ}$ H

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PDATECE	,	PORT OF RO	CHESTER						_	H&	A FILE	NO.		70819-				
PROJECT		ROCHESTER									OJECT I			M. VA		TNE		
LOCATIO		LABELLA AS									ELD REP			R. DEI				
CLIENT											TE STAI			2-Jun-				
CONTRAC		GEOLOGIC E	IN I EKPK	1959							TE FINI			2-Jun-(
DRILLER	·	L. TODD										JIL		uil-				
Elevation	252.	4 ft Dat		City	+	ng Locatio				Location Pia						214 * *		
Item		Casing	Sampler	Core Barrel		Make & M				ruck Mount		1		\		ill Mu		
Туре		HSA	SS	NX		Truck	_	ripod	[[=	ad		mmer T				chtor	
Inside Diam		3-1/4	1-3/8	2		ATV		ieoprobe	┞┾		310	4 5	∑ Saf	ety ughnut	1 =		olym lone	ici'
Hammer W			140		a	Track	남^	Lir Track	╽╞	Roller E			ing	wunut		√ N iven	- CITC	Spun
Hammer Fa		 Co1	30	. 1		Skid Stratum	<u> </u>		<u></u>	1 crumb	, .vau	Jun 1	B			. · VII		, spall
Depth (ft)	Casing Blows per	Sampler Blows per 6	Sample Number	& Sample D	epth	Change	1			Visual	Classifica	ıtion	and Re	marks				
zehm (11)	ft ft	in in	Recovery	1 (10)		(ft)							-					
					二			. TOPSOIL		10 272 1	le s	<u> </u>	1 22	de:				
Γ		4	SI	0.0	 T		Medi	ium dense bla	ck bli	ue silty fine		SANI TLL	ب, slag,	шу.				
1	 	19			_+													
1	ļ	24	11"/24"		2.0		Se-	e, except wet.										
1	1	12	S2	2.0	_ -+		Jame	,ept wet.										
1	l	21	12		二													
1		42	12"/24" S3	4.0	4.0		Same	5.										
_ 5		25																
[,	1	10 20	8"/24"		6.0		 											
1	 	14	8 724 S4	6.0			Medi	ium dense bro	wn fi	ine to coars	e SAND, s	lag.						
		12	ļ	_	4		 											
	1	2	10"724"		8.0													
1		3 (S 5	8.0	_		Medi	ium dense gra	y bro	own fine to	coarse SA	ND, s	ome gra	vel, wel	L			
	 	3 8	ļ				1											
10		10			10.0		Same											
		18	S6	10.0			oam	<u>. </u>										
	 	4	<u> </u>				1				ALL	UVI	JM					
1		6	8"/24"		12.0		 											
1	<u>L</u>						1											
			 			L	1-	· - · · · · · ·										
ł		<u> </u>					1											
15 —	 	<u> </u>	S7	15.0		ļ	Lone	se gray brown	fine	sand SICT	organics	moist	<u></u>					
i		2	<u> </u>				Ĕ	ا المحادث ر ــ ن										
1		3 3	3"/24"		17.0		+											
1		1 3	3 724"				1											
Ī			<u> </u>			ļ	1											
1		ļ	 			ļ—————	 											
1							1_											
20		2	58	20.0		{	Ver	y loose gray b	rown	fine sand	SILT, little	clay.	organic	s, moist	<u>. </u>			
		1					1											
1	1	3 3	16*/24	m——	22.0	<u> </u>	 											
1		 	10 /24			1	士											
Į	<u></u>	 	1			<u> </u>	$+\overline{-}$											
Ī	1	<u></u>	1				<u> </u>											
1			1			<u> </u>	1											
25		1	89	25.0			San	nc.										
Į.		1	1				1											
ļ	1	2	3 18"/24	 	27.0	 	-											
		<u> </u>	1.512			1	二			Во	ottom of Ex	cplora	tion at	27.0 ft.				
1			4			 	-			···								·
1	1		1			1	1											
1							1											
30 —	-					+	1-											
<u> </u>			r Level Date			<u></u>	工		mple						mmary 27			
Date	Time	Elapsed Tim				Water (f		O Open En T Thin Wa					len (Lin red (Lin		27			
1	+	(hrs)	Casing	(ft) Borin	<u>s (11)</u>	1		U Undistu	rbed S	Sample			of Samp		98 98			
			1			1		S Split Spe	Don S	ample			ING N			HA	-116	5

HALEY	&z
ALDRIC	H

															Pa	ge	1	of	
PROJECT		PORT OF RO	CHESTER								H&A FILE	NO.		70819					
LOCATIO	-	ROCHESTER		RK							PROJECT	MGR.		M. V	ALE	NTINE	3		
		LABELLA AS							_		FIELD RE	P.		R. DE			_		
CLIENT											DATE STA)	24-Ma					
CONTRAC		GEOLOGIC E	EN I EKPKI	369							DATE FIN			24-Ma					\dashv
DRILLER		L. TODD					_				DALEFIN	.UILE	_	4-1-1416	., -0		_		\equiv
Elevation	253.1	7 ft Date	um. C	ity		ng Locatio		See Bor											
tem		Casing		Core Barrel		Make & M			_							Drill N			
Гуре		HSA	SS	NX	[] ī	ruck [Tripod	Ŀ		it-Head	-	_	Туре				tonite	
nside Diams	eter (in)	3-1/4	1-3/8	2	□^	TV [Geoprobe	_[inch		-	afety				mer	
Hammer We			140		Πī	rack [Air Track	֓֞֞֞֞֞֜֞֞֞֜֞֜֞֜֞֜֞֜֞֜֞֜֞֜֞֜֞֜֞	_	oller Bit	عير		Ooughnut	_	Į.	Non		
lammer Fa			30			kid [_[] Cu	utting Head	Casi	ng		<u>Ц</u>	Driven		Sp	מנ
	Casing	Sampler	Sample	Sample De	enth)	Stratum				*,	isual Classific	ration -	المرس	Demest-					
Depth (ft)	Blows per	. 1	Number &	(ft)	.]	Change (ft)				V	13URI C1255111	Lauou A	Da.	CHIEL NS					1
	ft	ia	Recovery			(19)	_						-						\dashv
- ∘ -		l- <u>2</u>	SI	0.0			Med	dium dense brov	VII S	andy S	ILT, organics,	dry.							
ŀ		4																	
1	·	7 8	8"/24"		2.0														
ł	ļ 	10 "	S2	2.0			Ма	dium dense brov	νn t	olue sil	ty SAND, four	idry, de	bris,	dry.					
i		9 70			$\neg T$							FILL							
[20	9"/24"		4.0		 						_						
ł	ļ	13	S3	4.0	\exists		Ver	y dense blue-bl	ack	gray sa	andy SILT, bri	ck, slag,	, mo	ist.					
_ 5 _		34 53					<u> </u>									 			
1	l	507.4	14"724"		6.0														
		62	S4	6.0			San	ne, except wet.											-
]	ļ	1007.4	ļ																
ļ	L		7"/10"		8.0		-	4		3	~ POOP ***	Cries		wet					_
İ		6	S5	8.0	- T		Mê	dium dense blac	εκ-b	auc sili	y KUCK FKA	JMEN.	٠٠, ١	AUI.					
	 	13	ļ																
10	<u></u>	15	9"/24"		10.0	10.0	<u></u>	dium dense san	 • تنه		ittle clay area	nice ma	ojs†						
	!	20	S6	10.0			ivie	Audit uchse San	uy i	, se . 3 , 16	ciay, orga	, mt							
	 	7																	
		4	12"/24"		12.0		17	dium dense bla	ek	Tav ell	ty fine to coar	e SANI	5. 5/	me fine	grave	l, moist	l.		
	I	2 3	S7	12.0			,vie	ucuse via	- <u> 1</u>	<i></i> 311									
		[9					F				AL	LUVIU	М						
1		19	12"724"		14.0		-												
ا ۔۔ ا	1		L				L												
15	1						F				· · · · · · · · · · · · · · · · · · ·								
	 	 	 				 												
	l																		
			 				-												
			 				1												
1				100	\equiv	L	ļ.,	edium dense gra	IV. L	mur -	andy SII T Ea	le orav		ood orm	nice	, moist			
l	1	2 5	28	19.0		ļ	100	muni acuse Eu	.y-0			B1 BY		, ., ga					
20	 	- 6	<u></u>				1_		_										_
ł	ļ		7 14"724"	<u> </u>	21.0	ļ	+-												
l		 	+			<u> </u>	十												
i						ļ	1_												
ì	ļ			_		 	+												
1	1		<u> </u>			L	1						_						
		3	S9	24.0		 	1Si	ume.											
25 —	4	3 4				 	+-												
1			4 17"/24"	"	26.0		1				Dara	70-12	10-	of JK N N					
1		T	1			 	4-				Bottom of E	Apioral	.un	± 40.V ft.					
1			 			 	+												
1	1						1						_						
1			1			ļ	4.	ionitoring well i	Dat.	ग्राह्म स	completed by	rehole	See	Installati	on R	eport fo	ж		
i	<u></u>					1		BA-MW2.			00								
30						1	Ī												
			r Level Data				+	Ç	որե	e ID				S	uma				
		Elansed Tim			m of	Water (f	+	O Open Enc	dŘ	od				inear ft)	2	6			
Date	Time	(hrs)	Casing (TT ETER (I	1	T Thin Wal	ll Ti	ube		ock Core umber of		Linear ft)	7	98			
						 	4	ty Undisturi S Split Spo					-		;			17	
		F	1			<u></u>	┛	S Split Spo	UII I	omithic	· 1	BORI	NG	NO.		H	A-1	17	

HALEY & ALDRICH		0	BSI	CRV	ATION WELL			Well No. LBA-MW2	
ALDRICH]	INS	TA	LL	ATION REPORT		T	Boring No. HA-117	
PROJECT	PORT OF ROCHE	STER			H&A FIL	E NO.	70819-0	00	
LOCATION	ROCHESTER, NE		RK		PROJECT	MGR.		ENTINE	
CLIENT	LABELLA ASSOC				FIELD RI		R. DED		
CONTRACTOR	GEOLOGIC ENTE	RPRIS	E		DATE INS	STALLED	5/24/200	<u> </u>	
DRILLER	L. TODD				WAIEK				==
Ground El.	Not Surveyed ft	Loca	ation				uard Pipe oadway Be	n y	
EL Datum	Not Surveyed					(L) N			
SOIL/ROCE	K BOREHOL	E			Type of protective cover/lock		Roadwa	у вох	_
CONDITION	S BACKFILI			Ì					•
			_	 -	Height/Depth of top of guard pipe/ro above/below ground surface	adway box			_ n
			.	ļ	and the first an				
			-	┌╼╅┼	7			0.3	•
		ł			Height/Depth of top of riser pipe above/below ground surface			0.3	_ n
					and to below ground surface				
					Superior and a street and a str		No	ne	
		.			Type of protective casing:		140		A
	Ì]			Length Inside Diameter				 iı
		l			inside Diameter				
					Depth of bottom of guard pipe/road	way box			ft
1	Quartz Sano	ı							
	(17 ft. bgs.)				Type of Seals		Seal (ft)	Thickness (ft)	
İ	Bentonite				Concrete		0.0	0.0	_
	(17 ft. to 26 f	t.)	1		Bentonite Seal		0.0	4.0	
		ļ	LI						
	ļ								_
Die als benum eiles					Type of riser pipe:		P	vc	
Black brown silty SAND, slag, brick,	j			4 1	Inside diameter of riser pipe			2.0	i
gravel.					Type of backfill around riser		Quart	z Sand	
graves.									
					Diameter of borehole			4-1/4	i
1			1						
					— Depth to top of well screen			5.0	1
1									
1					Type of screen		SCHEDU	LE 40 PVC	
I					Screen gauge or size of opening	s ·		0.010	i
1	1								
			L2		Diameter of screen			2.0	1

Depth of bottom of well screen

Depth of bottom of borebole

0

Length of silt trap (L3)

Bottom of Silt trap

10

Bottom of borehole seal from 26.0 ft. to 17.0 ft. b.g.s. using Bentonite Chips.

Length of screen (L2)

<u>n</u> +

15.0

15.0 26.0

ft

15

Pay length

ſt

COMMENTS:

(Bettom of Extporation)
(Numbers refer to depth from ground surface in feet)

Riser Pay Length (L1)

Н	AI.	EY	&r
A	ĹĎ	ŔĨĊ	H

						_			_					Pa		1 0	of 2
PROJECT	تحبيب	PORT OF RO	CHESTER						_	H&A I	FILE	NO.	70819-				
LOCATIO	-	ROCHESTER								_ PROJI	ect n	IGR.				<u>E</u>	
CLIENT		LABELLA AS								_ FIELD) REP.	•	R. DE	DR	ICK.		
CLIEN I CONTRAC		GEOLOGIC I								DATE	STAF	RTED	8-Jun-	00			
		L. TODD	N							— DATE	FINE	SHED	8-Jun-	00			
DRILLER									=	ocetic- N							
Elevation	242.7			City		ring Locatio Make & M				ocation Plan ruck Mount					Drill I	Mud	
ltem		Casing	Sampler	Core Bat			Tripo) 			Ham	mer Type		\Box	Bento	onite
Туре		HSA	SS L3/8	NX 2		•	∏ Гпро ☐ Сеор					\overline{Q}			18	Poly	
Inside Diame		3-1/4	1-3/8	2	,		Air T		片	1 - 1 - 51		1 ក	Doughnut		Ö	None	
Hammer We			140 30			Skid			15	Cutting Hea	ıd	Casin			Drive	n [Spun
Hammer Fal	all (in) Casing	Sampler.	Sample			CANADA	<u> </u>			<u> </u>			· 	_			
Depth (ft)	Blows per	1	Number &	e Samp	le Depth (ft)	Change	1			Visual Cla	nssifica	tion a	nd Remarks				
()	ft	in	Recovery	1 1	(••)	(ft)											
_ 0 _				1_		 	ASPHAL	.r									
	!	9	<u>S1</u>		0.5	11	Medium	dense bla	ck bro	own red silty fir	ne to co	oarse S	AND, brick, s	som	e rock		
ŀ	 	18	 		2.0	20	fragment	ts, dry.			F	TLL -					
ļ	!	7	13"718" S2	2.0	2.6	4.0	Medium	dense bro	wn si	Ity fine to coan	se SAN	ID, mo	ist.	_			
Ì		12	<u> </u>								ALL	UVIUN	n				
,	t	9 8	12"724"	4-	4.0	 	 										
' }	 	4	S3	4.0			Loose gr	ay brown	silty	fine to medium	SANL), orga	nıcs, moist.				
5	 	4 3	ļ				 										
	(3	12"724"		6.0												
1							 										
•		 	 														
1							1										
			 			 	 										
!																	
10		- 6	S4	10.0		+	Medium	dense gr	ay fine	e to coarse SA)	VD, litt	le silt,	little gravel, v	wet.			
\	1	14	1			1	1										
i		12	16"/24"	7	12.0	1	+										
l .	 	- 	10"/24	_	14.	<u> </u>	1										
} '				1		+	+										
\		ļ	 	-		<u> </u>	1										
1		1	1	1			1										
15	 		S5	15.0		1	Very loc	ose brown	orga	nic SILT, mois	it.			_			
Ī			1				T										
ł	1		4 16"/24"		17.	0	+										
1	 	L	.0 124	士		1	1										
l	ļ			 			+										
1	1	1				1	1										
1			-			20.0	+										
20	4	4	\$6	20.0		1 20.0	Mediun	n dense g	ray bo	own silty fine t	to coars	se SAN	D, some grav	el, i	noist.		
l		16	1	二二		1						CIAL 1					
i	1	19	20 724	m	22.	0	-				N						
1		<u>'</u>	20 124			1	1										
1	 		+			+	+										
1	1 _			_+		1	1							_			
i .							4										
25	4	28	S7				Very d	ense brow	vn silt	y fine to coarse	SANL), some	e gravel, mois	it			
1	L	1007.4	107/10		25	.9	1										
1	<u> </u>		+				-										
]			1	_		1	1										
1						-											
1			_			_											
i						1	1										
30	4																
 			er Level Dat				丁		ample		工				nary Si		
Date	Time	Elapsed Tin	me Botton	n of B	lottom o	IWAIPP	(f) O	Open E					n (Linear ft) ed (Linear ft)	-	<u></u>		
	1 .	(hrs) 0.5	Casing	(n) E	ioring (ft	9.1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Undistu	an it ubed S	Sample			f Samples		128		
5/8/2000	<u> </u>	U.3					$\dashv \ddot{s}$	Split Sp					NC NO		_	UA.1	10

TEST BORING REPORT

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HA-118

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						Page 2 of 2
epth (fi)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		1007.4	\$8 3"/5"	30.0 30.4		Very dense brown silty line to coarse SAND, some gravel, moist.
		1007.4	3 73	30.1		
1						
		.,				
					<u> </u>	
_ 35		18	\$9	35.0	<u> </u>	Same, except gray brown.
		77 1007.5	12"/18"	36,5		
		1007.3	12 710	30.3		
				ļ	 	
i				 		
_ 40		36	\$10	40.0	<u> </u>	Same.
		66	310	140.0		
		98 87	12"/24"	42.0	 	
						
	<u> </u>			 -	 	
					Ţ <u></u>	
40						
45		1007.5	S11 3°/6°	45.0 45.5	<u> </u>	Same, except trace rock fragments.
		ļ		1		
					1	
				 	 	
50		100/.4	\$12 4 ⁴ /5 ⁴	50.0		Very dense red silty sandstone rock fragments.
	<u> </u>	 	4.75	30.31		Bottom of Exploration at 51.0 ft.
					 	
	L					
			 	_	-	
 55	-		 			
	<u> </u>				 	
	l					
			 		-	
	 				1	
	 		-		1	
60	4		1			
			 	_		
	1					
65-						
						
	1	I				
 70 -						FILE NO. 70819-000 BORING NO. HA-118

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PROJECT		PORT OF RO	CHESTER				— H&A FIL		
LOCATIO	N	ROCHESTER	R, NEW YOR	uk.			PROJECT		LENTINE
CLIENT		LABELLA A	SSOCIATES	}			FIELD RI	EP. R. DEI	DRICK
CONTRAC		GEOLOGIC					DATE ST	ARTED 2-Jun-	00
DRILLER		L. TODD					DATE FI	NISHED 2-Jun-	00
DKILLER									
Elevation	250.5	2 ft Da			ring Location	on See Borin	g Location Plan Truck Mount		Drill Mud
ltem		Casing			Make & N		Cat-Head	Hammer Type	Bentonite
Туре		HSA	SS		•		☐ Winch	Safety	Polymer
Inside Diam		3-1/4	1-3/8		ATV	Air Track	Roller Bit	Doughnut	None
Hammer W		<u> </u>	The same of the sa	TANK THE PARTY OF	Track	II All Hack	Cutting Head	Casing	Driven Spun
Hammer Fa		-	30	CONTRACTOR OF CO	Skid Stratum	<u> - </u>	Catanganas		<u> </u>
Depth (ft)	Casing	Sampler Blows per 6	Sample Number &	Sample Dept	Change	l .	Visual Classif	fication and Remarks	
Depta (it)	ft	in	Recovery	(ft)	(ft)				
								SPHALT	
\vdash \lnot					 	 		WELLALLI	
1 1		44	SI	1.0	 	Very dense brown gra	avelly fine to coarse S	AND, dry.	
		66		2.0	7	Medium dence brown	silty fine to medium	FILL SAND, little silt, wet.	····
		10	S2	2.0	 	MICHIGAN WORLD DIOMI			
1		 6	 		1		A	LLUVIUM	
			14"/24" S3	4.0	4	Medium dense brown	gray, fine to coarse	SAND, little silt, wet.	·
		7	33	-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1		×		
├ 5 ─		7							
	 	8	16"/24"	6.0	4	Medium dense grav	brown fine to coarse S	SAND, some silt, little r	ock fragments,
		12	- 57			wet			
		20	1007124	8.	ń				
		2:	10"724" S5	8.0	<u> </u>	Medium dense gray	brown gravelly fine to	o coarse SAND, trace si	lt, wet.
	i	14						, ,,,	
1		25	20"/24"	10	ol				
10	 		20 124		1				
	L								
	ļ	 							
1									
	İ				 				
1		14	S6	14.0		Loose gray brown sa	andy SILT, wet.		
15	<u> </u>	3 3							
ł		<u>-</u>	3 18"/24"	16	.0				
1									
1	ļ	 							
	1								
1			_						
		- 3	37	19.0		Loose gray brown s	ilty fine to coarse SA	ND, trace gravel, wet.	
20		3	1						
		3	3 20"/24"						
			4			_			
1	1	 							
									
	ļ			24.0		Loose gray brown	line to medium sandy	SILT, trace clay, organ	ics, moist.
	1	2	_ <u></u> _						
25 —		3	2 15"/24"		6.0				
1	<u> </u>		13 /24		~~				
1									
								······································	
	 								
1				300	7	- Isama			
			S9	29.0		Same.			
30	- 		14*724		11.0				
			ter Level Data	1		A 0-2-0-1	ple ID	Overburden (Linear ft)	ummary 51
Date	Time	Elapsed Ti			IWater	(ft) O Open End T Thin Wall		Rock Cored (Linear ft)	51
		(hrs)	Casing (OUTINE (" 	U Undisturb	ed Sample	Number of Samples	138
 	+					S Split Spoo	on Sample	BORING NO.	HA-119

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							Page	2		
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks				
				31.0						
ł									· · · · · ·	
	I									
ļ		1 2	S10	34.0		Loose gray brown fine sand SILT, trace clay, organics, moist.		_,		
35		3								
		3	17"/24"	36.0						
										
		ļ								
1										
	<u> </u>		\$11	39.0		Same.				
<u> </u>		3		<u> </u>						
		3	22"/24"	41.0						
	<u></u>									
Ì	l								·	
		1	\$12	44.0		Loose, gray fine sand SILT, trace clay, organics.				
45		2 3		ļ	ļ					
,		3	24"/24"	46.0						
ļ										
		1	S13	49.0	<u> </u>	Same.				
50	ļ	2								
1			18"/24"	51.0		Bottom of Exploration at 51.0 ft.				
. *										
·					 					
1										
•	ļ	 								
55	_				 					
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1								<u> </u>		
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60	4		1							
1					+					
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1	ļ							~		
65_										
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	1									
	1									
70-						FILE NO. 70819-000 BORING N			[A-11	

HALEY &
ALDRICH

BORING NO.
HA-120

....

						<u> </u>					Pa		l of	_ 2 _
PROJECT		PORT OF RO	CHESTER						H&A FIL	E NO.	70819-00	0		
LOCATIO		ROCHESTER							PROJECT	MGR.	M. VALE	NTINE		
		LABELLA A							FIELD RI	Σ P .	R. DEDR	JCK		
CLIENT									DATE ST		8-Jun-00			$\neg \neg$
CONTRAC	CTOR	GEOLOGIC 1	ENTERPR	1969				DATE STARTED 9-Jun-00						
DRILLER		L. TODD								IDAED	7-Juli-00			_=
Elevation	254.3	1 ft Da	tum (City	Bori	ng Locatio			ation Plan					
Item	71.5	Casing	Sampler	Core Barr		Make & M		5 - Truck				Drill M		
Туре		HSA	SS	NX		l'ruck	Tripod	V	Cat-Head	Hamme	r Type		Bentoni	
Inside Diam	eter (in)	3-1/4	1-3/8	2		ATV	Geoprobe		Winch		Safety		Polyme	r i
Hammer W		-	140			Frack	Air Track		Roller Bit		Doughnut	☑	None	
Hammer Fa			30		2400	Skid	O		Cutting Head	Casing		Driven		Spun
111111111111111111111111111111111111111	Casing	Sampler	Sample	Sample	Danth	Stratum								
Depth (ft)	_		Number	∝ l (f		Change			Visual Classif	ication and	Kemarks			
{	ft	in	Recover	y (·		(ft)								
- 0 -							ASPHALT							
1]		 	51		.5		Medium dense gra	y to blac	k fine to coarse	SAND, some	e rock fragme	nts, dry.		
[10								FILL				
[20	10"718" S2	2.0	2.0		Medium dense bla	ck to red	brown silty fine	to coarse S.	AND, some ro	ck fragn	nents,	
]		3 5	- 32	-\ '''			dry.							
		7												
		6	12"/24" S3	4.0	4.0		Same, except loos	ė.						
1			33	14.0										
5 —	·	3				7.5								
		2	12"/24' S4	6.0	6.0	6.0	Very loose brown	silty fine	to medium SA	ND, trace roo	ck fragments,	moist.		
]	ļ	 ' 	 	 * -					A	LÚVIUM				
i	 				- 6,									
1	ļ	<u> </u>	7"/24" \$5	8.0	8.0		Same, except wet.							
1	1	<u> </u>	 											
1		1	******		10,0									
10 —	 		3"/24" S6	10.0	10.0		Very loose gray b	rown silt	y fine to coarse	SAND, little	gravel, wet.			
1		<u> </u>	<u> </u>											
1		3	19851	*	12.0		 						·	
1		5	18*724 S7	12.0	12.0		Same, except som	e gravel.						
1	1	5	1											
1		5	2 16"/24	,,	14.0		 				····			
1	 	6 1	S8	14.0	17.0		Medium dense gr	ay brown	silty fine to co	arse SAND,	little gravel, w	reL		
15 —	<u> </u>	Б					ļ							
_ ·- ·-	1	5	8 144724	···	16.0	ļ	 							
		 	1 17.72											
1														
	1		+				 							
1		<u> </u>	1											
						 	- 							
ļ	1	 	- 			 	 							
20 —	1		S 9	20.0			Same, except ver	y loose.						
1	L	2 2				 	 							
1		-	3 14"/24	4"	22.0	l								
1	ļ													
1			<u>-</u>			 								
1	1						1							
1						ļ								
25	-	3	SIC	25.0		 	Very loose gray	brown fi	ne to medium s	ındy SILT, tı	race clay, orga	mics, mo	ist.	
		 	1-50	- 1 - 3.3		1								
1		2												
1			1 14772	4"	27.0	' 								
1		 												
l														
1						-{								
						 								
30 -	-										Sum	M 9		
			er Level Da		ttom of		O Open E	mple ID	<u>' </u>)verburden (52		
Date	Time	Elapsed Tit (hrs)	ne Botton Casing		ttom of ring (ft)	Water (T Thin W	all Tube	į	Rock Cored (Linear ft)	-		
ļ		- (nrs)	Casin	P (1.3) 100	E (11)	1	U Undistu	rbed San	nple [1	lumber of S		158		
 							S Split Sp	oon Sam	iple [BORING	NO.	H	A-120)

TEST BORING REPORT

BORING NO.
HA-120

Page 2 of 2

						Page 2 of 2
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
			811	30.0		Very loose gray brown fine to medium sandy SILT, trace clay, organics, moist.
		1 2	18"/24"	32.0		
		2	18"/24"	32,0		
	L					ALLUVIUM
35		1	\$12	35.0		Same.
}		1 2				
1		2	24"/24"	37.0		
ļ						
40		1	S13	40.0		Same.
		3 3			 	
		3	24"/24"	42.0		
	ļ					
 45		1	S14	45.0		Same.
ļ		2 4				
	1	3	22"/24"	47.0		
				ļ	 	
				ļ		
50	ļ	н	\$15	50.0	 	Same.
l		2 2				
i	l		24"/24"	52.0		Bottom of Exploration at 52.0 ft.
				<u>-</u>		BORION OF EXPLORATION AT 32.0 K.
	<u> </u>					
	<u> </u>			1		
55				 	 	
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			1	<u> </u>		
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65,						
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 6 5 -						
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 6 5 						
65 70						

TEST BORING REPORT

BORING NO.

HA-122

												ge 1 01 2
PROJECT		PORT OF RO	CHESTER						H&A FILE		70819-00	
LOCATIO	N	ROCHESTER	ς new you	RK			·		PROJECT	MGR.	M. VALE	
CLIENT	-	LABELLA A	SSOCIATES	s					FIELD RE	P.	D. NOST	RANT
CONTRAC	CTOR	GEOLOGIC I	ENTERPRIS	SES					DATE STA	RTED	31-May-0	ю
DRILLER		L. TODD							DATE FIN	ISHED	31-May-0	
Elevation	252.8			ity		ng Locatio		ing Loca 5 Truck I	ation Plan Mount			Drill Mud
Item		Casing		Core Barrel		Make & M			Mount Cat-Head	Hamme	Type	Bentonite
Туре		HSA	SS	NX 1.7/9		Γruck (ATV [Tripod Geoprobe	=	Cat-Head Winch		afety	Polymer
Inside Diame		3-1/4	1-3/8	1-7/8		Track [Air Track	_	Roller Bit	⊣ ≔)oughnut	None
Hammer We			140 3		_	Skid [Cutting Head	Casing	П	Driven Spur
Hammer Fal	Casing	- Sampler	Sample		٦	Stratum		<u></u>			1	-۶-
Depth (ft)	- 1	Blows per 6	Number &	Sample De	pth	Change			Visual Classific	ation and l	Remarks	
	ft	in	Recovery	(11)		(ft)				MINT OF		
_ 0 _			SI	0.0	그	- 0.3	Medium dense dar	brown		DPSOIL nd, little cin	ders, little gra	ivel.
] 1				-	$\neg \dagger$							
t		10	(70)207		36					FILL		
-		6 8	14"/24" S2	2.0	2.0		Same.					
1		- 6	_	1	二							
i i		5	10"/24"		4.0							
i		3	S3	4.0	" 		No Recovery.					
_ 5		3			二							·
-	! -]	2_2	0"/24"		6.0			_ 				
] t		2	\$4	6.0	二		Loose dark brown	coarse to	fine sand, some	gravel, trac	e silt, wet.	
1 J		3 2		+								
		2	2"/24"		8.0		*****					
l t		2 ,	85	8.0	二		Same.					
,		2 3	 		-+							
10	Li	21			10.0		Carro					
- 		1 2	S6	10.0			Same.					
!	 	6	<u> </u>		士							
1		10 26	14"/24" 57	12.0	12.0							
1 1		24	1 3/		_+							
1		10	3087574		14.0	13.2	Dense blue-gray g	avel, litt	lle coarse to fine	sand, wet.		
1	ļ	3	20"/24" S8	14.0	14.0						·	
15		<u>z</u>	1		二	- 14.3	Very loose brown	ORGAN	ICS, trace sand,	trace silt, w	et.	
1		1 3	16"/24"		16.0	_ 15.5	Very loose gray-b	own line	clayey SILT, so	me sand, li	tle organics, r	noist.
1 1	ţ	<u> </u>		1	二							
1	 				[AL	LUVIUM		
1 1	<u></u>	L										
1	[1									
1	 	 	 			<u> </u>	<u> </u>					
20					二		×	2				
1	1	1 2	S9	20.0		L	Same, except little	tine san	N.		·	
		1	<u></u>		_							
1		2	2 24"/24"	1	22.0	ļ						
	1		 									
			1				<u> </u>					
1	 		 			ļ	 					
]											
25 —		2	\$10	25.0			Same.					
1	 	2 2				ļ	 					
	L		3 20"/24"		27.0							
1						 	 					
1	 	 	1			 	<u> </u>			······································		
1												
							 					
30	 	<u> </u>	<u> </u>			<u></u>						
			Level Data				A American	iple ID		erburden (L	Summ	
Date	Time	Elapsed Tim (hrs)	Casing (f			Water (ft	T Thin Wal	l Tube	Ro	erburden (L ck Cored (L	inearft) 3	
 	+	- (ars)	- Castak (1	-/ Joring	-: <u>-</u> -		U Undistur	ed Samp	ple <u>Nu</u>	mber of Sur		2S
							S Split Spo		de	BORING	NO.	HA-122
	1	1	1	1		1	☐ G Geoprobe	•				

TEST BORING REPORT

BORING NO.
HA-122

						Page 2 of 2
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		2	SII	30.0		Loose gray-brown clayey SILT, little fine sand, little organics, moist.
Į		3				
[3 1	24"/24"	32.0		ALLUVIUM
			24724	52.0		
ļ						
ľ						
— 35 —			S12	35.0		
1		6			36.0	N. P. J. Britan and Francis St. T. Company Little along days
		8 30	15"/24"	37.0	37.0	Medium dense brown-red coarse to fine sandy SILT, some gravel, little clay, damp to moist. GLACIAL TILL
İ						Observed auger refusal at 37.0 ft. Begin coring at 37.0 ft. See Core Boring Report.
į					ļ	
i						
				 		
- 40						
					 	
					ļ	Bottom of Exploration at 42.0 ft.
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70	4					FILE NO TORIO MA PODINC NO UA 121
ļ						FILE NO. 70819-000 BORING NO. HA-122

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CORE BORING REPORT

ALUI	ICI					יענ	OIG	110	IXE	4 I . '	OIV.	1							
																Page	1	of	
PROJEC	Т	PORT OF	ROCHEST	TER						<u>-</u>	-	A FILE			70819				
LOCATIO	ON	ROCHEST	ER, NEW	YORK							PRO	DJECT	MGR.		M. VA	LENT	INE		
CLIENT		LABELLA	ASSOCIA	ATES							_ FIE	LD REI	P.		R. DE	DRICK			
CONTRA	CTOR	GEOLOGI	C ENTER	PRISE							DAT	TE STA	RTED)	30-Ma	y-00			
DRILLE		L. TODD									DAT	re fini	ISHEI)	30-Ma	y-00			
ļ			Datum			Darie	Location												_
Elevation				in Co			ake & Mod	ei								Dri	II Mu	d	
Item.		Casing HAS	Samp SS		NX NX	<u> </u>		Trip	od	7	Cat-Head	d	Ham	mer 7	Гуре	17	_	entoni	itc
Type Inside Dias	notes (in)	3-1/4	1-3/1		2		ATV [probe		Winch		[i]			- 년		olyme	я
Hammer V			140	300000		_	rack		Track		Roller B	it	1 0		ughnut		=	one	
Hammer F		 	30	2004002000			Skid [j			Cutting I	Head	Casii	ng		Dri	ven		Spun
	Drilling			very		T	Stratum												
Depth (ft)	Rate	Core No.	RC	QD _	Weather	ing	Change				Visual (Classific	ation a	nd Re	marks				
	(min/ft)	Depth (ft)	(in)	(%)		_	(ft)									·			
		-																	
							33.0	n 24	7	A A									
		37.0						Modera	oring at 37.	oderat	ely weathe	red red-b	rown-g	reen n	nottled	ine grai	ned,		
								very this	to thin be	dded S	ANDSTO	NE with	close to	very	close w	eathered			
			48	80				shaley p	arungs.										
1		RI	35	38	MOL						QUI	ENSTO	N FOR	MATI	ON				=
40-				ļ					············										
		<u> </u>																	
i !		42.0					42.0												
]		72.0		 							Во	ttom of B	oring a	it 42.0	ft.				
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45		 				-+													
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			Water Lev		W-11		·	×	San Open End	nple II	O .	(h)	rburder	i /1 in		mmary 37			
Date	Time	Elapsed I (hrs)	1	ing (ft)	Buttom of 1 (ft)	-orag	Water (ft)	1 .	Thin Wal	l Tube		Roc	k Core			3			
		(1113)						1 บ	Undisturb	ed Su	mpic	San	uples			12S			
								S	Split Spor	on 281	npic	- 1	BORIN	NG N	0.		HA	-122	

		L										age 1	01 4
PROJECT	•	PORT OF 1	ROCHESTER						_ H&A FILE	NO.	70819-00	90	
LOCATIO	N	ROCHEST	ER, NEW YO	RK					PROJECT	MGR.	M. VALI	ENTINE	
CLIENT	,	LABELLA	ASSOCIATE	S					FIELD RE	P.	R. DEDR	UCK	
CONTRA	CTOR	GEOLOGI	C ENTERPRI	SES					DATE STA	RTED	5-Jun-00		
DRILLER		L. TODD							DATE FIN	ISHED	6-Jun-00		
J			Datum C	City	P	g Locatio	m C D	rine !	ocation Plan				
Elevation Item	253.6	Casing				ig Locatio Make & M			ck Mount			Drill M	ud
		Casing HSA	Sampler	NX	T [V]		Tripod		Cat-Head	Hammei	г Туре		Bentonite
Type Inside Diam	eter (in)	3-1/4	1-3/8	2	,	TV (Geoprobe		Winch		afety	⊣ ─	Polymer
Hammer W		J-1/4 —	·			rack	Air Track		Roller Bit		Doughnut		None
Hammer Fa			30		-	kid	<u> </u>		Cutting Head	Casing		Driven	Spun
Depth (ft)	Casing	Sampler Blows per in	Sample) (1 t)	anthi	Stratum Change (ft)			Visual Classific	ation and l	Remarks		
	<u> </u>				士		(0.3 ft. TOPSOIL)						
┌ ╴		4 8	SI	0.0	工		Medium dense brov	wn gra		coarse grav	vel, dry.		
]	-	. 8			士								
1 1		8	8 8"/24" S2	2.0	2.0		Medium dense	Wn real	silty fine to coarse	SAND -	ce fine arms	dry	
[l i	7			_+		dense bro		co coarse	, ua	gravel	., — y.	
]		8	-0		7.								
	ļ	3	8 13"/24" S3	4.0	4.0		Same, except moist	t.					
_ 5 _	L	4			二								
		3	3 16"/24"		6.0								
[ļ	2	S4	6.0			Loose brown red si	lty fine	e to coarse SAND, i	trace fine gr	ravel, wet.		
1 1	ļ	2 2		-	4								
]	<u> </u>	<u> </u>	2 20"/24"		8.0							<u>-</u>	
j		1 4	85	8.0	二		Medium dense blac	k brov	vn silty fine to coar	se SAND, v	wood, wet.		
Į l	ļ	4 8			_+								
10	ļ		9 16"/24"		10.0		No Per						
	1	3 3		10.0	-		No Recovery.						
}		2											
1 1	ļ	3	2 0"/24" S7	12.0	12.0		No Recovery.						
1	L	5											
[1		3 0"/24"	-	14.0								
		3	3 0"/24" S8	14.0			Loose gray brown	silty fir	ne to coarse SAND	, some orga	nics, moist.		
15	ļ	4											
1	l	1	3 197/24"		16.0				ALI	LUVIUM			
1					二								
1	 	 			+								
1	L		1		二		ļ						
1 1		ļ					 						
1		2	89	19.0			Loose gray brown	clayey	SILT, little sand, n	noist.			
20	 	2 2			$-\Gamma$								
1		<u></u>	2 10"/24	(1	21.0								
[- T								
					_								
1	ļ	ļ					<u> </u>						
1	1	 			_+		<u> </u>						
1		1	\$10	24.0			Same, except little	clay.					
25 —	 	2 2		-			 						
1	 		2 14"/24"		26.0								
!					_		ļ						
1		t	<u> </u>		_+		1						
1	 		1		二		1						
1	1				-+		 					· · · · · · · · · · · · · · · · · · ·	
1	1	2	\$11	29.0			Same.						
30		7 4	13"/24*		31.0				,				
			ter Level Data					iple ID			Summ		
Date	Time	Elapsed Ti	me Bottom	of Bottom		Water (ft)	O Open End T Thin Wall			rburden (Li		14	
<u> </u>	 	(hrs)	Casing (f	(t) Boring (띄		T Thin Wall U Undisturb			k Cored (Li aber of Sam		48	
		1			_†		S Split Spoo	on Sam		BORING N			-123
					$\neg \neg$		G Geographe		J .			11/7	

TEST BORING REPORT

BORING NO.
HA-123

						Page 2 of 4
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
				31.0		
ŀ						
]						
	.,,					
ļ						
Ì		2 2	811	34.0		Very loose gray brown fine to medium sand SILT, trace clay, organics, moist.
— 35 —		2				
1		4	20"/24"	36.0		
- 1						ALLUVIUM
1						ALLOTION
j						
Ì		Т	\$12	39.0		Same.
40		2				
		3	14"/24"	41.0		
ı						
		1	\$13	44.0		Very loose gray silty fine to medium SAND, moist.
 4 5		2 2		1		
		3	19"/24"	46.0		
i						
			\$14	49.0	<u> </u>	Loose gray fine sand SILT, trace clay, organics, moist.
50	,	2				
		3 4	20"/24"	51.0		
				ļ		
	<u></u>			 		
		-T	\$15	54.0		Same.
55						
		3 3	20"/24"	56.0		
					İ	
			ļ		 	
		<u> </u>	316	59.0		Same.
60		2	310	J3.0		
VU		5 4	20"/24"	61.0		
	l	<u> </u>	<u> </u>			
	<u> </u>	 		 		
					ļ	
		<u> </u>		<u> </u>		
		3	\$17	64.0	ļ	Loose gray fine sand SILT, trace clay organics, moist.
 65	ļ	4	<u> </u>			
			24"/24"	66.0	 	
					ļ	
			 	-	 	
	ļ			1		
	<u> </u>	won	SIB	69.0		Same, except medium dense.
70		3 7	Ţ			
			22"/24"	71.0	5	FILE NO. 70819-000 BORING NO. HA-123

TEST BORING REPORT

BORING NO.
HA-123

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				γ 			Page	3 0	f 4
Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks			
İ			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
-									·
- [· · · · · · · · · · · · · · · · · · ·		
[···	
ŀ		4	S19	74.0		Medium dense gray fine sandy SILT, trace clay, organics moist.			
75		5 8	.,	ļ		ALLUVIUM			
1		9	22"/24"	76.0					
									~- -
ľ									
ŀ									
Į.			S20	79.0		Same.			
80		5	320	73.0		Daile.			
- 00-		7 9	23"/24"	81.0					
ŀ		· · · · · · · · · · · · · · · · · · ·	23 124	01.0					
ŀ									
l				 				·	
ľ		5 5	S21	84.0		Same.			
— 85 —		8							
-		9	20"/24"	86.0					
1									
					ļ				
1									
		3	S22	89.0	 	Medium dense gray brown silty medium to fine SAND, trace clay	y, moist.		
90		5 8							
			21"/24"	91.0					
	i								
		WOR	S23	94.0	ļ	Very loose gray brown silty medium to fine SAND, trace clay, n	noist.		
95		WOR WOR							
		WOR 3	22"/24"	96.0	 				
								·	
ļ				 	 				
					<u> </u>				
		3 7	S24	99,0	ļ	Same, except medium dense.			
100 —		8	339578						
	ļ	9	22"/24"	101.0	'				
		ļ	1					~	
									
			ļ						
		WOR WOR WOR	\$25	104.0	1	Same, except very loose.			
— 105 —	 	WOR			 				
		WOR	24"/24"	106.0	0				
			ļ	. 1-1-1					
									
	ļ		1		+				
	1		S26	109.0	1	Medium dence gray beaum eilty fine to medium CAND trace of	v postal-	of	
								UIL	
110		3 5 5	1	107.0	 	Medium dense gray brown silty fine to medium SAND, trace clarack fragments, moist.	y, podicis	<u></u>	

TEST BORING REPORT

BORING NO.
HA-123

						Page 4 of 4
	Casing	Sampler	Sample	Sample Dead	Stratum	
Depth (ft)	Blows per	Blows per 6	Number &	Sample Depth (ft)	Change	Visual Classification and Remarks
	ft	in	Recovery	(11)	(ft)	
1 1						
1						ALLUVIUM
			,			
		·			114.0	
1 1		100/.2	S27	114.0 114.2]	- 111.5	Very dense sandy ROCK FRAGMENTS.
			2"/3"	114.2		Very dense sandy ROCK FRAGMENTS. WEATHERED BEDROCK
115 -						Began rock coring 114.0 ft.
1 1			,			Bottom of Exploration at 116.0 ft.
1 1				. — — — — — — — — — — — — — — — — — — —		
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120-						
						
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						NOTE OF THE RESERVE O
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130						
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135		··· · · · · · · · · · · · · · · · · ·				······································
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140 —	L					
T-140						
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1						
				 		
1			 	[
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145						
T-173						
1		 _				
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	1					
1			f	l		
1	l	<u> </u>	l	·		
150	I	1		·	na caratera estrar.	FILE NO. 70819-000 BORING NO. HA-123
L	<u> </u>		l			FILE NO. /0017-000 BURING NO. HA-123

ABI	ELLA A	SSO(CIATES, P	.c.		PROJECT							BORING # 28					
					EW YORK	Port of Rochester							SHEET 1	OF 1				
		••••					4650 La	ake Avenu	ie ei				JOB # 99150	•				
171	RONM	ENTA	L ENGINE	ERING CO	NSULTANTS	} 							CHKD. BY					
			Marcor				BORIN	G LOCAT	ION									
RIL	LER		Jim				GROU	ND SURF	ACE ELEV	ATION		DATUM						
BE	ELLA R	EPRE	SENTATI	/E	DEP/TMS		START	DATE 8/	22/00	END [DATE 8/22/00							
_								1			R LEVEL DA							
/PI	OF D	RILL	RIG	geo-probe	,			ļ	DATE	TIME	WATER	CASING	REMARKS					
UG	ER SIZ	E AN	TYPE							<u> </u>								
VE	RBURG	DEN S	AMPLING	METHOD														
00	K DRIL	LING	METHOD									<u> </u>	L	 	N			
5										EQU	JIPMENT				0			
Ξĺ			S	SAMPLE			SAMPLE DESCR	IIPTION							T			
•					,	1				INST	ALLATION				E			
т	BLOW	NO.	DEPTH	N-VALUE	RECOVERY							моіѕти	ne:	PID	s			
븨	/6"		(FT.)	/RQD(%)	(INCHES)					 	LOG	MICISTO	16.		+-			
						gravel and	d sub-base					da.		0 ppm				
1		ļ				4						dry		Оррии	1			
- 1		L		ļ	<u> </u>	light brow	n medium/fine san	nd		ľ		dry		0 ppm				
2					ļ	-				-		la, A		о рр				
		ļ <u>.</u>	ļ			dark brow	vn sand/gravel/slag	3				moist		0 ppm				
3		<u> </u>	 	 		-	silver/black			}		1110101						
						brick						moist			1			
4		 		ļ	 	no recove	ments/sand (dark	brown)		+		-			1			
		├	ļ			DIICK II ay	cinders	Di Ottilij				moist		0 ppm				
5			 		 	-	Cilideis											
	_	ļ		 	 	light brow	vn silty clay					moist		10 ppm				
_			 -	 	 	- ingrit brot	vii siity oldy											
_	 -	 -	 		+	slag						moist		0.5 ppm				
7		 	-	 	1	light brov	vn clay											
8		1	 	<u> </u>								moist/sa	lurated	0 ppm	_			
Ü	-	1	 	 - · -	<u> </u>							saturated	d/moist	0 ppm				
9		1	1			gray/gree	en clay					ļ						
•	 	1				black cin	ders/slag					saturate	1/moist	0 ppm				
10]												
						light brov	wn/gray silt/fine sai	nd				saturate	d/moist	0 ppm				
11				Τ			very compacted			- [
		T										saturate	d/moist	0 ppm				
12				<u> </u>		ļ									-			
						_								0	1			
13				<u> </u>		very con	npacted silt with so	me clay		-		saturate	d	0 ppm				
	L_	1	<u> </u>	<u> </u>	<u> </u>	_								0				
14						gray -> t	orown					saturate	đ	0 ppm	1			
	L			<u> </u>		_				Ì				0.555	-			
15	·											saturate	a	0 ppm				
	L					4								0.000				
16	1		<u> </u>	J						1_		saturate	М	0 ppm				
			LEGEN	ם		NOTE	S: North end of pa	rks buildir)g									
	S - S	PLIT S	SPOON SO	OIL SAMPL	.Е	1												
	U٠U	INDIS	TURBED S	SOIL SAME	PLE													
	C-F	OCK	CORE SAI	MPLE														
GE	NERA	L NOT	ES:							ou = :-		TIONO MAN	E ODADUAL					
l		1) :	STRATIFIC	CATION LI	NES REPRES	SENT APP	ROXIMATE BOUN	IDARY BE	IWEEN S	UIL TYF	ES, THANSI	HONS MAY E	E GRADUAL.	TED				
		2) 1	WATER LI	EVEL REA	DINGS HAVE	BEEN MA	DE AT TIMES AN	D UNDER	CONDITION	ONS ST	ATED, FLUC	UATIONS O	- GHOUNDWA	HEH				

MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING #28

300 S	TATE S	TREE		ESTER, NE	EW YORK NSULTANTS	3	PRO Port of Roche 4650 Lake Av		BORING # 29/MW-4 SHEET 1 OF JOB # 99150 CHKD. BY:tms					
-	ACTO	R: Ma	ırcor				BORING LO							
٠. ـ	ER: Jin						GROUND SU				DATUM			
LABE	LLA RE	PRES	ENTATIVI	E: DEP/TM	IS		START DATI	8/22/00	END [OATE 8/22	/00			
										R LEVEL		<u>,</u>		
TYPE	OF DR	ILL RI	G: Geo-p	robe				DATE	TIME	WATER	CASING	REMARKS	 	
AUGE	R SIZE	AND	TYPE									<u> </u>		
			MPLING I	METHOD								 		
ROCI	DRILL	ING M	ETHOD			I		L		HOMENIT		<u></u>		N
D							2		EUI	JIPMENT				0
E			S	SAMPLE			SAMPLE DESCRIPTION	ALLATION				T		
P					DE00/ED	,			IIIVSTA	ALLATION				E
Т	BLOW	NO.		i	RECOVER	Y 			İ	LOG	MOISTU	RE	PID	s
н							h-hasa			200	11101010	flush mount road be		1
						gravel su	brown sand				dry	Bentonite seal 0'-1'		
1						i i keciaiii	DIOWN SCHO						••	
_						1					dry/mois	- t	0 ppm	
2	<u> </u>					1						quartz sand pack 1	'-12'	
3	<u> </u>					dark bro	wn sand and gravel				dry		0 ppm	
3							·					1* PVC well 2'-12'		
4	-					1					dry			\perp
•						dark bro	wn sand/gravel							
5]			1		dry		0 ppm	
						blue gra	y slag/brick		2					1
	_												48 ppm	
		<u> </u>				dark bro	wn/black sand and cinde	rs/gravel			dry			
7						-							0 ppm	
		ļ			<u> </u>	light bro	wn silt - compacted							
8		ļ		ļ	<u> </u>	 			_		dry			+
	ļ	<u> </u>	<u> </u>	 		light bro	wn silt 				moist		0 ppm	1
9		├ ─		ļ		-[TIOISC		Оррии	
	 	 				-					moist		0 ppm	
10	 	 	 	 		-{								1
	-	 -	ļ		 	-							0 ppm	
11	-	╂	 		 	-					moist			ł
12	.	├		+	 	1	Ţ							
12	·	┼		+										
13		1-	 		<u> </u>				ļ		İ			
"		 	 	-		7			ļ					
1.									j					
		1							ļ					- 1
1:	5	1									ļ			- 1
						_								
10	6													上
			LEGEN	D		NOTE	S: near door of parks bu							
	s-s	PLIT S	SPOON S	OIL SAMP	LE	ļ	Mw at center of build	ng appro	ximately	40' East o	of mainten	ance shop		
1	u-U	NDIST	TURBED S	SOIL SAM	PLE									
معددت ز	C-R	OCK (CORE SA	MPLE				··						
IGE.	NERAL	NOTE	S:				PPROXIMATE BOUNDA							

MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING # 29/MW-5

			·			PROJE			<u> </u>		BORING # 30	 -	
			ATES, P			Port of Rocheste				1		OF 1	
C.	:	STRE	ET, ROCH	IESTER, N	EW YORK	4650 Lake Aver					JOB # 99150		
						Į.	iue			ľ	CHKD. BY		
				ERING CC	NSULTANTS	BORING LOCA	TION						
		OR				GROUND SUR		ATION		DATUM			
	LER		Jim		реодио	START DATE 8			DATE 8/23/00				Ì
ABE	LLA R	EPRE	SENTATIV	'E	DEP/TMS	SIAMIDATE	1		R LEVEL DAT	-A		-	
							DATE	TIME			REMARKS		
		RILL F		geo-probe									
			TYPE	METHOD				1					
			METHOD	METHOD				1					
<u></u>	K DHIL	LING	WILTHOD				1	EQ	JIPMENT				N
E			s	AMPLE		SAMPLE DESCRIPTION							
P								INST	ALLATION				T
·	BLOW	NO.	DEPTH	N-VALUE	RECOVERY								E
	/6"	1,0.	(FT.)	/RQD(%)	l			<u> </u>	LOG	MOISTU	RE	PID	s
 				, , , ,		gravel							
1										dry		0 ppm	
						medium brown sand							
2										dry		0 ppm	
						slag/brick/fill/sand							
3						[dry		0 ppm	
		L											1
4				ļ						dry			-
		ļ		ļ <u>.</u> .		medium brown sand - coal, iron ore						0.555	
5		<u> </u>				conglomerate, shell fragm	ents			dry		0 ppm	
	-	<u> </u>		ļ		slag/brick				dry		0 ppm	Ì
,		L				layer of ash/slag]		lui,		O PP	
_		├				brown and black silt with fine sand,	ome slan w) aste		moist		0 ppm	
7		├			ļ	and rock fragments	onto orag m						
		}	 	 		and rook magnitude				moist/sat	turated	0 ppm	
8		+-	-							saturated	1/moist	0 ppm	
9													
•	 -	1	-	1	1	7				saturated	d/moist	0 ppm	
10	_	1 -	1		 	1							1
		1				brown firm silt with clay				saturate	d/moist	0 ppm	
11						1		-					
										saturate	d/moist	0 ppm	
12													\dashv
				1									
13		1	<u> </u>	_	ļ								
	<u></u>	 			<u> </u>	4							
14	<u></u>	4	ļ		 	-							
	<u></u>	1				-		1					
15	<u></u>	+-	 	 	 	-							
1	-	┼	 	 		-{		İ					
16	<u>L.</u>				1	NOTES: refusal at 5' - start over a	nnrovimatol	 v 3' wee	st, also refusal	start over an	proximat 10' n	orth, then 3' west	of the
		n	LEGEN		=	Sixth attempt approxima					,	,	
				OIL SAMPL		Sixui autempt approxima	.51, 10 6431	a. pain					
				OIL SAMP	LE								
<u> </u>			ORE SAM	nr LE									
الأو	NERA	L NOT	LO. TRATICIÓ	ALI MOLTA:	NES REPRES	ENT APPROXIMATE BOUNDARY B	ETWEEN SO	OIL TYP	ES, TRANSIT	IONS MAY B	E GRADUAL.		
		2) 1	VATERIE	VEL REAL	DINGS HAVE	BEEN MADE AT TIMES AND UNDE	R CONDITIO	NS ST	ATED, FLUCT	UATIONS OF	GROUNDWA	TER	
1		-, 4		MAY	OCCUR DUE	TO OTHER FACTORS THAN THOS	E PRESEN	T AT TH	HE TIME MEAS	SUREMENTS	WERE MADE	<u> </u>	
Le												SORING #30	

. .

BELLA ASSOCIATES, P.C.	PROJEC	T		1	BORING # 31				
TE STREET, ROCHESTER, NEW YORK	Port of Rocheste	-	SHEET 1 OF	1					
HE STILL I, HOULE DOWN, HE	4650 Lake Avenu	Je		,	JOB # 99150				
VIRONMENTAL ENGINEERING CONSULTANTS					CHKD. BY				
NTRACTOR Marcor	BORING LOCAT	ION							
HILLER Jim	GROUND SURF	ACE ELEVATIO	N	DATUM					
BELLA REPRESENTATIVE DEP/TMS	START DATE 8/	23/00 EN	D DATE 8/23/00						
DELLA NEI (1232)		WA	TER LEVEL DA	TA	Α				
PE OF DRILL RIG geo-probe		DATE TIM	E WATER	CASING	REMARKS				
GER SIZE AND TYPE									
ERBURDEN SAMPLING METHOD	ļ								
CK DRILLING METHOD							_		
		E	QUIPMENT				1		
SAMPLE	SAMPLE DESCRIPTION	Į							
		INS	STALLATION						
BLOW NO. DEPTH N-VALUE RECOVERY									
/6" (FT.) /RQD(%) (INCHES)			LOG	MOISTUR	IE	PID	4		
	gravel								
	brown silt with fine-medium sand			dry		0 ppm	1		
	mixed with gravel/rock frag	ments					-		
		dry		0 ppm	1				
		1		1					
		}		dry/moist	no odor	17 ppm	Ì		
	gray/brown silt/fine sand			1			-		
				dry/moist		3 ppm	\dashv		
	brown medium sand					0	ĺ		
5		Ì		moist		0 ppm			
	brown->red/rust fill - slag waste - iron	'				0.000	1		
	"filling"/stained silt			moist	0 ppm	-			
		ľ		moist		-			
7	brown silt/fine sand with some clay			likoist		Оррии	1		
_	1			moist/sate	urated	0 ppm			
B				saturated		0 ppm	٦		
	brown silt/fine sand					••	Ì		
9	DIOWN SILVINIE SAIIG			saturated	/moist	0 ppm	ļ		
	1								
0	brown silt/fine sand with some clay			saturated	/moist	0 ppm			
1									
' - - - - - - - - - 	1	1		saturated	i	0 ppm			
2	1	ļ			_				
6									
3	7			Į.					
*				1					
14									
	1								
15	1								
	7								
6	7								
LEGEND	NOTES: downgradient (approx. 12	') from AST's							
S - SPLIT SPOON SOIL SAMPLE									
U - UNDISTURBED SOIL SAMPLE									
C - ROCK CORE SAMPLE									
	<u> </u>						_		

MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING #31

10/	į	STRE		ESTER, N	EW YORK	PR Port of Roc 4650 Lake		JOB # 99150	OF							
NV	RONM	IENTA	LENGINE	ERING CC	NSULTANTS						CHKD. BY					
			Marcor			BORING L										
	LER		Jim			GROUND	SURFACE E	EVATION		DATUM			-			
		EPRE	SENTATIV	Έ	DEP/TMS	START DA	TE 8/23/00	END	DATE 8/23/00	<u> </u>						
							L	WAT	ER LEVEL DA							
YPI	OFD	RILL	RIG	geo-probe	1		DATE	TIME	WATER	CASING	REMARKS					
			D TYPE					_								
			AMPLING	METHOD												
			METHOD					i								
<u> </u>	K Drui	LLIITO						EQ	UIPMENT				N			
- 1			s	AMPLE		SAMPLE DESCRIPT	ION									
E				///// LL				INST	ALLATION				T			
P		Luo	Госопи	N VALUE	RECOVERY			1					E			
- 1	BLOW	NO.	1		(INCHES)				LOG	MOISTU	RE	PID	s			
븨	/6"		(FT.)	/HQD(%)	(IIIVOTICO)	blacktop										
		├				gravel sub-base				moist						
1			 	 	 	State and page				1						
		 		ļ		brown modium cand				moist	0 ppm					
2		 	 	 		brown medium sand										
		 	ļ			-		[moist		0 ppm				
3		ļ	 			-		Ì		1110101		•				
		<u> </u>	<u> </u>	<u> </u>		_				moist						
4		ļ	ļ	ļ	 					IIIOISI			7			
		<u> </u>	<u> </u>		ļ	gray sitt/fine sand				saturated		0 ppm				
5		<u> </u>		ļ						Saturated	•	o pp				
				ļ	ļ	mixed fill & slag, silt/sand wih b	rick frags			and wroter		0 ppm	ļ. :			
,		1		-		_		ł		saturated	,	о ррии				
	í	1	<u> </u>					ļ		Ì						
7	Ĺ	<u> </u>	<u> </u>			_		ļ								
			<u> </u>													
8		<u> </u>							 							
		<u> </u>				<u> </u>			,	į.			-			
9		<u> </u>											-			
		1_	<u> </u>		<u> </u>	_		ĺ					1			
10					<u> </u>											
ĺ				<u> </u>		1										
11					<u> </u>	_		1								
					1											
12		1			J								\dashv			
		T								1						
13		7						1								
ٔ ا		\top				_		[
14			1													
			1							1						
15		1		T												
۱.۰		\top	 	 												
16	_	1		1	7											
۳	1		LEGENI			NOTES: MW @ center of bu	ilding approx	. 40' east o	maint. Shop							
	e.e	e it	SPOON SC		.E	rejected 1st attempt at 6'										
			TURBED S													
			CORE SAL		- -											
-				41F LE		, 										
GE	:NERA	T NO1	CO: CTCATICI	LIACITA!	NES DEDDES	SENT APPROXIMATE BOUNDA	RY BETWEE	N SOIL TY	PES, TRANSIT	TIONS MAY E	BE GRADUAL.					
		1)	SIHAIIFK	ALION LI	UNICE HAVE	BEEN MADE AT TIMES AND U	INDER CONF	OITIONS ST	ATED, FLUCT	TUATIONS O	F GROUNDWA	TER				
1		2)	WATERLE	VEL HEA	COCCUE OU	E TO OTHER FACTORS THAN	THOSE PRE	SENT AT T	HE TIME MEA	SUREMENT	S WERE MADE					
1				MAY	OCCUR DUI	E TO OTHER PACTORS TRAIN		out. At t			le le	BORING #32	-			
LE	IA.										 -					

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A D C	1144	esoc	CIATES, P.	C			PROJEC		BORING # 33							
ADE				.c. IESTER, N	EW YORK	1	Port of Rocheste					SHEET 1	OF	1		
	TE	SINE	EI, RUUN	icoren, N	Lit TOTAL		Between 2 Ware					JOB # 99150				
				EDINO OO	NICH IL TANTO		Comount maio				1	CHKD. BY				
				EHING CO	NSULTANTS		BORING LOCAT	TION			.1	i				
INC	RACT		Marcor						TION		DATUM					
	.ER		Jim				GROUND SURF			ATE 0/00/00	DATON					
BE	LLA R	EPRE	SENTATI	/E	DEP/TMS		START DATE 8/	/23/00		DATE 8/23/00						
									WATE	R LEVEL DAT						
PE	OF D	RILLF	RIG	geo-probe				DATE	TIME	WATER	CASING	REMARKS				
			TYPE						<u> </u>		<u> </u>					
				METHOD												
			METHOD						l						,	
\widetilde{I}	COMIL	Liivo				Ĭ			EQUIPMENT						N	
- 1				AMPLE		!	SAMPLE DESCRIPTION		ļ						0	
[MINI CC		1	2 ,		INST	ALLATION					T	
<u> </u>		T.10	050711	NAME	RECOVERY	1			ļ						E	
- 1	BLOW	NO.	ŀ	i						LOG	MOISTUR	RE		PID	s	
4	/ 6"	ļ	(FT.)	/RQD(%)	(INCHES)	1-44									1	
1		<u> </u>	ļ	ļ		asphalt/gr	avei		dry			0 ppm	1			
ı		ļ	<u> </u>			1					u, y			∼ հիու	1	
			L			coarse sa	nd/gravel		at.			0				
2				<u> </u>		1			dry			0 ppm				
ſ								-								
3						blue slag					dry/moist		0 ppm			
ţ						medium g	gravel									
4		t^{-}		1		1					moist			0 ppm	4	
`				1		slag (blue	e/gray)			•	1				1	
_		-		-		red grave			1		moist			0 ppm		
5		 	 		 	⊣ _	ack gravel									
		 	 	-		15,041,006	g-m				moist			0 ppm		
_		 	 	+		hroun sit	•									
	_ 	-			 	brown sil	·				moist			0 ppm		
7		 	 	 		┥	-1A							· FF'''		
ļ		1_	 	 	ļ	gray silt (some clay)				moist/saturated			0 ppm		
8		 	<u> </u>	1	ļ	1			┪—	saturated/moist				0 ppm	\dashv	
	L	<u> </u>	_		1	4					Saturated	MINIOIS		o bhiii		
9		<u> </u>			ļ	red grave	el (shell chips)							0 ====	Ì	
		1	l	<u> </u>		_					saturate	ď		0 ppm		
ю		1				gray/bro	wn silt		İ		l				-	
					1	dark bro	wn organic				saturate	d		0 ppm	İ	
11		1	1						-						1	
•	<u> </u>	†	1		T	fine gray	sand		1		saturate	d		0 ppm		
12	-	+	+	1	1	7			1							
14		┪	+	-	 	1			1						1	
		+	+	-	 	-			-		1					
13			 	-	+						1.					
		4—			+	-{										
4			- -		 	4									1	
		┷	_		 	4			}						- {	
5	<u></u>								İ		1					
	L				<u> </u>	_									Ì	
6		\mathbf{I}														
_			LEGEN	ם		NOTE	S: eastern most point between	een 2 wareh	ouses							
	S - S	PLIT 9	_	OIL SAMPL	.E											
				SOIL SAMP												
					- -											
_			CORE SA	MPLE												
E	NERA	L NOT	TES:					CDAECH O	NI 1774	DEC TRANSIT	ONS MAY E	RE GRADI IAI				
		1)	STRATIF	CATION LI	NES REPRES	SENT APP	ROXIMATE BOUNDARY B	EIWEEN SC	JIL 171	-E3, IMMNSHI	LATIONIC C	こうりく そうよ	ATED			
		2)	WATER L	EVEL REA	DINGS HAVE	BEEN MA	DE AT TIMES AND UNDE	R CONDITIC	NS ST	ATED, FLUCTI	UATIONS O	r GHOUNDW	WIEH			
				MAY	OCCUR DU	E TO OTH	ER FACTORS THAN THOS	SE PRESEN	T AT T	HE TIME MEAS	UREMENT					
LB	A												BORIN	IG #33		
-3																

300 S	TATES	STREE		ESTER, N	EW YORK	PROJECT Port of Rochester Between 2 Warehouses							BORING # 34/MW-6 SHEET 1 OF 1 JOB # 99150 CHKD. BY:tms					
ا ا	RACT(ER: Jir	n		E: DEP/TN			GR	RING LOC OUND SU	IRFACE E			DATUM 23/00	CHKD, BY:tms					
TYPE AUGE OVEF	OF DF R SIZE	IILL RI E AND EN SA	G: Geo-p	robe		DATE TIME WATER							REMARKS					
D E P	BLOW		8	SAMPLE N-VALUE	RECOVERY	SAMPLE DESCRIPTION INSTALLATION												
H 1	/6"		(FT.)	/RQD(%)		gravel sub-base							MOISTURE PID flush mount road box dry Bentonite seal 0.5'-2.5'					
3						medium-o	coarse sand some odor - g	gray staine	d			moist moist moist	_quartz sand pack	67 ppm				
5						gravel red slag gravel	black/stained	gravel				moist/sat	turated _ 1" PVC Well screen 3.5'-5.5'	2000 ppm (high)				
8																		
10																		
12																		
14						-												
16	S - SF U - UI	NDIST	URBED S	OIL SAMPL		NOTES	S: refusal at 5.5	;										

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LBA

BORING # 34/MW-6

LAB	ELLA	ASSO	CIATES, P	.C.			PROJE	СТ		<u></u>		BORING # 35		
ļ. ^					EW YORK		Port of Rocheste	er				SHEET 1	QF 1	Ì
	ţ						Between 2 Ware	houses				JOB # 99150		
ENV	IRONN	MENTA	L ENGINE	ERING CO	NSULTANTS	;					<u>.</u>	CHKD. BY		
CON	ITRAC	TOR	Marcor				BORING LOCA	LION						
DRIL	LER		Jim				GROUND SURF	ACE ELEV	ATION		DATUM			
LAB	ELLA F	REPRE	SENTATI	/E	DEP/TMS		START DATE 8	/23/00	END (DATE 8/23/00				
										R LEVEL DATA	_			
TYP	E OF C	RILL I	RIG	geo-probe				DATE	TIME	WATER	CASING	REMARKS		
AUG	ER SIZ	ZE AN) TYPE											-
				METHOD			•		 					
	K DRI	LLING	METHOD			1		<u></u>	501	JIPMENT		I.		T.:
D			_			į	CAMPLE DESCRIPTION		EQU	HMENI				N O
E			٤	SAMPLE			SAMPLE DESCRIPTION		INST	ALLATION				Т
P	BLOW	, NO	DEDTH	NEVALUE	RECOVERY	-			11017	ALLATION				E
' Н	/6"	110.	(FT.)	/RQD(%)	ľ				1	LOG	MOISTU	RE	PiD	s
-	70	 	11.7	71100(70)	(monizo)	gravel			1					
1			-	 		1	nd (medium - coarse)		1				0 ppm	
Ĭ .		1		1		1	•							
2						gravel/sar	nd						0 ppm	
		_		ļ		-								
3		ļ		ļ		gray silt							400 ppm	,
١.		+	 	 							l		(last 4* on	iy)
4	 	ļ			<u> </u>	no recove	ry				+			-
5	<u></u> -	1		ļ		1					-		100 ppm	$ \cdot $
		┼				gravel/blu	e slao						140 ppm	
! 	' 	 	-]	o olug							
	 Ī	1												
7		†	<u> </u>						ļ					
8														
			ļ			1								
9		-	ļ	-		4								
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15		\top	1											
	[1												
16				1			<u>-</u>							\bot
			LEGEN	2		NOTES	refusal at 5.5'							
	S - SI	PLIT S	POON SO	IL SAMPLE	Ī									
	U-U	NDIST	URBED S	OIL SAMPI	-E	1								
	C-R	OCK C	ORE SAM	IPLE		1								
GE	NERAL													
•		-					OXIMATE BOUNDARY BE							
		2) V	VATER LE				DE AT TIMES AND UNDER							
1	_			MAY	OCCUR DUE	10 OTHE	R FACTORS THAN THOS	E PHESENT	ALTH	E TIME MEASU	HEMENIS	_		
LB	A											IB	ORING #35	

ARE		980	A, Ratak	.C.				PROJE	ECT				BORING # 36	5	
10°	E	STRE	ET. ROCH	IESTER, N	EW YORK			Port of Roches	ter				SHEET 1	OF 1	1
;	7	••••	,					Between 2 Wa	rehouses				JOB # 99150		
INVI	RONM	ENTA	L ENGINE	ERING CC	NSULTANTS		L						CHKD. BY		
			Marcor					BORING LOCA				5.47.44			
PILI			Jim					GROUND SUF			NATE 9/93/00	DATUM			1
ABE	LLAR	EPRE	SENTATI\	/E	DEP/TMS			START DATE	8/23/00		PATE 8/23/00 R LEVEL DAT				
									DATE	TIME			REMARKS		
	OF D			geo-probe					57.1.2		`				
			TYPE	METHOD											
			METHOD							_			l		
D										EQI	JIPMENT				N
E			5	SAMPLE			SAMPLE	DESCRIPTION			471011				O
P	 ,				r· ·					INST	ALLATION				E
- 1	BLOW	NO.	ì	1	RECOVERY					1	LOG	MOISTUI	RE	PID	s
н	/ 6"		(FT.)	/RQD(%)	(INCHES)	gravel su	h-hase								\top
1						3.4.0.30				1		moist		0 ppm	
'}	-					coarse/m	edium brov	wn sand							
2]								0 ppm	
Ì					ļ	rock frag	ments					moist		0 ppm	
3				ļ	<u></u>	1						moist		о ррпп	
		<u> </u>	ļ	ļ								Thoist			
4				 	ļ	no recov	ery		·	1					7
5		-	 	 		brown gr	ravel					saturated	i	0 ppm	
"		 		† · · · · ·]						1			
_						black gra	avel							0 ppm	
		L	ļ	<u> </u>	1	-						saturated	1	0 ppm	1 1
7		<u> </u>	ļ	 	-	-						saturate	4	o pp	
		-	 	 		coarse s	sano								_
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		∔		+		-									
15	-	+	+	+		-									
16	-	+-	+	+	1	7									
٣	-		LEGEN	<u> </u>		NOTE	S: refusal	at 5.5'							
				OIL SAMPL											
				SOIL SAME	PLE										
\vdash			CORE SA	MPLE											
GE	NERA	LNOT	ES:	~ ATION! 1 "	NEC DEDDE	ENT ADD	POYMAT	E BOUNDARY	BETWEEN S	OIL TYP	ES, TRANSIT	TONS MAY E	BE GRADUAL.		
		7) :	DIHAIIFK WATED!!	FVFL RFA	DINGS HAVE	BEEN M	ADE AT TIM	MES AND UNDI	ER CONDITI	ONS ST	ATED, FLUCT	UATIONS O	F GROUNDW	ATER	
		۷)	MAICH L	MAY	OCCUR DU	E TO OTH	IER FACTO	ORS THAN THO	SE PRESEN	IT AT TI	IE TIME MEA	SUREMENTS	S WERE MAD	E	
1	_													BORING #36	

AB			CIATES, P ET, ROCH		EW YORK	PROJE Port of Rochest Between 2 War	er				BORING # 37 SHEET 1 JOB # 99150	OF 1	
ENV	IRONM	IENTA	L ENGINE	ERING CO	NSULTANTS						CHKD. BY	· · · · · · · · · · · · · · · · · · ·	
			Marcor			BORING LOCA	TION						
	LER		Jim			GROUND SUR	FACE ELE	VATION		DATUM			
		EPRE	SENTATI	/E	DEP/TMS	START DATE 8	/23/00 Î	END (ATE 8/23/00				
								WATE	R LEVEL DA	TA	,		
ΥP	E OF D	RILLF	RIG	geo-probe			DATE	TIME	WATER	CASING	REMARKS		
			TYPE										
				METHOD									
			METHOD				<u></u>						
D								EQU	JIPMENT				N
E			9	SAMPLE		SAMPLE DESCRIPTION							0
Р								INST	LLATION				T
τ	BLOW	NO.	DEPTH	N-VALUE	RECOVERY								E
н	/6"		(FT.)	/RQD(%)	(INCHES)			_	LOG	MOISTUR	RE	PID	s
						black top				1			
1						gravel		1		moist		0 ppm	1
										Ī			-
2				1		brown silt with rock fragments and b	lue slag					0 ppm	
	L]				moist			
3				<u> </u>								0 ppm	1
		<u> </u>				_				moist/sat	urated		
4						rust/red silt/sand							-
		<u> </u>]		İ					}
5		<u> </u>	L			red/brown fill, foundation waste, son	њ siag	ļ		saturated		0 ppm	İ
	١	ļ	ļ	ļ		mixed with sand						0	
_		ļ						1				0 ppm	
	ı—–		ļ	ļ	ļ	_				saturated		0.000	
7	 	 _	<u> </u>		ļ	brown silt/fine sand -firm		i			1	0 ppm	
	<u> </u>	↓	ļ	ļ	 	<u> </u>				saturated	1		1
8		 	ļ	 		<u> </u>							+
		-				4				1			
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13	Ή—	+	1		†···	1							
14	-	+-	 		1	7							1
14	 	+	 	+		1							
15	\vdash	+	1	1		1							
۱,	<u> </u>	+	1			7							
16		\top	+-	+	1	7			_				
			LEGEN	_	<u> </u>	NOTES: x36							
	s-s	PLIT S		- DIL SAMPL	E	x38 x35	x37						
				OIL SAMP			33						
			CORE SAL									·	
G	NERA												
Ĭ _,		1) 5	STRATIFIC	CATION LIN	NES REPRES	ENT APPROXIMATE BOUNDARY B	ETWEEN S	SOIL TYP	ES, TRANSI1	TIONS MAY B	E GRADUAL.		
		2) \	NATER LE	VEL REAL	DINGS HAVE	BEEN MADE AT TIMES AND UNDE	R CONDIT	IONS ST	ATED, FLUCT	TUATIONS OF	GROUNDWA	TER	
		-, '		MAY	OCCUR DUE	TO OTHER FACTORS THAN THO	SE PRESE	HT TA TH	IE TIME MEA	SUREMENTS	WERE MADE		

BORING #37

ABI	ELLA	ASSO	HATES, P	.C.				PROJEC	СТ			•	BORING # 38		
K (¥	STRE	ET, ROCH	IESTER, N	EW YORK		Port	of Rocheste	er					OF 1	İ
	,						Betw	reen 2 Ware	houses				JOB # 99150		
ENVI	RONM	IENTA	L ENGINE	ERING CO	NSULTANTS	<u> </u>	<u> </u>					J	CHKD. BY		-
CON	TRAC	TOR	Marcor					ING LOCAT							
PIL	LER		Jim						ACE ELEVA			DATUM			
ABE	LLAF	EPRE	SENTATIV	/E	DEP/TMS		STA	RT DATE &	/23/00		DATE 8/23/00				\dashv
											R LEVEL DAT		REMARKS		႕
YPI	OFD	RILL	RIG	geo-probe	•				DATE	TIME	WATER	CASING	REMARKS		
			TYPE							-					\neg
			AMPLING	METHOD						 		-			
$\neg \neg$	KDRII	LLING	METHOD				······································		L	FOI	JIPMENT		L		N
D				AA451.5			SAMPLE DESC	CRIPTION			J., <u>-</u>				0
E			5	AMPLE			SAMI EL DECO	5/11/11/5/1		INST	ALLATION				Т
P	DI 014	1110	DEPTH	NIVALLIE	RECOVERY	1						İ			E
ı	BLOW /6"	NO.	(FT.)	/RQD(%)		ļ				ļ	LOG	MOISTUR	RE	PID	s
Н	76		11.1.7	71100(10)	(black top									1
1			 			sub-base						moist		0 ppm	
1		 				1									
2		<u> </u>				brown-bla	ack silt/medium s	sand with gr	avel;					0 ppm	
-		1	l]	slag and rock f					moist			
3												1		0 ppm	
		1				1						moist/sat	urated		
4										-		<u> </u>			-
				ļ		1								0.0	
5		<u> </u>			<u> </u>	4				1		saturated		0.3 ppm	
	-	<u> </u>		<u> </u>		4									
•			ļ. —.—		<u> </u>	1	fragments			-		saturated	ı	0.5 ppm	
	<u> </u>	—	ļ			rejected						Saturated	1	0.5 ppm	1
7			 	 	ļ	4									
		-	<u> </u>	 		-									
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16	<u>L</u>	_l		<u> </u>		 									
	_		LEGENI		_	NOTE	5 .								
				OIL SAMPL											
				OIL SAMP	LE										
<u> </u>			CORE SAM	MPLE											
GE	NERA	LNOT	E5:		NEG DEDDEG	ENT ADD	ROXIMATE BOL	INDARY R	ETWEEN SO	OIL TYF	PES, TRANSITI	ONS MAY B	E GRADUAL.		
		1) :	SIHATIFIC	AHON U	JINGS UAVE VED HEPHES	REEN MA	DE AT TIMES A	ND UNDER	CONDITIO	NS ST	ATED. FLUCTI	JATIONS OF	GROUNDWA	TER	
		2) \	MAIERLE	YEL HEAL	OCCI ID OI II	DECIMA TO OTH	ER FACTORS T	HAN THOS	E PRESENT	TAT TH	IE TIME MEAS	UREMENTS	WERE MADE		
				MAY	CCCOR DUI	_ 1001A	LITTO TOTO T	,		••				ORING #38	
LB	A														

Test Boring No.: B05-2 Job No.. 5505 1 OF 1 Page: Report Date: 5/10/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Elevation: 253.6

Water Level - Casing In: Below Surface - Casing Out: Geologist:

Driller: S. KAHN

Start: 5/10/2005

Completed: 5/10/2005

)cas(ona 		matic cha			ODS	erve	d water level	5.	
	c					N	5	Sample	Soil and Rock Information	
0		0"/6"	6"/12"	12"/18	18"/24"		No.	depth		
		2	1						TOPSOIL AND ORGANIC MATTER	0'6"
				3	7	4	1	0'0"-2'0"	FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL	
		11	12						FOUNDRY SAND AND SLAG	
				11	6	23	2	2'0"-4'0"	FILL MATERIAL (SAME)	4100
5		6	6							<u>4'6"</u>
	L			5	4	11	3	4'0"-6'0"	MEDIUM GREY GREEN MOIST TO WET CLAYEY	
		3	3					01011 01011	SILT, TRACE VF SAND	71011
	\vdash			3	7	6	4	6'0"-8'0"	MEDIUM GREY GREEN MOIST TO WET	<u>7'0"</u>
10	—	5	2	4	4	6	5	8'0"-10'0"	LOOSE GREY SATURATED M-VF SAND, LITTLE	
10	+		<u> </u>	4		0		80-100	IM-F GRAVEL AND ORGANIC MATTER	
	┝		-	 					IN-F GRAVEE AND ORGANIO WATTER	
	-			 		 -			(MUDDED BORING FROM 10' TO TERMINATION)	
	\vdash		 	 	_	 	 		(MODDED DOMING FROM TO TO TEXAMINATION)	
15	\vdash					 	-			
	+	4	4	 			 			
	\vdash	· · · · · · · · · · · · · · · · · · ·	 	5		9	6	15'0"-16'6"	LOOSE GREY SATURATED (MORE ORGANICS-	
				 					WOOD)	
	Г]		
20										<u> 18'0"</u>
		3	3							
	L		<u> </u>	3		6	7	20'0"-21'6"	MEDIUM DARK BROWN SATURATED ORGANIC SILT	
		<u> </u>	ļ <u>.</u>				<u> </u>			23'0"
	L	<u> </u>	<u> </u>	ļ				1		
25	4		<u> </u>		ļ		ļ			
	\vdash	2	4	<u> </u>		 _	<u> </u>	OFICIT COICE	MEDILINA ODEENI DDOMANI CATUDATED OU T. COME	
	\vdash		ļ	5		9	8	25'0"-26'6"	MEDIUM GREEN BROWN SATURATED SILT, SOME	
	<u> </u>	ļ	ļ	ļ	<u> </u>	ļ	ļ	-	M-F-GRAVEL, LITTLE VF SAND, TRACE CLAY (AUGERS STIFFENED @ 27'6")	
30	\vdash	ļ	 	 	 	 		4	(VERY SLOW PENETRATION)	
3U	┿	56/6	 	-	 	56/6] 30'0"-30'6"	NO RECOVERY	
	-	20/0		 	ļ. 	100/0	 	300-308	INO NEGOVER I	
	1	50/2	 	 	 	50/2	9	33'6"-33'8"	VERY DENSE GREY BLACK ROCK FRAGMENTS	
	-	30/2	 		 	30/2	"	1 330 -330	AUGER REFUSAL @	34'4"
35	-		-	+	 	 	╁	1	BORING TERMINATED @ 34'4"	<u> </u>
		Dloves to	2 ⁿ	Speen	<u> </u>	with	1,40	4	T Ea Blow	

Spoon 12" with 140 <u>30"</u> Ea. Blow N=No. of Blows to N=No. of Blows to Drive Spoon with lb. wt____Ea. Blow

B05-3 Test Boring No.: 5505 Job No.. 1 OF 3 Page: Report Date: 5/20/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Elevation: 253.2 Geologist:

Driller: S. KAHN Water Level - Casing In: Below Surface - Casing Out: Start: 5/19/2005

Completed: 5/20/2005

easc	С	Blo	ws on	•		N	0)	Sample	Soil and Rock Information	
0		0"/6"	6"/12"	12"/18	18"/24"		No.	depth		
		10	21						TOPSOIL AND ORGANIC MATTER	0'5"
				12	13	33	1	0'0"-2'0"	FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL	
		7	8						AND SLAG	
_			40	15	16	23	2	2'0"-4'0"	FILL MATERIAL C/O SILT,SAND AND GRAVEL, TOPSOIL, SLAG AND FOUNDRY SAND	5'0"
5		7	10	-	-	40		41011 61011	STIFF GREY BROWN MOIST MOTTLED SILT,	30
	Н	8	8	8	7	18	3	4'0"-6'0"	LITTLE CLAY	6'0"
	Н	<u> </u>		12	10	20	4	6'0"-8'0"	FIRM GREY SATURATED M-VF SAND, TRACE	<u> </u>
	Н			'-	10			0000	SILT	
10	\vdash		 	 						
	П	3	5							
	Г			8		13	5	10'0"-11'6"	FIRM GREY SATURATED (LITTLE M-F GRAVEL)	
									(AMUDDED DODING EDOM 45 TO TERMINATION)	
15							ļ	Į.	(MUDDED BORING FROM 15' TO TERMINATION)	
	lacksquare	5	5				<u> </u>	451011 461611	LOOSE GREY SATURATED	
	<u> </u>			4		9	6	150-166	LUOSE GRET SATURATED	
	┡			ļ				4		
20	⊢		 	+		-	├──	1		
	H	4	4	 			╁╌	1		
	┢		 	4		8	7	20'0"-21'6"	LOOSE GREY SATURATED (MARL NOTED)	21'2"
	┢		 	1			1		MEDIUM GREY SATURATED SILT, SOME VF SAND	23'0"
	Г							1		
25										
		1	2]		
				3		5	8	25'0"-26'6"	MEDIUM GREY SATURATED ORGANIC SILT	
	L	·	<u> </u>	ļ	ļ		 	1	* · · · · · · · · · · · · · · · · · · ·	
20	L		ļ	 			-	1		
30	Ļ	 				ļ	₩	4	4	
	\vdash	2	1	2		3	9] 30'0"-31'6"	SOFT GREY SATURATED	
	\vdash	 	 	+	1	ᡰ᠊ᡱ	┼╸	1 300 -310	JOHN SILL OMIGIVILED	
	-	 	 	+	 	-	+	-		
35	<u>_</u>	<u> </u>	 			—	-	-l		

lb. wt____Ea. Blow Spoon with -N=No. of Blows to Drive

B05-3 Test Boring No.: Job No.. 5505 2 OF 3 Page: Report Date: 5/20/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Geologist: Elevation: 253. 2

Water Level - Casing In: Driller: S. KAHN Below Surface - Casing Out: Start: 5/19/2005

Completed: 5/20/2005

	С	Blo	ws on	Samp	ler	N		d water leve Sample	Soil and Rock Information
35		0"/6"	6"/12"	12"/18	18"/24"		No.	depth	
		W/R	W/H	2		2	10	35'0"-36'6"	SOFT GREY SATURATED (LESS ORGANICS)
10		W/H	2						
		VV/11		2		4	11	40'0"-41'6"	SOFT GREY SATURATED (MORE ORGANICS)
15		W/H	W/H			14/0	40	451011 46161	VEDV COET OBEV CATURATED
				W/H		W/H	12	45'0"-46'6"	VERY SOFT GREY SATURATED
50_		W3/H	2	2		4	13	50'0"-51'6"	SOFT DARK GREY SATURATED (LESS ORGANICS MARL NOTED)
55		W/H	3						
	E	VV/H	3	4		7	14	55'0"-56'6"	MEDIUM DARK GREY SATURATED
60								1	
		W/H	2	3		5	15	60'0"-61'6"	MEDIUM DARK GREY SATURATED
65	F	1	3					1	
	E	1	3_	4		7	16	65'0"-66'6"	MEDIUM DARK GREY SATURATED
70	F	,						4	;

lb. wt Ea. Blow Spoon with N=No. of Blows to Drive

Test Boring No.: B05-3 Job No.. 5505 3 OF 3 Page: Report Date: 5/20/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Elevation: 253, 2 Geologist:

Water Level - Casing In: Driller: S. KAHN Below Surface - Casing Out: Start: 5/19/2005

Completed: 5/20/2005

	С		ows on			N	•	Sample	Soil and Rock Information
70		0"/6"	6"/12"	12"/18'	18"/24"		No.	depth	
		1	4	4		8	17	70'0"-71'6"	MEDIUM DARK GREY SATURATED (SANDIER)
75									
		2	2	2		4	18	75'0"-76'6"	SOFT DARK GREY SATURATED
80		1	2						
				1		3	19	80'0"-81'6"	SOFT DARK GREY SATURATED
85									(AUGERED TO 100' REMAINED SOFT)
90									
95									
100									BORING TERMINATED @ 100'0"
105									j,

N=No. of Blows to Drive Spoon with lb. wt____Ea. Blow

Test Boring No.: B05-4 Job No.. 5505 Page: 1 OF 2 Report Date: 5/6/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Elevation: 254.구 Geologist:

Driller: S. KAHN Water Level - Casing In: Below Surface - Casing Out: Start: 5/6/2005

Completed: 5/6/2005

		Blo	ws on	Samp	ler			_		
						N		Sample	Soil and Rock Information	
0		0"/6"	6"/12"	12"/18	18"/24"		No.	depth		
		7	7						TOPSOIL AND ORGANIC MATTER	0'5"
				7	7	14	1	0'0"-2'0"	FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL	
		13	13						LITTLE ASPHALT AND SLAG	
	Ш			10	9	23	2	2'0"-4'0"	FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL	
5	Ц	7	7						AND SLAG	
	Ц			4	4	11	3	4'0"-6'0"	FILL MATERIAL C/O MOIST FOUNDRY SAND	
	Ш	4	10						THE MATERIAL OVER EQUINIDRY CAND	7101
	Н			20	20	30	4	6'0"-8'0"	FILL MATERIAL C/O FOUNDRY SAND	7'8"
40	Н	15	10	15		25	5	8'0"-10'0"	FILL MATERIAL C/O SATURATED SLAG	
10	Н		40	15	22	25	3	80-100	FILL WATERIAL C/O SATURATED SLAG	
	Н	21	12		40	33	-	40'0" 40'0"	 FILL MATERIAL C/O SATURATED SLAG	
	Н		40	21	18	33	6	10'0"-12'0"	I FILL MATERIAL C/O SATURATED SLAG	
	H	7	10	9	4	19	7	12'0"-14'0"	FILL MATERIAL C/O SATURATED SLAG	
15	Н	3	3	9	4	19	 	120-140	FILE WATERIAL O/O SATORATED SEAS	15'0"
13	+			4	6	7	8	14'0"-16'0"	MEDIUM GREY SATURATED SILT, TRACE ORGANIC	100
	Н	6	5	 	-	 	┝	140-100	NODULES	15'8"
	\vdash		 	5	5	10	9	16'0"-18'0"	MEDIUM BLACK MOIST PEAT LIKE MATERIAL	100
				 	<u> </u>	 ``	Ť	100 .00		
20			 	 	<u> </u>			1	(MUDDED BORING FROM 18' TO TERMINATION)	
	T	2	3	 				1		
	┢			3	4	6	10	20'0"-22'0"	MEDIUM BLACK GREY WET TO SATURATED	
								SHELBY	INTERBEDDED SILT AND PEAT LIKE MATERIAL	
							1	TUBE	MEDIUM GREY SATURATED	24'0"
25		2	4]		
				3	4	7	11	24'0"-26'0"	MEDIUM DARK GREY WET ORGANIC SILT, TRACE	
									CLAY	
] .		28'0"
]		
30	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{\Box}}}$							j	\mathcal{J}	
		2	2					1	· · · · · · · · · · · · · · · · · · ·	
	L			2	L	4	12	30'0"-31'6"	MEDIUM GREY SATURATED SILT, LITTLE CLAY,	
	L				<u> </u>	<u> </u>	<u> </u>	1	TRACE VF SAND SEAMS (NO ORGANICS)	
	L						<u> </u>	1		
35	1_		2"	Spoon	12"	<u> </u>	140)" Ea. Blow	

lb. wt_____Ea. Blow N=No. of Blows to Drive Spoon with

Test Boring No.: B05-4

Job No.. 5505

Page: 2 OF 2

Report Date: 5/6/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Elevation: 254.7

Water Level - Casing In:
Below Surface - Casing Out:

Geologist:

Driller: S. KAHN

Start: 5/6/2005

Completed: 5/6/2005

	c		ows on			N	9	Sample	Soil and Rock Information	
5		0"/6"		12"/18	18"/24"		No.	depth		
		7	8	9		17	13	35'0"-36'6"	FIRM RED WET SILT, SOME C-F GRAVEL, WEATHERED ROCK AND VF SAND	35'6
ю									AUGER REFUSAL @	39'2'
	H								BORING TERMINATED @ 39'2"	
15										
				<u> </u>						
50										
		_								
55										
								i		
3O										
	Н									
35	H									
									;	
70	H									

Test Boring No.: B05-5 Job No.. 5505 1 OF 2 Page: _____ Report Date: 5/11/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Geologist:

Elevation: 252.\
Water Level - Casing In: Driller: S. KAHN Below Surface - Casing Out: Start: 5/11/2005

Completed: 5/11/2005

		Blo	ows on	Samp	ler	N		Sample	Soil and Rock Information	
0	М	0"/6"	6"/12"	12"/18	18"/24"	IN	No.	depth		
<u> </u>	╀┤	7	19	12/10	10 72-4		140.	асрат	TOPSOIL AND ORGANIC MATTER	0'7"
	Н		19	23	28	42	1	0'0"-2'0"	FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL	07
	\vdash	40	44-	23	20	44	 '	00-20	BRICK, WOOD AND SLAG	
	Н	13	14	15	19	29	2	2'0"-4'0"	FILL MATERIAL (SAME)	3'0"
5	Н	6	4	10	19	29	-	20-40	COMPACT BROWN MOIST M-VF SAND	3'6"
<u> </u>	니	0		4	4	8	3	4'0"-6'0"	LOOSE GREY SATURATED M-VF SAND, TRACE	<u> </u>
	Н		<u> </u>	4	4	-	3	40-60	ORGANICS (WOOD)	
	Н	2	4			11		6'0"-8'0"	FIRM GREY SATURATED	
	Н	46	<u> </u>	7	4	11	4	60-60	FIRM GRET SATURATED	
	Н	12	4	18	29	22	5	8'0"-10'0"	FIRM GREY SATURATED (LITTLE C-F GRAVEL)	
10	Н			10	29	22	1 3	80-100		
	Н									12'0"
	Н		 	├			├		(ANDDED DODING EDOM 45' TO TEDMINATION)	120
	Н		<u> </u>	ļ			 		(MUDDED BORING FROM 15' TO TERMINATION)	
4.5	Н	2	7	1 44		18	6	13'6"-15'0"	FIRM GREY SATURATED C-F SAND AND GRAVEL	
15	1		ļ	11		10	-	136-150		
	Ш			ļ		ļ	<u> </u>	ł	(LITTLE SILT LAYERED)	47100
	Ш						ļ			<u> 17'0"</u>
	Ш			.		<u> </u>	<u> </u>			
	\vdash						<u> </u>	1		
20							ļ			
		W/H	2	<u> </u>	ļ		L			
	\perp			2		4	7	20'0"-21'6"	SOFT GREY SATURATED CLAYEY SILT, LITTLE	
	L		<u> </u>	<u> </u>		<u></u>	<u> </u>		ORGANICS	
							<u> </u>	1		
25				<u> </u>			ļ			
		W/H	2				<u> </u>			
				2	<u> </u>	4	8	25'0"-26'6"	SOFT GREY WET	
									" · · ·	
	L]		
30]	I	
		2	3]		
				4		7	9	30'0"-31'6"	MEDIUM GREY WET	
								j		
								}		
35	Г			T				1	;	

N=No. of Blows to 2" Spoon 12" with 140
N=No. of Blows to Drive Spoon with lb. wt_____Ea. Blow

Test Boring No.: B05-5 Job No.. 5505 2 OF 2 Page: Report Date: 5/11/2005

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Elevation: 252.1 Geologist:

Water Level - Casing In: Driller: S. KAHN Below Surface - Casing Out: Start: 5/11/2005

Completed: 5/11/2005

	С	Blo	ows on	•		N	9,	Sample	Soil and Rock Information
35		0"/6"		12"/18	18"/24"		No.	depth	
		2	2	2		4	10	35'0"-36'6"	SOFT GREY WET (TRACE ORGANICS)
40	H						-		
		W/H	2	2		4	11	40'0"-41'6"	SOFT GREY WET TO SATURATED (TRACE ORGANICS)
45									
		1	1	1		2	12	45'0"-46'6"	VERY SOFT GREY SATURATED (TRACE MARL)
50		1	2						
			_	2		4	13	50'0"-51'6"	SOFT GREY WET (WOOD NOTED AND SLIGHTLY MORE CLAY)
55									
		3	3	5		8	14	55'0"-56'6"	MEDIUM GREY WET TO SATURATED (MORE ORGANICS TRACE WEATHERED SHALE) (VERY SLOW PENERATION FROM 58')
60		82/6				82/6	15	60'0"-60'6"	VERY DENSE RED WEATHERED SHALE 60'6"
							Ë		BORING TERMINATED @ 60'6"
65	E								
	-								
70	F							į	·

lb. wt____Ea. Blow Spoon with ____ N=No. of Blows to Drive

Test Boring No.: B05-7 Job No.. 5505 1 OF 1 Page: 5/10/2005 Report Date:

Project: PORT OF ROCHESTER

Client: LABELLA ASSOCIATES, PC

Geologist: Elevation: 253.272.7

Driller: S. KAHN Water Level - Casing In: Below Surface - Casing Out: Start: 5/9/2005

Completed: 5/9/2005

Spoon

N=No. of Blows to Drive

with _

	С		ows on			N	9	Sample	Soil and Rock Information	
0		0"/6"	6"/12"	12"/18'	18"/24"		No.	depth		
		14	10					,	TOPSOIL AND ORGANIC MATTER	0'5"
			·	18	50/0	28	1	0'0"-1'6"	FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL	
	П								AND CRUSHED STONE	
	П	50/4				50/4	2	3'0"-3'4"	FILL MATERIAL CONCRETE	4'0"
5	П									
		14	13							
				15	18	28	3	5'0"-7'0"	COMPACT BROWN MOIST SILT AND VF SAND	
		9	13							
10				14	14	27	4	8'0"-10'0"	COMPACT BROWN MOIST SILT, TRACE VF SAND	
										12'0"
	L			<u> </u>						
				<u> </u>	<u> </u>					
15	L			ļ			<u> </u>			
	_	7	8	<u> </u>		L	<u> </u>	4 = 10 11 4 0 10 11	OTIFE ODEN MOIOT OUT LITTLE OLAN	4.01011
	L			9		17	5	15'0"-16'6"	STIFF GREY MOIST SILT, LITTLE CLAY	<u> 16'6"</u>
	L	<u> </u>	ļ	_		<u> </u>				
00	<u> </u>	<u> </u>	ļ	ļ	<u> </u>	ļ			BORING TERMINATED @ 16'6"	
20	丰		 			<u> </u>			BORING TERMINATED @ 100	
			ļ			<u> </u>			NOTE: ADDITIONAL 1'6" DRILLED AT THIS	
	\vdash	ļ	 	ļ			-		LOCATION HEAVY FILLS MOVED BORING 3'	
	<u> </u>		 	 					LUCATION REAVY FILLS WOVED BORING 3	
25	-		ļ			ļ	<u> </u>			
20	+		ļ	 		-	 	Ì		
	\vdash		ļ <u> </u>	 			 			
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	\vdash	ļ	 	 	<u> </u>	-	-	1		
	\vdash	 	 	 			├	ĺ		
35	\vdash		 	 	 	-	╁	ĺ		
	Ļ	Blows to	2"	Spoon	12"	<u> </u>	140		L)" Ea. Blow	······

lb. wt.____Ea. Blow



Appendix 4

Photographs of Slag Fill



Typical view of slag fill at the Port of Rochester.



Appendix 5

Example of Material Tracking Spreadsheet

PORT OF ROCHESTER ENVIRONMENTAL MANAGEMENT PLAN WASTE STREAM TRACKING FORM

LANDFILL TICKET NO.																									
TIME TRUCK OFF-SITE																									
WASTE DISPOSAL LOCATION										;															
TYPE OF WASTE STREAM																									
MANIFEST NO.																									
TRUCK LISCENSE PLATE NO.																									
TRUCK I.D.																									
TRUCKING COMPANY																									
DATE																									
	1	2	3	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

SHEET OF __



Appendix 6

Example of Health & Safety Plan

Port of Rochester Site Health and Safety Plan

Location:

Port of Rochester Rochester, New York 14612

Prepared For:

City of Rochester Division of Environmental Quality 30 Church Street Room 300B Rochester, New York 14614

LaBella Project No. 205182

June 2005

Port of Rochester Site Health and Safety Plan

Location:

Port of Rochester Rochester, New York 14612

Prepared For:

City of Rochester Division of Environmental Quality 30 Church Street Room 300B Rochester, New York 14614

LaBella Project No. 205182

June 2005

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1.0	INTRODUCTION	1
2.0	RESPONSIBILITIES	1
3.0	ACTIVITIES COVERED	1
4.0	WORK AREA ACCESS AND SITE CONTROL	1
5.0	POTENTIAL HEALTH AND SAFETY HAZARDS	1
6.0	DECONTAMINATION PROCEDURES	3
7.0	PERSONAL PROTECTIVE EQUIPMENT	3
8.0	AIR MONITORING	3
9.0	EMERGENCY ACTION PLAN	4
10.0	MEDICAL SURVEILLANCE	4
11.0	EMPLOYEE TRAINING	4

Exposure Limits and Recognition Qualities Table 1

Compound		TLV-TWA	LEL	UEL	ШП	Odor	Odor Threshold	Ionization
	(p)(q)(mdd)	(b)(c)(d)	(%)(e)	(%)(f)	(b)(g)(mdd)		(mdd)	Potential
Acetone		750	2.5	13	20,000	Sweet	13	69.6
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1(1)	10	1.3	7.9	Ca	Pleasant	4.7	9.24
Benzo (a) pyrene (coal tar pitch volatiles)	0.2	0.2	NA	NA	700	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100	100	1.0	2.9	2,000	Ether	2.3	8.76
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Ideno (1,2,3-cd) pyrene		900	NA	NA	Ca	Na	Na	Na
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Napthalene	10, Skin	10	6.0	5.9	250	Moth Balls	0.3	8.12
n-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100	100	6.0	9.5	2,000	Sweet	2.1	8.82
1,2,4-Trimethylbenzene	NA	25	6.0	6.4	NA	Distinct	2.4	NA
1,3,5-Trimethylbenzene	NA	25	NA	NA	NA	Distinct	2.4	NA
Xylenes (o,m,p)	100	100			1,000	Sweet	1.1	8.56
Metals								:
Arsenic	0.01	0.2	NA	NA	100, Ca	Almond		NA
Barium	0.5	0.5	NA	NA	1,100			NA
Cadmium	0.2	0.5	NA	NA				NA
Chromium	1	0.5	NA	NA				NA
Lead	0.05	0.15	NA	NA	700			NA
Mercury	0.05	0.05	NA	NA	28	Odorless		NA
Selenium	0.2	0.02	NA	NA	Unknown			NA
Silver	0.01	0.01	NA	NA				NA

Skin = Skin Absorption
OSHA-PEL Permissible Exposure Limit (flame weighted average, 8-hour): NIOSH Guide, June 1990
ACGIH - 8 hour time weighted average from Threshold Limit Values and Biological Exposure Indices for 2003.
Metal compounds in mg/m3
Lower Exposure Limit (%)
Upper Exposure Limit (%)
Immediately Dangerous to Life or Health Level: NIOSH Guide, June 1990.

- Notes:
 1. All values are given in parts per million (PPM) unless otherwise indicated.
 2. Ca = Possible Human Carcinogen, no IDLH information.

SITE HEALTH AND SAFETY PLAN

Project Title: Port of Rochester

Project Number: 205182

Project Location (Site): Port of Rochester, Rochester, New York 14608

Project Manager: Gregory R. Senecal, CHMM

Plan Approval Date:

Plan Review Date:

Site Safety Supervisor: Michael Pelychaty

Site Contact Michael Pelychaty

LaBella Safety Director Richard Rote, CIH

Proposed Date(s) of Field To B

Activities:

To Be Determined

Site Conditions: Level to moderately sloping, encompassing approximately 5 +/- acres

Site Environmental Prior Environmental Reports by H&A of New York, Day

Information Provided By: Environmental, LaBella Associates, P.C., etc.

Air Monitoring Provided By: LaBella Associates

Site Control Provided By: To Be Determined

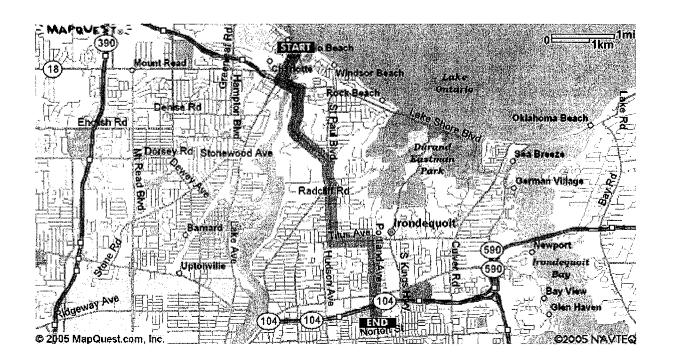
EMERGENCY CONTACTS

	Name	Phone Number
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	Rochester General Hospital	585-922-4000
Poison Control Center:	Finger Lakes Poison Control	585-275-3232
Police (local, state):	City of Rochester Police Department	911
Fire Department:	City of Rochester Fire Department	911
Site Contact:	Michael Pelychaty	585-451-6225
Agency Contact	NYSDEC – To Be Determined MCDOH – To Be Determined NYSDOH – To Be Determined	
Project Manager	Gregory R. Senecal, CHMM LaBella Associates, P.C.	Direct: 585-295-6243 Cell: 585-752-6480
Safety Supervisor	Michael Pelychaty LaBella Associates, P.C.	Direct: 585-295-6253
LaBella Associates Safety Director	Richard Rote, CIH LaBella Associates, P.C.	Direct: 585-295-6241

MAP AND DIRECTIONS TO THE MEDICAL FACILITY ROCHESTER GENERAL HOSPITAL

Directions

1:	Start out going NORTHWEST on CORRIGAN ST toward LAKE AVE.
2:	Turn LEFT onto LAKE AVE.
3:	Turn LEFT onto STUTSON ST.
4:	STUTSON ST becomes PATTONWOOD DR/CR-99.
5:	Turn RIGHT onto POW MIA MEMORIAL AVE/THOMAS AVE/CR-124.
6:	Turn RIGHT onto ST PAUL BLVD/CR-122.
7:	Stay STRAIGHT to go onto COOPER RD/CR-116.
8:	Turn LEFT onto TITUS AVE/CR-91.
9:	Turn RIGHT onto PORTLAND AVE/CR-114.
10:	End at Rochester General Hospital, 1425 Portland Ave Rochester, NY 14621-3001



1.0 INTRODUCTION

The purpose of this Health and Safety Plan (HASP) it to provide guidelines for responding to potential health and safety issues that may be encountered during the earthwork construction at the port of Rochester. The requirements of this HASP are applicable to all LaBella Associates personnel and their authorized visitors at the work site. This document's Environmental Management Plan (EMP), and the Community Air Monitoring Plan (CAMP), are to be consulted for guidance in preventing and quickly abating any threat to human safety or the environment. The provisions of the HASP do not replace or supersede any regulatory requirements of the USEPA, NYSDEC, OSHA or and other regulatory body.

2.0 RESPONSIBILITIES

The HASP presents guidelines to minimize the risk of injury, to project personnel, and to provide rapid response in the event of injury. The LaBella Associates HASP is applicable only to activities of LaBella personnel and their authorized visitors. The LaBella Associates Project Manager shall implement the provisions of this HASP for the duration of the project. It is the responsibility of employees to follow the requirements of this HASP, and all applicable company safety procedures.

3.0 ACTIVITIES COVERED

The activities covered under this HASP are limited to the following:

- Observation and inspection of construction activities
- Environmental Monitoring
- Collection of samples
- Assistance with the on-Site management of excavated soil and fill.

4.0 WORK AREA ACCESS AND SITE CONTROL

The general contractor will have primary responsibility for work area access and site control.

5.0 POTENTIAL HEALTH AND SAFETY HAZARDS

This section lists some potential health and safety hazards that project personnel may encounter at the project site and some actions to be implemented by LaBella Associates personnel to control and reduce the associated risk to health and safety. This is not intended to be a complete listing of any and all potential health and safety hazards. New or different hazards may be encountered as site environmental and site work conditions change. The suggested actions to be taken under this plan are not to be substituted for good judgment on the part of project personnel. At all times the Site Safety Officer has responsibility for site safety and his or her instructions must be followed.

5.1 Hazards Due to Heavy Machinery

Potential Hazard:

Heavy machinery including trucks, excavators, backhoes, etc will be in operation at the site. The presence of such equipment presents the danger of being struck or crushed. Use caution when working near heavy machinery.

Protective Action:

Make sure that operators are aware of your activities, and heed operator's instructions and warnings. Wear bright colored clothing and walk safe distances from heavy equipment. A safety orange vest, hard hat, and steel toe shoes are required.

5.2 Excavation Hazards

Potential Hazard:

Excavations and trenches can collapse, causing injury or death. Edges of excavation can be unstable and collapse. Toxic and asphyxiant gases can accumulate in confined spaces and trenches.

Protective Action:

LaBella Associates personnel are not to enter excavations over 4 feet in depth unless excavations are adequately sloped. LaBella Associates personnel must receive approval from the LaBella Project Manager to enter an excavation for any reason. Subsequently, LaBella personnel are to receive authorization for entry from the Site Safety Officer.

LaBella Associates personnel should exercise caution near all excavations at the site as it is expected that excavation sidewalls will be unstable.

5.3 Cuts, Punctures and Other Injuries

Potential Hazard:

In any excavation or construction work site there is the potential for the presence of sharp or jagged edges on rock, metal materials, and other sharp objects. Serious cuts and punctures can result in loss of blood and infection.

Protective Action:

The LaBella Associates Project Manager is responsible for making First Aid supplies available at the work site to treat minor injuries. The First Aid supplies will be kept in the work trailer. The Site Safety Officer is responsible for arranging the transportation of authorized on-site personnel to medical facilities when First Aid treatment in not sufficient. Do not move seriously injured workers. All injuries requiring treatment are to be reported to the LaBella Project Manager. Serious injuries are to be reported immediately (see Section 9.0 - Emergency Action Plan).

5.4 Injury Due to Exposure of Chemical Hazards

Potential Hazards:

Volatile organic vapors from petroleum products, chlorinated solvents or other chemicals may be encountered during excavation activities at the project work site. Inhalation of high concentrations of organic vapors can cause headache, stupor, drowsiness, confusion and other health effects. Skin contact can cause irritation, chemical burn, or dermatitis.

Protective Action:

The presence of organic vapors may be detected by their odor and by monitoring instrumentation. LaBella Associates employees will not work in environments where hazardous concentrations of organic vapors are present. Air monitoring performed by LaBella Associates (see Section 8.0) of the work area will be performed at least every 30 minutes or more often using a Photoionization Detector (PID) or a Flame Ionization Detector (FID). LaBella Associates personnel are to leave the work area whenever PID or FID measurements of ambient air exceed 25 ppm consistently for a 15 minute period.

6.0 DECONTAMINATION PROCEDURES

Upon leaving the work area, LaBella Associates personnel shall decontaminate footwear as needed. Under normal work conditions detailed personal decontamination procedures will not be necessary. Work clothing may become contaminated in the event of an unexpected splash or spill or contact with a contaminated substance. Minor splashes on clothing and footwear can be rinsed with clean water. Heavily contaminated clothing should be removed if it cannot be rinsed with water. LaBella Associates personnel should be prepared with a change of clothing whenever on site.

LaBella will use the contractor's disposal container for disposal of PPE.

7.0 PERSONAL PROTECTIVE EQUIPMENT

Conditions requiring a level of protection greater than Level D are not expected at this work site. Typical safety equipment identified in company safety and health procedures is required, i.e., hard hat, safety glasses, orange vest, rubber nitrile sampling gloves, splash resistant coveralls, construction grade boots, etc. Additional site-specific personal protective equipment is not necessary when working under the conditions of this plan.

8.0 AIR MONITORING

The LaBella Associates representative/EPM will utilize a PID to screen the ambient air in the work areas (excavation, soil staging, and soil grading areas) for total Volatile Organic Compounds (VOCs). Work area ambient air will generally be monitored downwind of the excavation or earthwork area in the general breathing zone

Air monitoring of the work areas will be performed at least every 30 minutes or more often using a photoionization Detector (PID). LaBella Associates personnel are to leave the work area whenever PID measurements of ambient air exceed 25 ppm consistently for a 5 minute period.

LaBella personnel may re-enter the work areas wearing a ½ face respirator with organic vapor cartridges for an 8-hour duration when VOC concentrations average between 25-50 ppm. Organic vapor cartridges are to be changed after each 8-hour of use. If PID readings are sustained at levels above 50 ppm for a 5 minute average, work will be stopped immediately until safe levels of VOCs are encountered.

At all times, the Site Safety Officer has authority over actions of LaBella Associates personnel and their guests at the site and his or her requests for evacuation are to be heeded without delay. Skin and clothing should be rinsed with clean water if chemical exposure has occurred as a result of splash or spill. Contaminated clothing must be removed; LaBella personnel should bring a change of clothes to the site. Water repellant suits will be provided to help prevent contamination of clothing. Medical attention should be provided if skin irritation has occurred. Please refer to Table 1 outlining chemical compounds detected in recent soil samples at the proposed Port of Rochester.

9.0 EMERGENCY ACTION PLAN

In the event of an emergency, employees are to turn off and shut down all powered equipment and leave the work areas immediately. Employees are to walk or drive out of the Site as quickly as possible and wait at the assigned 'safe area'. Follow the instructions of the Site Safety Officer.

LaBella Associates employees are not authorized or trained to provide rescue and medical efforts. Rescue and medical efforts will be provided by local authorities.

10.0 MEDICAL SURVEILLANCE

LaBella Associates will provide medical surveillance to all LaBella employees who are injured due to overexposure from an emergency incident involving hazardous substances at this site.

11.0 EMPLOYEE TRAINING

LaBella personnel who are not familiar with this site plan will receive training on its entire content and organization before working at the Site.



Appendix 7

Community Air Monitoring Plan

Port of Rochester Community Air Monitoring Plan for Earthwork Construction Activities

Location:

Port of Rochester Rochester, New York 14612

Prepared For:

City of Rochester Division of Environmental Quality 30 Church Street Room 300B Rochester, New York 14614

LaBella Project No. 205182

June 2005

Port of Rochester Community Air Monitoring Plan for Earthwork Construction Activities

Location:

Port of Rochester Rochester, New York 14612

Prepared For:

City of Rochester Division of Environmental Quality 30 Church Street Room 300B Rochester, New York 14614

LaBella Project No. 205182

June 2005

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1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) has been prepared by LaBella Associates on behalf of the City of Rochester Department of Environmental Quality (DEQ). This CAMP addresses potential Volatile Organic Vapor (VOC) and particulate emissions that may occur during the earthwork portion of construction activities at the Port of Rochester. The Port of Rochester encompasses approximately 26 acres in the City of Rochester, Monroe County, New York 14612 (see Figure 1) herein after referred to as the "Site."

Potential future earthwork construction activities are covered by this CAMP. Low levels of VOCs, semi-VOCs, and metals have been detected in the soil, fill, and groundwater at the Site. The volatilization of organic compounds through disturbance of soil and groundwater at the Site can potentially result in nuisance odors or health threats to the neighborhood in the immediate vicinity of the Site. Inorganic compounds, present in dust, could potentially be disturbed during earthwork construction activities. This CAMP describes daily air monitoring activities intended to identify and control environmental conditions presenting the potential for neighborhood exposure to ambient airborne hazards resulting from fugitive emissions during earthwork construction activities at the Site.

Pursuant to the New York State Department of Environmental Conservation (NYSDEC) Technical Administrative Guidance Manual (TAGM) #4031 – Fugitive Dust Suppression and particulate Monitoring Program at Inactive Hazardous Waste Sites, (HWR-89-4031), this CAMP addresses methods that will be utilized to monitor particulate (dust) levels at the perimeter of, and within the work areas (excavation, soil staging, and soil grading areas) of the Site. If elevated levels of particulate emissions are encountered, this CAMP identifies the procedures that will be employed to mitigate elevated particulate levels.

Perimeter air monitoring procedures for VOCs are also included in this CAMP. VOC monitoring of the work areas (excavation, soil staging, and soil grading areas) of the Site will also be conducted per the Health and Safety Plan (HASP).

2.0 METHODOLOGY

This CAMP has been designed for construction activities at the Port of Rochester. The CAMP pertains primarily to earthwork activities that disturb, man-made fill, soil and groundwater at the Port of Rochester. Previously completed soil investigations have indicated that petroleum soil and groundwater impairment is not significant or wide spread and located at intermittent locations. Fill containing metals is typically located throughout the Port of Rochester. No significant vapor emissions are expected. However, the following procedures will be implemented to monitor and, if necessary, mitigate the potential migration of fugitive particulate and/or VOC emissions at the Site.

2.1 Site Perimeter Monitoring

Each day of field work during the intrusive earthwork, a wind sock or flag will be used to monitor wind direction in the work areas (excavation, soil staging, and soil grading areas). Based upon daily wind conditions three temporary monitoring points, one up and two down wind of the work areas, will be identified at the perimeter of the Site or field work area.

Real time particulate monitoring will be performed utilizing aerosol monitors capable of measuring particulate concentrations of Particulate Matter 10 μ m in size (PM₁₀) or less. VOC monitoring will be performed with a Photo-ionization Detector (PID) equipped with at 10.6 eV lamp. Sufficiently wet Site conditions, such as after precipitation, may temporarily eliminate the need for particulate monitoring.

Each day, prior to the commencement of the intrusive earthwork work, background concentrations of particulate and VOCs will be measured and recorded as 5 minute averages at the identified upwind and downwind locations with the typical construction equipment engines and any other gas/diesel engines operating on Site.

Afterward, measurements will be recorded at approximate 30 minute intervals. The recorded 5 minute averages will be used to determine the difference in value between upwind and downwind particulate and VOC concentrations. Work will be temporarily halted and engineering controls, as per Section 2.3 or 2.5, will be implemented if the difference between the upwind and downwind particulate measurements exceed $100~\mu g/m^3$, or downwind VOC readings exceed upwind readings by 5 parts per million (ppm). It should be noted that downwind VOC readings will be adjusted for engine exhaust. If work is required to be temporarily halted, the Contractor will be required to implement dust suppression methods or other means to control dust and VOCs.

2.2 Work Area Monitoring

In addition to monitoring the perimeter of the work Site for VOCs and particulates, the immediate work areas (excavation, staging, and grading areas) will be monitored for VOCs as per the HASP developed for this project. Real time readings from the Work Area Perimeters will be observed and recorded as 5 minute averages at 30 minute intervals. If measurements exceed 25 ppm, as a 5 minute average, the requirements of Section 2.4 will be implemented.

2.3 Fugitive Dust Control

If the monitoring at the Site Perimeter, as described in Sections 2.1, indicates an upwind/downwind difference in fugitive particulate emissions greater than $100 \,\mu\text{g/m}^3$, the contractor will be required to implement dust control measures that may include the following methods:

- Apply water on haul roads.
- Wetting equipment and excavation faces.
- Restricting vehicle speeds to 10 mph.
- Hauling material in properly tarped containers.
- Spraying water in buckets during excavation and dumping.
- Reducing excavation size and/or number of excavations.

The contractor will be required to have a water truck or equivalent equipment on site for dust suppressions methods.

2.4 Minor Vapor Emission Response Plan

If any single Work Area Perimeter ambient air reading of total VOCs exceeds 25 ppm in the ambient air above background, as a 5 minute average, <u>continuous</u> Site Perimeter air monitoring shall be conducted at the downwind monitoring location.

Work activities may continue if total organic vapors in the ambient air are less than 25 ppm over background at the Work Area Perimeter, provided that the organic vapor levels measured at the Site Perimeter remain below 5 ppm over background.

Work activities may need to be modified as per the HASP if VOC measurements remain at 25 ppm or above in the ambient air at the Work Area Perimeter. See the HASP for further details.

All work activities must be halted and the Major Vapor Emission Response Plan (Section 2.5) will be implemented immediately if organic vapor levels exceed 5 ppm in the ambient air, as a 5 minute average, over background at the Site Perimeter.

2.5 Major Vapor Emission Plan

Engineering controls to abate the VOC emissions source will immediately be put into effect if total organic vapor levels in the ambient air exceed 5 ppm above background at the Site Perimeter. These engineering controls may include:

- Vapor suppression utilizing foam vapor suppressants, polyethylene sheeting, or water.
- Backfilling of excavations.
- Covering emission sources with stockpiled materials.

If the measures taken to abate the emission source are ineffective and the total organic vapor readings continue at 5 ppm or above background for more than 15 minutes at the Site Perimeter, then the following actions shall be placed into effect.

- Occupants of the residential and commercial buildings will be advised to stay inside their respective structure and to close all windows.
- All personnel listed in the Emergency Contacts section of the HASP for this project will be contacted
- The Site Safety Supervisor will immediately contact the local authorities and advise them of the circumstances.
- Continuous air monitoring will be conducted at the Site Perimeter and 1 minute average measurements will be recorded every 15 minutes. Air monitoring may be halted or modified by the Site Safety Supervisor when two successive measurements are below 5 ppm.

If readings remain elevated above 5 ppm over background for a period of 60 minutes the Site Safety Officer will request that local authorities evacuate the occupants of the buildings.